A VP-internal/Resultative Analysis of 4 "VP-External" Uses of Slavic Verbal Prefixes

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Abstract

This thesis is about the structure of prefixed verbs in Slavic and the syntax of resultative secondary predication. The topic is explored through four case studies of different prefixed-verb constructions (Slovenian *na-laufati se* [on-run self] 'get one's fill of running', Slovenian/Russian *na-brati*/*na-brat'* [on-gather] 'gather a quantity of', Slovenian *pre-sedeti* [through-sit] and Russian *pro-sidet'* [through-sit] 'spend time sitting'). The discussion is cast against the often hypothesized distinction between VP-internal/resultative and VP-external prefixes, for which all four constructions present a puzzle. For example, some of the prefixes in these constructions can stack on a verbal base that already contains a VP-internal/resultative prefix, which is typically considered a diagnostic of VP-externality. On the other hand, these same prefixes also change the argument structure of their input, which is the hallmark of resultative secondary predication.

The thesis argues that the constructions discussed all contain VP-internal/resultative prefixes. This conclusion opens another puzzle: when these prefixes stack over another resultative prefix, we have two resultative prefixes on one verbal root. This appears to go against the widely-assumed hypothesis that there can be only one resultative secondary predicate per verb. The thesis reconciles this hypothesis with the investigated data by proposing that, surface appearances notwithstanding, the syntactic structure of such doubly-prefixed 'verbs' in fact contains two VPs, each of which embeds a prefix-headed resultative secondary predicate; one of the V's, however, is null. The postulation of two VPs is supported with various kinds of novel data, including adverbial modification, aspectual patterning, and the occurrence of two unselected objects. The two VPs are proposed to be concatenated in a manner similar to one that has been proposed for some serial verb constructions, in a conjunction-like structure under a single Tense node.

The results of the thesis have consequences for the general theory of resultative secondary predication, for the theory of null verbs, and for the often hypothesized distinction between VP-internal/resultative and VP-external prefixation in Slavic.

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Introduction

1. Topic, proposal, and thesis outline

This thesis is concerned with the morphosyntactic structure of prefixed verbs in Slavic and the morphosyntax of resultative secondary predication. Some initial examples of prefixed verbs from Slovenian are in (1).[1]

(1) a. *raz-trgati* — apart-tear — 'tear apart'
b. *od-pisati* — off-write — 'write off'
c. *na-brati* — on-pluck — 'pick a quantity of'

More specifically, the thesis focuses on the structure of prefixed verbs from the perspective of the often posited morphosyntactic split in Slavic verbal prefixes into 'internal'/'lexical' and 'external'/'superlexical'. 'Internal'/'lexical' prefixes are typically said to have the capacity to affect the argument structure and event structure of the base verb, and are often analyzed as affixal prepositions functioning as VP-internal resultative secondary predicates, similarly to resultative particles in Germanic. 'External'/'superlexical' prefixes are typically seen as contributing meanings of outer-aspect modification, quantification, or measure, and are often analyzed as affixal prepositions functioning as VP-external, INFL-level material (e.g. Svenonius 2004, Ramchand 2004/2008b, Romanova 2007, etc.).

Adopting a model where prefixed verbs are built in the syntax, this thesis presents four case studies of Slavic verbal prefixation from the perspective of where each of those prefixes is introduced into the syntactic structure of the clause. It is shown that each of the four constructions exhibits some characteristics which are normally taken to suggest that their prefix is VP-external rather than VP-internal/resultative. For example, the prefix in (2) below appears to contribute a measure-like meaning.

(2) *Děti na-rváli cvetóv na lugú*. (Russian)
children on-plucked flowers$_{GEN}$ in meadow
'The children picked a lot of flowers in the meadow.' (Filip 2000: 49)

At the same time, however, each of the constructions discussed presents a puzzle because it also responds positively to some diagnostics that are standardly taken to identify resultative secondary predicates. This thesis discusses each of these four constructions in some detail and argues that they all represent instances of *VP-internal/resultative* prefixation. This conclusion, which has important consequences not only for the validity of characteristics that have been used as diagnostic of prefix VP-externality but possibly even for the validity of the VP-internal/VP-external split as a whole, constitutes the first main claim of the thesis.

At the same time, this conclusion opens a new puzzle. Some of these prefixes can combine with a verbal base that already contains a VP-internal/resultative prefix, as shown for the prefix from (2) above in (3) below.

[1] Unless marked otherwise, non-English examples in this thesis are from Slovenian. In violation of the standard orthography, prefixes will be separated from the verb stem with a hyphen for reasons of clarity.

(3) *Konduktor uže na-ot-ryvala biltikov*. (Russian)
ticket-seller already on-off-tore $\text{tickets}_{\text{GEN}}$
'The ticket-seller has prepared a lot of little tickets by tearing them off the roll.' (Romanova 2007: 273)

Therefore, if the *na-* of (3) is indeed a VP-internal/resultative prefix, we are faced with a string which contains *two* resultative prefixes and *one* verbal root. If taken at face value, this goes against the widely-assumed hypothesis (e.g. Rappaport Hovav & Levin 2001, Ramchand 2008a, den Dikken 2003, etc.) that there can be only one (independent) resultative secondary predicate per verb. However, the validity of this hypothesis can be maintained if we assume that, surface appearances notwithstanding, the syntactic structure of such doubly-prefixed 'verbs' in fact contains *two* VPs, each of which embeds a resultative small clause, but that one of the V's is *null*. I argue at length that for certain constructions discussed in this thesis, this is precisely the right approach; this constitutes the second main claim of the thesis. On the one hand, this aspect of the analysis has important consequences for the general theory of resultative secondary predication, since it upholds one of the basic hypotheses that are standardly assumed in the study of resultative secondary predication. On the other hand, this aspect of my analysis establishes a connection between such prefixed constructions and several otherwise unrelated constructions that have been analyzed as containing a null V, thereby tying in with the general theoretical implications posed by the existence of null Vs (cf. Ross 1979, McCawley 1979, van Riemsdijk 2002, Larson *et al*. 2006, Marušič & Žaucer 2005, 2006a, 2006b, etc.).

In turn, the hypothesis that cases such as (3) contain two VPs, with one of the V's null, leads to another important question, namely, the question of how the two VPs are combined. The thesis proposes that the two VPs are concatenated with a conjunction-like CausP (cf. Lidz & Williams 2002). One VP (or AspP) is merged as the specifier of CausP, the other VP (or AspP) as the complement of CausP, under a single Tense projection. This constitutes the third main claim of the thesis. This aspect of the analysis establishes a connection between such prefixed constructions and certain types of serial verb constructions in languages such as Edo, Korean, Kannada, Dàgáárè and Saramaccan (cf. Baker & Stewart 2002, Jeong 2006, Choi 2003, Lidz & Williams 2002, Hiraiwa & Bodomo 2008, Muysken & Veenstra 2006). Indeed, this link is also reflected through the phenomenon of internal argument sharing, which is well-known from the literature on serial verb constructions, and which will be shown to obtain between the two VPs in one of our three doubly-prefixed constructions as well. In view of some unclarities regarding the principles of concatenation of the two VPs, however, I point out that to a large extent, the three main claims that were just presented are independent of each other. For example, the correctness of the first claim does not depend on the correctness of the second and the third claim, neither does the correctness of the second claim depend on the correctness of the third claim.

In what follows, I will present a preview of the individual case studies, each of which constitutes a chapter of this thesis. In **chapter 1**, I discuss cases such as (4b), i.e. a reflexive-introducing use of *na-*, which has been discussed for Czech and Russian by Filip (1999, 2000, 2005a, 2005b) and Russell (1985) but it has not really received any attention in the syntactic literature on prefixes, getting mentioned only in footnotes (as in Pereltsvaig 2006, Romanova 2007, Gehrke 2008b).

(4) a. *govoriti*
talk
'talk'

b. *na-govoriti se*
on-talk self
'get one's fill of talking'

I treat the reflexive in (4b) as an 'unselected object' (a.k.a. 'fake object') which originates as the subject of a resultative secondary predicate headed by the prefix *na-*. I further discuss the fact that in this reflexive-introducing use, *na-* can also occur stacked over another resultative prefix, as in (5b).

(5) a. *pre-govoriti dvomljivca*
over-talk doubter
'talk over a doubter

b. *na-pre-govarjati se dvomljivcev*
on-over-talk self doubters
'get one's fill of talking doubters over'

Cases like (5b) are argued to contain *two* unselected objects, which provides prime evidence for the presence of two resultative secondary predicates, represented by the two prefixes. I propose that despite the fact that the doubly-prefixed case in (5b) shows only one verbal root, it has a structure with two resultative VPs. One resultative VP is merged as the specifier of the conjunction-like CausP, the other as its complement, as in (6).

(6) $[_{TP}\ [_{CausP}\ [_{Spec,CausP}\ [_{VP}\ [_{V}$ *govar-* $]\ [_{RP}$ *dvomljivcev pre-* $]]]\ [_{Caus'}\ [_{Caus^{o}}\ ]\ [_{VP}\ [_{V}\ ]\ [_{RP}$ *se na-* $]]]]]$

For singly-prefixed cases such as (4b), I propose that they can *also* have a double-VP structure, in which case they differ from (6) only in that the Spec,CausP-internal VP is not resultative; but they can also get a *single*-VP structure, with corresponding formal differences between the two parses. In addition to the presence of two unselected objects, the chapter offers other empirical evidence in support of the posited double-VP structure, such as aspectual patterning and various types of adverbial modification, and it also discusses the linearization of the posited structure.

In **chapter 2**, I discuss cases such as (2)-(3) above, repeated in (7), which have been discussed from both semantic and syntactic perspectives (Russell 1985, Filip 1999, 2000, 2005a, 2005b, Piñón 1994, Tatevosov 2007, Pereltsvaig 2006, Romanova 2007).

(7) a. *Děti na-rváli cvetóv na lugú*. (Russian)
children on-plucked flowers$_{GEN}$ in meadow
'The children picked a lot of flowers in the meadow.' (Filip 2000: 49)

b. *Konduktor uže na-ot-ryvala biltikov*. (Russian)
ticket-seller already on-off-tore tickets$_{GEN}$
'The ticket-seller has prepared a lot of little tickets by
tearing them off the roll.' (Romanova 2007: 273)

I show that in this use, *na-* can introduce various types of unselected objects, and that its measure meaning contribution not only *can* but in fact *must* be derived in a way that does *not* see the prefix as a quantificational functional element. Contra Pereltsvaig (2006) and Romanova (2007), I treat this *na-* as a resultative secondary predicate rather than a VP-external prefix. The verb in (7a) is analyzed as arising in a simple resultative VP, as in (8a). The doubly-prefixed 'verb' of (7b), however, is argued to arise in a structure with two

resultative VPs. The two VPs are concatenated with one resultative VP merged in the specifier of the conjunction-like CausP, the other as its complement, as in (8b).

(8) a. $[_{VP}\ [_{V}$ *rvá-* $]\ [_{RP}$ *cvetóv na-* $]]$
b. $[_{TP}\ [_{CausP}\ [_{Spec,CausP}\ [_{VP}\ [_{V}$ *rvá-* $]\ [_{RP}$ *biltikov*$_i$ *ot-* $]]]\ [_{Caus'}\ [_{Caus°}\ ]\ [_{VP}\ [_{V}\ ]\ [_{RP}$ *t*$_i$ *na-* $]]]]]$

The two VPs are shown to exhibit internal argument sharing. This explains why the doubly-prefixed instances of this construction do *not* occur with two internal arguments (unlike the construction from chapter 1). It also straightforwardly explains why the singly-prefixed instances of this *na-* construction license objects that are unselected objects with respect to the verbal root but the doubly-prefixed instances of this *na-* construction do *not* license objects that are unselected objects with respect to the prefixed stem that is the input to *na-* prefixation. The chapter also discusses the indefiniteness restriction on the internal argument that has been observed to hold for this construction, for which it argues that it can in fact be suspended and should thus *not* be indelibly built into the syntax of the construction. This restriction on the object, which is the subject of the resultative small clause, is assimilated to the indefiniteness restriction known from main-clause 'there-be' predicates.

Collectively, chapters 3 and 4 discuss the so-called perdurative, temporal-measure uses of Slovenian *pre-* and Russian *pro-*. I pave the way with a discussion of constructions such as (9), which are the topic of **chapter 3**.

(9) a. *Tone je v arestu pre-sedel dve leti.*
Tone is in prison through-sat two years
'Tone spent two years sitting in prison.'

b. *Petja pro-sidel v tjur'me 5 let.* (Russian)
Petja through-sat in prison 5 years (Borik 2002:
'Petja was in jail for 5 years / Petja spent 5 years in jail.' 57/2006: 80)

Schoorlemmer (1995), Klima (1974) and Chvany (1975) claim that in some cases, the temporal expression with this *pro-* can be an object, which would make the object an unselected object and the prefix a resultative prefix. Several other authors, however, mention this use of the Russian *pro-* as VP-external and the temporal expression in such constructions as an adjunct (e.g. Svenonius 2004, Ramchand 2004/2008b, Fowler 1994, 1996, 1997, Gehrke 2008b). I use several tests to argue that the temporal expression with the Slovenian *pre-* functions as an object rather than an adjunct, which makes it an unselected object and the prefix a resultative prefix. I also argue that the temporal expression of Russian cases such as (9b) is at least optionally parsable as an object, in which case *pro-* must be a resultative prefix. The construction is assigned a standard, single-VP resultative structure, as in (9').

(9') $[_{VP}\ [_{V}$ *sede-* $]\ [_{RP}$ *pre- dve leti*$]]$

In **chapter 4**, I set out by discussing another version of a measure use of Slovenian *pre-*, i.e., in constructions like (10).

(10) *Včer sva se pa ogromn pre-smejala.*
yesterday are self PTCL a-great-deal through-laughed
'Yesterday we spent a lot of time laughing.'

In this case, the measure expression ('a great deal') does *not* function as the object, the prefixed verb is based on the inherently reflexive *smejati se* (lit. laugh self) 'laugh', and the reflexive is shown *not* to be an unselected reflexive. I argue, however, that the prefix nonetheless heads a resultative secondary predicate. The obligatory measure expression in such cases originates inside the resultative small clause, as a complement of the prefix, along the general lines of (11). The cooccurrence of the measure expression argument and the reflexive is argued to be possible because the non-nominal measure expression is a PP-argument and as such does not depend on structural/accusative case.

(11) $[_{VP}\ [_{Spec,VP}\ \textit{se}\ ]\ [_{V'}\ [_{V}\ \textit{smeja-}\ ]\ [_{RP}\ \textit{pre- ogromn}]]]$

In some cases, this *pre-* also occurs stacked over another resultative prefix. Such doubly-prefixed cases are argued to differ from (10)/(11) only in that their structure contains two resultative VPs, which are concatenated along the general lines of (6)/(8b) above. In the second part of chapter 4, I turn to the Russian *pro-* construction which is an almost perfect parallel of the Slovenian *pre-* construction in (10). The only difference is that instead of a measure expression such as 'a great deal', we have a temporal-measure expression such as 'long'. I extend the analysis of the Slovenian *pre-* construction in (10) to these cases as well. This also covers the second parse of the Russian *pro-* construction in (9b) above; thus, even when the temporal expression in a Russian *pro-* construction does *not* function as a sentential object, the construction is argued to contain a *pro*-headed resultative secondary predicate, and the temporal expression to originate as a complement of the prefix. This general proposal also extends to cases such as (12). Its temporal expression acts as the complement of the resultative prefix, and the construction either gets a double-VP structure along the lines of (8b), but with only one of the VPs being a resultative VP, or it may potentially even get the simple, single-VP resultative structure in (11).

(12) *Galja pro-poloskala bel'e vse utro.* (Russian)
Galja through-washed laundry$_{ACC}$ all morning
'Galja spent all morning washing the laundry.' (Fowler 1997: 160)

Following chapter 4, the **Conclusion** summarizes the results and briefly mentions some consequences, limitations and possible extensions of the proposal.

2. Background

The previous section outlined the topic and the main claims of this thesis, and provided a preview of the contents of individual chapters. In the rest of this Introduction, I outline the background for the discussion in the 4 main chapters. Sections 2.1 and 2.2 are especially important, since their contents will be invoked repeatedly throughout the 4 main chapters.

2.1 Resultative prefixed verbs, particle verbs, and the structure of resultative secondary predication

This section presents the background assumptions about the syntax of secondary predication, and how prefixed and particle verbs fit into this picture.

2.1.1 *Prefixed verbs, particle verbs, and the structure of resultative secondary predication*

The literature often draws a direct parallel between one type of Slavic prefixation and resultative secondary predicates more generally (e.g. Spencer & Zaretskaya 1998a, Svenonius 2004). Most typically, the parallel is established between the syntactic structure of Slavic resultative prefixed verbs and Germanic resultative particle and prefixed-verb constructions, such as the English in (13).

(13) a. *write the car off* b. *throw the guests out*

Germanic resultative particle and prefixed-verb constructions, such as (13), are widely assigned the basic structure of a VP which takes as its complement a small-clause structure with a resultative secondary predicate, as in (14) (e.g. Hoekstra 1988, 2004, Bowers 1993, 1997, Levin & Rappaport Hovav 1995, Ramchand & Svenonius 2002, den Dikken 2003, McIntyre 2004, Mateu 2005, Folli & Harley 2005, Ramchand 2008a; for an overview of this and an alternative approach, see McIntyre 2007). The same has also been proposed for resultative Slavic prefixes (Svenonius 2004).

(14) [V *write* [ResultP/SC *the car* [PP *off*]]][2]

Resultative Slavic prefixed verbs and Germanic resultative particle and prefixed-verb constructions share several features. The following seem most relevant. To begin with, they share the presence of a prepositional element in the verbal cluster (see Emonds 1985 for an account of English particles as Ps, and Matushansky 2002, Žaucer 2002, 2005a, Arsenijević 2006, Biskup 2007, Gehrke 2008a, 2008b, Steriopolo 2007, Gribanova 2008, etc. for the claim that Slavic prefixes are Ps). Secondly, both Germanic particle verbs and Slavic resultative prefixed verbs have the capacity to change the argument structure of the verb they combine with, so that the particle/prefixed verb can appear with a direct object that the verb cannot select in the absence of the particle/prefix, as in (15). In other words, both Germanic particles and Slavic resultative prefixes license 'unselected' (or 'fake') objects.

(15) a. *write the car* *(*off*) b. * (*od-*)*pisati avto*
off-write car
'write off the car'

[2] Typically, the result argument originates as the external argument/subject of the small clause, as in (14). In this case, the particle is often seen as syntactically intransitive (e.g. Emonds 1985), or as having a null pronoun in its complement (Svenonius 1996). In special cases, though, particles/prefixes are also known to be transitive, and the result argument may sometimes originate as the internal argument of the prefix/particle (cf. Svenonius 2003, McIntyre 2004, Romanova 2007). This will be important in chapters 1, 3 and 4.

Such unselected objects include unselected reflexives, as in (16) (see Hoekstra 1988, Levin & Rappaport Hovav 1995 for Germanic, Spencer & Zaretskaya 1998a, 1998b for Slavic.)

(16) a. *wear oneself* *(*out*) b. * (*z-*)*laufati se*
out-run self
'wear oneself out running/run oneself exhausted'

Sometimes the reflexive is the only kind of unselected reflexive a Slavic prefixed verb accepts, shunning any other kind of pronominal or nominal object; this is also known from various Germanic resultative constructions, as in *sing oneself hoarse* (cf. **sing Peter hoarse*) or *talk oneself into a corner* (cf. **talk Peter into a corner*). In addition, the Slavic unselected reflexive can sometimes only take the form of a reflexive clitic, as in (17).

(17) a. *(*za-*)*govoriti se* b. * (*za-*)*misliti se*
behind-talk self behind-think self
'talk oneself into a corner' 'think oneself into a stupor'

A similar contrast is again found in Germanic, with Dutch showing resultatives where only the weak reflexive pronoun can be used.[3] Regardless of the exact treatment one assumes for the reflexive clitics in (16)-(17), they can still be considered (a reflex of) an unselected internal argument of the verb, as claimed in Spencer & Zaretskaya (1998a, 1998b), Babko-Malaya (1997), Svenonius (2004), etc.

The third important shared feature of resultative Germanic particle verbs and Slavic prefixed verbs is the often clear predicative relation that seems to hold between the object and the prefix/particle, in both spatial and more figurative uses of the prefixes/particles. (18) gives some pairs from Slovenian, (19) some pairs from English (the pair in (19g)-(19h) contains an adjectival resultative).[4]

(18) a. *pri-makniti stol* b. *stol je pri nečem*
at-move chair chair is at something
'move the chair to an (implitic) location' 'the chair is at something'

c. *pri-garati denar* d. *denar je pri nekom*
at-toil money money is at someone
'acquire money by toiling' 'the money is at someone'

(19) a. *switch the lights on* b. *the lights are on*
c. *call the concert off* d. *the concert is off*
e. *blow the balloon away* f. *the balloon is away*
g. *sing oneself hoarse* h. *one is hoarse*

[3] English does not have weak reflexive pronouns. Oya (2002) argues that this is why English, unlike German, does not use an unselected reflexive with resultative uses of verbs which express the subject's maintenance of a spatial configuraton, as evidenced by the contrast between **He stood himself sore* and the German *Er stand sich müde* (lit. he stood self sore) 'He became tired by standing' (Oya 2002: 962, 972).

[4] The fact that not all combinations of particles and particle-verb objects can be used in predicative constructions such as (19) is sometimes taken as a counterargument to the resultative small-clause account of particle verbs. See McIntyre (2007: 13) for the flaws of this reasoning.

Closely related to the previous one, another shared feature of resultative Germanic particle verbs and Slavic prefixed verbs is their complex event structure, the presence of a result state subevent. This is evidenced most clearly by the felicity of modification with adverbials which target specifically the result state, such as the result-state durative adverbial in (20) (Dowty 1979, Piñón 1999, Rapp & von Stechow 1999, etc.).[5]

(20) a. *pri-makniti stol za 10 minut*
at-move chair for 10 minutes
'move the chair to an (implicit) location for 10 minutes'

b. *turn the lights on for an hour*

The small-clause structure in (14) straightforwardly explains these shared features of resultative Germanic particle verbs and Slavic prefixed verbs. In these structures, the verb does not take a nominal as its complement but rather a small clause (i.e. a tenseless subject-predicate structure), with the particle/prefix representing the predicative head. What ends up as the direct object is thus in fact an argument in the small clause. This directly explains the occurrence of unselected objects, i.e. why the direct object of resultative prefixed verbs can sometimes be a nominal that cannot be selected by the verb in the absence of the particle/prefix. In the same vein, the small-clause structure also directly explains the often clear predicative relation between the object and the prefix/particle, since the object indeed originates as the subject of the prefix-/particle-headed secondary predicate. Furthermore, the small clause also directly explains the presence of the independently modifiable stative subevent.

2.1.2 *Only one resultative secondary predicate per verb*

It is widely assumed that there can be only one resultative secondary predicate per verb and thus only one stative subevent in a complex event denoted by a VP (e.g. Rappaport Hovav & Levin 2001, Ramchand 2008a, den Dikken 2003, etc.). This is motivated theoretically through the fact that the resultative secondary predicate is in the complement of the verb, and given binary branching, the verb can have only one complement. This is also motivated empirically, namely, by the fact that resultative particles in Germanic generally cannot cooccur, (21a), and the same holds for resultative adjectives, (21b), for resultative particles and adjectives, (21c), and for resultative particles and inseparable prefixes.

(21) a. **send the letters up away* (den Dikken 2003)
b. * *pound the meat soft flat*
c. **wipe the table clean off / off clean*
d. * *dat dat me schleht uit zal overkómen* (Dutch)
that that me badly out will over-come (den Dikken 2003)

[5] Despite these similarities, there are, of course, considerable differences in the syntactic autonomy of these elements both between the Germanic group as a whole (particle, separable prefix, inseparable prefix) and the Slavic group as a whole (inseparable prefix only), and also across different Germanic languages (cf. den Dikken 2003) and even among different uses of the same particle within individual Germanic languages (e.g. *wear oneself out* vs. *outshout someone*).

Now, a PP that is embedded under the projection of the particle, as in *run down into the woods*, is often analyzed as a full second small clause rather than just a PP (den Dikken 1995, Svenonius 2004: 245, etc.). Moreover, den Dikken (1995) also mentions double particle constructions, such as *I'll send the letter on over to Grandma's house* (op.cit.: 80). This may make one doubt the validity of the above mentioned hypothesis according to which there can be only one resultative secondary predicate per verb. However, even if the nested particles in such cases come in a sequence of small clauses, their subject is shared, i.e. the structure only introduces one argument. In the case of a full prepositional phrase following a particle (*run down into the woods*), this aspect of the structure is also no different. Full prepositional phrases do come with their internal argument, to which they assign case, but if they are represented as a separate small clause embedded under the small clause of the particle, the subject of the two small clauses is still shared between the two. Also, the small clauses of such nested particles/PPs are always part of a single stative subevent within the complex event of the VP. Accordingly, such structures do not allow two result-state durative adverbials or two instances of the restitutive *again*. Therefore, we can conclude that the hypothesis that there can be only one independent resultative secondary predicate (i.e. only one result-state subevent) per verb remains valid.[6]

2.2 'Internal'/'lexical' vs. 'external'/'superlexical' Slavic prefixation

It is widely held that not all Slavic prefixation follows the patterns established in the previous section. In this section, I introduce the distinction between internal and external prefixes, both from an empirical perspective and from the perspective of the structures that one prominent line of research assigns to the two (2.2.1). I relate the two perspectives by explaining how the structures explain the empirical observations (2.2.2).

2.2.1 *'Internal'/'lexical' vs. 'external'/'superlexical': initial observations and structures*

Slavic verbal prefixes are often said to fall into two big classes, 'internal'/'lexical' and 'external'/'superlexical'. In Svenonius' (2004: 205) words: "The lexical prefixes are like Germanic particles, in having resultative meanings, often spatial, but often idiosyncratic. The superlexical prefixes are like adverbs or auxiliary verbs, having aspectual and quantificational meanings." Or in Ramchand's (2008b) words: "one subclass, the lexical prefixes, interact with the base lexical meaning of the root to create new event descriptions; the other subclass, the superlexical prefixes, are more semantically regular and have an adverbial or modificatory effect on the roots that they combine with"; also, "superlexical prefixes add a predictable, adverbial-like, measure-like or modificatory meaning to the event". Two examples of internal/lexical/resultative prefixes—with spatial or idiosyncratic meaning contributions—are repeated from above in (22) below.

(22) a. *pri-makniti stol*
at-move chair
'move the chair to an (implicit) location'

b. *od-pisati avto*
off-write car
'write off the car'

[6] Particle verbs can also take infinitival complements, as in *He went off to sit down* (den Dikken 1995). Such cases contain two VPs, so the two particles are not a problem for the hypothesis of one resultative secondary predicate per verb.

Some examples of external/superlexical prefixes—with adverbial-like or measure-like meaning contributions to the base verb—are in (14); the underlined part of the translations in (23) is the meaning contributed by the prefix.

(23) a. *do-čitat'* (Russian)
to-read
'finish reading' (Ramchand 2004: 340)

b. *po-sedeti*
over-sit
'sit for a little while'

c. *pro-sidet'* (Russian)
through-sit
'sit for a certain time' (Ramchand 2004: 340)

e. *za-pet'* (Russian)
behind-sing
'begin to sing' (Babko-Malaya 2003: 25)

f. *na-brat'* (Russian)
on-gather
'gather a sufficiently large quantity of' (Svenonius 2004: 234)

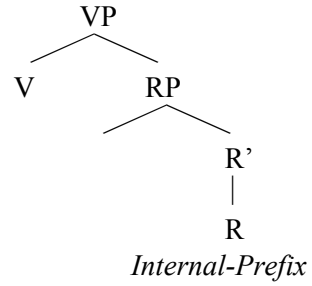
The general idea of the distinction between two classes of prefixes has been around for quite a long time, as it originates in the work of pre-generative Slavic linguists (e.g. Isačenko 1960). In the wake of a renewed interest in syntactic word decomposition (cf. Baker 1988, Pesetsky 1995, Marantz 1997, etc.), the distinction has also made its way into syntactic accounts of prefixation such as Schoorlemer (1995), Verkuyl (1999), Babko-Malaya (1999, 2003), Di Sciullo & Slabakova (2004), Svenonius (2004), Ramchand (2004/2008b), Slabakova (2005), Istratkova (2006), Richardson (2006), Romanova (2007), Gehrke (2008b), Tatevosov (2008), etc. Even though not all of these authors implement the distinction in the same way, they all argue that the distinction reflects different morphosyntactic structures such that external/superlexical prefixes originate higher in the tree than internal/lexical prefixes.

A prominent line of research sees internal/lexical prefixes as resultative secondary predicates (along the lines mentioned in section 2.2.1 above), thus placing them *inside* the VP, in a resultative small clause; external/superlexical prefixes, on the other hand, are seen as sitting *above* the VP (Svenonius 2004, Ramchand 2004/2008b, Istratkova 2006, Romanova 2007, Gehrke 2008b, Tatevosov 2008[7]; cf. also Dimitrova-Vulchanova 1999). In

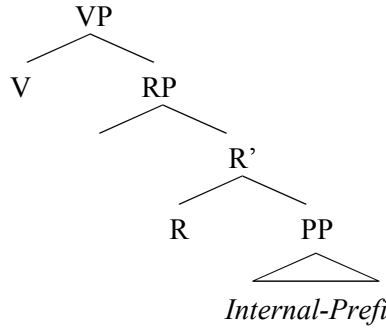
[7] To be precise, Tatevosov (2008) actually posits a third class, which he calls "intermediate prefixes" and treats as located in-between the VP and the vP. At this point, this additional distinction is not important.

Svenonius's (2004) implementation, internal prefixes are below the VP, either directly in the ResultP (op.cit.: 212) or in a PP within the ResultP (op.cit.: 243), as in (24).[8]

(24a)



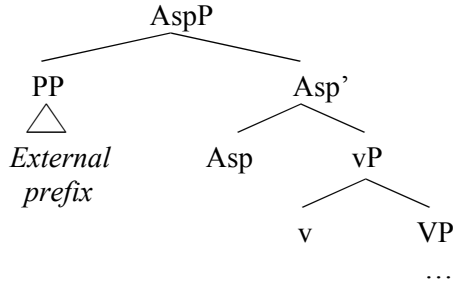
(24b)



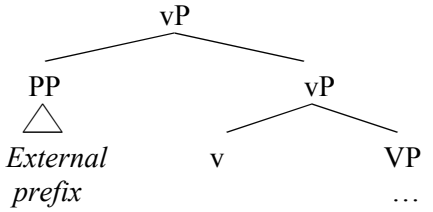
(Svenonius 2004)

External prefixes may come in two kinds. One type is located above the VP/vP in various FPs/AspPs, the other is adjoined to the VP/vP (op.cit.: 231), as in (25).[9]

(25a)



(25b)



(Svenonius 2004)

In this thesis, I will adopt the structure in (24b) as the structure of internally prefixed verbs.

2.2.2 *What this structural split explains, and how*

2.2.2.1 By assigning internally prefixed verbs the structure in (24), this account follows the tradition of the small-clause approach to resultative secondary predication. Therefore, the proposal directly derives the main features that the previous section (2.1) pointed out as characteristic of resultative particles and prefixes. For example, it directly explains the fact that internal prefixes affect the argument structure of the base verbs and that internally prefixed verbs can license unselected objects, as in *(*za-*)*liti klet* (lit. behind-pour basement) 'flood the basement' or *(*od-*)*pisati avto* (lit. off-write car) 'write off a car' from above. It directly explains the fact that internally prefixed verbs denote complex events, with an independently modifiable stative subevent (cf. (20) above). And with the use of the dedicated

[8] Another variant of the structures in (24) that Svenonius (2004: 245) explores is with the internal prefix heading a PP which sits in a Spec of or adjoined to one of the XPs of a highly articulated result part of the clause; these differences are irrelevant at this point.

[9] The distinction between internal and external prefixation, as represented in the second line of approach, i.e. (24) vs. (25), can by and large also be thought of in terms of the distinction between L-syntax and S-syntax of Hale & Keyser (2002 and earlier work), and it is partly also reminiscent of the distinction between inner and outer word-formation of Marantz (2003, 2007).

VP-internal functional projection ResultP, it seems to build into the structure the hypothesis that there can be only one independent resultative secondary predicate/only one stative subevent per verb, thereby explaining the fact that we cannot have structures like (26).[10]

(26) **pri-z-vezati psa*
at-together-tie dog

cf. ✓*pri-vezati psa*; ✓*z-vezati psa*
at-tie dog; together-tie dog
'tie the dog to an implicit) location'; 'tie the dog up'

At the same time, by assigning externally prefixed verbs the structure in (25), the account derives the observation that external prefixes, such as those in (23) above, do not seem to affect the argument structure of the base verb. Also, with external prefixes either adjoined to the vP or located in the specifiers of various different AspPs/FPs (in the spirit of Cinque 1999), it derives the observation that there can apparently be more than one external prefix per verb, as in (27). In the same vein, it is also assumed to derive the observation that in a stack of prefixes, the internal prefix will always be stem-adjacent and any non-stem-adjacent prefix will be an external prefix, as in (27) (Svenonius 2004: 229).[11]

(27) a. *na-vy-sižívat* (Russian)
on-out-sit
'hatch a quantity of' (Romanova 2007: 2, fn. 1)

b. *pri-vz-digniti*
at-up-lift
'lift up a little'

c. *po-pri-vz-digniti*
across-at-up-lift
'lift up a little one by one'

c. *po-na-vy-našivat'* (Russian)
across-on-out-carry
'to take out a lot of x one after another' (Filip 2000: 75)

What this section presented was the reasoning of Svenonius (2004), Ramchand (2004/2008b), Romanova (2007), etc. As already noted, I will adopt the small-clause account of internal prefixes. But the above discussion is *not* intended as my adoption of the view that the non-stem-adjacent prefixes in (27) are VP-external. For example, (27a) will be explicitly argue to contain two VPs, each with a resultative prefix, but with one of the V's null. Also, Svenonius's (2004: 229) conclusion from the previous paragraph, whereby the combination of (24)-(25) predicts that in a stack of prefixes, any non-stem-adjacent prefix will be VP-external, ignores the option of having two prefixes represent a structure that corresponds to Germanic double particle constructions, such as den Dikken's (1995: 80) *I'll send the letter on over to Grandma's house*. As discussed in section 2.1.2, these are both treated as VP-internal, though as part of the same result subevent. In passing, chapters 1 and 2 will suggest that cases like (27b) contain a *single* VP, but the stacked *pri-* is still merged VP-internally, inside the same complex RP as the stem-adjacent *vz-*, as a kind of modifier of result.

[10] If there appears to be a structuer that violates this, the stem-adjacent prefix must have been reanalyzed as part of the verb, as in [VP [V^0 [[P^0] [V^0]]] [RP [PP]]] (following a hint in Svenonius 2004: 234).
[11] See footnote 10 above.

2.2.2.2 In addition to the features above, the internal/external split in (24)-(25) is often said to have further empirical merits. For example, Slavic prefixed verbs exhibit 'secondary imperfectivization' (akin to English progressivization, cf. Borer 2005b, Arsenijević 2006, but also Filip 2005a, 2005c). An imperfective unprefixed verb, such as *liti*^{IMPF} '(be) pour(ing)', becomes perfective after prefixation, as in *za-liti*^{PF} 'flood'; this can then be turned imperfective with the addition of a suffix, as in *za-li-va-ti*^{IMPF} '(be) flood(ing)'.[12] Internal and external prefixes are said to split with respect to this phenomenon, with internally prefixed verbs generally allowing secondary imperfectivization and internally prefixed verbs generally disallowing it (on the progressive reading) (e.g. Svenonius 2004: 229). The syntactically distinct positions assigned to internal and external prefixes in (24)-(25) can easily capture this. For example, such an approach can assume that external prefixes and the secondary imperfective compete for the same AspP, which preempts their cooccurrence. Or it can assume that external prefixes are higher than the secondary imperfective FP, and then it is a matter of simple selection; external prefixes simply do not select for perfective complements (ibid.). Such a structural explanation in terms of scope/ relative syntactic height has great appeal, but it predicts categorical patterning: the secondary imperfective will be generally possible with internal prefixes and always impossible with external ones.

However, the patterning is not categorical. Svenonius (2004: 229) notes himself that the restriction on secondary imperfectivization of externally prefixed verbs does not hold for Bulgarian. Despite adopting the VP-internal/VP-external split, Gehrke (2008b: 177-181) argues that the so-called 'empty' prefixes in Russian and Czech are not VP-external but internal, and that they still generally shun secondary imperfectivization on the progressive reading. Žaucer (2005b) points out for Slovenian that the availability of natural secondary imperfectives of internally-prefixed verbs is a strong tendency but far from an exceptionless generalization; for example, the internally prefixed *pri-laufati* (lit. at-run) 'arrive running', *u-hoditi čevlje* (lit. in-walk shoes) 'break in the shoes', and *pre-spati predavanje* (lit. through-sleep lecture) 'sleep through the lecture' all shun secondary imperfectivization (cf. also Biskup 2007). Žaucer (2005b) also notes that it is often the case that if the secondary imperfective is *forced* on an externally prefixed verb, it predictably scopes over the prefix, so the AspP of the secondary imperfective still has to be higher than the prefix. And finally, it is known that there exist verbs where an external prefix attaches to a perfective base (e.g. Filip's [2000: 75] Russian *na-vy-nosit* [lit. on-out-carry] 'to amass by taking out'), so a simple top-down selection on the part of external prefixes also cannot work. It appears, then, that an explanation in terms of syntactic scope cannot be correct, and that the validity of secondary imperfectivization as a diagnostic is highly questionable. This will also be the conclusion stemming from my four case studies, since the prefixes discussed there generally shun secondary imperfectivization, but will all be argued to be internal.

Similarly, it has been suggested that the syntactic split in (24)-(25) explains the absence of gerundial nominalizations with external prefixes, which contrasts with the existence of even root nominalizations with internal prefixes (e.g. Svenonius 2004: 240-1). To derive this, the syntactic-split account in (24)-(25) must merely assume that external prefixes, unlike internal ones, attach above the point at which nominalizations are formed.

Again, however, it is not clear that the explanations should have to do with the internal/external split. The first thing that suggests so is the fact that the lack of gerundial

[12] I am following the Slavic tradition here in the use of the terms 'perfective' and 'imperfective', even though they are known to be problematic; this issue is not important for the point being made here.

nominalizations seems to be language-specific, with Slovenian allowing many things that Russian does not. Secondly, one type of English resultatives does not allow gerundial/-*ing* nominalizations with *of*. Carrier & Randall (1993: 201) note contrasts such as *The watering of tulips flat is a criminal offence in Holland*, *The slicing of cheese into thin wedges is the current rage* versus **The drinking of oneself sick is commonplace in one's freshman year*, **What Christmas shopping means to me is the walking of my feet to pieces*. Some take such contrasts to reflect a difference between two types of resultatives (e.g. Bowers 1993, 1997), others claim that a single structure is still waranted (Hoekstra 2004: 341-3). Importantly, though, both types of accounts have the AP/PP in the nominalization-shunning *drink oneself sick* and *walk one's feet to pieces* firmly inside the VP. Thirdly, there exist classes of prefixed verbs that the split-syntactic account considers resultative but they still appear to shun root nominalizations as a class, such as sound-emission manner-of-motion verbs (e.g. *pri-jokati* [lit. at-cry] 'arrive crying' – **pri-jok*, *pri-vriskati* [lit. at-yodel] 'arrive yodeling' – **pri-vrisk*, *pri-stokati* [lit. at-moan] 'arrive moaning' – **pri-stok*; note that the unprefixed *jok* 'a cry/crying', *vrisk* 'a yodel/yodeling', *stok* 'a moan/moaning' are all existing words). Therefore, even though a structural account may be in order for many of the nominalization restrictions, it is not clear that explanations have to do with the internal/external prefix split. And again, this will also stem from the subsequent chapters, since some of the prefixes discussed there generally shun nominalizations, but will be argued to be internal.

2.3 Alternative views on 'internal' vs. 'external' prefixation

This section presents some alternative views of Slavic prefixation, as well as some reasons for why I do not adopt them. First, I briefly mention a view according to which some prefixes that are typically considered VP-external are in fact resultative (2.3.1). Then I present a view (Slabakova 2005, etc.) which also subscribes to the syntactic split of external and internal prefixes but encodes it differently from the structures in (24)-(25) (2.3.2). Section 2.3.3 then discusses the complex-predicate accounts of Basilico (2008), Filip (2003), and Borer (2005a), and section 2.3.4 presents the view that prefixes are in causative little *v* (Slabakova 1997, Travis 2003). These sections serve the prupose of avoiding some digressions in the discussion of the main chapters, but they are not crucial for the discussion in the main chapters, so impatient readers can jump right on to chapter 1.

2.3.1 *'Internals' and 'externals' are both resultative*

2.3.1.1 Despite the prevalence of the view that structurally splits internal and external prefixes, I note that one can also find the claim that 'external' prefixes are resultative as well.

In semantic and lexical-semantic accounts, the idea that all prefixes are resultative is expressed in Brecht (1985), Klein (1995), Strigin & Demjjanow (2001), Bertinetto (2001), Žaucer (2002), etc.). This position is motivated mostly by the following facts. Whether 'internal' or 'external', stem-adjacent prefixes typically trigger perfectivity, and verbs with either an 'internal' or 'external' stem-adjacent prefix often seem to denote a change-of-state event. These authors thus hypothesize that all prefix-triggered perfectivity is a sign or consequence of a prefix-introduced resultative change of state.[13,14] Secondly, both types of

[13] In a lexical-semantic approach, Žaucer (2005a) makes an exception for the 'pofective' *po-*, treating it as non-resultative but also as non-perfective. I no longer adhere to this view. I will not discuss this prefix here.

prefixes belong to the category of prepositions (e.g. Matushansky 2002), and they are both realized by the same prefixed prepositions. Thirdly, prefixes comprise only prepositions that have a locative meaning (possibly in addition to a directional meaning) but not prepositions that only have a directional meaning (Žaucer 2002, 2005a, Gehrke 2005, 2008a, 2008b). This can be made sense of if perfectivizing external prefixes are also stative predicates but has no motivation if they are VP-external adverbial/aspectual elements (Žaucer 2002, 2005a).

Among syntactic accounts, I only know of three proposals that advance the idea that (some) 'external' prefixes are to be treated as VP-internal resultative Ps (Žaucer 2005b, Arsenijević 2006, 2007, Biskup 2007). In what follows, I give a very brief outline of the structures they propose. The proposals of this thesis will share some important claims with each of these works, but I will distance myself from the specifics of all of three proposals. I mention them here to avoid some digressions in the case studies in the subsequent chapters.

2.3.1.2 Žaucer (2005b) discusses Slovenian 'inceptive' *za*-verbs, as in *za-peti pesem* (lit. behind-sing $song_{ACC}$). He assumes that they have the interpretation 'begin to sing a song'/'break into a song' and assigns them a two-VP structure with a resultative prefix, as in (28), which derives an interpretation such as 'fall into singing a song'. The verbal root (e.g. 'sing') is inserted in the lower V and the upper V is occupied by a phonologically null verb.

(28) $[_{vP}\ [_{Spec,vP}$ *Peter* $]\ [_{v'}\ [_{v}$ INIT $]\ [_{VP}$ BECOME $[_{RP}\ [_{Spec,RP}$ ~~*Peter*~~ $]\ [_{R'}\ [_{R}$ RES $]\ [_{PP}$ *za-* $[_{VP}$ *peti pesem* $]]]]]]]$

This proposal has some problems, and since I also no longer endorse the basic idea that the structure of these particular Slovenian verbs contains two VPs, I will not review this proposal any further here (though I *do* still endorse the claim that the prefix is resultative).[15,16]

Arsenijević (2006, 2007) gives all 'external' prefixes a two-VP structure. In the case of multiply prefixed cases, such as (29), each prefix is part of a different VP, as in (30).

(29) *Jovan je po-iz-bacivao pse iz sobe.* (Serbo-Croatian)
Jovan is over-out-threw dogs from room
'Jovan threw the dogs out of the room so that the eventuality of throwing distributes over some contextually available set.' (Arsenijević 2007: 28)

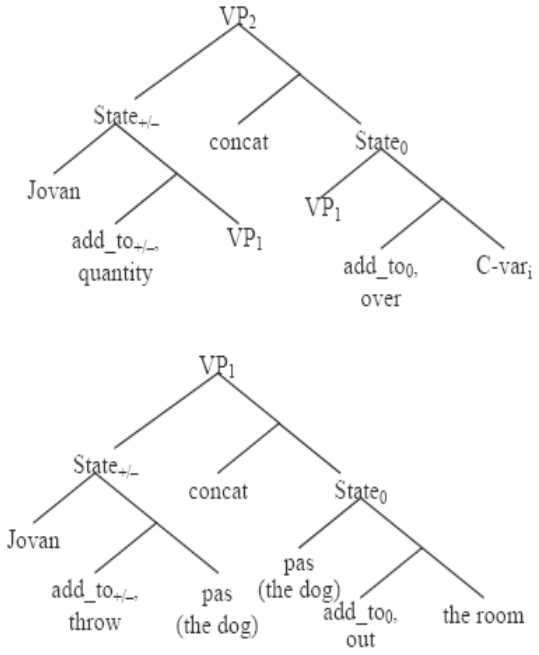
---

[14] The implication is sometimes wrongly taken as bidirectional, but it only goes one way. Prefix-induced perfectivity signals a prefix-introduced change of state, but not all perfectivity is a result of a change of state (e.g., Slovenian also also has the perfective suffix *-n(i)-*). This also doesn't mean that all prefixation has to lead to a change-of-state interpretation; there may be VP-internal prefixes which do not trigger a change of state.

[15] In their transitive use, Slovenian *za*-verbs are not inceptives (contrary to Žaucer 2005b). *Za-peti pesem* (lit. behind-sing song) is not interpreted as 'start to sing a/the song'/'break into a song' but simply as something like 'sing a song' or 'sing out a song'. This can be shown with adverbs of completion (e.g. 'halfway', 'completely'). Cf. also Młynarczik (2004: 81, fn. 2), who states that "the Polish verb *zagrać* [lit. behind-play, R.Ž.] cannot be correctly described as referring to the initial point of the event". Even Russian *za*-transitives are unclear: Gehrke (2008b: 157) gives the gloss 'to (begin to) sing a/the song', stating that "the most natural translation of verbs containing the ingressive *za-* should be a plain verb, in these cases *he sang a song* […]" (p. 173, fn. 32).

[16] It may well be, however, that some Russian *za*-inceptives *do* warrant some sort of a two-VP structure. This would apply especially to some forced examples from the literature, such as Svenonius's (2004: 206) *za-brosat' mjač* (lit. behind-throw ball) 'begin to throw the ball', which three of my four linguist informants and another nonlinguist informant refuse to accept even as forced.

(30)



(Arsenijević 2007: 29)

The two trees in (30) are combined, with the bottom tree inserted into the top tree as indicated. I will comment on the comparison of the proposal I will make in the thesis with the proposal of Arsenijević (2006, 2007) in a few places in the discussion. Let me just note here that whereas I would agree with his basic claim that cases like (29) have a two-VP structure (but I would not agree about that for all stacked prefixes!), my two-VP structure would be importantly different from the one in (30), which does not seem to derive the attested interpretation of 'cause dogs to be (spread out) over [some implicit location] by throwing them out of the room'.

Finally, Biskup (2007) claims that all Slavic external prefixes are resultative, offering some interesting counterarguments to the Svenonius-(2004) view. But at the same time, at least some of the prefix uses that he mentions would in fact be seen as instances of internal prefixation in the internal/external-split accounts of Schoorlemmer (1995) and Gehrke (2008b). Also, the only structure he operates with is one of a simple small-clause resultative VP, leaving cases of stacked prefixes undiscussed.

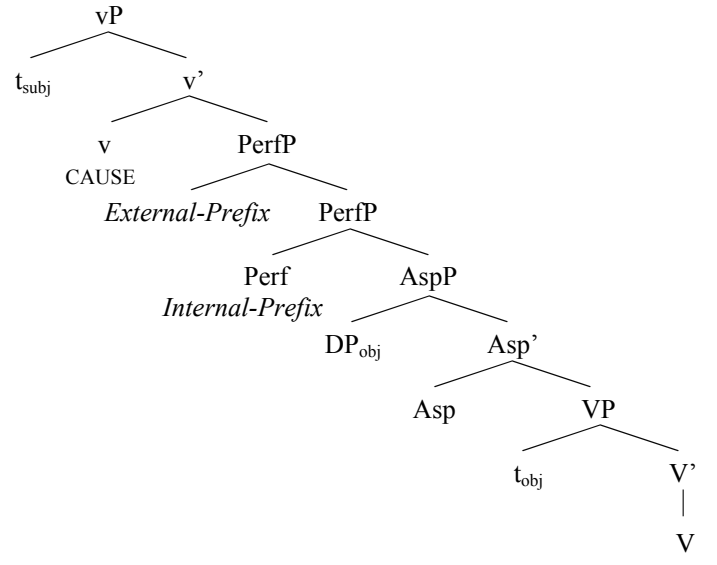
Unfortunately, Žaucer (2005b), Arsenijević (2006, 2007) and Biskup (2007) all either have obvious problems or leave rather many things unaddressed/not worked out. I will agree with their main claim, though, i.e., that despite exhibiting several diagnostics of 'external' prefixes, the four constructions discussed contain resultative prefixes.

2.3.2 *'Internals' in PerfectivityP, 'externals' adjoined to it (Slabakova 2005, etc.)*

Besides the Svenonius (2004)-style approach sketched in 2.2, the other main line of approach to Slavic prefixation does not follow the small-clause approach to resultative secondary predication from sections 2.1 and 2.2. Rather, it introduces *both* classes of prefixes above the VP, but internal prefixes are merged closer to the VP than external prefixes. This general line of approach includes Slabakova (2005), Richardson (2006) and Istratkova (2004), and is

related to many other proposals that do not discuss the distinction between the two classes but still place *all* prefixes above the VP, such as Fowler (1994, 1996), Slabakova (1997, 2003), Travis (2003, 2005). In Slabakova's (2005) implementation, an internal prefix is located in a PerfectivityP just above the VP; external prefixes sit above the internal one, adjoined to this PerfectivityP (Slabakova 2005: 332-333), as in (31).[17]

(31)



(Slabakova 2005)

Just like the Svenonius (2004)-style account in 2.2.1 above, this proposal also derives the observations that there can be just one internal prefix per verb and multiple external ones, and that external prefixes stack over internal prefixes rather than the other way round. In what follows, I will mention my reasons for adopting the small-clause approach to resultative prefixation over the one in (31).

The main advantage that the small-clause approach to internal prefixation has over (31) is its ability to make sense of unselected objects. In the small-clause approach, these are arguments of the resultative predicate and are thus in no direct semantic-selection relation to the verb. Now, Slabakova (2005) claims that since her telicity-encoding PerfectivityP is inside the vP, i.e. within the domain of the argument structure of the verb, her account explains the argument structure effects of prefixes. However, I do not see how the structure in (31) can actually do that. The object will always start out as the argument of the verb stem and so the s-selection of the verb presumably cannot be canceled.

The same point can be made by approaching the facts from another perspective. In the small-clause account of internal prefixation, it is the secondary predicate of the prepositional prefix that contribues the result state. In Slabakova's (2005) account, however, it is the VP which is seen as denoting the result state, and the PerfectivityP is seen as a telicity projection (i.e. essentially a projection encoding the transition/BECOME predicate) (op.cit/: 332). This may make sense in cases such as *z-lomiti* (lit. off-break) 'break', in which the V-inserted verbal stem could be seen as providing the result state (cf. also Baker 2003: 320). However, this does not make sense semantically in the case of unselected-object

[17] In addition to internal and external prefixes, Richardson (2006) actually a third class of VP-external prefixes, namely, "purely-perfectivizing prefixes".

prefixed verbs (e.g. *od-pisati avto* [off-write car] 'write off a car'): if one cannot 'write a car', there is no sense in which the state of being written can be ascribed to a car (cf. Baker 2003: 222, Fn. 24). Or from the other perspective, (31) cannot explain why the direct object of internally prefixed verbs or the derived subject of intransitive prefixed verbs often seems to be in a clear predicational relation with the prefixal preposition rather than just in some random, idiosyncratic relation to it (see 2.1.1 above for data); the small-clause account, on the other hand, does that. And since the importance of unselected-object examples is sometimes being downplayed, let me point out that there is at least one other big class of prefixed verbs with which the VP-as-result and the prefix-as-BECOME analysis does not make sense. These are sound-emission manner-of-motion predicates, such as (32).

(32) *Kokoška je pri-kokodakala do ograje*.
hen is at-cackled to fence
'The hen came to the fence cackling.'

With the verb root/V being 'cackle', the V clearly cannot describe the result state, since the result state of (32) is by no means one where the hen is undergoing cackling but one where the hen is at the fence. In fact, there may well be no overlap between the hen's cackling and the hen's being at the fence; the cackling may very well stop at the point when the hen's being at the fence starts. So Slabakova's (2005) model cannot be used for sound-emission manner-of-motion prefixed verbs.

2.3.3 *Complex predicate accounts (Basilico 2008, Filip 2003, Borer 2005a)*

In the same sense as the previous section discussed for the account of Slabakova (2005), unselected-object prefixed verbs and sound-emission manner-of-motion prefixed verbs cannot be made sense of by the complex-predicate account of prefixed verbs in Basilico (2008), where the uncategorized root and the prefix combine to denote the result state, which is then predicated of the internal argument (op.cit.: 1721). The same goes for the complex-predicate account of Filip (2003), where the verbal head and the prefix's prepositional head merge to yield another V^0 before combining with an argument.[18]

A different kind of complex-predicate account is given in Borer (2005b). For Borer, resultatives (including adjectival resultatives, Goal-motion constructions and resultative particle constructions) do not decompose into two subevents. They are some sort of complex V-heads, and the 'secondary predicate' in such constructions is basically a bare modifier which comes with no functional event structure and does not license any event participants (op.cit.: 220-232). Furthermore, Borer argues that the verbal domain has a single 'quantity' projection, and she ultimately equates the structure of quantity-interpreted resultatives, such as (33a), and that of any other kind of quantity-interpreted verbal predicate, such as *read the text in ten minutes* (i.e. what is often seen as direct-object induced quantity, cf. Ramchand

[18] In Germanic languages, several syntactic issues, such as gapping (cf. e.g. den Dikken 1995: 42-3, but also Farrell 2005: 114-5) have been invoked in the small-clause vs. complex-predicate debate with respect to particle verbs. Such phenomena cannot be brought to bear on the debate with respect to Slavic prefixed verbs because of the strict inseparability of the verb and the prefix. See also McIntyre (2007: 11-5) for a brief comparison of the merits of the two approaches.

2008a). For Borer, (33a) does not have the more commonly posited neo-Davidsonian structure in (33b) but rather the structure in (33c).

(33) a. *Kim sang the baby asleep in ten minutes*.

b. ∃e [sing (e) & originator (Kim,e) & ∃e' [asleep (e') & subject-of-state (the baby,e')] & cause (e, e')]

c. ∃e [quantity (e) & originator (Kim,e) & subject-of-quantity (the baby,e) & sing-asleep (e)]

(Borer 2005b: 224, 227)

Borer's idea about a single quantity projection and the event non-decomposability of resultatives is possibly very appealing in the parallel it can thus draw between the expression of quantity in the nominal domain (Borer 2005a) and the expression of quantity in the verbal domain (Borer 2005b). However, the hypothesis does not seem to be supported by the facts.

For example, in arguing against decomposition into two subevents, Borer (2005b) goes against much work which posited independence of the *result subevent* on the basis of evidence from the restitutive reading of 'again' and the result state-modifying reading of *for-x-time* (Morgan 1969, McCawley 1976, Dowty 1979, von Stechow 1996, Piñón 1999, Beck & Johnson 2004). However, she offers no alternative explanation for those facts. Similarly, independence of the *manner subevent* of resultatives is evidenced by its ambiguity in complex events such as *John hopped in*, where *hop* can be read iteratively or as a single hop (regardless of whether the complex event of *John hopped in* is read as a single event or not).

As for unselected objects, Borer's model is set up so that internal arguments are introduced via functional structure above the domain of lexical items, i.e. completely independently of the lexical items. Thus, it has no concept of semantic selection and may be seen as impervious to the puzzle presented by unselected objects. However, setting up the model in such a way does not deny the fact that decompositional/small-clausal accounts of resultatives have an *explanation* for unselected objects and the alternative does not seem to.

Moreover, it is not the case that the kind of quantity brought about with prefixal resultativity is the only kind of event quantity. Unlike what is typically assumed (e.g. Verkuyl 1999, Slabakova 2005, Borer 2005b, Pazelskaya & Tatevosov 2006: 260, Žaucer 2002, etc.), Richardson (2006) argues that bounded direct objects with unprefixed verbs are not inert with respect to predicate quantization in Slavic. At the same time, though, such predicates are degraded with the *in-x-time* adverbial (to the extent that naïve speakers normally rule them out), unlike what is the case with prefixed-verb predicates. In fact, some sort of quantity interpretation can arise in various structures. In (34)-(34), the bare adverbial does not function as the equivalent of the English *for-x-time* adverbial (even though in principle, it can do so) but rather as the equivalent of the English bare adverbial (cf. Morzycky 2004); therefore, it is not an instance of outer aspect in the sense of Borer (2005b).

(34) *Tinček je maraton laufal dve ure deset*.
Tinček is marathon ran two hours ten
'Tinček ran the marathon two hours ten.'

(35) *Do prvega štanta je Tonček lezel tričetrt ure.*
to first belay is Tonček climbed three.quarters hour$_{GEN}$
'It took Tonček fourty-five minutes to climb to the first belay point.'

As pointed out by Kozlowska-MacGregor (2000) for a Polish sentence of the type in (35), the events expressed in (34)-(35) do not contain any smaller parts that would also count as 'running the marathon'/'climbing to the first belay point', so the events expressed in (34)-(35) are non-divisive, i.e. quantity structures.[19] But at the same time, in contrast to quantity predicates with prefixed verbs, such as (36), they do not accept *in-x-time* adverbials, as shown in (37) for (35).

(36) *Do prvega štanta je T. pri-lezel v tričetrt ure, (torej v 45 minutah).*
to first belay is T. at-climbed in three.quarters hour$_{GEN}$ that-is in 45 mins
'Tonček climbed to the first belay point in fourty-five minutes.'

(37) *Do prvega štanta je Tonček lezel tričetrt ure, (*torej v 45 minutah).*
to first belay is Tonček climbed three.quarters hour$_{GEN}$ that-is in 45 mins
'It took Tonček fourty-five minutes to climb to the first belay point.'

In sum, Borer (2005b) offers no explanation for unselected objects, the result state-modifying reading of the *for-x-time* adverbial, the restitutive reading of 'again', and the ambiguity of *hop* within complex events such as *hop in*. A decompositional account of resultatives captures all of this. In addition, there is evidence for more than one kind of event quantity (ignoring outer aspect), so the initial appeal of Borer's model, which is in the establishment of a parallel between quantity in the verbal domain (i.e. event quantity) and quantity in the nominal domain, also disappears.[20]

2.3.4 *Prefixes in little v (Slabakova 1997, etc.)*

The last view of prefixes I mention is that of Slabakova (1997), which to some extent can be seen as a variant of Slabakova's (2005) analysis in (31), as it also introduces prefixes above the VP. The difference is that here, prefixes are merged in the causative little *v*. Whereas Slabakova herself has abandoned this proposal, it is adopted in Travis (2003: 319, 2005: 73-4), and Slabakova (2005) still mentions that some internal prefixes introduce a causer.

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[19] That the bare adverbial in (34)-(35) is not the equivalent of the *for-x-time* adverbial is shown also by the fact that (34) cannot be continued with 'and in fact he is still running it'. With *for-x-time* adverbial, such cancellations of the boundary set by the adverbial are possible, as in *He ran for two hours … and in fact, he is still running* (cf. Depraetere 1995, Egg 1995: 314, Krifka 1998: 216, Smith 1999: 484).

[20] Note that in the sense of the 'Talmy (1985) parameter', a resultative treatment with a syntactically encoded result makes Slavic languages parallel with Germanic languages rather than with languages such as Spanish or Greek, thus going against Snyder (2001), Beck & Snyder (2001) and Horrocks & Stavrou (2003, 2007). As shown in Žaucer (2002), however, only prefixal PPs but not non-prefixal PPs can license unselected objects with unprefixed verbs in Slavic (e.g. *(*v*-)*tepsti komu idejo v glavo* [lit. beat someone$_{DAT}$ idea into head] 'get an idea into someone's head' [op.cit.: 94]), and similarly, only prefixal PPs but not non-prefixal PPs can create manner-of-motion predicates from unprefixed non-motion verbs (e.g. *(*pri*-)*blebetati v mesto* [lit. at-babble into town] 'come into town babbling' [op.cit.: 96]) (note that prefixal PPs license both of these phenomena regardless of grammatical aspect, i.e. in the secondary imperfective as well). The nature of the difference between prefixal and free-standing prepositions is clearly something to explore.

First of all, the original claim that all prefixes are causative heads is untenable in view of the fact that there can be more than one prefix per stem (unless, of course, every multiply prefixed verb would be seen as containing multiple VPs and hence multiple *v*Ps, but that can easily be proven wrong). Secondly, this claim is problematic in view of the fact that Slavic languages have (albeit no longer completely productive) causativization realized by suffixes or sometimes by ablaut, and these suffixes and stem changes can cooccur with prefixes. For example, we have *rumen-i-ti* 'to make/be making yellow' (compare with *rumen-e-ti* 'to grow/be growing yellow'), *plav-i-ti les* 'to float/be floating timber' (compare with *plav-a-ti* 'to float/be floating') and *to̲čiti* 'to pour/be pouring water' (compare with *te̲či* 'to run/be running'), and then we have these causative-suffixed bases combined with prefixes, as in *po-rumen-i-ti* 'to make yellow', *s-plav-i-ti ladjo* 'to launch a boat' and *na-točiti* 'to pour full'. Thus, the prefixes here cannot be causative heads.[21] As already mentioned, Slabakova (2005) abandons her (1997) view of prefixes as causative heads, but she still claims that some internal prefixes can introduce causers (also DiSciullo & Slabakova 2005), as in (38).

(38) a. *decata se smjaha*
children self laugh
'the children laughed'

b. *klouna raz-smja decata* (Bulgarian)
clown apart-laughs children
'the clown made the children laugh'
(Slabakova 2005: 331)

However, given that the prefix is prepositional in nature, there is little reason to assume that the prefix here is really a causative head. It is well-known that the addition of PPs can turn intransitives into causatives, as in *jump the horse* *(*over the fence*) (where this PP is seen as heading a VP-internal small clause in Rappaport Hovav & Levin 1995: 111, Hoekstra 2004: 387, fn. 15, Folli & Harley 2005: 105, Folli & Harley 2006: 123; cf. also McIntyre 2007: 16, Fn. 8). In short, I see no argument for analyzing prefixes as causative heads, and there are some reasons against this.

3. Conclusion

In this introductory chapter, I outlined my assumptions about the syntax of resultative secondary predication in general and the syntax of Slavic resultative prefixation. I also presented the background about Slavic prefixation, in particular, the widely held split into VP-internal/resultative and VP-external prefixation. In the subsequent chapters, I will present four case studies of Slavic prefixed constructions which present a puzzle because they exhibit a mix of internal-prefix and external-prefix characteristics. I will argue that all of those constructions exhibit resultative prefixation. In some cases, the constructions will be argued to contain two VPs, despite the fact that we only see one verbal stem. I will thus uphold the validity of the common assumption that there can be at most one independent resultative secondary predicate per V.

Before moving on, a remark on my use of the terms external and internal prefix is in order. In what follows, I will often refer to a prefix as internal or external. This is *not* meant to suggest anything with respect to the syntactic position I would assign to the prefix under consideration; it is only meant to indicate that in the accounts that syntactically split prefixes in these two groups, the prefix would be internal or external.

[21] Also, the causativizing suffix and stem change do not have the perfectivizing effect that prefixes do.

Chapter 1: The reflexive-introducing ('quantificational'/'cumulative'/ 'accumulative'/'vague-measure') *na-*[*]

This chapter 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$_{GEN}$) 'get one's fill of watching movies', *na-pre-igravati se Beckhama* (lit. on-through-play self Beckham$_{GEN}$) 'get one's fill of faking out Beckham'. This use of *na-* is often called cumulative, accumulative, or as expressing an extensive vague measure (cf. Filip 1999, 2000, 2005a, 2005b, Romanova 2007). The discussion is cast against the background of the often hypothesized distinction between internal/resultative and external/adverb-like prefixes which was outlined in section 2.2 of the Introduction. The relevant *na-* is interesting because according to some widely used diagnostics, it patterns as internal/resultative, while according to others, it patterns as external/adverb-like (section 2).

I will argue that the relevant *na-* should be analyzed as internal/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 will be 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- se* construction with the somewhat reminiscent 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'. Unlike the *na- se* examples, both of these have simpler structures with a single V (section 5). This discussion will also reveal, however, that some *na- se* examples 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.

2. Puzzle and outline of proposal

In light of the characteristics that were presented in section 2.2 of the Introduction as defining VP-internal/resultative and VP-external prefixes, the prefix *na-* in (5) appears to be a hybrid (noted also by Furmanska 2006).[1] On the one hand, this *na-* affects the argument structure of the base verb by introducing an unselected reflexive clitic, thus patterning with internal prefixes such as (6) below. That such reflexive clitics can indeed be considered unselected objects is argued in Spencer & Zaretskaya (1998a, 1998b), Babko-Malaya (1997),

[*] An earlier version of this material (Žaucer, to appear) is to appear in the proceedings from the *4th Graduate Colloquium of Slavic Linguistics* (held in 2006 at the Ohio State University, Columbus). I thank Vedrana Mihaliček, Lauren Reese and Anastasia Smirnova for comments on a draft of that version, many of which are also reflected in this version.

[1] As noted in the Introduction, some authors syntactically distinguish a third class (Richardson's 2006 VP-external "purely-perfectivizing prefixes", Tatevosov's 2008 VP-external "intermediate prefixes"). Even in these three-class systems, our *na-* would seem a hybrid between internal and external, irrespectively of the third class.

Svenonius (2004), etc., and for similar cases in Germanic in Hoekstra (1988), Levin & Rappaport Hovav (1995), etc.; see also section 2.2 of the Introduction.[2]

(5) a. *klepetati* (**se*)
chat self
'chat'

b. *na-klepetati se*
on-chat self
'get one's fill of chatting'

c. *gledati filme*
watch movies$_{ACC}$
'watch movies'

d. *na-gledati se filmov*
on-watch self movies$_{GEN}$
'get one's fill of watching movies'

e. *za-vezovati gojzarje*
behind-tie boots$_{ACC}$
'be tying up boots'

f. *na-za-vezovati se gojzarjev*
on-behind-tie self boots$_{GEN}$
'get one's fill of tying up boots'

g. *pri-frfotavati* (**se*)
at-flutter self
'arrive fluttering/flapping wings'

h. *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'

c. *laufati* (**se*)
run self
'run'

d. *z-laufati se*
out-run self
'run oneself exhausted'

On the other hand, several characteristics seem to place this *na-* with externals. Firstly, despite the unselected reflexive in the examples in (5), the argument-structure also seems to be retained; that is, the internal argument of the base verb is there, but in the genitive rather than accusative, (5c-f). Secondly, these prefixed verbs typically or at least often resist secondary imperfectivization (compare (5d) with its secondary imperfective form ??*na-gledovati se filmov* 'be coming to have one's fill of watching movies'; and the same holds for the Polish counterpart, cf. Jabłońska 2007: 189).[3] Thirdly, this *na-* does not appear on gerunds in spontaneous speech, and seems to be plain impossible on root/zero

[2] Presumably in order to save the idea that *na-* in comparable Russian verbs is vP-external, Gehrke (2008b: 179, fn. 40) simply states that the prefix *na-* and the reflexive (which in its weak form is always suffixal in Russian) form a circumfix expressing accumulative aspect. Gehrke does not give any support for this claim, and she does not mention another class of verbs where *na-* is also typically said to contribute accumulation but in which *na-* shows up *without* the reflexive (e.g. Romanova's 2007: 177 Russian example *na-stavitj bankomatov* [lit. on-stand bank.machines$_{GEN}$] 'install a lot of bank machines'); see chapter 2 for an account of this type of verbs. In a similar spirit, Filip states that the reflexive has nothing to do with the prefix but does not say where it comes from (Filip 2000, fn. 11 of the prepublication version on her website and http://www.semanticsarchive.net/, omitted from the published version).

[3] This holds to the extent that such forms typically or at least often feel forced/unnatural. If such forms are forced, however, the scope of the secondary imperfective is predictable (just as is often the case with secondary imperfectives of externally prefixed verbs). Therefore, such structures are not, in fact, structurally impossible (cf. also section 2.2.2.2 of the Introduction for general remarks on this diagnostic, and section 3.3 below).

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-* is non-spatial, constant and measure-/adverb-like, often dubbed as something like 'V a lot/to excess'. And finally, this *na-* can attach to the left of an internal prefix and scope over the internally-prefixed verb, (5d), which likewise places it in the external group.[4] 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 in the Introduction as advocating the external/internal distinction do not seem to explicitly mention this particular use of the reflexive-introducing *na-*, so it is not clear what their position on such cases would be, especially for the cases with the *na-* stacked over an internal prefix. In a discussion of the reflexive, Jabłońska (2007: e.g. 188-9) sees 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 this *na-* is stacked over another prefix.[5]

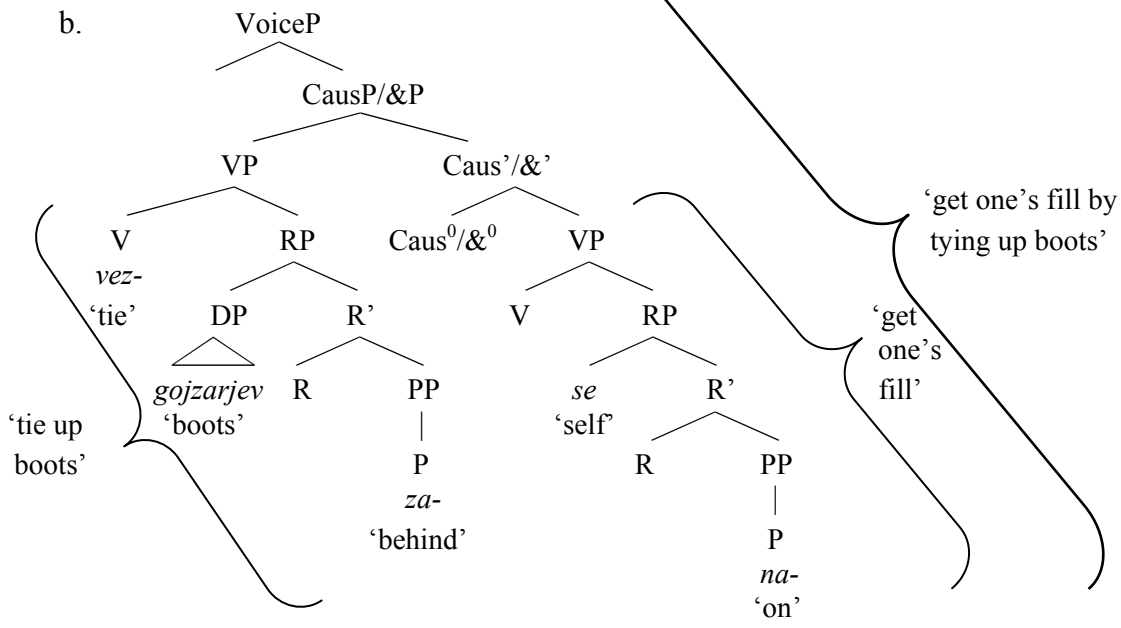
In what follows, I will assume a small-clause account of internal prefixes, placing them inside a Ramchandian (2008a) ResultP (see the Introduction for background). I will argue that all instances of this *na-* should be treated as internal/resultative. Furthermore, I will claim that at least in some cases, the structure contains two VPs (cf. also Arsenijević 2007). These cases certainly include cases like (5f) and (5h), in which *na-* shows up stacked on top of another internal prefix, and perhaps only optionally cases like (5d). I will discuss two general possibilities for the way in which the two VPs are combined. One concatenates the two VPs with a conjunction-like phrase CausP (cf. Lidz & Williams 2002), whose specifier is interpreted as the manner part of the whole predicate and its complement as the result (just like *hammer* provides the manner and *flat* the result in *hammer the metal flat*); a simplified structure I propose for (5f), repeated below as (7a), is then as in (7b). The alternative has one VP embedded under the RP of the other VP, as in (7c).

[4] One can also find claims that this use of *na-* does not accept the *in-x-time* adverbial, e.g. Filip (2000: 52) marks a Russian example with a *for-x-time* adverbial with a star and the same sentence with an *in-x-time* adverbial with # (cf. also Richardson 2006: 73). I agree with Filip's marking: whereas the *for-x-time* is impossible (i.e. ungrammatical, *), the *in-x-time* adverbial can sound odd (possibly for #) but is grammatically possible, just as the *in-x-time* adverbial often sounds odd with achievements and seems to be closer to the meaning of 'after an hour' (see Piñón 1997, also Romanova 2007: 24, fn. 9, etc.). The infelicity of the *in-x-time* adverbial is clearly no conclusive indicator of a construction's non-resultativity. In fact, in *He got his fill of walking around in an hour*, the *in-x-time* adverbial may also seem not to measure the event of 'getting one's fill' but rather be closer to the meaning of 'after an hour'.

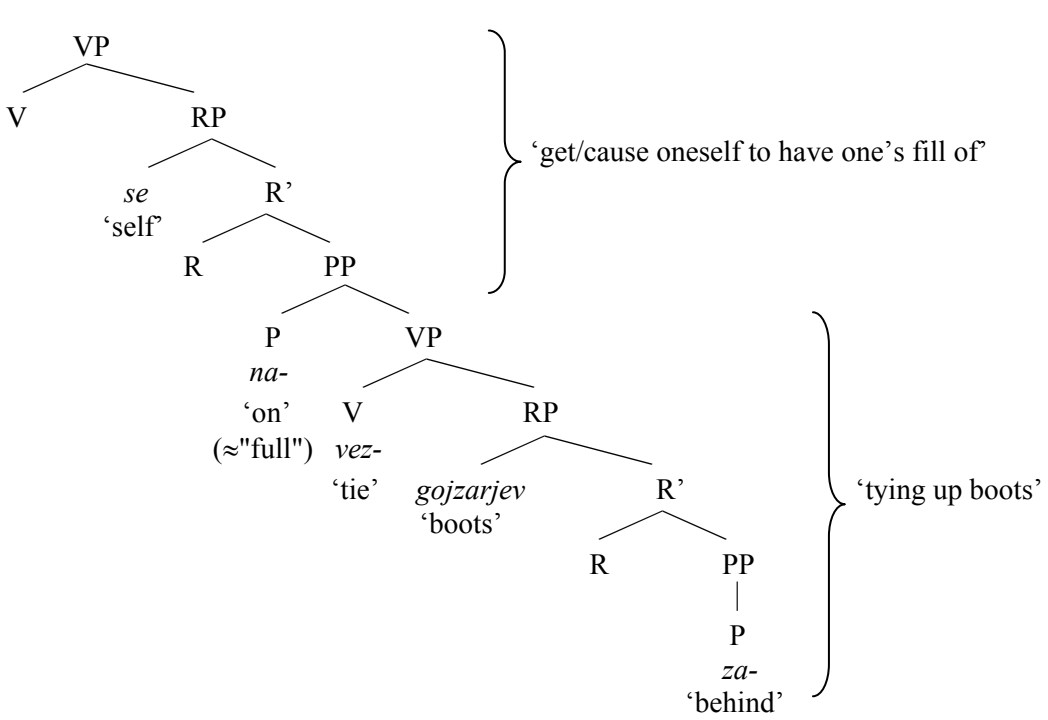
[5] In a semantic framework, Filip (2000, 2005a) sees this *na-* (as in Russian *na-guljat'sja* (lit. on-walk-self) 'get one's fill of walking') as a pure 'measure prefix' and the verb as combined with the prefix presyntactically. But if *na-* is essentially a quantifier, I can see no insightful way 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$_{GEN}$) 'pluck a (large) quantity of flowers', with which I disagree. While I will claim that both *na-*'s are resultative, they differ in several respects, including the obligatoriness/impossibility of an unselected reflexive. In chapter 2, I analyze verbs with this second *na-* as resultatives very similar to the English *amass*.

(7) a. *na-za-vezovati se gojzarjev*
on-behind-tie self boots$_{GEN}$
'get one's fill of tying up boots'

b.



c.



I will present and discuss more detailed versions of (7b)-(7c) in section 4, and I will also discuss the pros and cons for each of the alternatives. I will adopt (7b), but I note that the specific implementation of the double-VP structure is in principle independent of the claim

that the construction contains two VPs. The next section presents the data that will motivate a two-VP analysis, for which the details of section 4 are not crucial.

Before proceeding, I note that depending on the context, my translations of the *na- se* construction may vary from example to example, 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. (One can also find quite a bit of variation in the meaning definitions of the close to 80 *na- se* entries in the SSKJ dictionary, though the prevailing one is 'satisfy one's desire for V-ing'.) Similarly, the English *get one's fill of something* can be interpreted either positively, as in 'get enough/a good amount of something, so that one is satisfied', or negatively, as in 'get more than one can take, resulting in displeasure'. Crucially, this variation is not meant to imply any structural differences. Note also that Filip (2000, 2005a, 2005b) claims that the semantics of this *na-* is one of measure, and more specifically, of large measure. Example (7') below, however, shows that the 'largeness' is only a cancelable implicature.

(7') *V bistvu nisem veliko laufal, vsega 10 minut, ampak sem se vseeno na-laufal.*
in fact not-am a-lot run only 10 minutes but am self still on-run
'I actually didn't run a lot, no more than 10 minutes, but I still got my fill of running.'

Similarly, there is an implicature that if *I've had enough of running*, I did a substantial amount of running, but this can be canceled, as in *I've had enough of running, even though I only ran for 5 minutes* (see also section 1.6 of chapter 2 for a similar situation with another kind of verbs with *na-*).

3. Motivating data

3.1 Two unselected objects

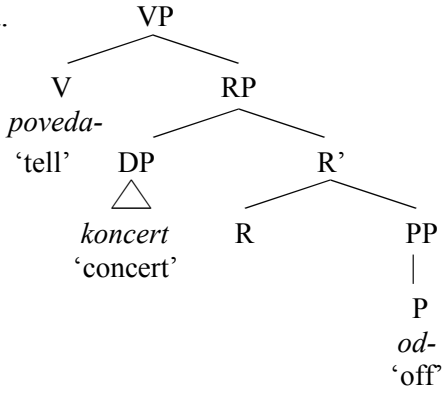
Consider (8). The verbal stem is 'tell', whose semantic selection prohibits 'concert' from being its internal argument, (8a-b). As (8c) shows, though, 'concert' is a licit internal argument when the stem occurs with *od-* 'off'. Example (8c) therefore exhibits a case of a prefix-licensed direct object, i.e., a case of an unselected object. In models such as Svenonius' (2004) or Ramchand's (2008a, 2004/2008b), this necessarily means that we are dealing with a resultative prefix; the pre-movement structure of (8c) would thus be along the lines of (8d).

(8) a. *povedati resnico*
tell truth$_{ACC}$
'tell the truth'

b. **povedati koncert*
tell concert$_{ACC}$

c. *od-povedati koncert*
off-tell concert$_{ACC}$
'call off a concert'

d.



Now, keeping in mind that 'concert' is an unselected object of *od-povedati*, consider (9).

(9) a. *na-od-povedovati* *(*se*) *koncertov*
on-off-tell self concerts$_{GEN}$
'get one's fill of calling off concerts'

b. *Hej, Geldof, a se še nisi na-od-povedoval koncertov?*
yo Geldof Q self still not-are on-off-told concerts$_{GEN}$
'Yo, Geldof, haven't you had enough of calling off concerts yet?'

Example (9) contains *od-povedati*, which again comes with its unselected object 'concert'. However, *od-* is now found under a second prefix, *na-*, which obligatorily cooccurs with the reflexive. Example (9b) shows the chunk from (9a) used in a sentence. In (9), we thus see the prefix *na-* introducing an unselected reflexive and the prefix *od-* introducing an unselected 'concert' (in this case in the genitive). In short, we have two prefixes and two unselected objects. In models such as Svenonius' (2004) or Ramchand's (2008a, 2004/2008b), this can only mean that we have two resultative prefixes.

Furthermore, the model of Svenonius (2004) and Ramchand (2008a, 2004/2008b) also adheres to the widely-held assumption that there can be only one resultative secondary predicate per verb. The projection of ResultP *can*, of course, embed more than a single PP, as in *kick the ball out on the lawn*; such PP nesting is often analyzed as a succession of small clauses embedded under one verb (cf. den Dikken 1995, Svenonius 2004: 245). However, as explained in section 2.1.2 of the Introduction, such nested small clauses always share the subject (and the nested small clauses form part of a single stative subevent). In our case from (9), however, the two prefixal small clauses each come with their own subject (and as will be shown below, they each represent a separate stative subevent). Therefore, (9) contains two prefixes, each of which introduces its own unselected object. This means that despite

appearances, we have two VPs (in a structure where (8d) from above is embedded under the top part of (7b) above).[6]

Other cases with *na-* stacked over another prefix and with two unselected objects like (9) can easily be thought of, e.g. *na-pre-skakovati se ograje* (lit. on-over-jump self $\text{fence}_{\text{GEN}}$) 'get one's fill of jumping over the fence', *na-pre-govarjati se dvomljivcev* (lit. on-over-talk self $\text{doubters}_{\text{GEN}}$) 'get one's fill of talking doubters over', *na-pre-igravati se Beckhama* (lit. on-over-play self $\text{Beckham}_{\text{GEN}}$) 'get one's fill of faking out Beckham', *na-na-padati se sovražnika* (lit. on-on-fall self $\text{enemy}_{\text{GEN}}$) 'get one's fill of attacking the enemy' (verb form listed in Toporišič 2000: 216), *na-iz-kopavati se zakladov* (lit. on-out-dig self $\text{treasures}_{\text{GEN}}$) 'get one's fill of digging up treasures', etc. A special case of a doubly-prefixed verb with two unselected objects is presented also by cases such as *na-pre-rekati se* (lit. on-through-say self) 'get one's fill 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-* (which brings about the 'get-one's-fill' meaning); but as with other combinations of two *se*'s, such as an ordinary reflexive *se* and an impersonal *se* (see Marušič & Žaucer 2006a: 1133, Fn. 30 for illustration), we only get *se* realized once, a fact that is typically attributed to haplology (e.g. Rivero 2001: 175).[7]

Note that if the genitival nominal is introduced by the prefix, it is—like any resultative predicate-introduced nominal—an argument and not an adjunct. That this is indeed the case is supported by the genitival nominal's obligatoriness. As shown in (10a), *šotor* 'tent', when cooccurring with *ob-kopati* 'surround with a ditch, dig a ditch around sth', 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). This supports the claim that despite its being in the genitive, it is an argument and not an adjunct.

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[6] In view of some points of the discussion below, one may ask whether the genitival *koncertov* 'concerts' in (9) could not be introduced (solely) as the complement of the resultative *na-* (and the reflexive as the subject of the resultative *na-*). Thus, one prefix would introduce two arguments, and we would have no evidence for two resultative prefixes and two VPs (but this would still mean that we have a non-stem-adjacent argument-introducing prefix). For independent reasons, it is easiest to show that this is *not* the case with another case of this type of *na- se* construction, built on *igrati* 'play' (on its sports reading, ignoring the movie-acting reading). As shown in (i), *Beckham* 'Beckham' is an unselected object to *pre-igrati* 'fake out', i.e. an object introduced by the prefix *pre-*.

(i) a. *igrati fuzbal* / **Beckhama*
play $\text{soccer}_{\text{ACC}}$ / *$\text{Beckham}_{\text{ACC}}$
'play soccer'

b. *pre-igrati Beckhama*
through-play $\text{Beckham}_{\text{ACC}}$
'fake out Beckham'

As shown in (iia)-(iib), both an unprefixed *igrati* and the prefixed *pre-igrati* can serve as input to the reflexive-introducing *na-*. Therefore, if one claimed that in (iib), *na-* introduces both the reflexive and *Beckham*, so that *Beckham* has nothing to do with *pre-*, then it should also be possible to add *Beckham* to *na-igrati se* in the absence of *pre-*. This is not the case.

(ii) a. *na-igrati se*
on-play self
'get one's fill of playing'

b. *na-pre-igravati se Beckhama*
on-through-play self $\text{Beckham}_{\text{GEN}}$
'get one's fill of faking out Beckham'

c. * *na-igrati se Beckhama*
on- play self $\text{Beckham}_{\text{GEN}}$

[7] The same happens in the overtly two-VP near-paraphrase with *na-veličati se* (lit. on-a.lot_{INF} self) 'grow tired of', i.e. *na-veličati se* (**se*) *pre-rekati* (lit. on-a.lot_{INF} self (self) through-say_{INF}) 'grow tired of arguing', where we likewise see only one reflexive clitic surfacing.

(10) a. *Tone je* *(*ob-*)*kopal*/*(*ob-*)*kopaval* *šotore*.
Tone is around-dug/around-dug.impf tents$_{ACC}$
'Tone dug some ditches/was digging ditches around (the) tents.'

b. *Tone je ob-kopal/ob-kopaval* *(*šotore*).
Tone is around-dug/around-dug.impf tents$_{ACC}$
'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$_{GEN}$
'Tone came to have his fill digging ditches around (the) tents.'

Other cases with non-omissible genitival nominals can easily be thought of, such as *na-od-povedovati se* *(*prireditev*) (lit. on-off-tell self events$_{GEN}$) 'get one's fill of calling events off', *na-pre-klicevati se* *(*njegovih nepremišljenih izjav*) (lit. on-over-call self his rash statements$_{GEN}$) 'get one's fill of revoking his rash statements,' *na-od-pisovati se* *(*dolgov*) (lit. on-off-write self debts$_{GEN}$) 'get one's fill of writing off debts', *na-za-govarjati se* *(*pokvarjenih politikov*) (lit. on-behind-say self corrupt politicians$_{GEN}$) 'get one's fill of defending corrupt politicians', *na-raz-kopavati se tujih omar* (lit. on-apart-dig self else's closets) 'get one's fill of ransacking other people's closets', etc.[8]

To sum up, two prefix-introduced unselected objects can only be made sense of if both prefixes are internal/resultative. In turn, two internal/resultative prefixes which introduce distinct arguments are only possible if there are two VPs.

3.2 Perfectivity triggering

Another thing that sets this *na-* apart from some 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-b). For authors like Brecht (1985), Klein (1995), Strigin & Demjjanow (2001), Bertinetto (2001), Žaucer (2005a), Arsenijević (2006, 2007), all prefix-triggered perfectivity is actually a sign of a prefix-introduced resultative change of state. (How this perfectivity triggering is derived is not crucial for my purposes, but see Klein 1995, Bohnemeyer & Swift 2004, Svenonius 2004 and Ramchand 2004/2008b for possibilities.) When such a prefixed structure is suffixed with the so-called secondary imperfective suffix *-va-*, the latter scopes over the prefix, (11c).[9,10]

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[8] If the genitive in these examples, or in (ia) below, were just an adjunct, then we might also expect to be able to use such genitives in the reflexive-introducing prefixed structure from (6b) above, as in (ib). This is impossible.
(i) a. *na-govoriti se neumnosti* b. **za-govoriti se neumnosti*
on-talk self stupidities$_{GEN}$ behind-talk self stupidities$_{GEN}$
'get one's fill of talking nonsense' (intended: 'get oneself in trouble by talking nonsense')

[9] Some see the secondary imperfective suffix as the counterpart of the English progressive, e.g. Borer (2005b), Arsenijević (2006); more precisely, Borer (2005b) 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. 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 ^{PF} and ^{IMPF} 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. Note also that

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

Keeping this in mind, note that there exist some prefixes with clearer adverb-like characteristics than *na-* (they seem to have modificatory meanings and do *not* come with argument-structure changes). When a prefix of this kind is stacked over a secondarily imperfectivized internal-prefixed structure, this prefixation has no effect on the aspectual characteristics of the input. This is shown in (12) and (13), where the imperfective suffix *-va-* still scopes over the doubly prefixed verb which has the meaning 'plough through again'/'lift up partly'.

(12) a. *orati*$^{\text{IMPF}}$ *njivo* b. *pre-orati*$^{\text{PF}}$ *njivo*
plow field over-plow field
'plow the field' 'plow up the filed'

c. *pre-ora-va-ti*$^{\text{IMPF}}$ *njivo* d. *pre-pre-ora-va-ti*$^{\text{IMPF}}$ *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*$^{\text{IMPF}}$ *hlod* b. *pri-vz-digo-va-ti*$^{\text{IMPF}}$ *hlod*
up-lift log at-up-lift log
'be lifting up the log' 'be lifting up the log partly'

Our *na-*, however, behaves differently. (14) shows that when this *na-* is stacked over a secondarily imperfectivized internally prefixed structure, it *does* trigger perfectivity, scoping over the suffix. If prefix-introduced 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 internal/resultative prefixation.

(14) a. *pre-ora-va-ti*$^{\text{IMPF}}$ *njivo* b. *na-pre-ora-va-ti se*$^{\text{PF}}$ *njive*
over-plow field on-over-plow self field$_{\text{GEN}}$
'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'—has a qualitatively different meaning contribution. However, such an objection becomes highly suspicious against the data in (15). In (15b), an adverbial

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some authors attribute the function of secondary imperfective in verbs like *prifrfotavati* 'arrive fluttering' to *-va-*, others to *-av-*; this issue is irrelevant for my purposes.

[10] The examples that I translate with the English progressive form could, in the right context, also get a simple tense-form translation. This is why such examples are often translated in the literature with '(be) lift(ing) up' (e.g. Filip 2003). 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 signal the clear separation 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.

prefix with a meaning very close to that of *na-* is stacked over an internal one, or rather, is stacked onto 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-polnje-va-ti*^{IMPF} *škatlo*
on-fill box
'be filling up the box'

b. *pre-na-polnje-va-ti*^{IMPF} *škatlo*
over-on-fill^{IMPF} 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, (16d) also shows that their semantic contribution cannot really be exactly the same, i.e. that they do not simply both contribute the 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, whereas *pre-*, I would claim, modifies the result, i.e. contributes the underlined part in the paraphrase 'get more than one's fill of V-ing', and is akin to the second particle in the English double particle constructions discussed in section 2.1.2 of the Introduction. (See section 4.4.4 below for some more discussion of these result-modifying prefixes and of their structural position, as well as footnote 37 in chapter 2 and section 5.7 in chapter 2; but also note that the validity of the latter claim is in principle independent of the claims I make about *na-*).[11]

(16) a. *na-frfotati se*
on-flutter^{PF} self
'get one's fill of fluttering'

b. *pre-na-frfotati se*
over-on-flutter^{PF} self
'get more than one's fill of fluttering'

c. *na-frfota-va-ti se*
on-flutter^{IMPF} self
'be getting/be about to get one's fill of fluttering'

d. *pre-na-frfota-va-ti se*
over-on-flutter^{IMPF} self
'be getting/be about to get more than one's fill of fluttering'

In summary, our data show a purely empirical parallel between *na-* and the internal prefixes in (11), in that they both go hand in hand with an aspectual change, and 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* go hand in hand with 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 the perfectivizing force of *na-* suggests that the latter is indeed

[11] Similarly, it has been suggested that the stacked *po-* in Czech *po-od-skočit* [lit. along-away-jump] 'jump a little away' from Filip (2003) modifies the result contributed by the stem-adjacent prefix, see Žaucer (2002: 78, 2005a: 290, Fn. 13) and Gehrke (2005, 2008a, 2008b).

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 will not be conclusive evidence, 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 (1998a), Babko-Malaya (1999, 2003), Svenonius (2004), Ramchand (2004/2008b), etc., have claimed that while perfectivity is a result of resultativity/change of state with internally-prefixed verbs, external prefixes can *also* bring in perfectivity, although with these the 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 then be adjoined to vP, the perfectivity-triggering adverbial externals could be in the Spec of AspP (Tatevosov's 2008 account with internal, intermediate and external prefixes goes in the same direction). If this view is correct, then it could in principle be possible for *na-* to bring in perfectivity and still be external, so our aspect-related facts, though suggestive, may not settle the issue. But even if this may in principle be a possibility, I should stress that neither of the two structures for externals from Svenonius (2004) seem suited to *na-*, since the latter seems to combine both an aspectual import—suggesting Svenonius'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.[12]

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

The third 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*$^{\text{IMPF}}$ *njivo*
over-plow field
'be plowing up the field'

b. *na-pre-ora-va-ti*$^{\text{PF}}$ *se* *njive*
on-over-plow self field$_{\text{GEN}}$
'get one's fill of plowing up the field'

On the interpretation given in the translation of (17b) and marked in the original with the superscript $^{\text{PF}}$, the imperfective suffix *-va-* is interpreted as scoping over 'plowing up', with the prefix *na-* therefore triggering perfectivity for the doubly prefixed structure. As discussed in the previous section, this shows that just like other internal prefixes, such as in (11c) and (12c) above, *na-* triggers perfectivity.

As is also well known, internal prefixes not only trigger perfectivity of their imperfective simple-base input but can (provided they accept secondary imperfectivization, cf. footnote 3 above) also co-occur with the secondary-imperfective suffix *-va-* and be

[12] As mentioned above, Arsenijević (2006, 2007) also capitalizes on the fact that his 'external' prefixes, when occurring on a secondarily imperfectivized internally-prefixed verb, 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.

interpreted inside the scope of the latter, as is the case in (17a). And indeed, while the combination of our *na-* and the secondary imperfective *-va-* most saliently yields the perfective interpretation from (17b), this interpretation is actually not the only one available. The imperfective suffix *-va-* can in fact 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) (and (14b) above), indicating that both interpretations are possible. Note that the imperfective interpretation of the *na- se* construction is not available in the absence of *-va-*, that is, when *na-* attaches to a simple imperfective, as in (19); this pattern repeats the one found with ordinary internal prefixes, such as the spatial *pri-* in (11) above.

(18) a. *Ko sem prišel, se je Juš ravno počasi na-pre-ora-va-l*^{IMPF} *njive, ampak*
when am arrived self is Juš just slowly on-over-plow field$_{GEN}$ but
se je v končni fazi ni na-pre-ora-va-l^{PF}.
self it$_{GEN}$ 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*$^{PF/IMPF}$ *se njive* [(18b) = revised (14b)/(17b)]
on-over-plow self field$_{GEN}$
'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*^{PF} *se njive*
on-plow self field$_{GEN}$
'get one's fill of plowing the field'

So, these data tell us that just like other internal prefixes, such as in (11c) and (12c) above, *na-* does not only trigger perfectivity but can itself also occur in the scope of the secondary-imperfective suffix *-va-*. This gives us another empirical parallel between *na-* and other internal prefixes. But more importantly, 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 the only way to attach *na-* is if the internal-prefixed input has been secondarily imperfectivized. As shown in (20b), due to its perfectivity, the internal-prefixed form without the secondary imperfective suffix *-va-* is not a possible input for *na-*.[13,14]

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[13] This imperfectivity restriction matches the restriction found with the overtly two-VP near-paraphrase: if nonfinite, the clausal complement of *na-žreti se* 'get fed up, grow tired' or *na-veličati se* 'get fed up, grow tired' must be imperfective, regardless of whether it is a gerund, (i), or an infinitive, (ii).

(i) *na-žreti se oranja njive / pre-ora-va-nja njive / *pre-oranja njive*
on-eat self plowing$_{GEN}$ field$_{GEN}$ over-plowing$_{GEN}$ field$_{GEN}$ over-plowing$_{GEN}$ field$_{GEN}$

(ii) *na-žreti se orati njivo / pre-ora-va-ti njivo / *pre-orati njivo*
on-eat self plow$_{INF}$ field over-plow$_{INF}$ field over-plow$_{INF}$ field
'get one's fill of/fed up with plowing (up) the field'

(20) a. *na-pre-ora-va-ti*$^{PF/IMPF}$ *se njive*
on-over-plow self field$_{GEN}$
'get one's fill of plowing up the field'

b. * *na-pre-orati se njive*
on-over-plow self field$_{GEN}$

So, given that *na-* only attaches to imperfective inputs, and given that the internal-prefixed *pre-ora-* can only be interpreted imperfectively after it has been secondarily imperfectivized with *-va-* (i.e. to form *pre-ora-va-*), we know that in a string where *na-* is stacked on *pre-ora-va-*, the suffix *-va-* certainly modifies *pre-ora-*. At the same time, we have seen that although *na-* triggers perfectivity for its secondarily imperfectivized input of *pre-ora-va-*, as in (17b), the string *na-pre-ora-va-* can (unlike *na-ora-* in (19)) actually not only be interpreted as a perfective but also as a (secondary) imperfective, that is, with the suffix *-va-* scoping over *na-* (this yields a regular secondary imperfective of the *na- se* construction), (20a). 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- se* construction. 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-*.

Needless to say, a two-VP approach to such such structures easily explains the presence of two instances of the VP-dominating AspP of the secondary imperfective/*-va-*; if there are two VPs, they can each be dominated by an instance of one and the same AspP. Moreover, a two-VP approach also easily captures the ambiguity of cases like (20a), where the *na- se* construction can be read both perfectively or imperfectively. On the perfective reading, the imperfective suffix *-va-* instantiates just the AspP that dominates the VP of 'plowing up', in which case *na-* then triggers perfectivity for the 'getting one's fill' part. On the imperfective reading, the imperfective suffix *-va-* instantiates both the AspP that dominates the VP of 'plowing up' as well as the AspP that dominates the VP of 'getting one's fill', which is then read imperfectively. Note also that the ambiguity of (20) and the presence of two instances of the same type of AspP are not just easy to explain in an account with two VPs and two (partial) sets of FPs, they also present quite a bit of a challenge for an account with *na-* as an external prefix dominating a single VP, since on such an account, there should only be one instance of the same type of AspP in the extended projection of the single VP.

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;

[14] When the input to *na-* is a motion predicate, the restriction that *na-* imposes on the input is not just to imperfective (simple or secondary) but also to the so-called non-directed/indeterminate motion as opposed to directed/determinate motion (see Jabłońska 2007 for general issues about the opposition), so that *na-* is fine on the imperfective *voziti* '(non-directed) drive' but not on the imperfective *peljati* '(directed) drive', cf. *na-voziti se* 'get one's fill of driving' vs. **na-peljati se* on the same intended reading (Romanova 2007: 184, fn. 6 observes the same for Russian). And again, this restriction has a match in the restriction with the overtly two-VP near-paraphrase, where only the non-directed variant can occur in the nonfinite complement of *na-žreti se* 'get fed up, grow tired' or *na-veličati se* 'get fed up, grow tired'.

following the interpretation, the suffix *-va-* is indicated twice, although in reality it is only pronounced once).

(21) a. *ora-*$^{\text{IMPF/ATELIC}}$ > *pre-ora-*$^{\text{PF/TELIC}}$ > *pre-ora-va-*$^{\text{SEC.IMPF/PROG.}}$ >
plow- over-plow over-plow-SEC.IMPF.
'plow/be plowing' > 'plow up' > 'be plowing up' >
> *na-pre-ora-va-*$^{\text{PF/TELIC}}$ > *na-pre-ora-va-*$^{\text{SEC.IMPF/PROG.}}$
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'

b. [[*na-* [[*pre-* [*ora-*$^{\text{IMPF/ATEL.}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$]
on over plow SEC.IMPF. SEC.IMPF.
{ '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 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. *pre-na-pre-pre-ora-va-ti se* 'get/be getting more than 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 brings the perfective(/telic) interpretation but that the latter is rather carried over from the input form, where it was triggered by the prefix.[15]

(22)
[[*na-* [[*pre-* [*pre-* [*ora-*$^{\text{IMPF/ATEL.}}$] $^{\text{PF/TEL.}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$]
on over over plow SEC.IMPF. SEC.IMPF.

(23)
[[*pre-* [*na-* [[*pre-* [*pre-* [*ora-*$^{\text{IMPF/ATEL.}}$] $^{\text{PF/TEL.}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$] $^{\text{PF/TEL.}}$] $^{\text{PF/TEL.}}$] *-va-*$^{\text{SEC.IMPF/PROG}}$]
over on over over plow SEC.IMPF. SEC.IMPF.

[15] (22)-(23) are *not* syntactic structures. For example, 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*$^{\text{ATELIC}}$] *flat*$^{\text{TELIC}}$], even if the resultative adjective is analyzed as sitting below the VP.

And in fact, (22)-(23) represent just one possible intuition about the order of the attachment of the adverb-like/result-modifying prefixes. The 'again' *pre-* in (22) and (23) is represented as being added before secondary imperfectivization of its input, i.e. as if we go from *pre-pre-ora-* to *pre-pre-ora-va-*. It could also be represented as being added after secondary imperfectivization of *pre-ora-*, i.e. as if we go from *pre-ora-va-* to *pre-pre-ora-va-*: [*pre-* [[*pre-ora-* $^{\text{PF/TEL.}}$] *-va-* $^{\text{SEC.IMPF/PROG}}$] $^{\text{SEC.IMPF/PROG}}$]. The same applies with respect to the 'too much' *pre-* in (23).

Before concluding this section, let me briefly turn to an immediate question that the idea with two instances of the same AspP raises, namely, why do the strings for which I claim that they contain two instances of AspP overtly only show one rather than two *-va-* suffixes (cf. *na-pre-ora-va-ti se* vs. **na-pre-ora-va-va-ti se*). Just like I did in section 3.1 with respect to a 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-or<u>a</u>-va-ti*) and in which the stress falls on this *-a-*, cases whose stem-final vowel is *-o-* (e.g. *na-za-vez<u>o</u>-va-ti se gojzarjev* [on-behind-tie- self $boots_{GEN}$] '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 only get the perfective reading, at least for some speakers. However, such speakers find it 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-vez<u>a</u>-va-ti se*. While I would not want to make any firm claims about these morphophonological changes, it does not seem completely implausible that, since they affect the interpretation, they reflect a structural change, that is, that the cooccurrence of both *-va-* on the one hand and the changes in the thematic vowel and place of stress on the other hand signal the presence of two instances of one and the same type of AspP (keep in mind that some sort of vowel change/ablaut, often in both a vowel of the root and in the thematic vowel, is also one type of allomorphy in the expression of secondary imperfective (replacing *-va-*), as in *voziti* 'drive', *pre-voziti* 'drive through', *pre-važati*$^{SEC.IMPF.}$ 'be driving through').

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

3.4 Result-state adverbial and restitutive 'again'

Durative adverbials are known to split into 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*. (Piñón 1999: 420)

The typical reading of (24) is the one where the adverbial is read as modifying the result state subevent, that is, the one where Manuela stays in the water for 20 minutes, while one has said nothing about the duration of the jumping event. But the adverbial 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. So if a sentence admits the result-state adverbial, then it should in principle contain a result-state subevent which the adverbial is modifying. Example (25) below juxtaposes two examples that differ minimally in the presence/absence of the prefix *na-*, and the contrast in the acceptability of the result-state subevent suggests that the prefixed example indeed contains a result-state subevent; (26) provides a contextualized example. Examples combining *na- se* and the result-state adverbial can also be found in the SSKJ dictionary, such as *za dolgo se je na-kadil cigaret* (lit. for long self is on-smoked cigarettes$_{GEN}$) 'He's come to have his fill, for a while, of smoking cigarettes'.

(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$_{GEN}$ for 10 minutes
'I've come to have enough, <u>for 10 mins</u>, of watching these cartoons.'

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

The sentences in (25b) and (26) thus support the idea that the *na- se* construction contains a result-state subevent—specifically, 'the state of having one's fill', 'the state of being fed up'—and that the contribution of *na-* is not simply that of an adverbial such as 'excessively'. And since the only element that can plausibly be contributing the result state in (25b) is the prefix, we must be dealing with an internal/resultative prefix.

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 assertion *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- se* construction obligatorily occurs with an unselected reflexive, the result state necessarily holds of the same argument that is also the external argument, which may make it harder than usually to see if 'again' can scope under the external argument. That is, if after an event of 'causing oneself to have one's fill/enough', the potential result state holds of the same individual as after a previous event of 'causing oneself to have one's fill/enough' (i.e. if 'oneself' refers to the same individual in both states of 'having one's fill/enough'), then the external argument (i.e. the causer of the state of 'having one's fill/enough') 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 being fed up with 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/being fed up with running'.

(27) *Peter je imel ob rojstvu poln kufer laufanja, pol se je to mal nehal in je*
Peter is had at birth full case running$_{GEN}$ then self is this a-little stopped and is
velik laufu, lan se je pa (za nekaj časa) spet na-laufu.
a-lot run 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 ran 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- se* construction accepts result-state adverbials and allows a restitutive reading of 'again', which suggests that it contains a stative subevent. As the only plausible candidate for the contributor of the result state in our *na-* sentences is the prefix, we must be dealing with an internal/resultative prefix.

3.5 Other types of adverbial modification

3.5.1 Positive evidence (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 getting his fill (of swimming). (The underscoring in the examples of this section signals the main stress of the sentence.) In the sentence 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.[16]

(28) *Peter se je v Piranu na-plavu za ceu let naprej.*
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-plavu v morju (, tko da se bova jutr*
now are self PTCL surely already on-swum in sea so that self will tomorrow
preselila v bazen).
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 can situate either of the two events, one can form pairs such as (30a-b), 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-plavu 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 his fill 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 one of the two VPs, and in (29) and (30a), the locative is adjoined to the other VP. At the same time, these data are problematic if *na-* is external and if all of these structures only contain one VP.

[16] Judging from the translation, this low scope of the locative adverbial also seems to obtain in Jabłońska's (2007) (i).
(i) *Marek dość już na-leżał się na kanapie.* (Polish)
Marek enough already on-lie self on sofa
'Marek has lied on the sofa (to satiation) already enough.' (Jabłońska 2007: 188)

Similarly revealing is the combination of the *na- se* construction and the locative adverbial with *po* 'around', as in (31) (or in Filip's [2000: 47, 2005a] 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 dictionary,
today am self PTCL trully on-flown around offices entry *naletati se*]
'Today I really got my fill of running around offices.'

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

(32) a. *Danes sem se pa* (**po uradih*) *res naveličal letat* (*naokol*).
today am self PTCL around offices trully grown-tired run$_{INF}$ 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 trully grown-tired run$_{INF}$ 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- se* 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 that does not also encode '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, (34) with a 'for'-adverbial, (35) with an 'about'-adverbial, and (36) with a directional.

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

(34) *A se še ni<u>s</u>i na-o-prezu za fazani?*
Q self still not-are on-at-strained for pheasants
'Haven't you had your fill of looking out for pheasants yet?'

(35) *na-govoriti se o čem* [SSKJ dictionary, entry *nagovoriti*]
on-talk self about something
'get one's fill of talking about something'

(36) *A si se končno na-vozu Maše v šolo?*
Q are self$_{ACC}$ finally on-driven Maša$_{GEN}$ to school
'Have you finally grown tired of driving Maša to school?'

Furthermore, as a two-VP structure might lead us to expect, it is not only the case that the same type of adverbial can modify either of the two events, one can also create sentences with the same type of adverbial occurring twice. (37a) gives an example with two locatives and (37b) gives an example with two result-state adverbials.

(37) a. *V Piranu se je pa pol dokončno na-plavu v morju.*
in Piran self is ptcl then permanently on-swum in sea
'In Piran he then got his fill of swimming in the sea once and for all.'

b. *Zdej sm se pa za kšne pu leta na-iz-klaplu luči za tko kratk cajt.*
now am self ptcl for some half year on-out-switch lights for thus short time
'Now I've gotten my fill, for about half a year, of switching lights off for such a short time.'

Having two result-state adverbials suggests having two independent result subevents, and two independent result subevents suggest two VPs. Of course, such sentences need a favorable context. In addition, there may be some controversy regarding the leftmost of the two locatives (it is sometimes claimed that these are possible also in single-VP structures, cf. Rivero & Milojević Sheppard 2008). This is why I will leave the doubling data with (37) and just note that the crucial point of this secion is that several types of adverbials (such as locatives) clearly *can* have scope over an event smaller than the whole event of 'getting one's fill of something' (in which case they clearly cannot be dismissed as frame adverbials on a single-VP *na- se* construction), and that the *na-* sentences admit adverbials (such as *po uradih* 'around offices') which could not be modifying the entire event of 'getting one's fill of something', as shown in (31)-(32). At the same time, contrary to the facts presented in this section, there exist modifiers that can only have scope over the entire event of 'getting one's fill of something'. I will turn to these cases in the next section.

3.5.2 Negative evidence (manner adverbs, duratives, temporals)

In contrast to the adverbial data just presented, it is interesting to observe that manner adverbs can apparently only scope over the entire event of 'getting one's fill of something'. Example (38), with 'slowly' attempted as a modifier of 'swim', is judged bad by the same speakers that judge (30a) as well as the rest of the sentences above as acceptable.[17]

[17] This contrast is reminiscent of the situation found with active-participle nominalizations such as *sprehajalec* 'stroller'. These allow (for many speakers) various types of adverbials, e.g. *sprehajalec po parku* (lit. stroll-ACT.PTCP-er around park) 'person strolling around the park' (see Marvin 2002: 100-103). At the same time, these nominalizations do not allow manner adverbs, e.g. **sprehajalec počasi* (lit. stroll-ACT.PTCP-er slowly) (intended: 'person strolling slowly').

(38) **Peter se je že na-plavu počas, tko da bo zdej plavu hitr.*
Peter self is already on-swum slowly, so that will now swum fast
(intended: 'Peter has by now had his fill of swimming slowly, 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 one of the clauses in this *na- se* construction. If locative adverbials are adjoined to VP and manner adverbs are introduced a bit higher, say, at the level of VoiceP (cf. Cinque 1999), then one of the two clauses contains a VP but not much more than that. And I assume that if a sentence like (38) is nonetheless forced, then we have expanded this clause to include the projection with which manner adverbs are associated.

Another type of modifiers that does not seem to be possible on the VPs encoding what one has gotten their fill of is simple durative adverbials. This can be approached in the same way as the impossibility of manner adverbs, that is, by assuming that this is a consequence of the fact that this clause does not include some DurativityP, which would be needed to license such adverbials. This may seem like an odd claim at first, given that the input to the *na- se* prefixation is actually restricted to imperfective verbs, which normally happily combine with durative adverbials. However, note that even though they can cooccur and even though imperfective forms are said to express duration and durative adverbials likewise, these adverbials are in fact not licensed as simple adjuncts or Specs of such an (Impf)AspP projection; as shown by Borer (2005b), durative adverbials do not just further specify their durative input but rather make a homogeneous input quantized, which means that syntactically, they must be associated to a separate projection above the (Impf)AspP projection of the imperfective verb (unlike *in-x-time* adverbials, which could indeed be seen simply as adjuncts or Specs of some telicity projection, as the predicate, normally, already has to be telic for the *in-x-time* adverbial to be licensed, and so the *in-x-time* adverbial only further specifies the time it took for a telic event to unfold). So the fact that our *na- se* construction cannot have simple durative adverbials modifying the event of 'swimming' (to the exclusion of 'get one's fill') could be taken as suggesting that the clause that encodes the 'swimming' event also does not contain such a DurativityP (to the exclusion of the other clause). Alternatively, the impossibility of simple durative adverbials could also be taken as suggesting that this clause is missing only some higher HabitualityP; note that one can only *get one's fill of swimming for two hours/grow tired of swimming for two hours* if *swimming for two hours* is understood as expressing a habitual event of running for two hours and not if it is understood as a single/noniterative event of running for two hours. (In fact, even related constructions with an overtly two-VP structure tend to need an overt frame-setting adverbial to allow a habitual reading, as in *grow tired of always swimming for two hours*.) So the impossibility of having a simple durative adverbial modifying the event of 'running' (to the exclusion of the event of 'get one's fill') can be taken to show some deficiency of that clause, either the absence of DurativityP or at least the absence of some higher HabitualityP.

Furthermore, the *na-* sentences also do not seem to allow temporal adverbials ('in the evening') modifying the event of 'swimming' (to the exclusion of 'get one's fill'), which is presumably due to the fact that the two events are necessarily temporally coextensive unless the 'swimming' event is a habitual one, and so we are back to the absence of HabitualityP. (Once again, this restriction has a match in a restriction on related overtly two-VP constructions such as *grow tired of doing something*.) In fact, the absence of HabitualityP is probably also what is behind the requirement that the input of this *na-* be imperfective (also

matched in the overtly two-VP near-paraphrase, cf. footnote 13 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 *kicking the ball* is ruled out).

To sum up, we saw that adverbials such as locatives can modify either the whole 'getting-one's-fill-of-x' meaning of the *na- se* construction, or just the smaller event, i.e. the event one has gotten their fill of. This was further supported with the acceptability of *na-* sentences to host adverbials which simply cannot be interpreted as modifying the whole complex 'getting-one's-fill-of-x' event, but only as modifying the event one has gotten their fill of. These facts get a natural explanation on a two-VP analysis of the *na- se* construction but are problematic if *na-* were to be treated as an external prefix and the construction as containing a single VP. Moreover, I suggested that the unacceptability of manner adverbs, as well as of durative and temporal adverbials, may be seen as showing that one of the two clauses is defective in not being dominated by the verb's full extended projection.

3.6 Two accusatives?

Examples with this *na-* contain a reflexive clitic, which was said to be an unselected object, and often also a genitival argument, which was said to be an argument of the *na*-less verbal base (whether the latter is a bare stem or already a prefixed stem), (39a). 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 cannot 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. (See also sections 4 and 5 below for support for the claim that it is not the case that in, say, (39a) 'boots' are in the genitive due to being a direct complement of a quantificational *na-*, or a complement of a null quantifier in the complement of *na-* à la Pereltsvaig 2006.) Note, however, that under some pressure, speakers also acknowledge transitive verb-based *na- se* examples which contain the second, non-reflexive internal argument in the accusative. This is shown in (39) and (40) (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).[18]

(39) a. *A se je Kaja že na-za-vezovala tistih gojzarjev?*
Q $self_{ACC}$ is Kaja already on-behind-tied $those_{GEN}$ $boots_{GEN}$
'Has Kaja gotten her fill of tying up those boots yet?'

b. ??*A se je Kaja že na-za-vezovala tiste gojzarje?*
Q $self_{ACC}$ is Kaja already on-behind-tied $these_{ACC}$ $boots_{ACC}$
'Has Kaja gotten her fill of tying up those boots yet?'

[18] That the forced accusatives in (39b) and (40b) are not instances of inherent accusative but of structural accusative is confirmed by the fact that under sentential negation, they switch to the genitive, i.e., they undergo the process of genitive of negation, which is standardly assumed to be an alternation between the genitive and the two structural cases.

(40) a. *A si se končno na-vozu Maše v šolo?*
Q are self$_{ACC}$ finally on-driven Maša$_{GEN}$ to school
'Have you finally gotten your fill of driving Maša to school?'

b. ??*A si se končno na-vozu Mašo v šolo?*
Q are self$_{ACC}$ finally on-driven Maša$_{ACC}$ to school
'Have you finally gotten your fill of driving Maša to school?'

Note also that despite the degradation, (39b) and (40b) 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, (41).

(41) a. *A se Peter res sramuje tistih gojzarjev?*
Q self Peter really shames those$_{GEN}$ boots$_{GEN}$
'Is Peter really ashamed of those boots?'

b. * *A se Peter res sramuje tiste gojzarje?*
Q self Peter really shames those$_{ACC}$ boots$_{ACC}$

Therefore, we have at least some tentative reasons to assume that the reflexive in our *na- se* construction is accusative. And if this is the case, then our *na- se* construction 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 (39b) and (40b) are marginal.

Above I showed that our *na- se* construction allows independent locative adverbials in both clauses (e.g. both the 'swimming' event and the 'getting one's fill event'), but that manner adverbs are normally only possible as modifying the 'get one's fill event'. This can be explained if we assume that the clause encoding the 'swimming' event is deficient and does not contain VoiceP (and higher clausal structure). I also suggested that if manner adverbs are nonetheless forced in this 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 (but see sections 4 and 5 below for an alternative). Normally, there is relatively little structure above the VP of this clause, including no TransP, so the clause holds no accusative. Since the accusative of the 'get-one's-fill' VP is taken up by the reflexive, the internal argument of the 'swim' 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 'swim' VP (a TransP, 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 (39b) and (40b) 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 VP, which is in congruence with the observations about adverbial modification in the previous section. On the other hand, if our *na- se* construction does not have two VPs but instead only combines 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. The structure in more detail

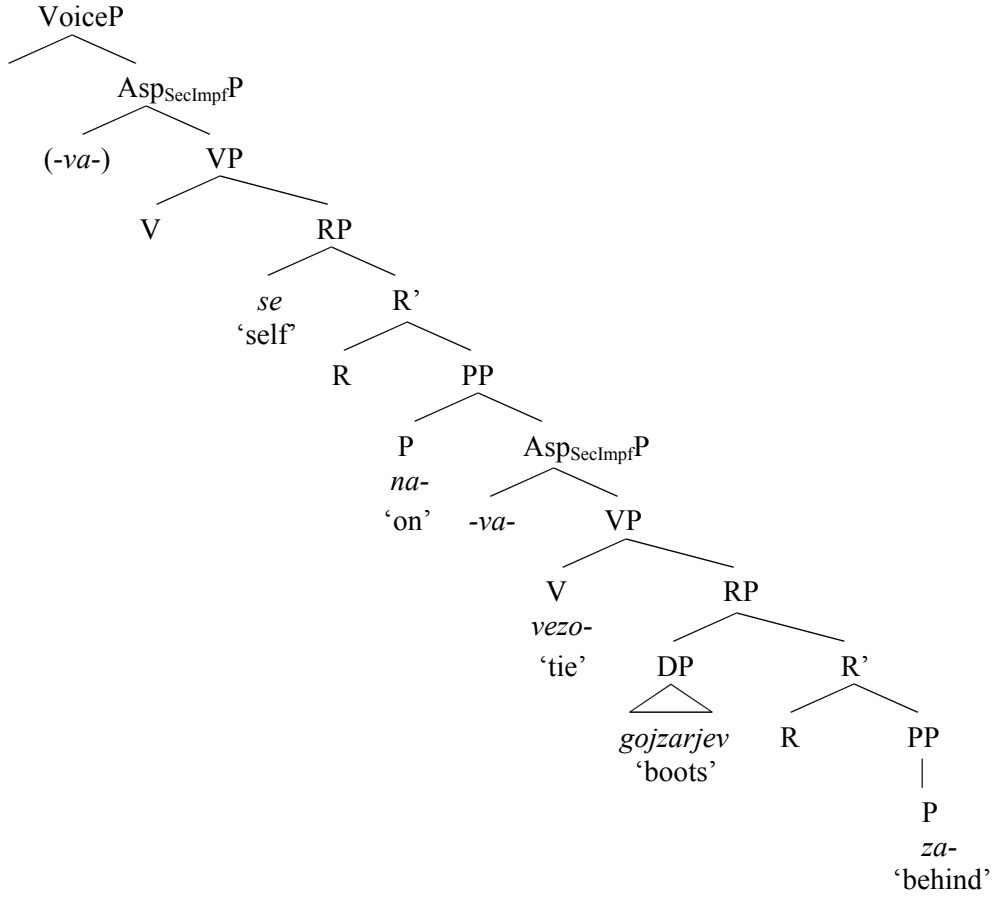
In section 3.1, we saw doubly-prefixed examples that exhibit two unselected objects. In 3.3, we saw doubly-prefixed examples that exhibit two scopes of the secondary imperfective. In 3.4, we saw examples with a result-state adverbial modifying the state of the subject's having their fill/enough of something. 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. In addition, we also saw a doubly-prefixed example that hosts two result-state adverbials and two locative adverbials. And in 3.6, we saw examples in which the genitival argument can be turned into accusative, with degradation, so that the construction possibly ends up containing two accusatives.

To accommodate these data in a standard syntactic framework, it seems to be well justified to posit some sort of a structure with two VPs, and at least some clausal structure over one of the VPs and ordinary full clausal structure over the other VP. For ease of reference, I repeat the example from (5f) above in (42). Thinking about the structure of (42) on the basis of its gloss, and assuming the approach to resultatives I adopted in the Introduction, the most straightforward structure will be along the lines of (43). Note that (43) omits the details that are not crucial for the present purposes; for example, with respect to the prefixal part of the structure, the RP-embedded PP may well have more structure than indicated in (43) (cf. Svenonius 2004), the thematic vowel is indicated as part of the root, etc. This practice will be followed in subsequent trees as well.[19]

[19] Arsenijević (2007: 33) also gives a two-VP structure for this use of *na-*. His tree fom this use of *na-* is essentially identical to the tree in (30) of the Introduction (but with the reflexive realizing the external argument of the lower VP). However, his structure (translated into a more standard tree of the type in (43)) thus has the second VP in the Spec,RP of *na-*, deriving the interpretation 'someone's tying up boots caused there to be a lot of his tying up boots'. It must have become clear from the discussion that this is not the interpretation that our *na- se* construction has.

(42) *na-za-vezovati se gojzarjev*
on-behind-tie self boots$_{GEN}$
'get one's fill of/come to have enough of tying up boots'

(43)



If we interpret the decomposed verbs with roughly the semantics resultatives are assigned in Ramchand's (2008a) system (i.e. with RP encoding result state), then the structure translates into a paraphrase like 'get one's fill of causing boots to be tied up', which fits the intuitions speakers have regarding the interpretation of these constructions.

Before moving on, let me just note that the idea that a prefix/particle sometimes takes some sort of a clausal complement is not unprecedented. Den Dikken (1995) treats constructions such as *the baby went off to sleep* and *he went on to become a great president* as consisting of two VPs. The higher verb selects a small clause headed by the particle *off*, and the particle selects the infinitival projection of the other verb. The infinitival complement in such constructions can, of course, also contain a particle (*he went on to tie up his boots*); the structure of such constructions would thus come out as fairly close to (43).

The next part of section 4 will discuss the details of the *na- se* construction on the basis of (43). At the end of section 4 (subsection 4.4.1), I will also give some reasons for why the structure in (43) may need to be modified in such a way that the lower VP moves to a higher position, or is even base-generated there (4.4.2). But first I will discuss those aspects of the structure which do not change with that modification (sections 4.1, 4.2, 4.3) and the

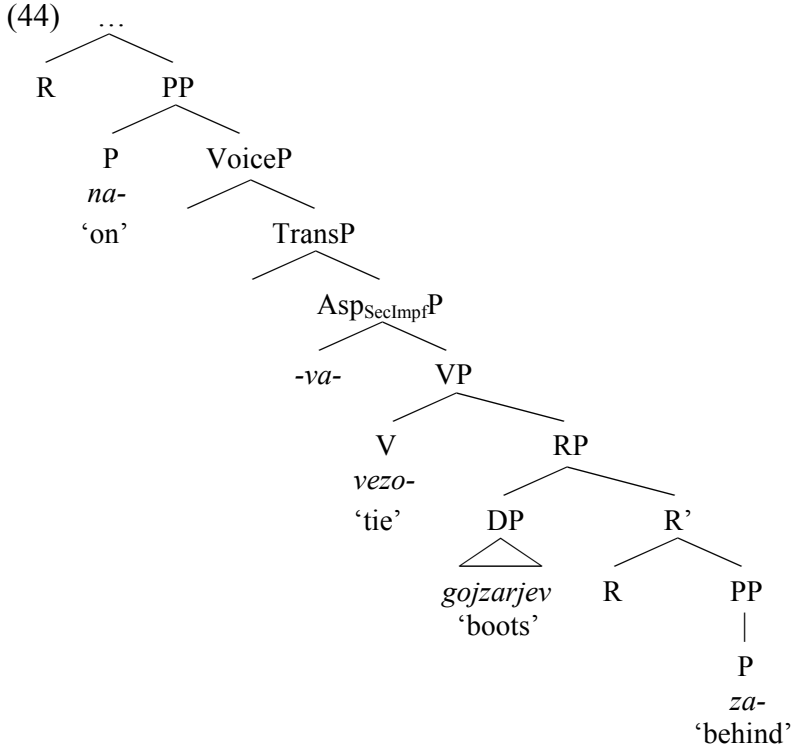
way in which (43) might nonetheless be made to work, albeit with certain stipulations (section 4.4.1).

4.1 Deficient embedded clause

Although (43) 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, with respect to the structure dominating the lower VP, the same does not hold. We have seen examples with an internal prefix tucked in between the verb root and *na-*, as is the case with *za-* in (42). In (43), 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 *na-klepetati se* (lit. on-chat self) 'get one's fill of chatting', the lower part stops at the VP level; see also section 5). Since we have seen that the lower VP, when containing a resultative prefix, can be modified by the secondary imperfective *-va-*, as in (42), the lower part contains an $Asp_{SecImpf}P$ dominating the VP. This $Asp_{SecImpf}P$, however, seems to be the point at which the clausal structure of the lower VP normally stops. We know this because we saw that normally, the argument of the embedded verb cannot be in the TransP-located accusative (cf. section 3.6), and that VoiceP-related manner adverbs are normally not possible (cf. 3.5.2). We also know this because we saw that there is interpretative evidence that HabitualityP is not there (cf. 3.5.2). And nor is there any morphological evidence of TenseP or SubjectAgrP, or any reason to assume that TenseP and SubjectAgrP are there covertly.[20] Of course, if we force the judgments and accept the cases with the second internal argument in the accusative rather than genitive (cf. 3.6), and if we accept manner adverbs on the lower VP (cf. 3.5.2), then the structure dominating the lower VP presumably goes up to TransP/VoiceP, as in (44) below. However, the higher clausal FPs are still missing. So even in this case, what we have downstairs is a deficient clausal complement.

[20] A structure that combines two AspPs under one Tense node is reminiscent of serial verb constructions in Dàgáárè. As claimed in Hiraiwa & Bodomo (2008: 823), a serial verb construction in Dàgáárè does not contain just two VPs under one Tense projection but rather two AspPs, as shown by overt presence of imperfective aspect markers on each of the verbs. A structure with two AspPs (rather than just two VPs) under the same Tense node was proposed also in Baker & Stewart (2002) for one of their three serial verb constructions.

(44)



As for the $Asp_{SecImpf}P$ of the higher VP, it has to be projected when a *na- se* 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), or it is always projected but specified as $[+Asp_{SecImpf}]$ when a *na- se* construction as a whole is interpreted imperfectively and as $[–Asp_{SecImpf}]$ when it is interpreted perfectively. In (43), 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 (cf. section 3.3)—but that there could sometimes be a vowel-change/ablaut reflex of the presence of the upper $Asp_{SecImpf}P$. (Remember from section 3.3 that for some speakers, an imperfective reading of (42) is more readily available if there is a change in the thematic vowel.) In cases like *na-klepetati se* (lit. on-chat self) ‘get one’s fill of chatting’ from (5b) above, which have no *-va-*, the $Asp_{SecImpf}P$ of the lower clause may be missing or present but specified as $[–Asp_{SecImpf}]$.

The structure only has room for one subject. If one wants to further split the subject and the causer/initiator, and to include the causer/initiator into each of the two VPs, then the causer/initiator of the upper event (‘getting one’s fill’) and the causer/initiator of the lower event (‘tying up boots’) will obligatorily be the same. This can be achieved with whatever mechanism one uses for subject-control structures. I will not go into this any further, I just note that the same restriction holds even in overtly two-VP near-paraphrases when their lower clause is infinitival: in *na-žreti se za-vezovati gojzarje* (lit. on-eat self behind-tie_{INF} $boots_{ACC}$) ‘grow tired of tying up boots’, the causer/initiator of the tying up of boots can likewise only be the same as the causer/initiator of the causing of oneself to be tired.

4.2 Nature of genitive case

As for the origin of the genitive case on the internal argument of the lower VP, I noted above that it could be an instance of inherent case, licensing the lower internal argument in the absence of TransP in the lower clause. At this point, let me only give the two most obvious arguments for why I claim that it is not (in general) the case that 'boots' are in the genitive due to being a direct complement of a quantificational *na-* (in the spirit of Filip 2000, 2005a), or a complement of a null quantifier in the complement of *na-* (à la Pereltsvaig 2006). Firstly, if it is *na-* that contributes the meaning of 'having one's fill of', then its complement (or the complement of its null Q complement) should be something like a VP or some XP from its extended projection (e.g. $Asp_{SecImpf}P$), given the meaning of 'get one's fill of tying up boots' rather than 'get one's fill of boots' (see section 5.2 below for other arguments). Secondly, as already explained in footnote 9 above, it is clear that in cases such as (45a), which is built on the sports meaning of *igrati* 'play', the genitival argument is introduced by the prefix *pre-* as an unselected object to *pre-igrati* 'fake out' and not by the prefix *na-* (see fn. 9 for the whole paradigm). If the genitival *Beckham* of (45a) were introduced as a complement of *na-*, we would expect that it will be possible to use it in the absence of *pre-* as well, given that both a *pre-*prefixed and a bare *igrati* can serve as input for the *na- se* construction, (45b). This, however, is not correct, (45c).

(45) a. *na-pre-igravati se Beckhama*
on-through-play self $Beckham_{GEN}$
'get one's fill of faking out Beckham'

b. *na-igrati se*
on-play self
'get one's fill of playing'

c. **na-igrati se Beckhama*
on-play self $Beckham_{GEN}$

Therefore, we need another source for the genitive on these nominals in the *na- se* construction.

One option is to see the genitive as arising as inherent case in a deficient clause, loosely following Alexiadou's (2001) proposal for the origin of the genitive on the internal argument in gerunds. At the same time, this internal argument cannot get the accusative of the higher clause because the latter is taken up by the reflexive clitic. But if, with degradation in the acceptability of the sentence, accusative case is nonetheless forced on the second internal argument instead of the genitive, then we have forced some extra functional structure on the lower VP. (For possible single-VP parses of certain *na- se* examples, and for the different nature of the genitive in such cases, see section 5.)

To summarize, it is not totally clear to me why the case we get is exactly genitive. However, there are some reasons for which it makes sense *not* to derive the genitive by merging the argument as a direct complement of *na-* (or the complement of a null Q complement to *na-*). I tentatively suggested one option for explaining its nature. (See section 5 for additional arguments and further discussion.)

4.3 Nature of phonologically unrealized verb

As is immediately obvious, the *na- se* construction never contains two overt verbal stems. If the structure contains two VPs, this means that one of the Vs is phonologically null.

Firstly, this could mean that one of the Vs (according to (43) the upper one) is realized by a phonologically null lexical verb that has some basic semantics such as ACT (or following Ramchand's 2008a labeling of the structural meaning of the V node, UNDERGO). Note that this is not the more widely posited null causative *v* that is often assumed to dominate an overt V, but rather a null V. Nevertheless, that there should exist such a phonologically null V should not be a problem, especially when it has some basic/primitive meaning (cf. Marušič & Žaucer 2006a). Phonologically null verbal roots have been proposed in the literature before: McCawley (1979), Ross (1979), Larson *et al*. (2006), Marušič & Žaucer (2006b), etc., posit a null HAVE, Larson *et al*. (2006) posit null BE, GIVE and FIND, van Riemsdijk (2002) posits null GO in several Germanic languages, Marušič & Žaucer (2005) posit null GO for Slovenian, Marušič & Žaucer (2006a) posit null FEEL-LIKE for several Slavic languages, and Inkelas (1993) posits several null verbs for Nimboran.

Secondly, one could also assume that there is no such thing as lexical categories, but that the concept of 'verb' boils down to a functional node or a set of functional nodes (e.g. a causative head *v*, a process/change head, and in resultatives a result head) into which roots are inserted (cf. e.g. McIntyre 2004, Ramchand 2008a). If this is so, our structures could be seen simply as having a null functional head, and we would only be interpreting the structural meaning of a functional node. What is marked as V in the above structures, then, would really be a functional node, no different in its status from, say, the causative little *v*. Compared to the option with a phonologically null but semantically specified lexical verb, the difference would be that we are then positing a null functional element rather than a phonologically null lexical verb, and null functional elements, of course, are even more commonly posited than null lexical verbs.

Following the second option, one can ask why it should be the case that in this construction, this node apparently *must* be empty. Outside this construction, the normal situation is one where the V-node is filled with a root. An immediate option that comes to mind is that in Slavic languages, verbal roots cannot stand bare or with just aspectual inflection. And given that we only have one set of full clausal projections, whereas the other clause is deficient, there is only room for one verbal root. The other V can thus only contribute its structural meaning. The whole thing may thus well be related to the question of why Slavic languages do not have serial verb constructions. Interestingly, Baker & Stewart (2002), Muysken & Veenstra (2006: 263-5), etc., have explicitly linked the existence of serial verb constructions to the question of whether verbs can occur uninflected in a language or not, and more generally, to the absence (or at least relative poverty) of overt verbal morphology in a language.[21]

Finally, there is the issue of licensing/recoverability of the null verb. This is discussed at length in van Riemsdijk (2002), who proposes that null verbs need formal licensing (cf. also Larson *et al*. 2006). This position is criticized in Marušič & Žaucer (2005, 2006a), who conclude that null verbs simply have to be recoverable; the structure must have something that signals the presence of the null verb. From this perspective, our null verb is quite unproblematic. Resultative heads only occur as complements of verbs, and so the presence of the prefix *na-* signals to the hearer/learner that he has to recover a null verb.

[21] In a similar spirit, the possibility to occur uninflected has also been proposed to be a prerequisite for a language to have adjectival resultatives (Gumiel *et al*. 1999, Kratzer 2005, but cf. Whelpton 2006). This could explain why Slavic languages have prepositional resultatives but not adjectival ones; Slavic adjectives must carry agreement.

In summary, the claim that the structure contains two VPs, where one of the V heads is null, is not in itself problematic. With respect to the nature of the null V, I outlined two options (lexical category vs. functional node in a decomposed 'verb'), which rest on different theoretical assumptions. As the choice between the two options is not central to my claims, I will not commit to one or the other; both are workable. The licensing, or rather, recoverability of the null verb is also not problematic. A harder question that the nullness of the matrix verb poses, however, is the following. Given that the matrix verb is null, how do we get to what is eventually spelled out, that is, to an inflected verbal root of the lower VP? This is what I address next.

4.4 Linearization of (43) and alternative structures

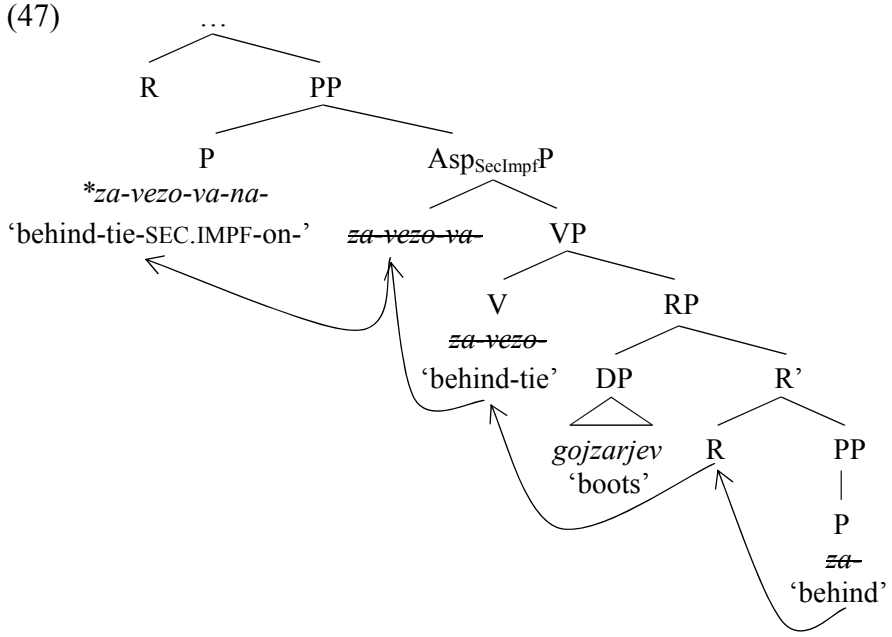
In this section, I discuss the issue of the linearization of (43). I first outline the linearization of the structure from (43), mentioning some problems and some stipulations that are necessary to bypass the problems (4.4.1). In 4.4.2, I explore an alternative whereby the structure starts out as in (43) but the two VPs end up concatenated with a conjunction-like phrase, which forces the lower VP to move to the specifier of this phrase; I also weigh the merits and the minimally required stipulations. And in 4.4.3, I explore another alternative, one where the two VPs *start out* as the specifier and the complement of a conjunction-like phrase, again weighing the merits and the minimally required stipulations. Without clear arguments to decide between the alternatives, I adopt the last version, as it will allow me to use the same account for all double-VP constructions in this thesis, whereas (43) would not.

4.4.1 Linearization of (43)

In section 4.1 above, I suggested that the lower clause is deficient, in the sense that its verb is not dominated by full clausal structure. This structural impoverishment, and more specifically the absence of the CP, could be seen as the factor that makes it possible for the lower verb 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 Slovenian FEEL-LIKE construction, as analyzed in Marušič & Žaucer (2006a), the absence of the CP can be taken to mean the absence of an intervening PF-phase (irrespectively of LF-phases) which would make sure that the lower clause with its overt verb would be spelled out to PF at that point. 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.

With the mechanism just outlined, any of the standard word-building processes, for example head movement, will get us the attested morpheme order of the overt verbal root and the inflectional morphemes despite the fact that the upper V is null. One problem that this system has, however, is deriving the linearization of the prefix *na-* with respect to the rest of the string. Specifically, simple left-adjoining head movement will not get us the correct result, since instead of the attested *na-za-vezo-va-* (on-behind-tie-SEC.IMPF) from (42), we should get the impossible *za-vezo-va-na-* (behind-tie-SEC.IMPF-on). In other words, the higher prefix/*na-* should surface as a suffix on *za-vezo-va-*, as in (47) below.

(47)



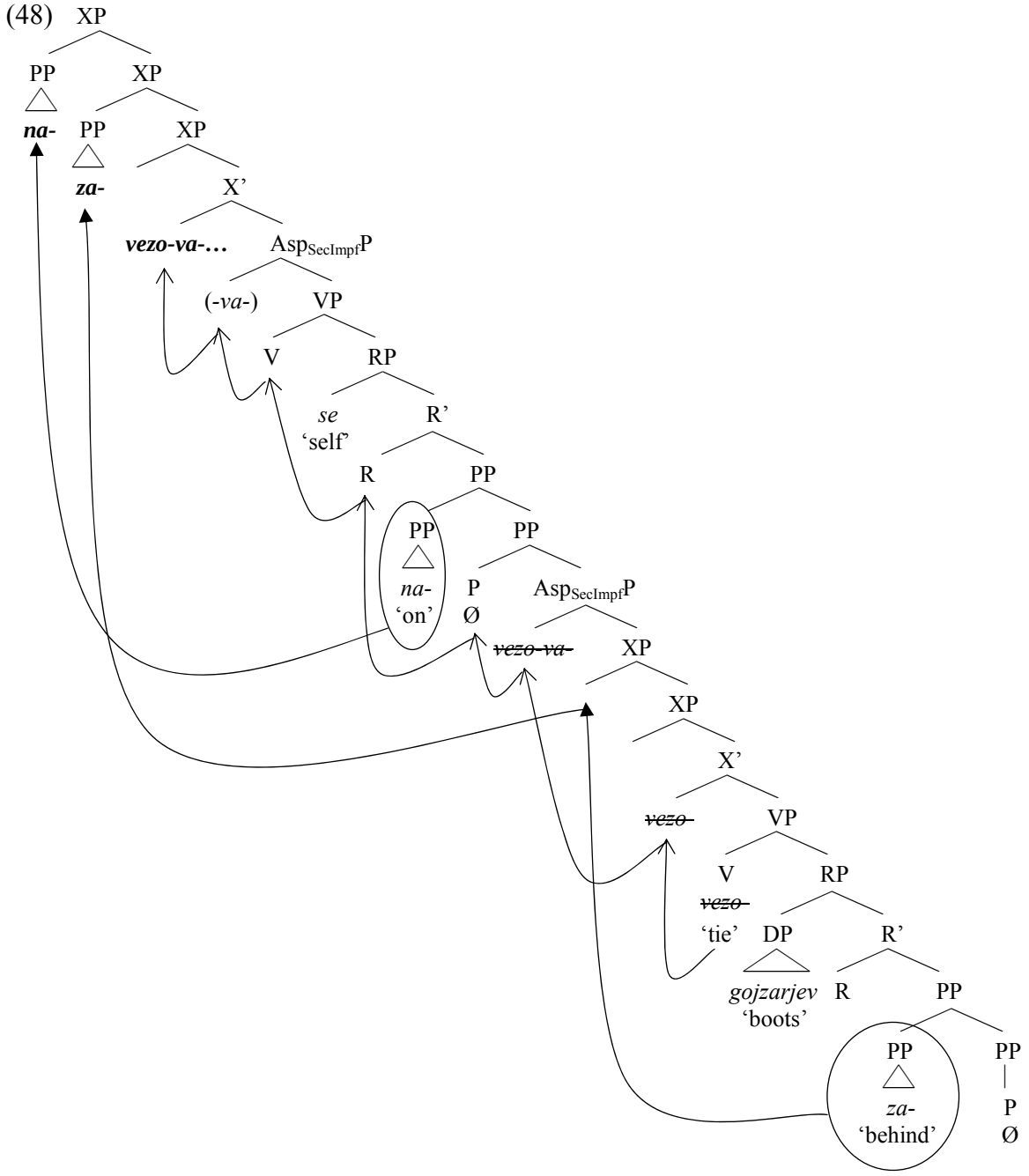
In the same vein, assuming a head movement analysis for what is realized as suffixes and remnant phrasal movement for prefix attachment is also not going to work with the structure in (43). If the lower V is to head-move to pick up the inflection (e.g. subject agreement of the higher VP), it presumably could not avoid moving through the higher prefixal P on the way, so *na-* could not be left in situ for subsequent remnant movement to XP-move it up. It would inevitably get picked up by the head-moving lower V, and so we would not be able to avoid getting *na-* suffixed onto *za-vezova-*.

There may still be two options that would get us the right result. One is head movement coupled with the stipulation that affixes are morphologically specified for whether they are prefixes or suffixes. *Za-* and *na-* could thus both get realized as prefixes, and in the correct relative order (i.e. just as in (47) above, but with *za-vezo-va-* adjoining to the right of *na-* due to a morphological specification of *na-* as a prefix rather than suffix). This solution is not terribly attractive, but it is not completely unprecedented either.

The other option is to assume that prefixes do not originate as Ps heading a PP which is part of the main frame, as in (43), but rather as heading a PP which is adjoined to one of the projections of a highly articulated result part of the clause, as per the second option considered in Svenonius (2004)[22]. Following this option, prefixes end up as prefixes through being adjacent to the verb+suffixes complex after they XP-move to adjoin to the final location of the head-moving verb, as in (48) below.

[22] In the text on p. 244, Svenonius (2004) states that the “prefixal phrase originates as an adjunct to PathP”, while in the tree on p. 245, he places it in Spec,PathP. With respect to the prefixal PP, this makes no difference.

(48)



However, this option is supposed to be motivated by spatial uses of prefixes, where the prefix is often doubled by a prepositional phrase. In the case of our *na-*, this motivation is missing, as the prefix actually cannot be doubled by any prepositional phrase (as is the case with prefixes with rather idiomatic uses more generally). In addition, this option appears to complicate the explanation of prefixal argument-structure effects (by obscuring the question of why free-standing directional PPs/PathPs cannot license unselected objects, as shown in Žaucer 2002: 94), and it may have a hard time explaining why prefixes, if they are not incorporated heads but rather heads of XP-adjoined PPs, differ phonologically from free-

standing PPs headed by cognate prepositions (as shown in Steriopolo 2007 and Gribanova 2008).[23]

To recapitulate, if the linearization can be made to work in any of the two ways suggested in the previous paragraph, then the structure in (43), with a null matrix V, is all we need. (This is where I left things in Žaucer [to appear].) However, since both of these options appear to be stipulative in one way or another, I will now explore two alternatives.

4.4.2 Modification of (43): Movement of lower VP

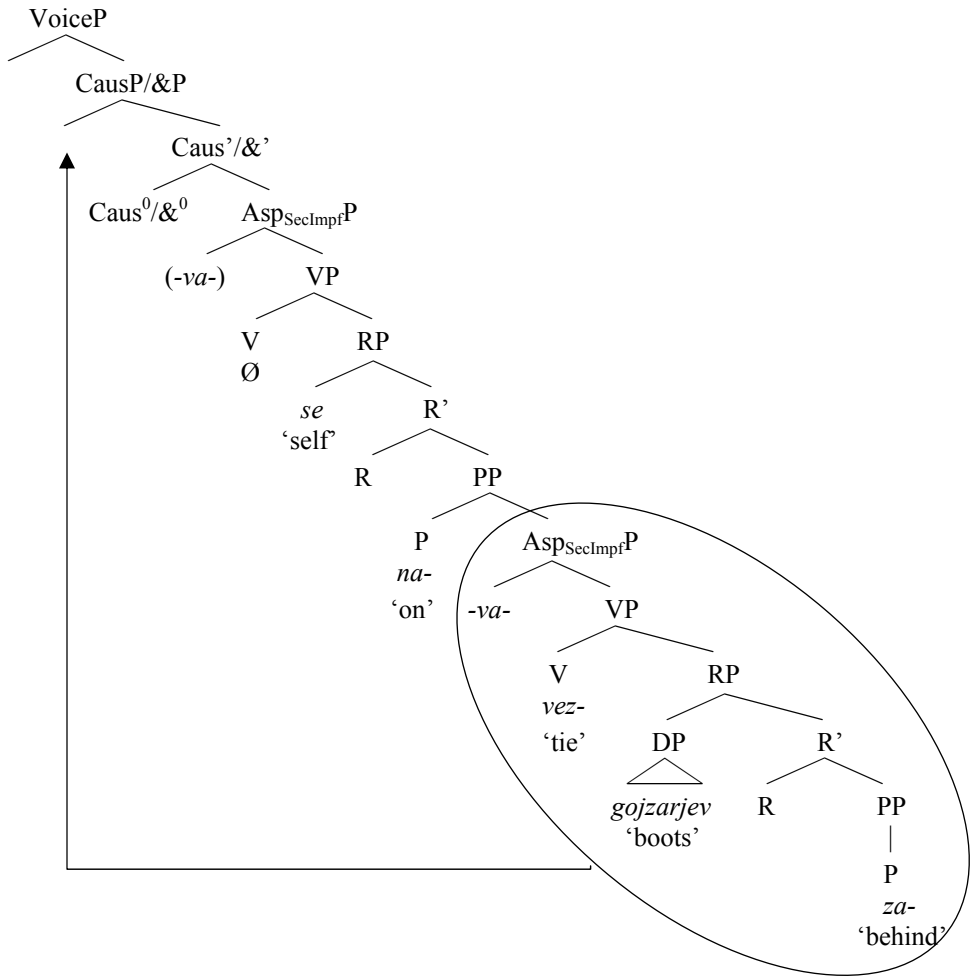
First of all, note that even though I have been translating the meaning of the *na- se* construction with glosses such 'get one's fill of tying up shoes/running/...', it seems that the meaning could also be 'get one's fill of tying up shoes/running/... by tying up shoes/running/...' (i.e. the (unacceptable English) 'run oneself sick of running'). Whether this is really the case or not may well be impossible to tell, given that the truth of the upper predicate ('get one's fill of') presupposes the truth of the lower predicate (e.g. 'tying up shoes/running'). In other words, the fact that one cannot truthfully predicate a past-tense *na-laufati se* [lit. on-run self] of a subject if that subject's getting their fill of running did not also coincide with that subject's running, prevents us from determining whether the meaning is just 'get one's fill of running' or rather 'get one's fill of running by running/run oneself sick of running'.[24] So let us simply assume for the moment that the interpretation is indeed 'get one's fill of running by running/run oneself sick of running', and explore how that can be encoded syntactically and if the resulting structure could have any independent advantages over the structure explored above 4.4.2.

One way of deriving the above-mentioned interpretation is by positing a movement where the whole lower VP ($Asp_{SecImpf}P$) moves to a VP-concatenating projection where it is interpreted as manner, as in (49a). The resulting structure is in (49b).

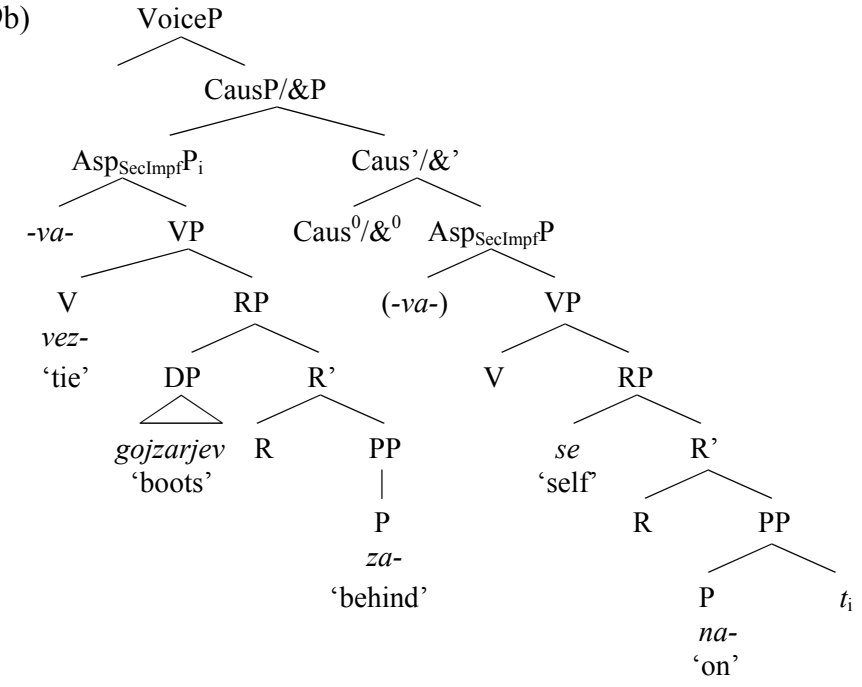
[23] Gribanova (2008) treats prefixes as forming a word with the verbal stem (i.e. as affixes) and their cognate free-standing prepositions as forming a post-lexical/prosodic unit with its host (i.e. as clitics).

[24] The problem can also be appreciated by looking at the overtly two-VP near-paraphrase in Slovenian or the English *get one's fill of running/become sick of running/grow tired of running*, where the truth of the whole construction also presupposes the truth of its lower predicate, and the upper predicate in these constructions evidently does not contain the root 'run'/*run*.

(49a)


VoiceP
CausP/&P
Caus'/&'
Caus^0/&^{0}
Asp$_{SecImpf}$P
(-*va*-)
VP
V
Ø
RP
se
'self'
R'
R
PP
P
na-
'on'
Asp$_{SecImpf}$P
-*va*-
VP
V
vez-
'tie'
RP
DP
R'
gojzarjev
'boots'
R
PP
P
za-
'behind'

(49b)


VoiceP
CausP/&P
Asp$_{SecImpf}$P$_i$
Caus'/&'
-*va*-
VP
Caus^0/&^{0}
Asp$_{SecImpf}$P
V
vez-
'tie'
RP
(-*va*-)
VP
DP
R'
V
RP
gojzarjev
'boots'
R
PP
se
'self'
R'
P
za-
'behind'
R
PP
P
na-
'on'
t_i

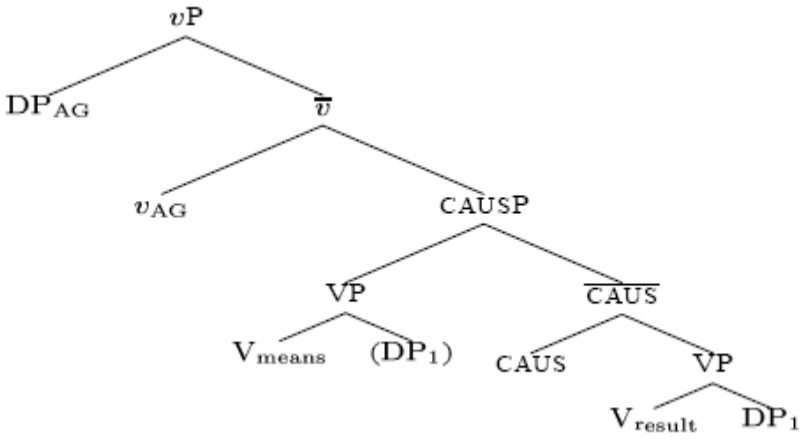
There are several issues that arise with respect to this structure: the nature of CausP/&P, the interpretation, the trigger for movement, and the linearization. I will discuss them in turn.

CausP/&P is a projection I borrow from Lidz & Williams (2002). They use CausP in the discussion of a resultative serial verb construction in Kannada, an example of which is in (50).

(50) *Hari kabbinavannu chappateyaagi taTTida*. (Kannada)
Hari metal$_{ACC}$ flat.be(come)$_{PastPtcp}$ hammer$_{Past.3.Sg.Masc}$
'Hari hammered the metal flat.' (Lidz & Williams 2002: 113)

Such cases, which can be roughly paraphrased as 'cause metal to become flat by hammering it', contain two verbs, a finite verb form representing the manner component of the serial verb construction, i.e. 'hammer', and a past participial verb form representing the result component of the serial verb construction, i.e. 'flat.be(come)'. The general structure Lidz & Williams propose for cases like (50) is in (51).

(51)



(Lidz & Williams 2002: 101)

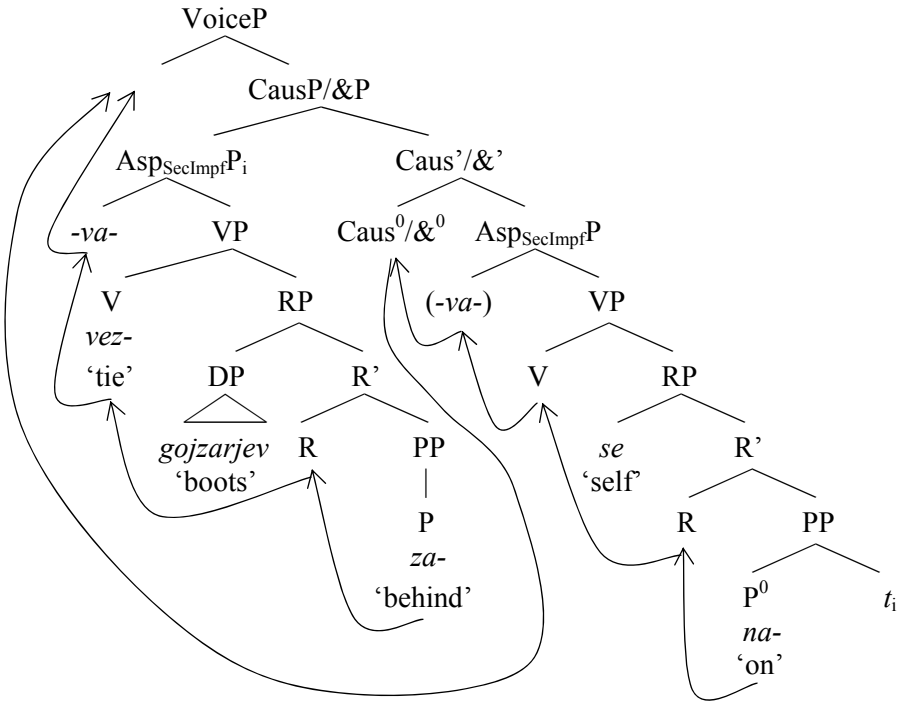
The two VPs of (51) are concatenated with CausP, a conjunction-like syntactic head that establishes a relation between them. The specifier of CausP hosts the 'manner' VP, while the 'result' VP forms part of the main projection line, as the complement of CausP. CausP is then dominated by the subject-introducing projection and the rest of the clausal structure. (Note that this structure is fairly close to what is a very common structure assigned to serial verb constructions, i.e. adjunction of one VP to another VP [e.g. Baker & Stewart 2002, Muysken & Veenstra 2006, Jeoung 2006].)

Going back to our construction with *na-*, I suggested that the VP that starts out as the complement of *na-*, and is as such interpreted as what one gets one's fill of, could move up to the specifier of CausP. Given the causative/conjunctive semantics of CausP, this VP will also be interpreted as manner. This brings us the interpretation of 'get one's fill of VP-ing by

VP-ing'.[25] Furthermore, given the character of CausP, which is one of establishing a relation between VPs, there is no problem with the motivation for movement. CausP can only establish a relation if it has a VP in the complement and a VP in the specifier, and so we motivate the movement. We still have to see, however, how this structure fares in terms of linearization.

It turns out that with this configuration, simple left-adjoining head movement can partly get the right output, i.e. with both prefixes ending up as prefixes and in the right relative order, and with the suffixes ending up as suffixes and in the right order, as in (52) below.

(52)



One stipulation we seem to need is the assumption that two instances of the secondary imperfective suffix *-va-* are not just prevented by haplology (cf. section 3.3 above), but that the nonrealization of the *-va-* of the main projection line is somehow related to the fact that the V that this Asp$_{SecImpf}$P dominates is null, and the *-va-* stays unrealized because of that. The second stipulation we need is that the complex head from the Spec,CausP-internal VP, i.e. *za-vezova-*, moves to the first head dominating CausP before the complex head of the main projection line. This is needed to ensure that *na-* is realized to the left of *za-*. Given that the first head position above CausP should count as equally local for the complex heads of both VPs (Asp$_{SecImpf}$Ps), this requirement is a stipulation. But at the same time, it is not clear how precedence is decided in such cases, and even though linear precedence is normally taken to play no role in grammar, the fact is that in serial verb constructions, which are

[25] One might wonder whether there will be reconstruction effects. Given that what moves is a VP, we cannot test for reconstruction with the standard test, i.e binding. In a simpler sense, however, one could claim that if the interpretation of this VP is indeed both as part of result and as manner, then this is precisely evidence for reconstruction.

commonly analyzed as adjunction of one VP to another VP, the linear order of the verbs is not free. In Baker & Stewart (2002), for example, the left-adjoined VP will also linearly precede the verb from the main projection line. Hiraiwa & Bodomo (2008: 829) have to settle for a similar stipulation in their 'double-headed' account of serial verbs. And in the case of Lidz & Williams' (2002) Kannada resultative serial construction from above, which they analyze as having one VP merged in Spec,CausP of the main projection line (cf. (51)), it is the verb in the Spec,CausP (the manner verb) that surfaces in finite form; the verb from the main projection line (the result verb) surfaces in participial form. So even though we need this stipulation for head movement to give the right result in (52), it appears that it is a stipulation which is needed in similar constructions anyway. In terms of linearization, then, the derivation in (52) may have an advantage over the one in (43), or is at least equal to it.

In summary, in view of the potential linearization problem posed by the structure in (43), this section started out with the goal of determining whether there is an alternative to (43). I explored the option that the VP which starts out as the complement of the prefix *na-* moves to a higher position, i.e. the specifier of a conjunction-like CausP, where it gets interpreted as manner. The interpretation cannot be taken as favoring one or the other option. In terms of linearization, however, the second option (i.e. (49)/(52)) seems to fare better, or the two are comparable. The appeal to the CausP projection, which had been proposed in the literature on serial verbs, provides the manner interpretation for the VP in its specifier and it also provides the trigger for movement.

4.4.3 Modification of (49): (49b) as base-generated

Before concluding, let me also mention a variant of (49) that may be simpler than either (49) or (43), namely, having the configuration from (49b) as a base-generated structure. The structure would have two VPs, concatenated with CausP, so that the manner resultative VP (e.g. 'tie up boots') would merge directly in the specifier of CausP rather than moving there from the complement of *na-*. The obvious question that arises with such a structure is how we derive the intuition that what one has gotten their fill of is 'tying up boots'. I can think of two options.

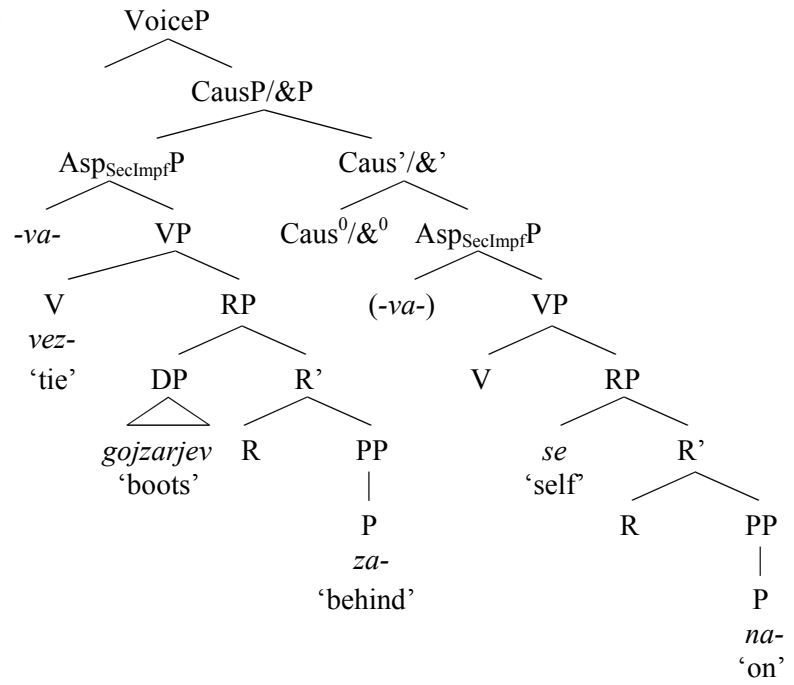
Firstly, we could posit a null variable in the complement of *na-* (i.e. in the position where (49b) has the trace of the moved VP). The variable would be bound by the VP in Spec,CausP. In this way, we would have the structure that may be the less stipulative structure in terms of linearization, and we would also get 'tie up boots' interpreted as what one has gotten their fill of. It must be noted, however, that the difference between this option and the one with the VP merged as the complement of *na-* and then moved to Spec,CausP depends on one's theoretical assumptions. If one adheres to the view that variables are really just traces of movement, then this option is really one and the same with the option in (49). If one does not collapse variables and movement, then base-generation of the VP in Spec,CausP and coindexation with a variable in the complement of *na-* may be a possibility. In fact, there may be some reasons for accepting this.

Na- is one of the prefixal prepositions which appear to be at least optionally transitive. Although I will not discuss these cases in more detail until section 5 below, let me point out here that some *na- se* structures, when *na-* is the only prefix, can not only have a double-VP parse but also a single-VP parse, as in *na-piti se vode* (lit. on-drink self water$_{GEN}$) 'drink oneself full of water'. It will be shown below that in such cases, 'water' is most

probably a complement of *na-*. Therefore, if *na-* is independently known to have a transitive use, it need not be surprising that it could have a variable in its complement.

And secondly, it may perhaps also be conceivable that there is no variable in the complement of *na-*, and it is merely world knowledge that tells us that if one made oneself have one's fill by tying up boots, it is tying up boots that one has one's fill of. In other words, our double-VP *na- se* construction might have the equivalent of (49b) as the original structure, with a regular, intransitive prefix *na-* in the result of the main-frame VP, as in (53).

(53)



The main projection line gives us the meaning of 'getting one's fill', and the VP in Spec,CausP gives us the meaning of manner. That such a structure is feasible is also suggested by cases like *na-spati se* (lit. on-sleep self), for which it will become clear below (section 5) that in addition to their double-VP parse, they can also have a single-VP parse but still get the interpretation of 'get one's fill of sleeping'. If so, how do we get the interpretation that what one has gotten their fill of is sleeping? The only answer I can see to this question is that 'run'/'sleep' is inserted in V, where it identifies the manner (as is standardly assumed in the small-clause model of resultatives for any kind of garden-variety resultatives), and that it is either world knowledge or a null V-coindexed variable in the complement of *na-* that tells us that what he got his fill of, by sleeping, is sleeping. The reason for this is that one would not want to claim that in these cases, *na-* has a simple V ('sleep') in its complement, and the latter then moves up into the usual V position. On the one hand, this would mean, controversially, that we have a head in an argument position; on the other hand, it would also predict an incorrect morpheme order.

To conclude, it seems that there is motivation for having a double-VP structure along the lines of (53), with the VP in Spec,CausP base-generated there rather than moved from the complement of *na-* (whether *na-* is then seen as having a null variable in the complement or no complement at all). At the same time, all three options that I discussed in 4.4.1-4.4.3 (i.e. *na-* with a VP complement, *na-* with a VP complement that moves to the conjunction-like

Spec,CausP, and the second VP base-generated in Spec,CausP) have to acknowledge some stipulation or other. Since I do not have clear arguments to decide between the alternatives, I will adopt the last version, i.e. (53), as it will allow me to use the same account for all double-VP constructions in this thesis, whereas (43) would not work for doubly-prefixed cases of the construction discussed in chapter 2. All else being equal, one would assume that the way the two VPs are concatenated is the same in all these constructions. In the next section, I supplement the picture of linearization with the result-modifying prefixes which, as discussed in section 3.2, can also occur in the *na- se* construction.

4.4.4 Linearization of 'adverbial'/result-modifying prefixes

In sections 3.2 and 3.3, I mentioned a prefix which was said to be 'more adverb-like' than our *na-* and to be able to stack over our *na-*, as in *pre-na-frfotati se* (lit. over-on-flutter self) 'get more than one's fill of fluttering'. I also mentioned that unlike our *na-*, this *pre-* does not trigger perfectivity when occurring on a secondarily imperfectivized prefixed verb, as in the imperfectively interpreted *pre-na-frfotavati se* (lit. over-on-flutter.sec.impf self) 'be getting/be about to get more than one's fill of fluttering'. In this section, I will briefly mention some further differences between this type of prefixes and our *na-*, differences that suggest a radically different syntactic function for the two types of prefixes (despite the fact that this difference is not immediately obvious because both types of prefixes are realized as verbal prefixes). Then I will go on to incorporate these prefixes into the structure I adopted for the *na- se* construction in (53) above.

4.4.4.1 As just mentioned, the first difference between prefixes such as the above *pre-* and our *na-* is the fact that only the latter perfectivize a secondary imperfective (section 3.3). On the assumption that prefix-triggered perfectivity is a signal of resultativity (Brecht 1985, Klein 1995, Strigin & Demjjanow 2001, Bertinetto 2001, Žaucer 2005a, Arsenijević 2006, 2007), this suggests that this *pre-* does not contribute a second independent result predicate to the *na- se* construction. Secondly, whereas doubly-prefixed *na-PRF-V se* cases were shown to license two unselected objects (section 3.1), no such second unselected object can be observed when it is this *pre-* that is stacked over a resultative prefix. Therefore, there is evidence that our *na-* heads an independent resultative secondary predicate, but there is no such evidence for this *pre-*. Thirdly, doubly-prefixed *na-PRF-V se* cases were shown to license two result-state adverbials, which suggests that they contain two independent result subevents (section 3.5). Nothing like this is possible when this *pre-* is stacked over a resultative prefix, so there is no motivation for positing two independent result subevents. And more generally, doubly-prefixed *na-PRF-V se* cases were shown to license various types of adverbials modifying either the 'getting one's fill' event or the other event ('tying up boots'), which was taken as support for the claim that those doubly-prefixed *na-PRF-V se* cases contain two VPs. On the other hand, nothing like this is possible when this *pre-* is stacked over a resultative prefix, and so there is no motivation for positing two VPs. All of these characteristics present syntactic evidence for the claim that this *pre-* does not head an independent resultative secondary predicate. There are other prefixes of this type, such as *pri-* in *pri-vz-digniti* (lit. at-up-lift) 'lift up partly' from (13b) above, or *pre-* on *pre-u-stekleničiti* (lit. over-in-bottle) 'to rebottle'; these pattern with the *pre-* in *pre-na-frfotati se* (lit. over-on-flutter self) 'get more than one's fill of fluttering' in all of the above mentioned

respects. The question remains, however, where these modifying *pre-* and *pri-* prefixes originate.

4.4.4.2 I suggested in passing that these modifying prefixes originate as modifiers of result, but at first sight, it is not clear that they could not be higher up, say, vP- or VP-level modifiers. In fact, Romanova (2007: 175, fn. 1) considers such a *pri-* VP-external, and in Tatevosov's (2008) model, where prefixes are split into resultative/internal, intermediate, and vP-external, these prefixes would fall in the intermediate group, since they scope under the secondary imperfective. As such, they would be at least above the VP or adjoined to the VP. However, there are several interpretational facts which show that this position cannot be correct.

Firstly, this can be shown with the help of the restitutive reading of 'again'. For example, *pri-*, which adds to *vz-digniti* (lit. up-lift) 'lift up' the meaning of 'partly', cannot take wide scope with respect to the restitutive reading of 'again', (54).

(54) *Maša je klop spet pri-vz-dignila*.
Maša is bench again at-up-lifted
'Maša partly lifted the bench again.'

(54) only has the reading '[cause [become [again [partly [up]]]]]', but not '[partly [cause [become [again [up]]]]]' or '[cause [partly [become [again [up]]]]]'. Given that the restitutive reading of 'again' is known to be an instance of result-state modification, i.e. to arise when 'again' is located below the VP/at the level of the ResultP (see section 3.4 above for references), this means that *pri-* cannot be a VP-external prefix but must also originate below the VP.

Secondly, adverbs of completion can be used to show the same. The 'again'-like *pre-* cannot take wide scope with respect to *do polovice* 'halfway', (55).

(55) a. *Kaja je do polovice pre-u-stekleničila tisti hektoliter vina*.
Kaja is to half over-in-bottled that hectoliter wine_{GEN}
'Kaja rebottled that hectoliter of wine halfway (i.e. rebottled half of that hectoliter of wine).'
(impossible: 'Kaja bottled that hectoliter of wine halfway (i.e. only half of it) again.')

b. *Peter je samo na pol pre-u-strojil sistem*. [*u-strojiti* = 'shape', *pre-u-strojiti* = 'reshape']
Peter is only on half over-in-shaped system
'Peter reshaped the system only halfway.' (i.e. the system must have been fully shaped before Peter's half-reshaping took place, it is not possible that it was only half-shaped before and he half-shaped it again)

Since such adverb(ial)s of completion are known to always take narrow scope with respect to both the repetitive and the restitutive reading of 'again' (Piñón 2005), and since the restitutive reading of 'again' is known to arise when 'again' is located below the VP/at the level of the ResultP (see section 3.4 above for references), we know that *pre-* cannot be VP-external but must also sit below the VP/at the level of the ResultP. (Cf. McIntyre 2003: 130-9 for similar claims concerning the English *re-*.) Therefore, we know that these modifying

prefixes which do not trigger perfectivity when they stack on a secondarily imperfectivized prefixed verb are not VP- or vP-modifiers but rather ResultP-modifiers. The question remains, however, whether these modifying prefixes originate above the main resultative prefix or below it.

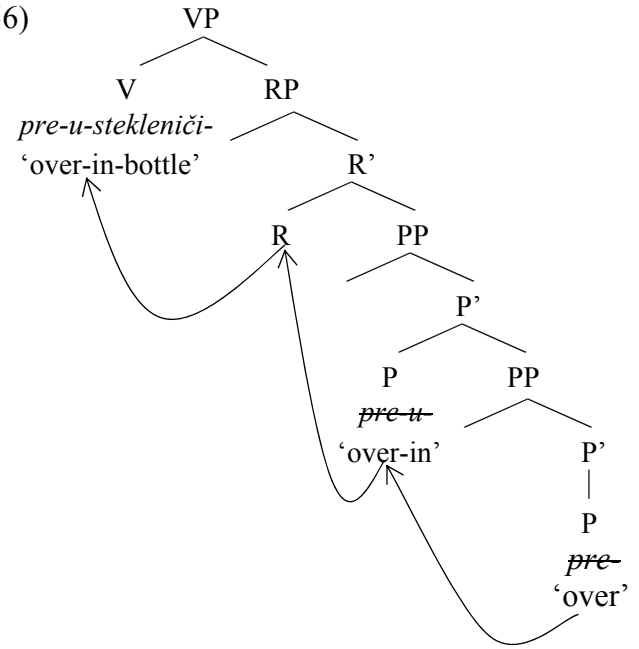
4.4.4.3 In principle, one would think that a result-modifying prefix originates either adjoined to the PP of the main resultative prefix or in a DegP in the extended projection of the PP of the main resultative prefix. However, it should also be possible, in principle, that such prefixes originate embedded under the main resultative prefix, as its further specification, just like in English directed-motion structures with nested particles, or with a PP following a particle (e.g. *I'll send the letter on over to Grandma's house* (den Dikken 1995: 80), *She climbed up into the tree*, *She cut up the cheese into small pieces*, *She passed the wine over to me*). For such cases, den Dikken (1995) offers syntactic evidence that the second particle or the PP following the particle originate embedded under the small clause of the main resultative particle (his evidence comes from the possibility of fronting the PP without the particle, and from the relative word order of the stranded particle and the direct object after fronting of the PP).

Unfortunately, given the fact that Slavic prefixes are necessarily prefixed on the verb, such tests are unavailable. However, at least for one of these result-modifying prefixes there is one piece of data which offers a hint that this prefix originates embedded under the main resultative prefix. The relevant case is *pre-u-stekleničiti* (lit. over-in-bottle) 'to rebottle'. Compared to *u-stekleničiti* (lit. in-bottle) 'to bottle', it appears that the 'again'-like meaning of *pre-* 'over' actually comes from the meaning of 'in another location', i.e. 'cause to be in (a bottle) in another location(/bottle)'. This is suggested by the fact that *pre-u-stekleničiti* cannot be used in a situation where one bottled some wine, then emptied the bottle, and then bottled the wine again in the same bottle. If *pre-* were a mere modifier meaning 'again', then there is no reason for this restriction; this is confirmed by the fact that *spet u-stekleničiti* (lit. again in-bottle) can easily be used in such a situation (on either a repetitive or restitutive reading of *spet* 'again'). This suggests, then, that this 'again'-like meaning of *pre-* indeed comes from a locative use that further specifies the location specified by the stem-adjacent prefix *u-* 'in'. And if we extrapolate from den Dikken's (1995) conclusion about the syntactic position of the second particle or the further specifying PP, we can conclude that these stacked adverb-like prefixes originate embedded under the main resultative prefix. Den Dikken's (1995) conclusion was, of course, reached on the basis of English and Dutch particles, so this can offer only very indirect evidence for Slavic prefixes. However, given the unavailability of comparable tests in Slavic due to the inseparability of the prefixes, and given the overall strong parallels between Slavic prefixes and Germanic particles, I tentatively conclude that what I have been calling result-modifying prefixes originate embedded under the main resultative prefix.

4.4.4.4 To summarize, prefixes which do not trigger perfectivity when they stack on a secondarily imperfectivized prefixed verb do not represent a second independent secondary predicate, as suggested by the fact that they do not introduce unselected objects, they do not license a second reading of adverbials, etc. This clearly separates such prefixes from the cases where our *na-* is stacked over a resultative prefix. Unlike our *na-*, such prefixes are result-modifiers, as can be shown by interpretative evidence involving relative scope with respect to the restitutive 'again' and to adverbs of completion. Finally, I tentatively suggested

that these prefixes originate embedded under the main resultative prefix, in the spirit of den Dikken (1995), rather than adjoined to the main resultative secondary predicate or in a DegP in the extended projection of the main resultative secondary predicate. If this is the case, then adding such prefixes to the double-VP structure of our *na- se* construction in (53) presents no additional linearization puzzle. Simple head movement will get the 'modifying' prefix to be stacked on top of the main resultative prefix, as is shown for the single VP of *pre-u-stekleničiti* (lit. over-in-bottle) 'rebottle' in (56).

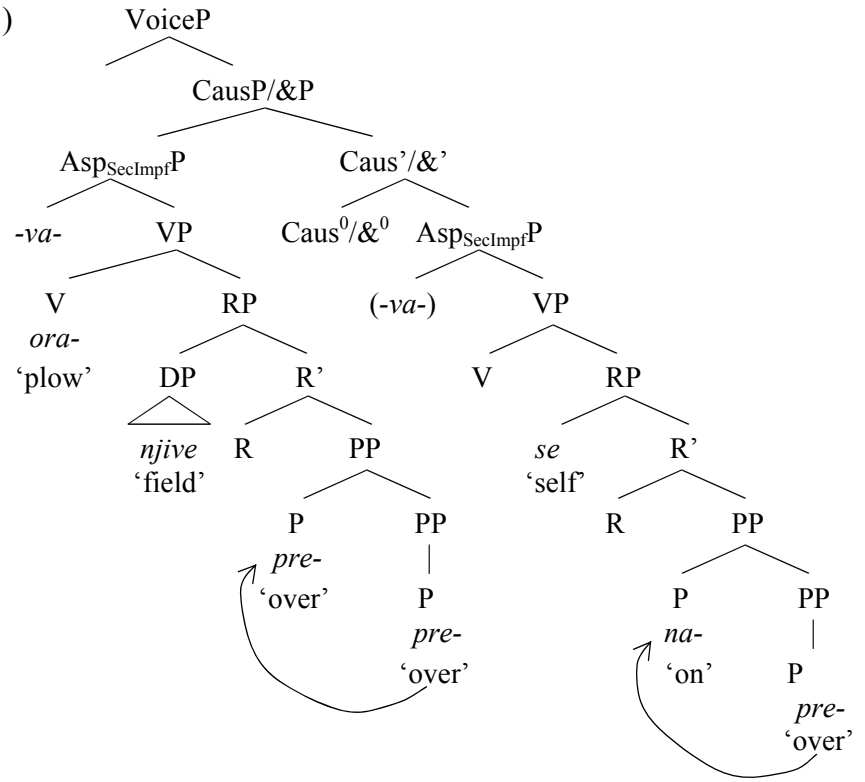
(56)



If the stacked PPs are seen as two full small clauses rather than only stacked PPs, i.e. each with a subject position, nothing changes with respect to the linearization. The lower prefix would head-move through the null head introducing the subject of its small clause on its way to the higher prefix. Importantly, though, the subject of the two small clauses would be realized by the same nominal, and the two small clauses form part of one independent result subevent.

In double-VP cases like ***pre***-*<u>na</u>*-***pre***-*<u>pre</u>*-*oravati se njive* (lit. over-on-over-over-plow self field$_{GEN}$) 'get/be getting **more than** one's <u>fill</u> of [plowing <u>up</u> the field **again**]' from section 3.2, where each of the two main resultative prefixes (underscored) comes with its own further specifying prefix (bold), the latter will head-move and adjoin to the left of the main resultative prefix of its subevent, as in (56').

(56')



This concludes the section on the structure of the *na- se* construction.

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

The structure adopted in the previous section captures the behavior which was described in section 3 and which, in principle, any *na- se* example with an imperfective base verb 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- se* construction with English adjectival resultatives such as *run oneself exhausted*, and then I will show that in some cases, *na- se* 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 several claims made in previous sections (the double-VP structure, the nature of genitive case, etc.).

5.1 *Na- se* vs. *run oneself exhausted*

It is often noted that the *na- se* construction resembles certain English resultative structures with unselected reflexives, such as *run oneself exhausted/tired*. The parallel, however, is not perfect. Such English cases do not exhibit any scope ambiguities with adverbials, etc. Therefore, it only makes sense to consider these as having a standard resultative structure with a single VP, as in (57) (cf. Hoekstra 1988, etc.).

(57) [$_{VP}$ *run* [$_{RP/SC}$ *oneself* [$_{AP}$ *exhausted*]]]

In fact, Slovenian has a prefixed verb with an unselected reflexive which appears to be a direct counterpart of the English adjectival resultative, (58a). As a single-VP structure would predict, *z-laufati se* does not accept the 'around' adverbial from (31) above, as shown in (58b), it shows no ambiguity with adverbials, etc.[26]

(58) 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 cases of *na- se*

5.2.1 The claim that our *na- se* constructions have two VPs was based on their behavior as presented in section 3. The two VP structure, however, is not the whole story. Some examples with a reflexive-introducing *na-*, an imperfective base verb, and a genitival nominal show an interesting ambiguity. (59) 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').

(59) *A si se že na-pil vode?*
Q are self already on-drunk water$_{GEN}$
i. 'Have you had your fill of water yet, by drinking?'
ii. 'Have you had your fill of drinking water yet?'

That the ambiguity is real is suggested by various facts. Firstly, this is suggested by the fact that on the reading in (ii)—but not on the reading in (i)—it is felicitous to precede the question in (59) 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.

Secondly, the ambiguity from (59) is also confirmed by the fact that on the reading from (59i), the truth of an affirmative past-tense version of (59), as in (60), entails that Tone has had his fill of H_2O, (60i), regardless of whether the speaker knows that water and H_2O are co-extensional. On the other hand, on the reading from (59ii), the truth of an affirmative past-tense version of (59), as in (60), does not entail that Tone has had his fill of H_2O, (60ii). In other words, on one of the readings, the sentence in (60) shows hyperintensionality (cf. Kearns 2000, Larson 2002), while on the other reading it does not.[27]

[26] Note, incidentally, that *z-laufati se* also fails at least two of the putative diagnostics for internally prefixed verbs, Root/zero nominalization from it seems impossible (*lauf* 'a run', **z-lauf* (*se*)), and it resists secondary imperfectivization in spontaneous speech, especially on a noniterative/progressive reading (??*z-laufavati se*), casting more doubt on the validity of these diagnostics.

[27] For Larson (2002), hyperintensionality can only occur in clausal complements, so the presence of hyperintensionality in (60) presumably suggests that the double-VP structure in (53) should indeed have a variable in the complement of *na-*, bound by the Spec,CausP-internal VP. At the same time, on Larson's (2002)

(60) *Tone se je na-pil vode*.
Tone self is on-drunk $water_{GEN}$
i. 'Tone had his fill of water, by drinking.' ==> *Tone se je na-pil H_2O-ja*.
ii. 'Tone had his fill of drinking water.' =/=> *Tone se je na-pil H_2O-ja*.
Tone self is on-drunk H_2O_{GEN}

And thirdly, the ambiguity of (59) and (60) also becomes clear through a comparison with a lone case of the *na- se* sequence with a perfective base verb. Recall that I said that the *na- se* construction discussed above was restricted to imperfective base verbs (a restriction shared by the overtly two-VP near-paraphrase, cf. footnote 13). Now, comparing (59) and (60) with *na-užiti se svežega zraka* (lit. on-eat self fresh air_{GEN}) 'get one's fill of fresh air', whose base verb *užiti* 'eat' is perfective, it turns out that there is no ambiguity of the type in (59) and (60). This example can only mean 'get one's fill of fresh air' but not 'get one's fill of taking in fresh air' (confirmed by the SSKJ dictionary).

Therefore, on the reading in (i), (59)/(60) are structurally nearly parallel to *run oneself exhausted*, for which see (57) above, but with the difference that unlike the intransitive resultative adjective *exhausted*, the prepositional prefix *na-* takes 'water' as its complement, (61).

(61) $[_{VP}$ *piti* $[_{RP/SC}$ *se* $[_{PP}$ *na-* [*vode*]]]]
drink self on $water_{GEN}$

Even closer to the structure of (59i)/(60i), then, would be the English *He drank himself full of water*, with both cases having a single VP and a complement-selecting resultative head (P in the Slovenian case, A in the English case). On the other hand, on the interpretation in (59ii)/(60ii), the same example gets the two-VP structure proposed in (53) above. [28,29]

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view, the presence of hyperintensionality in (60) is another piece of support for the claim that on this reading, the structure contains two VPs. Regardless of whether one adopts Larson's (2002) view of hyperintensionality, however, one needs to explain the observed difference in the interpretation.

[28] Pereltsvaig (2006: 457, fn. 24) mentions that in contrast to the direct Russian counterpart of (60), the same sentence with 'water' replaced by 'a bucket of water' is out (also true for Slovenian), for which she invokes an idiosyncratic reason about case and overtness/covertness of a Q element. If the meaning is really more or less 'drink oneself full of water', no such idiosyncratic explanation is needed. Simply, one can be 'full of water' but not 'full of a bucket of water'. And if attempting the second parse of (60), 'a bucket of water' is out because a repetitive/habitual interpretation of the Spec,CausP-internal clause is impossible (cf. 3.5.2 above), but 'a bucket of water' could only be possible on such a reading. The same rules out replacing 'water' with 'a lot of water'.

Further, Pereltsvaig (2006: 466, fn. 28) notes that given that she claims that 'water' in the Russian counterpart of (60) is selected by the prefix, not the verb root, it may be problematic that 'water' cannot be replaced by 'pears'. Again, this is explained if the meaning of (60) is 'drink oneself full of water'. Replacing 'water' with 'pears' would then give us 'drink oneself full of pears', which is clearly infelicitous (even though structurally fine). And if attempting the second parse of (60), we would get 'get one's fill of drinking pears', likewise infelicitous. Cf. also Spencer & Zaretskaya's (1998b: 113) remark about *wipe the table clean*/#*dirty*.

5.2.2 The ambiguity from (55) and (61) above can also be used to make a clear case for the view expressed in section 4.2 above that the genitive in our two-VP *na- se* construction is not assigned directly by a quantificational *na-* (or a null quantifier in its complement, à la Pereltsvaig 2006). This is, of course, already suggested by the fact that the meaning of, say, *na-za-vezovati se čevljev* (lit. on-behind-tie self shoes$_{GEN}$) is 'get one's fill of tying up shoes', as was noted in 4.2, but it becomes even clearer in view of (55ii)/(60ii), where one can, as already mentioned, get one's fill of drinking water *without* getting one's fill of water. In other words, if *na-* is the part that contributes the meaning 'have one's fill', then 'water' on the reading in (55ii)/(60ii) clearly cannot get genitive by virtue of being its direct complement (or the complement of its null QP complement) since it is not 'water' one comes to have one's fill of but 'drinking of water'. If 'water' were the complement of *na-* (or its null QP complement) in this case, the meaning of the sentence would, contrary to fact, *necessarily* involve the subject's ending up sick of water. Moreover, note that if the genitive 'water' in (55) is—with degradation—forced to be realized in the accusative, as in (62), then the sentence is no longer ambiguous; it only allows the reading in (ii).

(62) ?? *A si se že na-pil to prokleto vodo?*
Q are self already on-drunk this damned water$_{ACC}$
i. Not: 'Haven't you had enough of this damned water yet?'
ii. 'Haven't you had enough of drinking this damned water yet?'

This offers one more confirmation that the ambiguity in (55)/(60) is real, and in addition, it supports the idea that the nature of the genitive nominal and the genitive case of (55)/(60) 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, the genitive nominal is the sole internal argument of the Spec,CausP-internal VP of a two-VP structure, and its genitive case can*not* be a result of the nominal's being a direct complement of *na-* (cf. 4.2 above for speculation on the origin of this genitive). If the nominal is then actually forced into accusative, we have possibly added some extra structure on top of the deficient Spec,CausP-internal VP (cf. 4.2). Conversely, when the genitive can*not* be switched for accusative (i.e. on the reading 'drink oneself full of water'), the syntactic origin of the genitive nominal must be different. The genitive case may also be inherent, but because the nominal is a complement to the prefix and thus coexists with another, higher argument in its VP (i.e. the reflexive subject of the result predicate), it will not be able to count as the direct object of this VP, and it will thus not be able to be switched to accusative. In short, on the

[29] Almost the same structure as in (61) would probably be assigned to what McIntyre (2004) calls the "argument-blocking" particle verb *read up* in (i). That *on semantics* is not a VP-adjunct is suggested by the 'do so' constituency test, (ii), and that it is not an adjunct to RP is suggested by the extractability of *semantics*, (iii). Therefore, *on semantics* appears to be an argument of *up*.
(i) *John read up *(on) physics.* (ii) **John read up on physics, and Mary did so on math.*
(iii) *What does he regret reading up on?*
The unselected reflexive from the Slovenian *na- se* 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*. 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/get one's fill of semantics' and the two-VP interpretation of 'get one's fill of reading on semantics'.

reading 'get one's fill of drinking water', the reflexive and the genitive nominal are arguments of different VPs, and on the reading 'get one's fill of water/drink oneself full of water', the reflexive and the genitive nominal are arguments of the same single VP; this is why the genitive can, with degradation, only be switched for accusative in the first case.

As for the origin of the genitive on 'water' on the reading 'get one's fill of water/drink oneself full of water', I will assume that it has the same inherent-case nature as we get in *o-tresti drevo uši* (lit. out-shake $tree_{ACC}$ $lice_{GEN}$) 'shake the tree free of lice' or *o-mesti dimnik saj* (lit. out-sweep $chimney_{ACC}$ $soot_{GEN}$) 'sweep the chimney clean of soot'. In fact, if we posit *na-* to essentially mean 'full', so that *na- se* basically means 'cause oneself to be full of something', then the genitive nominal in our *na- se* examples is the exact opposite of the genitive nominal in cases like *o-mesti dimnik saj* (lit. out-sweep $chimney_{ACC}$ $soot_{GEN}$) 'sweep the chimney clean of soot'. In these cases, the prefix *o-* gives the meaning 'empty of/free of', i.e. 'without/not having', and in *na-piti se vode* (lit. on-drink self $water_{GEN}$) 'drink oneself full of water', the prefix *na-* gives the meaning 'full of/fed up with', i.e. 'with/having'.[30] With respect to the English resultative counterparts, we can note that the Slovenian genitive corresponds to the English *of*-phrase in both cases, which is also a common situation.

5.2.3 Finally, the reality of the ambiguity and its structural origin is confirmed through its correlation with other specifics of individual *na- se* cases. For example, just like the ambiguity cannot be there in a *na- se* example when the second internal argument is in the accusative, as this necessarily means two VPs, it is also not there whenever a singly-prefixed *na- se* example contains a VP-adverbial which does not modify the whole 'getting-one's-fill-of-something' but just what one has gotten their fill of. Since such adverbials were shown to require a two-VP structure, the non-ambiguity of such cases is expected. Similarly, the ambiguity cannot be there in a *na- se* example whenever *na-* is stacked over another prefix. This is also expected, since two resultative prefixes necessarily mean that the construction has two VPs, and so generally each of the two prefixes needs its argument.[31]

5.2.4 To sum up, this section showed that singly-prefixed *na- se* sentences with a genitival nominal are ambiguous between 'get one's fill of NP' and 'get one's fill of V-ing NP'. The ambiguity is evidenced by the im-/possibility of continuing the utterance with a partial negation of the assertion expressed with the *na- se* sentence, by the use of co-extensional expressions, and by its absence in a lone case of the *na- se* sequence with a perfective base verb. The first interpretation arises in a single-VP resultative structure, the second in a double-VP structure. Accordingly, the ambiguity disappears when a *na- se* sentence contains a VP-adverbial that modifies just what one has gotten their fill of, when it contains a second

[30] Obviously, for 'full' to be interpreted as 'fed up with/sick of/having one's fill of', some metaphoric interpretation should have taken place. Incidentally, the Slovenian adjective *sit* actually combines precisely these two meanings, namely, 'full/not hungry' and 'sick of/fed up with/having one's fill', so the idea of one and the same resultative secondary predicate (i.e. *na-*) getting interpreted as both of these need not be implausible either. Furthermore, note that *na-* actually has other uses where it essentially means 'full', as in *na-polniti* (lit. on-fill) 'to fill something full/to fill up'.

[31] One may wonder if such doubly-prefixed *na- se* cases could host a *second* genitive nominal, which is not the case. If doubly-prefixed *na- se* constructions are analyzed with one VP in the complement of *na-* (as in (49)), this is expected. If they are analyzed with one VP in the specifier of CausP, as in (53), then this possibly suggests that we should indeed posit a variable in the complement of *na-* (see 4.4.3 above for discussion).

accusative, or when *na-* is stacked over another resultative prefix; all these characteristics require a double-VP structure. The ambiguity also helps establish that the genitive nominal of double-VP *na- se* cases has a different origin from the one of single-VP *na- se* cases. Both may be inherently case-marked, but it is only in single-VP *na- se* cases that this nominal is a complement of *na-*. *Na-* can essentially be treated as a resultative predicate meaning 'full'.[32]

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

The previous section showed that cases like (59)/(60) can be ambiguous, allowing either a double-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'. The difference is whether the 'something' is a nominal or an event. We have also seen *na- se* cases which do not show ambiguity. I will now mention some further *na- se* cases that may be parsable in either way, and I will suggest what makes the single-VP reading possible in these cases.

When *na-* occurs directly on the verbal root, when there is a genitive nominal, when there are no adverbials to prevent it, etc., *na- se* sentences can in principle contain either two VPs or a single VP. The two-VP parse gives us an interpretation along the lines of 'make oneself "full" of V-ing NP', the single-VP parse 'make oneself "full" of NP by V-ing'. Consequently, the single-VP parse is most obvious with cases such as *na-piti se vode* (lit. on-drink self water$_{GEN}$), since 'get one's fill/"full" of water by drinking' can be interpreted without any metaphoricity (cf. *drink oneself full of water*). At least with some metaphorical interpretation of the meaning of the resultative prefix, however, this option could in principle be available with any other case with the same ingredients as well. To take the example from (5d) above, i.e. *na-gledati se filmov* (lit. on-watch self movies$_{GEN}$), one could then also 'get oneself (metaphorically) "full" of movies by watching' (i.e. one would 'get their fill of movies by watching'). So unless the sentence contains an adverbial of the type that prevents a single-VP parse (cf. section 3.5.1 above), a sentence in which *na-* occurs directly on the verbal root and there is a second argument in the genitive can perhaps *always* be parsed with a single VP as well. (But not a sentence in which *na-* is stacked over another prefix!)

Secondly, it seems plausible that whenever *na-* is found directly on the verbal root, the construction contains no genitive argument, and there is also no adverbial which could not modify the whole 'getting-one's-fill-of-something' but just what one has gotten their fill of, then such a *na- se* construction could in principle also be parsed both with two VPs and with 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 reading', or *na-klepetati se* (lit. on-

[32] Note that by treating *na-* as essentially a resultative P meaning 'full' (literally or metaphorically), we avoid treating *na-* as either directly or indirectly quantificational, contra Filip (1999, 2000, 2005a, 2005b) and also contra the footnote-suggested analyses of Pereltsvaig (2006) and Romanova (2007) (cf. Pereltsvaig's 2006 fn. 24 on p. 457 and fn. 28 on p. 465, and Romanova's 2007 fn. 12 on p. 84, fn. 2 on p. 175, and fn. 6 on p. 183-4). As already noted in footnote 28, this avoids some stipulations that Pereltsvaig has to make. Moreover, quantificational analyses have no explanation for the emergence of the unselected reflexive. In a discussion focusing on the use of *na-* that I will discuss in chapter 2, Pereltsvaig's (2006) footnotes suggest that in *na- se*, a VP-external *na-* introduces the genitive nominal. Assuming that a head only introduces one argument, this proposal thus falls short of explaining the reflexive. Also in a discussion focusing on the use of *na-* from my chapter 2, Romanova's (2007) footnotes suggest that in *na- se*, *na-* is a VP-external event-quantifier; this also fails to explain the reflexive. But if *na-* is resultative, it is *not* surprising that a *na*-prefixed verb (on the single-VP parse) can have two nominal arguments that are both related to *na-*. The reflexive is the external argument of the result predicate (argument of R), the genitive nominal the internal argument (argument of the P *na-*).

chat self) 'get one's fill of chatting' from (5b) above. How to get to the two-VP parse for these cases is clear, so let me explain how such cases could get 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. [$_{VP}$ *laufati* [$_{RP/SC}$ *se* [$_{PP}$ *na-*]]], but still get 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 may be more than just one way of deriving this. One way to get this will rely on the fact that *na-* may be a complement-selecting prefix, and so the structure would actually be [$_{VP}$ *laufati* [$_{RP/SC}$ *se* [$_{PP}$ *na-* [*x*]]]]. The *x* in this structure could be several things. It could be a null nominal variable (e_N) coindexed with V, or it could be a contextually-defined null nominal variable (e_N), in the spirit of Arsenijević (2006, 2007) (similarly to the way the complement of a spatial prefix such as *pri-* in *pri-laufati* (lit. at-run) 'arrive running' is a variable that gets interpreted as a contextually relevant location). Since one's state of being "full" of/having one's fill of a contextually relevant thing would have been brought about by one's running, it may not be unreasonable to think that the variable would get interpreted as running. Alternatively, one could still see *na-* as intransitive and get the contents of what one has gotten their fill of from world knowledge rather than a syntactically present but null variable. Both options would presumably get us a paraphrase along the lines of 'get one's fill of running by running' (and it may well be impossible to prove the correctness of one over the other). This, then, is how a single-VP structure without an overt genitive nominal could give the same result as a two-VP structure. (Again, such a single-VP parse is not available when a *na- se* sentence contains adverbials which preclude it, when *na-* is stacked over another resultative prefix, etc.)

To sum up, we saw how a single-VP parse of singly-prefixed cases *with* a genitive nominal (e.g. *na-gledati se filmov* (lit. on-watch self movies$_{GEN}$)) and *without* a genitive nominal (e.g. *na-laufati se* (lit. on-run self) can yield an interpretation roughly comparable to that yielded by a two-VP parse. One can presumably 'get one's fill of movies by watching', and 'get one's fill of running by running'. In the next section, I will offer some data that may support the claim that things 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 Passive participles of *na- se*?

Sometimes, this reflexive-introducing *na-* can be found on passive participle forms. The process is not terribly regular, but in some cases, it is actually perfectly normal (attested in dictionaries and on the internet), (63a)-(63b), and in some cases, it can be formed with some imagination, (63c)-(63d).

(63) a. *na-čitan*
on-read$_{PASS.PTCP}$
'well-read (i.e. who has read extensively)'

b. *na-span*
on-slept$_{PASS.PTCP}$
'who has had enough sleep (cf. well-rested)'

c. *Tone je na-pit vode*.
Tone is on-read$_{PASS.PTCP}$ water$_{GEN}$
'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$_{PASS.PTCP}$/ on-ski$_{PASS.PTCP}$
'T. has run/skied to his heart's content.'

Interestingly, though, while it seems that *na-čitati se* (lit. on-read self) can have two readings and as such both a single- and double-VP parse, the passive participle *na-čitan* appears to have just the interpretation of the single-VP parse: it can only mean something like 'who has read themselves full'. The same holds for (63c)-(63d); (63c), for example, cannot be interpreted as 'who has come to have enough of drinking water' but only as 'who has drunk themselves full of water'. Furthermore, sentences such as in (64) are just not possible.

(64) a. **Tone je čist na-laufan po uradih.*
Tone is totally on-run$_{PASS.PTCP}$ around offices

b. * *Tone je čist na-lupljen* (*krompirja*).
Tone is totally on-peel$_{PASS.PTCP}$ potatoes$_{GEN}$

In other words, with the single-VP/double-VP ambiguous *na-piti se vode* (lit. on-drink self water$_{GEN}$), the passive participle can only have one reading, the one derived in a single-VP structure with 'water' as the complement of *na-*. 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. In the case of *na-laufati se* (lit. on-run self), this is suggested by the fact that (64a), which differs from (63d) only in the presence of the adverbial 'around offices', is out. That is, the reading 'get one's fill 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$_{GEN}$) is impossible, so it seems that we can only parse *na-lupiti se krompirja* with a two-VP structure (perhaps simply because the idea of someone 'getting their fill of potatoes by peeling' just seems too much to ask from our imagination).

Now, as *na-čitati se* (lit. on-read self) and *na-laufati se* (lit. on-run self) do form passive participles, as in (63a) and (63d), this seems to show that we can parse them with a single-VP structure. Therefore, this may provide support for the suspicion from the previous section, namely, that things 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 get a single-VP parse as well.[33] To be sure, I am not sure how to derive this restriction on passive participle formation, so I only offer it here as tentative further support for the claim that some *na- se* examples can get not only a two-VP parse but also a single-VP parse, and that these are not only those *na- se* examples for which

[33] Given what we just saw with respect to the passive participle in relation to the *na- se* construction, it is not surprising that *z-laufati se* 'run oneself exhausted'—for which I noted in 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).

(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
'It's a 6km 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.'

a single-VP seems perfectly unsurprising, such as *na-piti se vode* (lit. on-drink self water$_{GEN}$) 'drink oneself full of water'.

To close section 5, let me summarize all structural options for our *na- se* 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 also contain either two VPs or a single VP.

6. Conclusion

Perfectivity triggering, modification with result-state adverbial and restitutive 'again', and the licensing of an unselected reflexive show that our *na-* is best treated as resultative prefix. Moreover, two scopes of VP-adverbials, two accusatives, and an interpretational ambiguity with certain singly-prefixed *na- se* cases show that such 'verbs' can contain two VPs. The presence of two unselected objects and two scopes of the secondary imperfective further show that doubly-prefixed *na- se* cases contain two VPs. I accounted for these data with an analysis in which one VP originates in the specifier of a conjunction-like CausP and the other VP in the complement of CausP. We thus have a structure with two VPs under a single Tense node, reminiscent of serial verb constructions. Despite the presence of two VPs, we only see one verbal root, whereas the other V is null. This was ascribed to the fact that Slavic verbs cannot appear bare or with only secondary-imperfective morphology. The following chapters will provide further support for the claim that doubly-prefixed 'verbs' can contain two-VPs. At the same time, though, I provided data that established that some *na- se* cases can be ambiguous between a two-VP parse and a single VP-parse, which may have helped to conceal the two-VP structure of some of the *na- se* cases.

By positing a VP headed by a null verb I was able to maintain the validity of the widely-held assumption that there can be only one independent resultative secondary predicate per verb. This means, of course, that the claim that there can be only one independent resultative prefix per verb is correct only if interpreted as a restriction to one such prefix per V but not necessarily per overt verbal stem.

In passing, I have also suggested that the stacking prefixes which I referred to as result-modifiers are likewise not VP-external. They originate in the result part of the clause, embedded in a second PP under the main resultative prefix. Unlike our stacked *na-*, these stacked prefixes do not encode an independent subevent but act as further specification of the resultative prefix that dominates them.

It follows from this chapter 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, impossibility of occurring on root/zero nominalizations and resistance to secondary imperfectivization—do not reliably identify external prefixes, even when they all point in the same direction. This conclusion will also be corroborated in the chapters to follow.

Finally, one thing I did not do is look for cases similar to our doubly-prefixed *na- se* construction in non-Slavic languages. In view of the strong parallels between Slavic prefixes and Germanic particles, the question arises, naturally, whether such cases exist in Germanic, and if not, why not. Whereas the literature does not seem to record such cases, Marcel den Dikken informs me that Dutch *does* in fact show parallel cases. The adjectival resultative construction based on the adjective *suf* 'silly' seems to have the same meaning as our *na- se* construction, and it also comes with an unselected reflexive. At the same time, when the verb is in nominal-infinitive form, this construction can also contain a second resultative secondary predicate—a particle—which comes with its own unselected object. (65a)-(65b) are two examples based on Slovenian cases from section 3.1, and (65c) repeats the Slovenian counterpart of (9) from above.

(65) a. *het zich suf af zeggen van afspraken* (Dutch)
the REFL silly off say of appointments
'getting one's fill of cancelling appointments' (Marcel den Dikken, p.c.)

b. *het zich suf uit spelen van Maradona* (Dutch)
the REFL silly out play of Maradona
'getting one's fill of faking out Maradona' (Marcel den Dikken, p.c.)

c. *na-od-povedovati se koncertov*
on-off-tell self $\text{concerts}_{\text{GEN}}$
'get one's fill of cancelling concerts'

Moreover, note that the non-reflexive nominal, which is an unselected object introduced by the particle *af* 'off', occurs with the case-marker *van* 'of', which is strongly reminiscent of Slovenian genitive case. M. den Dikken also informs me that the two scopes of locative adverbials I observe with *na- se* in (30) can be reproduced with the Dutch *zich suf* (with the reading in (30a) needing "some 'massaging'"), and that the manner adverb which I observe to only have one scope in the *na- se* in (38) likewise gets only one scope in the Dutch *zich suf*. A cross-linguistic exploration is therefore the obvious next step in the future work on this type of construction.

Chapter 2: On the (non-reflexive-introducing) 'quantificational'/'cumulative'/ 'accumulative'/'vague-measure' use of *na-*

This chapter will discuss another use of *na-*, a use which is like the one in chapter 1 in apparently also having some quantificational effect, but which crucially differs from the one in chapter 1 in *not* introducing an unselected reflexive. Some examples are given in (1).

(1) a. *Děti na-rváli cvetóv na lugú.* (Russian)
children on-plucked flowers$_{GEN}$ in meadow
'The children picked a lot of flowers in the meadow.' (Filip 2000: 49)

b. *na-begat' 100 časov* (Russian)
on-run 100 hours$_{GEN}$
'accumulate 100 hours by running' (Romanova 2007: 178)

c. *Konduktor uže na-ot-ryvala biltikov.* (Russian)
ticket-seller already on-off-tore tickets$_{GEN}$
'The ticket-seller has prepared a lot of little tickets by tearing them off the roll.' (Romanova 2007: 273)

This use of *na-* is often called cumulative, accumulative, or as expressing an extensive vague measure. Syntactic accounts that deal specifically with this use see it as brought about by *na-* attaching VP-externally (Pereltsvaig 2006, Romanova 2007), accounts that mention the syntactic position of this *na-* in passing or as part of a bigger group of prefixes mostly assume that it attaches VP-externally (e.g. Ramchand 2004/2008b, Istratkova 2006, Milićević 2004, etc.).[1,2] Such positions are based on the fact that this use of *na-* allows stacking over another prefix (cf. (1c) above); in addition, such *na-*verbs are often said to resist secondary imperfectivization, nominalization, etc., all of which has been taken as evidence of prefix VP-/vP-externality. On the other hand, this *na-* typically attaches to imperfective base verbs, in which case it triggers perfectivity. The input to *na-* is imperfective in all three cases in (1) (primary imperfective in (1a)-(1b) and secondary imperfective in (1c)), and all three *na-*forms in (1) are perfective (though see below for (1c)). For Brecht (1985), Klein (1995), Strigin & Demjjanow (2001), Bertinetto (2001), Žaucer (2005a), Arsenijević (2006, 2007), its perfectivity-triggering force suggests resultativity.

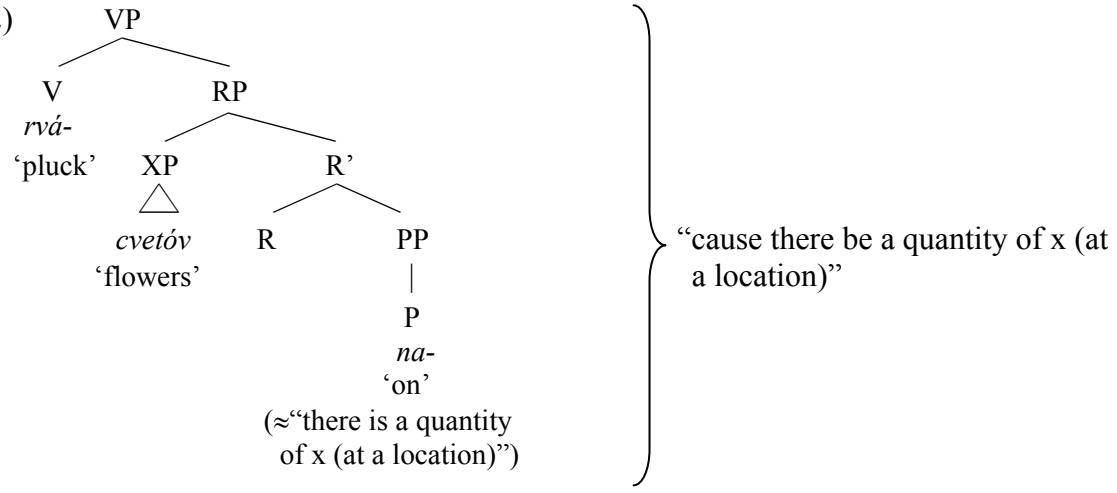
I will argue that such *na-*prefixed verbs are resultative (cf. Piñón 1994, Babko-Malaya 1999: 52, Tatevosov 2007, Biskup 2007) and that their object is introduced by *na-*.

[1] The position of Svenonius (2004) is unclear. In his discussion of secondary imperfectivization, he explicitly considers this *na-* VP-external (op.cit. 230-1). At another point, he appears to see it as fitting into neither of his two classes (resultative, vP-external). He states that such prefixes "do not have anything to do with the argument structure of the verb", thereby not treating it as resultative, but he also states that "quite plausibly, the prefix originates inside an internal argument, and moves to the prefixal position" (op.cit.: 236), thereby not treating it as VP-external. He thus lets in a third class of prefixes (which affects the merit of his diagnostics of prefix VP-externality, as this *na-* is said to pattern with VP-external prefixes but to originate inside the VP).

[2] The position of Tatevosov (2007, 2008) is not clear to me. In Tatevosov (2007: 531, 541), he explicitly states that *na-*verbs contain a result state and that it is the prefix that introduces the result state. But the only syntactic structure in the paper has *na-* above the VP; also, in Tatevosov (2008), he explicitly states that *na-* is a vP-external prefix. See section 4.3 below for some comments specifically on this position.

The result predicate, headed by *na-*, will be seen as a small-clausal counterpart of what Kearns (2000) calls 'there-be' constructions (typically an existential or representational 'there-be', sometimes a task or list 'there-be'). Often, a *na*-verb can thus be interpreted as a sort of creation verb, loosely understood, with a quantity of something coming into existence or coming to exist at a particular location. Ignoring VP-dominating FPs and the fine structure of *na-*'s RP, the basics of the structure proposed for cases such as (1a) above are given in (2).

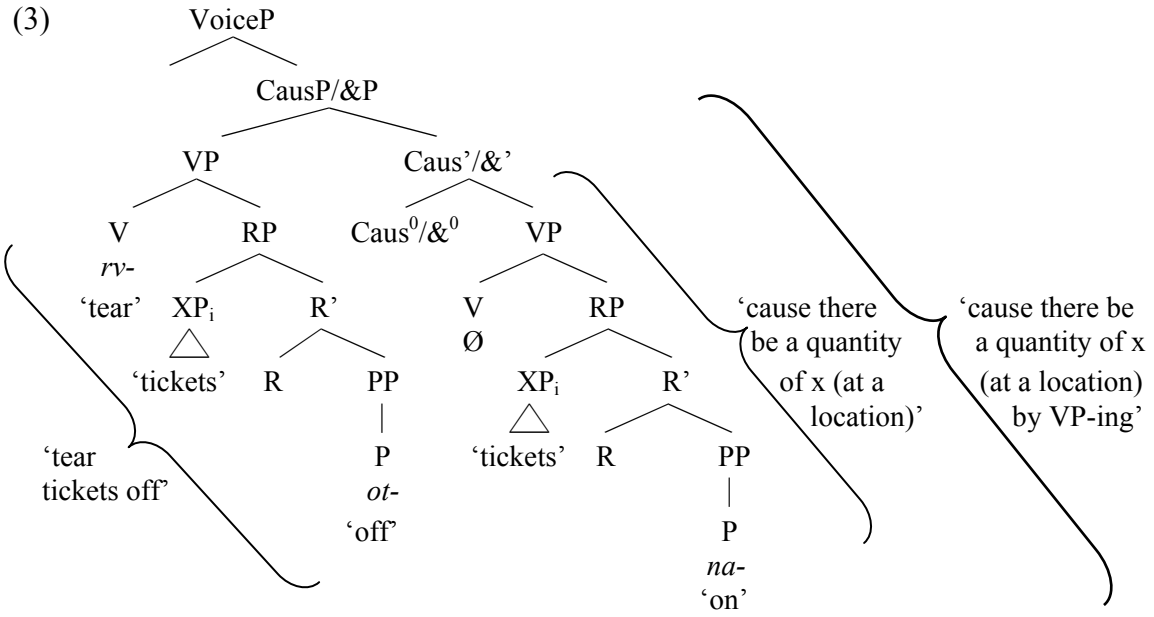
(2)



When this *na-* is stacked over another resultative prefix, as in (1c), we have a structure with two VPs, with one resultative VP merged in the specifier of the conjunction-like CausP, which dominates the main-frame resultative VP, as in the simplified form in (3) (along the general lines of the double-VP structure discussed in chapter 1 for the *na- se* construction). The Spec,CausP-internal VP thus contributes the manner part of the whole predicate, i.e. the second part from the gloss from (1c) ('by tearing them off'). The two VPs exhibit internal argument sharing (similarly to what is known from the literature on serial verbs).[3]

[3] Arsenijević (2007) also claims that when *na-* is stacked over another prefix, we have a multiple-VP structure, but he appears to claim that *na-* quantifies over the event, which he implements by having one resultative VP merged in the specifier of the main-frame ResultP (a kind of 'accumulated-event' account). However, such a structure should result in a meaning that would give (1c) the paraphrase 'cause there to be a lot of tearing off of tickets' (contrast with Romanova's gloss in (1c), 'cause there to be a lot of tickets by tearing them off'). This would incorrectly predict that the objectless **Peter je na-laufal* (lit. Peter is on-run) should be fine (getting the meaning 'Peter caused there to be a lot of running'). Also, he seems to attribute the characteristics on the basis of which Svenonius (2004), etc., classify prefixes as VP-external precisely to a multiple-VP structure (Arsenijević 2006, 2007), so that *na*-verbs would *always* have a multiple-VP structure, even when *na-* is the only prefix/is not stacked over another prefix.

(3)



In section 1, I present some old and some new data which show that the object is introduced by the prefix, not the verb. They include various types of selectional restrictions that *na*-verbs impose on their arguments, unselected-object data, and a context-sensitive suspension of the indefiniteness restriction that is normally found with the arguments of *na*-verbs. Section 2 presents my proposal. 2.1 discusses the structure of *na*-verbs in general, claiming that their structure is very close to that of English verbs such as *amass* but with the verbal root (or in the case of doubly prefixed *na*-verbs the inner resultative VP) specifying the manner. Section 2.2 discusses some details that are specific to doubly prefixed *na*-verbs, e.g. the internal argument sharing between the two VPs. Section 3 discusses counterexamples from Romanova (2007), and section 4 critiques three recent acounts that make explicit claims about the syntax of *na*-verbs (Perelstvaig 2006, Romanova 2007, Tatevosov 2007, 2008). Section 5 discusses further issues, such as a link to another use of *na*-, the tendency to resist secondary imperfectivization, a restriction to imperfective and indeterminate-motion base verbs, and the meaning of weak distributivity that has been attributed to *na*-.

The chapter contains a considerable amount of Russian data. One reason for this is that in spontaneous Slovenian, the direct counterpart of, say, (1a) will either have the object in the accusative or it will have an overt quantifier next to the genitival object; (1a) with a bare genitival object is restricted to formal Slovenian.[4] My Slovenian examples thus typically contain a genitival nominal with a bracketed quantifier, as in *(veliko) rožic* (lit. many flowers$_{GEN}$); this signals that in spontaneous Slovenian, the quantifier will certainly be there, while in formal Slovenian it need not be. In section 2, I account for the commonalities and the differences between bare genitive objects and bare accusative objects of *na*-verbs.

Note that the discussion of some aspects of the two-VP structure in (3) will be less detailed than the one of the *na- se* construction in chapter 1. For those details and consequences of the analysis that are the same as in chapter 1, I will refer the reader there.

[4] The situation may actually be similar with younger speakers of modern Russian (cf. Filip 2005a).

1. A look at the data and some of the previous accounts

In this section, I will present several types of data that show that *na*-verbs are best treated as resultatives, with the internal argument introduced by the prefix *na*-. The section is split into several subsections so that the characteristics of *na*-verbs can be looked at one by one. The characteristics discussed will include a (mild) change of selectional restrictions of *na*-verbs in comparison to their unprefixed counterparts (subsection 1.1), a restriction on *na*-verbs to only combine with internal arguments expressing a specific subtype of incremental themes (1.2), a restriction on *na*-verbs to only combine with direct internal arguments (1.3), and the capacity of *na*-verbs to license unselected objects (1.4). Finally, I will show that despite the general validity of the indefiniteness restriction on the internal argument of *na*-verbs (Filip 1999, 2005a, 2005b, Pereltsvaig 2006), there exist contexts in which this restriction is suspended. In view of the claim that the resultative subevent is encoded in a 'there-be' type of small clause, this is reminiscent of the list-reading of 'there-be' sentences (1.5).

1.1 Changed selectional restrictions

The first thing to point out about this *na*- is the well-known change in the selection restrictions of *na*-verbs as compared with their unprefixed counterparts (cf. Filip 1999, 2005a, 2005b, Piñón 1994, Babko-Malaya 1999: 52, Svenonius 2004, Pereltsvaig 2006, Romanova 2007, Tatevosov 2007). As shown by Pereltsvaig (2006: 467) with the example in (4) below, the internal argument of Russian *na*-verbs has to be a mass noun or a plural count noun but (ignoring the 'kind' reading) cannot be a singular count noun.

(4) a. *Antoška kopal kartošku / tranšei / jamu.* (Russian)
Antoška dug potatoes$_{ACC}$ trenches$_{ACC}$ pit$_{ACC}$
'Antoška was digging potatoes / trenches / a pit.'

b. *Antoška na-kopal kartoški / tranšej / *jamy.*
Antoška on-dug potatoes$_{GEN}$ trenches$_{GEN}$ pit$_{GEN}$ (Pereltsvaig 2006:
'Antoška dug up a lot of potatoes / a lot of trenches (/ a large pit).' 467)

The data in (4) also show that with Russian *na*-verbs the case of a bare internal argument shifts from accusative to genitive.[5] And if the internal argument is preceded by a cardinal numeral or a quantity noun, as in (5), then the latter is marked accusative and its complement is marked genitive (Pereltsvaig 2006: 456). Moreover, the internal argument of Russian *na*-verbs normally has to be nonspecific indefinite, and thus, for example, cannot be preceded by definiteness elements such as demonstratives or quantifiers like 'each' and 'all' (Filip 1999, 2005a, 2005b, Pereltsvaig 2006) (though see section 1.5 below).

[5] Note that my use of the expression 'bare (accusative/genitive) argument' is not meant to suggest a structural analysis of the nominal (i.e. that such nominals are NPs with no further functional structure); it is meant as a descriptive term capturing the fact that the noun appears without any overt modification (except potentially adjectives). See sections 1.5 and 2 for some discussion of the functional structure of such arguments.

(5) *Džejms Bond na-kopiroval djužinu čertežej*. (Russian)
James Bond on-copied dozen$_{ACC}$ blueprints $_{GEN}$
'James Bond copied a whopping dozen of blueprints.' (Pereltsvaig 2006: 456)

Now, given that resultative prefixation is known to come with various kinds of peculiarities, such changed restrictions are not unimaginable if *na-* is a resultative prefix (even if in combination with a quantificational role). Moreover, some of these restrictions, such as the ban on definiteness elements, the absence of a partitive reading, and the presence of genitive case, are also known to hold in existential 'there-be' constructions in at least some Slavic languages. If the result predicate is a 'there-be'-like small clause, some of the restrictions may thus be easy to explain.[6]

At the same time, however, Svenonius (2004: 236) has suggested that "quite plausibly, the prefix originates inside an internal argument". Filip (2005a, 2005b) has treated *na-* essentially as an argument quantifier (cf. also Spencer & Zaretskaya 1998a: 25).[7] And Pereltsvaig (2006) has treated it as an element that selects a [QP/NumP [NP]] structure as its complement (where the QP/NumP is overtly or covertly headed by a weak Q). On such accounts, the above changes in selectional restrictions are also unsurprising and are, in fact, also directly explained.

1.2 Incremental themes

1.2.1 *Only incremental themes*

Another restriction on the attachment of *na-* is reflected in example (6) below, which shows that having an internal argument is not enough to license *na-*. Filip's (2005a, 2005b) version of the account just mentioned can capture this by claiming that *na-* only combines with incremental theme objects. On the other hand, Pereltsvaig claims to capture the impossibility of a Russian counterpart of (6) with the idea of the existence of 'small nominals' (i.e. NPs/QPs vs. full DPs) and by seeing *na-* as an element that only selects small nominals but not full DPs. On this view, (6) is supposed to be ruled out due to the fact that its internal argument consists of a small nominal (an NP selected by a null Q, selected by *na-*, without an intervening full DP structure) and therefore can only get a non-individuated interpretation, but this is incompatible with the verb 'love', which takes individuated objects (Pereltsvaig 2006: 459).

[6] In discussing 'there-be' constructions, Kearns (2000) splits them into existential, presentational, task, and list. The first two ban strong NPs, the latter two do not. Due to their shared ban on strong NPs, existential and presentational 'there-be' sentences are sometimes discussed in the literature under the single term existential, and the list 'there-be' construction is simply referred to as the list reading of existentials. For convenience sake, I will follow this practice here. As the term 'there-be' suggests, what all four types of 'there-be' sentences have in common is the form *There is/are/…*. It should not be surprising that we would also find the same four types encoded with the same form (e.g. the secondary predicate *na-*) at the level of small clauses.

[7] More precisely, Filip sees *na-* as an A-quantifier quantifying over a variable introduced by the incremental-theme argument (e.g. Filip 1999: 261); but this essentially boils down to the same thing as treating *na-* as a nominal quantifier.

(6) **Piotr na-kochał kobiet*. (Polish)
Piotr on-loved women$_{GEN}$
(intended: 'Piotr loved a lot of women.') (Piñón 1994: 498)

However, Pereltsvaig's explanation clearly cannot be the whole story, since 'love' nevertheless *can* also take non-individuated objects, as in 'love good music', where 'love good music' can easily also be put in such a context that that the rest of *na-*'s selectional restrictions are met. But still, a *na*-prefixed 'love' cannot cooccur with 'good music' as the internal argument, as shown in (7).[8]

(7) **Peter bi z veseljem na-ljubil* (*veliko*) *dobre glasbe*.[9]
Peter would with pleasure on-loved (a.lot) good music$_{GEN}$
(intended: 'Peter would gladly love a lot of good music.')

Filip's (2005a, 2005b) explanation fares better: *na-* is said to only combine with incremental theme objects, and the object of 'love' is not an incremental theme. However, with such a restriction on *na-*, the argument-quantifier account of *na-*—at least in its simplest version—starts to look suspicious, since it seems quite unprecedented to have to stipulate that a quantifier only selects a particular thematic role. This, then, is the first thing here that suggests that *na-* cannot be just a simple argument quantifier (à la Filip 2005a, 2005b or Svenonius 2004: 236).

At the same time, note that if *na*-verbs are resultatives, then the unacceptability of (6)-(7) is also not suprising since resultative-formation based on stative base verbs is known to often show restrictions. And moreover, if *na*-verbs are some sort of creation-verb resultatives, the unacceptability of (6)-(7) is even less suprising since, simply, one's loving will normally not be able to produce beautiful women/good music, or beautiful women/good music will not accumulate due to one's loving, as pointed out by Piñón (1994).

Furthermore, Romanova (2007: 176) points out that the base verbs to which *na-* can attach do not only include verbs that come with an incremental-theme internal argument, as the base verb in (8) below.

(8) *na-stavitj bankomatov* (Russian)
on-stand bank.machines$_{GEN}$
'install/put up a lot of bank machines' (Romanova 2007: 177)

But she also notes that the quantified argument in such cases still provides incrementality for the event, i.e. for the event of coming into existence/coming to exist at a location, so when such an argument occurs with the prefixed verb, it is an incremental theme (cf. also Piñón 1994, Filip 2005a, 2005b). Therefore, the generalization that internal arguments of *na*-verbs

[8] Romanova (2007: 195) has similar examples, whose failure she explains by drawing an interesting parallel between the type of Russian verbs that allow *na-* and the type of French verbs that allow so-called 'quantification at a distance' (QAD), which has been analyzed as a case of verb quantification which indirectly quantifies over the argument. Some arguments against treating *na-* as an event quantifier will be pointed out in the discussion of further data in section 1, and a detailed critique of this account is given in section 4 below.

[9] Recall that 'a.lot', etc., in Slovenian *na*-examples will always be parenthesized to signal that in spontaneous Slovenian, the genitive argument always appears with an expression such as 'a.lot', whereas in formal Slovenian, it can also be found without it.

are incremental themes still holds. Moreover, this shows that the addition of *na-* to the base verb changes the thematic role of the argument (as contrasted to the thematic role of 'bank machines' when combined with the unprefixed verb). This is another thing that one does not expect from an argument quantifier, but which is not suprising on an account where the argument is introduced by the prefix, which exerts selectional restrictions over its argument just like any other argument-introducing head does (such as a preposition or a verb).

1.2.2 *Not all incremental themes*

Whereas an internal argument must be an incremental theme to work with *na-*, it is not the case that an argument's being an incremental theme guarantees acceptance in this *na-*construction, as shown by the unacceptability of Svenonius' (2004) example (9b) below, which features one of the prototypical incremental theme verbs. As (9b) could be problematic due to referentiality/specificity of 'olives', I add (10), where this possibility is eliminated. In (10), 'eat olives' is embedded under an attitude-report predicate, so it should certainly be possible to read 'olives' nonreferentially/nonspecifically. However, (10b) is still bad.

(9) a. *On na-bral olivok.*
he on-gathered $olives_{GEN}$
'He gathered a sufficiently large quantity of olives.'

b. **On na-jel olivok.*
he on-ate $olives_{GEN}$
(intended: 'He ate a sufficiently large quantity of olives.')
(Russian)
(Svenonius 2004: 234)

(10) a. *On bi želel na-brati* (*veliko*) *oliv.*
he would wish on-$pick_{INF}$ many $olives_{GEN}$
'He would like to pick many olives.'

b. * *On bi želel na-jesti* (*veliko*) *oliv.*
he would wish on-eat_{INF} many $olives_{GEN}$
(intended: 'He'd like to eat many olives.')

In addition to having to stipulatively restrict a quantifier to occurring with just arguments with a particular thematic role, as shown in 1.2.1, an argument-quantifier account (à la Filip 2005a, 2005b) will now have to add further stipulations to make sure that the argument quantifier *na-* only combines with incremental-theme arguments of certain (classes of) verbs. Similarly, such restrictions are problematic for an account such as Romanova's (2007), where *na-* is treated as a VP-external event quantifier and should as such not be sensitive to what subtype of incremental-theme argument the verb takes.[10]

[10] Commenting on the unacceptability of (9b), Svenonius (2004: 234) says that in this case, *na-* is resultative, and that this is the reason it does not admit genitive plural objects like regular cumulative *na*-verbs. Firstly, note that if we change the genitive plural to singular accusative, (9b)/(10b) are still out. Secondly, Svenonius' idea begs the question why the cumulative *na-* cannot combine with 'eat', i.e. why 'eat' could only combine with a resultative *na-* and not with the cumulative *na-*. Given that the attempted form $na_{RESULTATIVE}$-'eat' does not even yield an acceptable combination when combined with a genitive plural object, as shown by (9b)/(10b), there could clearly be no blocking effect preventing the form $na_{CUMULATIVE}$-'eat'. Romanova (2007: 195, fn. 12) also mentions the fact that Russian 'eat' and 'drink' do not accept the quantificational *na-*, but leaves the issue aside stating that these two verbs are "notoriously 'odd' in Russian in that they do not behave as other transitive and

On the other hand, if *na-* forms creation verbs, then the unacceptability of these cases is not surprising: whereas (10a) could then be paraphrased with 'He would like to gather up a large quantity of olives', (10b) should mean (at least on a naïve first attempt) 'He would like to cause a large quantity of olives to exist by eating (them)', which will clearly be infelicitous (as also pointed out in Piñón 1994: 498-499). In other words, even though 'eat' meets *na-*'s incremental-theme restriction, it is a consumption verb and will as such be incompatible with the creation verb-forming *na-* (at least on a naïve first attempt and in the context of (9b)/(10b), but see the discussion of (18)-(20) in 1.4.1 below).

1.2.3 Na-*verbs with an obligatory/doubling directional PP or dative argument*

Consider (11) and (12) below ((12a) is from the SSKJ dictionary.

(11) a. *On na-nes na čerdak mnogo sena*. (Russian)
he on-carried onto attic a.lot hay_{GEN}
'He brought a lot of hay to the attic.' (Biskup 2007)

b. *Vasja na-brosal peska / kamnej v jamu*. (Russian)
Vasja on-threw sand_{GEN} $\text{rocks}_{\text{GEN}}$ into pit (Tatevosov 2007: 530)
'Vasja accumulated a quantity of sand/rocks in the pit by throwing.'

(12) a. *na-nosil ji je drv*
on-carried she_{DAT} is logs_{GEN}
'he brought her a quantity of firewood'

b. *na-nosil je drv na mizo*
on-carried is logs_{GEN} onto table
'he brought a quantity of firewood onto the table'

As pointed out by Biskup (2007) with respect to (11a), the prefix in (11)-(12) seems to not only have its quantificational function but also the same spatial function that it has in, say, *na-šiti gumb na srajco* (lit. on-sew $\text{button}_{\text{ACC}}$ onto shirt) 'sew a button on the shirt'. That is, the prefix in (11)-(12) seems to contribute the location where the theme ends up in a quantity as a result of the carrying (cf. also Willim 2008: 233, 238 for Polish). Especially for authors who otherwise treat spatial prefixes as resultative, such as Svenonius (2004), Ramchand (2004/2008b), Romanova (2007), it thus seems odd to treat *na-* in (11)-(12) as VP-external. Now, for some other cases where a prefix that he would normally see as external appears to behave as internal, Svenonius (2004) suggests that those are cases where an external prefix has been reanalyzed as internal. However, such a move seems quite unwarranted in view of the fact that at least the *na*-verbs in (11b) and (12) behave just as any other *na*-verb. For example, as shown in (13), they do not accept a singular count noun as their internal argument, which is just like prototypical *na*-verbs and which is unexpected if *na-* in this case has been reanalyzed as an internal prefix.

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incremental verbs". However, she offers no support for this claim, and Richardson (2006), on the other hand, treats Russian 'eat'/'drink' as regular incremental theme verbs. Moreover, note that both of these verbs can occur with resultative prefixes, as in (i), and also in the *na- se* construction (see chapter 1), which also does not suggest any exceptional status for them. (See section 5.1 below for some comments on (i).)

(i) *V otpuske v Grecii on *(na-)jel ogromnoje brjuxo*. (Russian)
in vacation in Greece he on-ate huge $\text{belly}_{\text{ACC}}$
'On his vacation in Greece, he ate his belly huge.' (Svenonius 2004: 234)

(13) a. **na-nosil je drvo na mizo*
on-carried is $\log_{SG}$ onto table
(intended: 'he brought a piece of firewood onto the table')

b. * *Vasja na-brosal kamnja v jamu.* (Russian)
Vasja on-threw $\text{rock}_{SG.GEN}$ into pit
(intended: 'Vasja threw a rock in the pit.') (Tatevosov 2007: 530)

Furthermore, note that the directional PP/the dative argument in (11)-(12) is in principle obligatory, that is, it can only be left out if the context makes it clear what location the quantity of firewood is predicated of (cf. also Willim 2008: 238 for Polish). This can, of course, be explained by any account which posits that the argument which *na-* targets has to be an incremental theme or that the VP simply has to contain any kind of measurable material (as in Romanova 2007), since it is only with the addition of the PP that the VP in (11)-(12) comes to contain that. However, note that this obligatoriness of the directional PP in (11)-(12) is quite parallel to the situation with spatial prefixes such as *pri-* in (14) below, where the directional PP/the dative argument will likewise be left out only in supportive context, that is, when the location/ground argument of *pri-* is clear from the context.

(14) a. *pri-nesel ji je drva*
at-carried she_{DAT} is logs_{ACC}
'he brought her firewood'

b. *pri-nesel je drva na mizo*
at-carried is logs_{ACC} onto table
'he brought firewood onto the table'

And in fact, the resultative accounts of spatial prefixes in Svenonius (2004) and Romanova (2007) even use this kind-of-obligatory directional PP-doubling of spatial prefixes as motivation for claiming that the prefix and the directional PP originate as parts of the same extended projection within a highly articulated result part of the tree (also Biskup 2007). So even if Svenonius (2004) and Romanova (2007) can explain the obligatoriness of the PP in (11)-(12) due to *na-*'s requirement for an incremental theme/mesaurable scale, the data in this subsection should nonetheless give them good reason, both in terms of empirical parallels between *na-* and spatial prefixes and in terms of their theory-internal views of spatial prefixes, for an analysis of the cumulative *na-* that is at least partly parallel to their analysis of spatial prefixes such as *pri-* in (14). That analysis has the prefix in a VP-internal result phrase.

As for the account I am proposing here, the obligatoriness of the doubling PP with *na-* in (11)-(12) can be explained as follows. The result part of the *na-*verb is a 'there-be' small clause. Since one normally does not 'create' firewood by carrying or rocks by throwing, the 'there-be' small clause will have to be interpreted as 'cause firewood to be/exist at a particular location by carrying', not just the simpler 'cause firewood to exist by carrying', and that will normally require the doubling PP. Of course, the quantity argument of such a verb still counts as an incremental theme.

1.2.4 *Incremental theme verbs as resultatives*

The proposals of Svenonius (2004: 236), Filip (2005a, 2005b), Pereltsvaig (2006) and Romanova (2007) have each been shown to have problems with some piece of the data from

the previous three subsections. However, I would also like to stress that Piñón (1994), Filip (1999, 2000, 2005a, 2005b) and Tatevosov (2007) all converge on the view that the argument of *na*-verbs is always an incremental theme. Now, it is fairly widely assumed that when occurring with quantity internal arguments, predicates with an incremental-theme verb are accomplishments or achievements, i.e. they contain a result-state subevent (e.g. Rapp & von Stechow 1999: 181-186, Dowty 1979, Jackendoff 1996: 333-335, Tenny 2000, Parsons 1990, Rothstein 2004, etc.). And indeed, the semantic representation for *na*-verbs of Piñón (1994) contains a change-of-state predicate and the semantic representation for the prefix *na*- in Tatevosov (2007) contains an explicit result subevent. The semantic representations that Piñón (1994), Filip (1999, 2000, 2005a, 2005b) and Tatevosov (2007) assign to *na*-verbs therefore all suggest that in a model that assumes an articulated verb phrase with a dedicated result layer, the syntactic representation of *na*-verbs will include the result layer.

1.3 Only direct internal arguments

1.3.1 *Only direct objects*

As pointed out by Filip (2005a), Russian *na*- does not only impose selectional restrictions on an argument's semantic type and thematic role but also on the argument's syntactic position: it can only target (nonspecific indefinite) direct internal arguments but not (nonspecific indefinite) external arguments or (nonspecific indefinite) indirect internal arguments. The same is shown for the Slovenian *na*-form in (15) (based on a similar Russian example in Filip 2005a).

(15) a. *On bi z veseljem na-daroval bogovom* (*mnogo*) *ovc*.
he would with pleasure on-donated gods_{DAT} many $\text{sheep}_{\text{PL.GEN}}$
'He would gladly give the gods some sheep / many sheep.'

b. * *On bi z veseljem na-daroval mnogo bogovom* / *mnogim*
he would with pleasure on-donated many gods_{DAT} / many_{DAT}
bogovom ovco.
gods_{DAT} $\text{sheep}_{\text{SG.ACC}}$
(intended: 'He would gladly give many gods a sheep.')

c. **Mnogo ljudi bi z veseljem na-darovalo bogovom ovco*.
many $\text{people}_{\text{GEN}}$ would with pleasure on-$\text{donated}_{\text{3P.SG}}$ gods_{DAT} $\text{sheep}_{\text{SG.ACC}}$
(intended: 'Many people would gladly give the gods a sheep.')

d. * *Mnogi ljudje bi z veseljem na-darovali bogovom ovco*.
many_{NOM} $\text{people}_{\text{NOM}}$ wud with pleasure on-$\text{donated}_{\text{3P.PL}}$ gods_{DAT} $\text{sheep}_{\text{SG.ACC}}$
(intended: 'Many people would gladly give the gods a sheep.')

e. **On bi z veseljem na-daroval ta kip v mnoge konce*
he would with pleasure on-donate this statue to many_{ACC} $\text{parts}_{\text{ACC}}$
sveta / v mnogo koncev sveta.
$\text{world}_{\text{GEN}}$ to many $\text{parts}_{\text{GEN}}$ $\text{world}_{\text{GEN}}$
(intended: 'He would gladly give this statue to many parts of the world.')

On the one hand, (15a) contains a direct internal argument that satisfies *na-*'s selectional restrictions, and is acceptable. On the other hand, (15b) contains a direct internal argument that violates *na-*'s selectional restrictions and an indirect internal argument that satisfies *na-*'s selectional restrictions, but (15b) is still impossible. And (15c)-(15d) contain a direct internal argument that violates *na-*'s selectional restrictions and an external argument that satisfies *na-*'s selectional restrictions, but (15c)-(15d) are still impossible (where (15a) and (15b) are variants with an agreeing and nonagreeing subject). Furthermore, (15e) shows that *na-* also cannot target a nominal sitting in a PP complement to the verb, despite its selectional restrictions being met (on some analyses, such a PP would of course be structurally comparable to indirect internal arguments).[11]

To account for this pattern, an argument-quantifier account of *na-* has to stipulate that *na-* can only target internal arguments but not external arguments (i.e. arguments originating in Spec,vP), and even worse, it has to stipulate that *na-* can only target direct internal arguments but not indirect internal arguments, and also not nominals sitting in a PP complement of the verb. The same holds for an account such as Romanova's (2007), where *na-* is treated as a VP-external event quantifier. For a resultative account of *na-*, however, these facts are unproblematic.

1.3.2 *Subjects of unaccusative intransitives*

It was said above that *na-* always targets direct objects. As this suggests that *na-* only occurs on transitive verbs, I should add that as pointed out in Piñón (1994), Filip (2005a) and Romanova (2007), *na-* can in fact also occur on unaccusative intransitives (Russell's 1985: 64 patient-subject verbs), as in (16).

(16) a. *Na-padało deszczu*. (Polish)
on-fell rain$_{GEN}$
'A lot of rain fell.' (Piñón 1994: 505)

b. *V gostilno je počasi na-kapljalo veliko najstnikov*.
into pub is slowly on-trickled a.lot teenagers$_{GEN}$
'Slowly, a lot of teenagers trickled into the pub.'

I will have nothing more to say about these except that as noted by Piñón (1994) and Filip (2005a), they are perfectly compatible with the claim that their quantity argument is an incremental theme as well as with a structure with a resultative *na-* in an 'there-be'-like small clause. Of course, the 'teenagers' in (16b) are not 'created' in the sense that they did not exist before, they are merely 'created' in the sense that they came to exist in a certain location, just as is the case in *All of a sudden, there emerged 300 ants in my bed*.

[11] None of the starred examples can get the reading under discussion and none is straightforwardly acceptable, but given that *na-* has many other uses, the sentences may all be interpretable on some irrelevant meaning if one is pushed to interpret them.

1.4 Unselected objects

This section provides *na*-verbs with unselected objects. I first discuss some bare genitive unselected objects, which have been noted in the literature but whose importance has been played down for presumably being rare. I then go on to show that *na*-verbs' objects that contain a cardinal numeral, for which it has been suggested that they are measure-phrase adjuncts, also constitute unselected objects. Finally, I also present *na*-verbs with unselected reflexives. I conclude that a resultative account offers an easy explanation for these data, whereas an argument-quantifier or even-quantifier account of *na-* does not.

1.4.1 *Bare genitive unselected arguments*

Na-verbs do not only have different selectional restrictions from their base verbs, they also differ from the base verbs in being able to host unselected objects. For example, as shown in (17), *na*-prefixation of 'swim/sail' can license an unselected object. Note that the argument in (17) is a quantity genitive (in this case bare, but it could also be preceded by 'many'/'a lot of'), which is a typical form for an argument of *na*-verbs.

(17) a. *na-plavat' detej po svemu miru* (Russian)
on-swim/sail children$_{GEN}$ around all world
'to be at sea and, especially, on shore, for such a long time and with such productivity that all that results in many children born in different areas of the world' (Romanova 2007: 188)

b. * *plavat' detej po svemu miru* (Russian)
swim/sail children$_{GEN}$ around all world

As pointed out by Spencer & Zaretskaya (1998b) in their discussion of another type of quantificational-looking prefix, a "lexical-subordination analysis [or a syntactic implementation of it, R.Ž.] is the only one available which provides even a partial explanation for the existence of such unselected complements" (op.cit.: 123).

Another case of an unselected object with *na-* is in (18), where an object not selected by the base verb becomes possible after prefixation with *na-* and an object selected by the base verb becomes blocked after prefixation with *na-* (a situation reminiscent of the effects prefixation often has in the locative alternation).

(18) a. *grabit' proxožih*
rob passers-by$_{ACC}$
'rob passers-by'

b. * *grabit' denjgi* (Russian)
rob money$_{GEN}$
(intended: steal money (cf. **rob money*))

c. **na-grabit' proxožih*
on-rob passers-by$_{GEN}$
(intend.: 'rob many passers-by')

d. *na-grabit' deneg*
on-rob money$_{GEN}$ (Romanova
'steal a lot of money' 2007: 202)

With respect to (18), I agree with Romanova's (2007: 212, fn. 22) suggestion that while it seems natural to think of a robbing event as the creation of a pile of money by robbing, thinking of it as the creation of a pile of passers-by is at best less likely.

A similar contrast to the one in (18) holds in Slovenian, where, however, *ropati* 'rob' accepts both 'stolen goods' and 'robbed people' as its internal argument, (19a)-(19b). But nevertheless, when prefixed with *na-*, the option of having 'robbed people' as the object seems to disappear, (19c)-(19d) ((19c) is, of course, possible on the meaning of (19d), i.e. the odd 'steal a lot of passers-by').

(19) a. *ropati mimoidoče*
rob passers-by$_{ACC}$
'rob passers-by'

b. *ropati dragocenosti*
rob valuables$_{ACC}$
'steal valuables'

c. #*na-ropati* (*veliko*) *mimoidočih*
on-rob a.lot passers-by$_{GEN}$
(intended: 'rob a lot of passers-by')

d. *na-ropati* (*veliko*) *dragocenosti*
on-rob a.lot valuables$_{GEN}$
'acquire a lot valuables by robbing'

One option is to ascribe this *na*-induced argument-structure change to Romanova's suggestion mentioned above, i.e., that thinking of an event of robbing as the creation of a pile of passers-by is at best less likely (but perhaps not completely impossible, if one can conceive of a robbing event as describing a situation where as a result of one's robbing, one creates a lot of people/a big group of people who qualify as robbed). Alternatively, this *na*-induced argument-structure change can be ascribed to the fact that the basic meaning of *ropati* 'rob' is perhaps really 'steal' and its argument structure thus—neutrally—always contains a (covert) 'stolen-goods' argument, even in (19a). (19b) is then problematic since it will—neutrally—encode the meaning 'create a group of people by stealing them', making the potential meaning 'create a lot of people/a big group of people who qualify as robbed' hardly accessible. Be that as it may, the most important thing is that a base verb which allows two types of arguments as its internal argument only seems to allow one after prefixation with *na-*, and such argument structure effects, which are the hallmark of resultative secondary predication, are perfectly expected if *na-* is an argument-introducing resultative prefix. Conversely, they are not expected both if *na-* is an argument quantifier (à la Filip 2005a, 2005b, Svenonius 2004: 236) and if it is a VP-external event quantifier (à la Romanova 2007). To close the section, let me point out that the SSKJ dictionary actually contains quite a few unselected-object *na*-verbs of this type. One more is given in (20), and further cases are *(*na-*)*kaditi veliko dima* (lit. on-smoke a.lot smoke$_{GEN}$) 'produce a lot of smoke by smoking' and *(*na-*)*besedičiti neumnosti* (lit. on-word$_{diminutive.inf}$ stupidities$_{GEN}$) 'pile up a quantity of stupidities by babbling', and further cases of argument blockages include, for example, *kositi travo*/*travnike* 'mow grass/lawns' vs. *na-kositi trave*/**travnikov* (lit. on-mow grass$_{GEN}$/lawns$_{GEN}$) 'obtain/'create' a quantity of grass by mowing'.[12]

[12] Just like with (19c), I would say that at least on a naïve first reading, (20c) is out; one can cause (a quantity of) milk to exist by milking but one does not normally cause (a quantity of) cows to exist by milking. But if one accommodates the idea that what is being accumulated is 'milked cows', then *na-molsti krav* can perhaps also become marginally acceptable. The same holds for **na-kositi travnikov* (lit. on-mow lawns$_{GEN}$), which can perhaps become marginally acceptable if one accommodates the idea that what is being accumulated are 'mowed lawns'.

(20) a. *molsti krave / *mleko*
milk cows$_{ACC}$ milk$_{ACC}$
'milk (the) cows'

b. *na-molsti mleka* [SSKJ dictionary]
on-milk milk$_{GEN}$
'obtain a quantity of milk by milking'

c. **na-molsti krav*
on-milk cows$_{GEN}$
(intended: milk a lot of cows)

1.4.2 *Unselected objects with a cardinal numeral*

1.4.2.1 Another type of object that *na*-verbs combine with is a plural noun preceded by a cardinal numeral (Filip 2005a, 2005b, Pereltsvaig 2006, Romanova 2007), as in the Russian (1b) above, or the Slovenian (21) below (based on a Russian counterpart in Filip 2005a, Pereltsvaig 2006: 466-467 and Romanova 2007: 230).

(21) *Letos je Tone na-laufal že 300 kilometrov*.
this-year is Tone on-run already 300$_{ACC}$ kilometers$_{GEN}$
'This year, Tone has already run 300 kilometers/accumulated 300 kilometers.'

Russell (1985) mentions that Isačenko (1960) classified these cases as 'accumulative', separating them from cases with a bare genitive, which he classified as 'partitive-accumulative' (classification followed also in Russell 1985). According to the studies of Filip (1999, 2000, 2005a, 2005b), Piñón (1994), Pereltsvaig (2006), Romanova (2007: 175, fn. 2) and Tatevosov (2007), however, there seems to be no reason for distinguishing the two classes. If this is true, then we do not have two subtypes of *na*-verbs, and so the unselected object data from the previous section already prove resultativity for all *na*-verbs. But to be on the safe side, I will now devote some additional attention to cases such as (21).

Since demonstrating that (21) contains an unselected-object *na*-verb is less straightforward, let me start this section off by presenting a clear case where this type of *na*-verb argument acts as an unselected object. In (22) below, the measure expression 'a hundred rubles' cannot cooccur with 'ride' in the absence of *na-*, showing that (22a) contains a typical case of unselected object.

(22) a. *Taksi na-jezdilo 100 rublej*. (Russian)
taxi on-ridden 100 rubles (Isačenko 1960: 248, cited
'The taxi trip has amounted to 100 rubles.' in Romanova 2007: 176)

b. * *Taksi jezdilo 100 rublej*. (Russian)
taxi ridden 100 rubles

As before, I stress that a resultative/creation-verb account of *na-* can easily derive this, since it is the prefix that introduces the object, not the verb stem. On the other hand, it appears that neither an argument-quantifier account of *na-* (à la Filip 2005a, 2005b) nor a VP-external event-quantifier account of *na-* (à la Romanova 2007) can offer any explanation.

1.4.2.2 Having provided a straightforward case of unselected object with a cardinal numeral, let me now turn to cases such as (21) above, repeated as (23a). As mentioned

above, the status of the object of (23a) is less clear. Even though it appears to be an effected object, (23b) shows that what seems to be the same measure expression can be used with 'run' in the absence of the prefix.

(23) a. *Letos je Tone na-laufal že 300 kilometrov / 300 ur.*
this-year is Tone on-run already 300_{GEN} $kilometers_{ACC}$ 300_{GEN} $hours_{ACC}$
'This year, Tone has already accumulated 300 kilometers/hours of running.'

b. *Letos je Tone laufal že 300 kilometrov / 300 ur.*
this-year is Tone run already 300_{GEN} $kilometers_{ACC}$ 300_{GEN} $hours_{ACC}$
'This year, Tone has already run (for) 300 kilometers/(for) 300 hours.'

Romanova (2007: 203, 205-6) appears to consider the measure expression in cases like the Russian counterpart of (23a) to be an adverbial adjunct. At lest in Slovenian, though, one can demonstrate that the measure expression in (23a) actually serves as a direct object and that, at the same time, the measure expression in (23b) does *not* serve as a direct object. This effectively shows that the measure expression in (23a) is an unselected object which cannot occur with the unprefixed counterpart of the verb. Let me elaborate.

In Slovenian, most cardinal numerals assign genitive case to their complement, including the numeral in (23). However, the numerals from 1 to 4, and then likewise 101 to 104, 201 to 204, etc., behave like simple adjectives and assign no case. Next to these numerals, the nominal gets whatever case it would get if it were bare (*prebunkati pet falotov*$_{\underline{GEN}.PL}$ 'beat-up five rascals' vs. *prebunkati tri*$_{\underline{ACC}.PL}$ *falote*$_{\underline{ACC}.PL}$ 'beat-up three rascals'). At the same time, accusative-marked direct objects become genitive under sentential negation (*ni prebunkal treh*$_{\underline{GEN}.PL}$ *falotov*$_{\underline{GEN}.PL}$ 'didn't beat-up three rascals'). This is important as it will allow us to see whether a measure expression, such as '303 kilometers' in a sentence like (23), acts as a direct object (as assumed by Pereltsvaig 2006: 466-467 for a Russian counterpart of (23a)) or as a bare accusative adverbial (as assumed by Romanova 2007: 203, 205-6 for a Russian counterpart of (23a)).

As can be seen in (24) below, the expression '303 kilometers' behaves differently when cooccurring with *laufati* (lit. run) and when cooccurring with *na-laufati* (lit. on-run). The accusative '303 kilometers' from the *na*-sentence in (23a) turns genitive under negation, (24a), and the accusative '303 kilometers' from the *na*-less sentence in (23b) remains accusative under negation, (24b). So next to *na-laufati* (lit. on-run), the measure expression behaves as an internal argument, and next to *laufati* (lit. run), it does not behave as an internal argument but as an adverbial.

(24) a. *Tone letos še ni na-laufal* ✓*tristotreh kilometrov* / ??*tristotri kilometre*.[13]
Tone this-year still not-is on-run 303_{GEN} kms_{GEN} 303_{ACC} kms_{ACC}
'This year, Tone has not accumulated the total of 303 km yet.'

[13] The accusative version may be *marginally* possible, in which case I would claim that the structure also contains a null noun, with the whole measure expression thus being 'A/THE DISTANCE OF 303 kilometers' or 'A/THE DISTANCE WHICH IS 303 kilometers' (cf. Kayne 2003/2005). This claim is further explained in the next chapter in the context of the same issue with respect to the status of a measure expression with some *pre*-prefixed verbs.

b. *Tone letos še ni laufal #tristotreh kilometrov / ✓tristotri kilometre.*
Tone this-year still not-is run 303_{GEN} kms_{GEN} 303_{ACC} kms_{ACC}
'This year, Tone has not run 303 km yet.'

Note that the genitive variant of (23b) can be okay only on another meaning, i.e., when the measure expression means some specific '303 kilometers', e.g., 'the 303 kilometers of Ljubljana-Ormož-Ljubljana race', in which case 'the 303 kilometers' basically serve as another name for the race. In this case '303 kilometers' is presumably indeed an internal argument, similar to 'run the race'. What is crucial for my purposes, though, is that in (23a), '303 kilometers' patterns with ordinary internal arguments in that it normally *must* turn genitive under negation, whereas the '303 kilometers' in (23b) can turn genitive *only in special circumstances*. That the latter option is a special case is evident also from the fact that it is only available with a small class of verbs, whereas even some other manner-of-motion verbs, such as (24'b), exclude it altogether, and so do predicates with more unrelated verbs, such as *ni sedel tri ure*/**treh ur* 'didn't sit (for) three hours' ((24'a) is the negated Slovenian version of a Russian example from Pereltsvaig 2006: 466-467 and Romanova 2007: 230).

(24') a. *Ta pilot letos še ni na-letal ✓tristotreh ur / *tristotri ure.*
this pilot this-year still not-is on-flown 303_{GEN} hrs_{GEN} 303_{ACC} hrs_{ACC}
'This year, this pilot has not accumulated the total of 303 hours of flying yet.'

b. *Ta pilot letos še ni letal/letel *tristotreh ur / ✓tristotri ure.*
this pilot this-year still not-is $run_{DIR/NON-DIR}$ 303_{GEN} hrs_{GEN} 303_{ACC} hrs_{ACC}
'This year, this pilot has not flown 303 hours yet.'

In the same spirit, (25a) below shows that '300 hours' with a *na*-verb can take a nominal complement in the shape of a gerund that doubles the root of the *na*-verb. For obvious reasons, such cases will feel somewhat redundant. However, their acceptability contrasts sharply with an attempt at the same thing with the unprefixed counterpart, (25b). If '300 hours' next to an unprefixed 'fly' is a durative/temporal adjunct and next to '*na*-fly' an object, the contrast is explained.

(25) a. *Ta pilot je letos na-letal že 300 ur (letenja).*
this pilot is this-year on-flown already 303_{GEN} hrs_{GEN} $flying_{GEN}$
'This year, this pilot has already accumulated 300 hours of flying.'

b. *Ta pilot je letos letal že 300 ur (*letenja).*
this pilot is this-year on-flown already 303_{GEN} hrs_{GEN} $flying_{GEN}$
'This year, this pilot has already flown (for) 300 hours (of flying).'

Furthermore, the objecthood of the measure expression in (24)-(25) can also be shown with the 'do so' constituency test. If the measure expression were an adjunct, one would expect that it could be freely left out of the referent of the 'do so' pro-form, as is the case in (25'a) with 'this/last year'. However, the measure expression from (24)-(25) above is obligatorily part of the referent of the 'do so' pro-form, as shown in (25'b). This suggests that it functions as an object rather than as an adjunct.

(25') a. *Tine je lani na-letal 300 ur, Tone pa je to naredil letos.*
Tine is last-year on-flown 300 hrs Tone ptcl this-year this not-is did
'Tine accumulated 300 hours last year, and Tine did so this year.'

b. * *Tine je* (*lani*) *na-letal 300 ur, Tone pa je* (*letos*) *to naredil 200 ur.*
Tine is last-year on-flown 300 hrs Tone ptcl is this-year this did 200 hrs
(intended: 'Tine accumulated 300 hours (last year), while Tone did so 300 hours (last year).'

1.4.2.3 Another case of this type of unselected-object *na*-verb is given in (26a) below. As shown by the fact that (26b) is also acceptable, the unselected status of the object in this sentence is again somewhat obscured.

(26) a. *Jože je v pristanišču na-štel 28 ladij.*
Jože is in port on-counted 28 ships
'Jože counted 28 ships in the port / came up with a total of 28 ships in the port.'

b. *Jože je v pristanišču štel 28 ladij.*
Jože is in port counted 28 ships
'Jože counted/was counting 28 ships in the port.'

Note, however, that the English *John counted 28 ships* has been observed to have two readings (Moltmann 1997, Parsons 1997). In Moltmann's (1997: 44) words, the first reading is 'There is a group x of 28 ships such that John counted x', and the second reading is "'when counting ships, John arrived at the number 28' (though perhaps John miscounted the ships, which actually might be 26 or 30 in number [...])", or with Parsons' (1997), 'John counted and came up with the number 28'. And sure enough, the *na*-prefixed 'count' in (26a) only has the second of these two readings of the English sentence, whereas the unprefixed 'count' in (26b) only has the first of the two readings of the English sentence. This is clear from (27); assuming that there is just one set of ships in the port, (27a) is fine even though Peter, Maša and Kaja produced different totals. But (27b) cannot be good because Peter, Maša and Kaja cannot be counting (on the second reading of *count*) different numbers of ships when there is only one set of ships in the port.[14]

(27) a. *Peter je v pristanišču na-štel 28 ladij, Maša 27, Kaja pa 29.*
Peter is in port on-counted 28 ships Maša 27 Kaja PTCL 29
'Peter counted 28 ships in the port, Maša 27, and Kaja 29.'

b. # *Peter je v pristanišču štel 28 ladij, Maša 27, Kaja pa 29.*
Peter is in port counted 28 ships Maša 27 Kaja PTCL 29

[14] (27) would also not be good with *pre-šteti* (lit. through-count) 'go through 28 ships counting' (i.e. the telic reading of the first reading of *count*), which is not a creation verb, event though it contains a resultative and a potentially unselected-object licensing prefix. For a discussion of a related use of *pre-*, see chapters 3 and 4.

So (26a)/(27a) show another case of a *na*-introduced unselected object, which is easily captured if *na*-verbs are resultatives. Indeed, the 'creation'-verb account with an existential resultative small clause fairly closely captures Parson's (1997) intuition that the second reading of *I counted 28 ships* is "just elliptical for 'I counted there to be 28 ships'".

To conclude, this section has provided examples from another type of *na*-verbs—namely, *na*-verbs with a genitive plural noun preceded by an accusative cardinal numeral—and it showed that these should also be analyzed as containing unselected objects. Given that these examples differ from their counterparts where the same measure expression is *not* licensed only in the presence of the prefix, it makes perfect sense to claim that the object is introduced by the prefix. But if so, these cases present serious problems for any argument- or event-quantifier account of *na-* (such as Filip 1999, 2000, 2005a, 2005b, Svenonius 2004: 236 or Romanova 2007). On the other hand, if *na*-verbs are essentially creation verbs ('cause there to be a quantity of something by V-ing'), the *na*-verb examples in this section are easily explained. In a framework such as Spencer & Zaretskaya (1998a), Svenonius (2004), etc., the unselected argument-introducing prefix will originate in the result part of the verbal predicate.

1.4.3 *Unselected reflexive*

Given that the argument introduced by our *na-* is an effected object, it is probably quite unlikely that we will get *na*-verbs with an unselected reflexive, since the meaning of such a structure would be 'cause a quantity of oneself to exist (somewhere) by V-ing'. However, there nonetheless seems to exist a special type of *na*-verbs that have the same meaning of quantity and occur with a reflexive clitic which is not licensed in the absence of *na-*, specifically, *na*-verbs with an accumulated/'created' derived subject. (Importantly, this is *not* the *na- se* construction from chapter 1.)

In section 1.3.2 above, I showed that in addition to transitive *na*-verbs, there also exist unaccusative *na*-verbs, one example of which is repeated below as (28).

(28) *V gostilno je počasi na-kapljalo* (*veliko*) *najstnikov*.
into pub is slowly on-trickled a.lot teenagers$_{GEN}$
'Slowly, a lot of teenagers trickled into the pub (=there came to be a lot of teenagers in the pub by trickling).'

In (28), the Theme that gets accumulated in the pub is a derived subject. But whereas the wording in (28) is my version, the SSKJ dictionary lists the reflexive *na-kapljati se* (lit. on-trickle self) as having the meaning from (28), as in (29); on the internet, both the reflexive and the reflexiveless versions are attested.

(29) *V gostilno se je počasi na-kapljalo* (*veliko*) *najstnikov*.
into pub self is slowly on-trickled a.lot teenagers$_{GEN}$
'Slowly, a lot of teenagers trickled into the pub.'

Importantly, the reflexive clitic is not possible in the absence of *na-* (**kapljati se* [lit. trickle self]). The only other doublet like this that I know of is in (30); in this case, the internet and the SSKJ dictionary both attest the reflexive as well as the reflexiveless version. And again, the reflexive clitic is not possible in the absence of *na-* (i.e. **teči se* [lit. flow self]).

(30) *Čez noč (se) je na-teklo za dve vedri vode*.
over night self is on-flowed for two buckets water$_{GEN}$
'Over night, there came to be available two bucketfulls of water.'

Now, the *na-* in these two doublets is clearly our quantity *na-*, as shown by the fact they do not admit singular count nouns as their derived subjects; for example, one cannot replace '(a lot of) teenagers' in (28)-(29) with a singular count noun such as 'a teenager'. And as I noted above, when the argument introduced by our *na-* is a 'created' *object*, the meaning of a structure with an unselected reflexive would be the unlikely 'cause a quantity of oneself to exist (somewhere) by V-ing'. But in an unaccusative *na*-structure, the meaning would be 'a quantity of something comes to exist (somewhere) by V-ing/in the manner of V', which is a less unlikely scenario, and is in fact just what (28)-(30) instantiate.

So in view of the unselected reflexive clitic, (29)-(30) will have to receive a resultative structure; depending on one's view of such reflexive clitics (which cannot be replaced by a full reflexive in (29)-(30)), this can have various implementations. If resultative VPs project the specifier of V (as per Ramchand 2008a, in whose system this position is the position of Undergoer), then the simplest option is to have the 'teenagers' originate in Spec,VP and then move it up to the subject position, and to have the reflexive originate in the result phrase. And if resultative VPs do not project the specifier of V, then one option is to have 'teenagers' originate in the result phrase and move to the subject position, and to see the reflexive clitic as a reflex/copy of 'teenagers' (à la Hornstein 2001); and another option is to have 'teenagers' originate in the result phrase and move to the subject position, and to see the reflexive clitic as instantiating the defective (i.e. accusativeless) head of Tr(ansitivity)P whose EPP feature gets checked off when 'teenagers' stops over in its Spec on its way up to the subject position (à la Golędzinowska 2005). In the first implementation, the reflexive will be seen directly as an unselected object, in the latter two it will be seen as an indirect reflex of an unselected object.

Irrespective of the particular implementation one goes for, a resultative account of *na-* easily explains the possibility of having a reflexive clitic in (29)-(30) and the symultaneous impossibility of having a reflexive clitic with the same verbs in the absence of *na-*. Of course, such unselected reflexives will still be rare, since they have a competing form in the reflexiveless version and since the derived subject is completely nonagentive (unlike in most other prefixed verbs with an unselected reflexive). However, the existence of the two doublets in (28)-(30) nonetheless attests this structural option, and these unselected-reflexive data receive a natural explanation on our resultative account of *na-* and pose a problem for any account that does not see *na-* as argument-introducing.

1.5 Indefiniteness restriction suspended

As mentioned above, Filip (1999, 2005a, 2005b) and Pereltsvaig (2006) argued that the internal argument of *na*-verbs has to be nonspecific indefinite, so that definiteness elements such as demonstratives and quantifiers such as 'each' and 'all' are not acceptable, as shown in (31) (though they are possible on the kind reading, 'that type/all types of flowers', Pereltsvaig 2006: 459).

(31) a. *Peter je na-trgal* (**tistih*/**vseh*) *rožic* / (**tiste*/**vse*) *rožice*.[15]
Peter is on-plucked those all flowers$_{GEN}$ those all flowers$_{ACC}$
'Peter plucked a quantity of flowers.'

b. *Peter je na-laufal 300 kilometrov* / **vse kilometre*.
Peter is on-run 300 kilometers$_{ACC}$ all kilometers$_{ACC}$
'Peter accumulated 300 kilometers of running.'

Now, if the *na*-introduced resultative small clause is some sort of an existential predicate, the ban on definiteness elements need not come as a surprise (including the possibility of a kind reading). The same restriction is known to hold in existential sentences (e.g. Hartmann & Milićević 2008). At the same time, there are certain cases in which the definiteness restriction is known to be suspended in existential sentences, such as on the so-called list reading of existentials, as in (32).

(32) A: *Is there any good bar in this town?*
B: *Well, there's that nice place on Elgin street.* / *Well, there's "The Manx".*

So one may wonder whether our *na*-verbs perhaps also show contexts in which a definite may nonetheless be acceptable. And it turns out that this is indeed the case, for instance in contexts like (33) and (34); in (33a), the nominal is preceded by a demonstrative, in (33b)-(33c), it is preceded by the universal quantifier, and in (34), the argument is realized by a definite pronoun.

(33) a. *Tistih 150 rožic, ki so zdaj tamle v kotu, je Peter na-trgal na travniku*.
those 150 flowers$_{GEN}$ that are now there in corner is Peter on-plucked on meadow
'All those 150 flowers that are over there in the corner, P. plucked in the meadow.'

b. *Vse rožce, ki so zdaj tamle v kotu, je Peter na-trgal na travniku*.
all flowers$_{ACC}$ that are now there in corner is Peter on-plucked on meadow
'All the flowers that are over there in the corner, P. plucked in the meadow.'

c. *Vse cvety što naxodat'sja tam v uglu Ivan na-rvál na lugú*. (Russian)
all flowers$_{ACC}$ that exist there in corner Ivan on-plucked on meadow
'All the flowers that are over there in the corner, Ivan plucked in the meadow.'

(34) *Vsi tisti kilometri, ki jih je Peter na-laufal lani, se mu bojo letos*
all those kms$_{NOM}$ that them$_{ACC}$ is Peter on-run last-year refl he$_{DAT}$ will this-year
obrestovali.
pay-back
'All those kilometers that Peter accumulated last year will pay back at the Olympics.'

[15] In spontaneous Slovenian, a non-quantity-modified argument of *na*-verbs is accusative, in formal Slovenian, it can be genitive. Note that the accusative variant of the sentence can be forced to be acceptable if it gets the reading of (33a) below, and (31b) with 'all kilometers' can be forced to be acceptable if it gets the reading of (34) below, although the absence of context and the word order of (31a)-(31b) are very unfavorable for this. See section 2 for a discussion of the differences between accusative- and genitive-marked arguments of *na*-verbs, one of which is purposefully ignored in (31a).

So first of all, this shows that the restriction on the internal argument of *na*-verbs having to be indefinite cannot be absolute (contra Filip 1999, 2005a, 2005b and Pereltsvaig 2006); it also shows that the argument of *na-* can have a full DP structure (contra Pereltsvaig 2006, who claims that *na-* will only select a QP/NumP as its complement, i.e. a DP-less structure such as [QP/NumP [NP]]). Moreover, these data suggest a further parallel between our *na*-verbs and existential sentences, namely, that there are contexts in which the definiteness restriction is suspended; and in fact, the cases in (33)-(34) seem fairly similar to cases of 'list'-reading existentials, cf. *And then there are all of those flowers that Peter plucked in the meadow* / *And then there are those 150 flowers that Peter plucked in the meadow*. And finally, (33b)/(33c) show that Romanova's (2007) account, which proposes that *na-* be treated as an event quantifier of the type known from French 'quantification at a distance' (cf. footnote 8 above), i.e. an event quantifier which indirectly quantifies over the argument, also cannot be correct, as (33b)/(33c) would then have the putative event-quantifying *na-* indirectly quantifying over an argument that contains the universal quantifier 'all', and so the argument would end up being quantified over by two different quantifiers at the same time.[16]

To conclude, this section showed that even though the internal arguments of *na*-verbs are typically restricted to indefinites, this restriction is not absolute, as there are contexts where it can be suspended. As existential sentences are also known to exhibit such behavior (with the restriction to indefiniteness suspended in the 'list'-reading existentials, e.g. Hartmann & Milićević 2008), this may offer further support for the claim that the resultative small clause of *na*-verbs has the form of an existential predicate. Now, the difference between the 'existential' and the 'list' reading of *there*-sentences has been argued by some to be pragmatic and by others to be syntactic; this issue, however, is not crucial for my purposes. Even if they are syntactically different, both would still be some sort of predicational structures, so some kind of resultative small clause will still work for both types of my examples; I will not go into this issue any further.[17]

1.6 Quantity, not 'large quantity'

Before concluding the basic-data section, it should be noted that although in many of the examples above the translation had the internal argument in the form of something like 'a lot of N', 'a lot' actually does not appear to be part of the semantics of *na*-verbs (contra Piñón

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[16] One might wish to rescue some of these ideas by claiming that unlike the *na-* in (31), the *na-* in (33) is not the same quantity *na-* but has been reanalyzed as resultative. This would not only seem very ad hoc due to the unclarity as to why such a reanalyzed *na-* could not be used in (31), it would also make no sense given that *na-trgati* (lit. on-pluck) cannot occur with a singular count noun even in (33a), i.e., changing 'those 150 flowers' to 'that flower' makes the sentence bad, (i). See section 2 for some more discussion of these issues.

(i) * *Tisto rožico, ki je zdaj tamle v kotu, je Peter na-trgal na travniku.*
that flowers$_{ACC}$ that are now there in corner is Peter on-plucked on meadow
(intended: 'That flower that is over there in the corner, Peter plucked in the meadow.')

[17] Pereltsvaig (2006: 460-1) also observes that objects of *na*-verbs cannot take non-isomorphic wide scope with respect to subjects with strong universal quantifiers like 'every'. If *na*-verbs are some sort of creation verbs, this is also expected (even though it may in fact be pragmatic rather than strictly grammatical), since having an object like '50 objects' take non-isomorphic wide scope with respect to a quantified subject such as 'every boy' would mean that there were fifty events in which different boys 'created' the same 50 objects. Indeed, the same scopal relations hold with English creation and consumption verbs, *Every boy created*/*built 50 bicycles*, *Every boy plucked 50 flowers*/*ate 50 bananas*.

1994 and Filip 1999, 2000, 2005a, 2005b); rather, the semantics appears to be something like 'a quantity of N'. This is shown for Russian by Tatevosov (2007: 533), who lists *na*-sentences where the internal arguments contain small-quantity measure expressions, such as 'only a few N', 'totally not enough N', etc. The same is shown for Slovenian in (35).

(35) *na-molsti vsega skup 3 litre mleka*
on-milk all together 3 liters $milk_{GEN}$
'obtain a measly total of 3 liters of milk by milking'

So even though there is often a strong implicature that the quantity in question is a large one, this is not part of the semantics of *na-*.[18]

2. The proposal in detail

This section lays out the proposal in more detail. Section 2.1 discusses the structure of *na*-verbs, concentrating on singly-prefixed *na*-verbs. The discussion is organized in subsections, which cover the numerous issues that have been raised as important for the treatment of *na*-verbs in the previous literature. The main intuition behind the proposal is that *na*-verbs share several characteristics with verbs such as *amass*, with the difference that *na*-verbs contain an explicitly encoded manner via the verbal root (or in the case of doubly prefixed *na*-verbs the inner resultative VP) and can therefore also function as creation verbs. In section 2.2, I present the proposal for the cases where *na-* is found stacked over another prefix. The discussion is organized in subsections. I first discuss the two-VP structure that is already familiar from chapter 1, offering also brief remarks on the interpretation, aspectual effects, and linearization. Then I discuss the realization of internal arguments of the two VPs; I propose, in the spirit of some proposals for serial verb constructions, that the construction involves internal argument sharing between the two VPs.

2.1 The basic structure: Singly-prefixed *na*-verbs, the genitive argument, etc.

2.1.1 *The basics*

The data in section 1 were shown to call for a resultative, some sort of 'creation'-verb account of *na*-verbs with the result predicate encoded by an existential small clause. Now, what is the correct analysis of existential sentences remains quite controversial (see for example Partee & Borschev 2002, Błaszczak 2008, Hartmann & Milićević 2008, Kallulli 2008 and the references there), especially with respect to the hierarchical order of the location and locatum. Partee & Borschev (2002), for example, assign Russian existential sentences (just like locatives) the simple structure of BE(THING,LOC) and blame the differences on perspectival/information structure (cf. also Kallulli 2008); Hartmann & Milićević (2008), on the other hand, assign Serbian locatives a structure à la Partee &

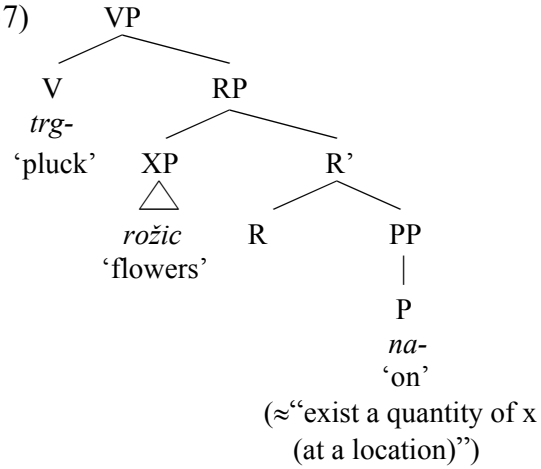
[18] Similarly, the English noun *quantity* can be modified with both *large* and *small* (*a large*/*small quantity of x*), but when it is used on its own, it can be read either as 'an indeterminate quantity' or as 'a sufficient/large quantity', as shown also by the fact that *Random House Webster's Unabridged Electronic Dictionary* (1996 electronic edition) assigns it a meaning described as 'a considerable or great amount', as in the expresion *in quantity*.

Borschev (2002)—i.e. a predicative structure with the locatum as the specifier of a $Pred_{loc}$ head and a location PP as its complement—and they assign Serbian existential sentences, with their genitive theme argument, a predicative structure with the location as the specifier of a $Pred_{ex}$ head and the locatum as its complement; an FP mediating between $Pred_{ex}P$ and the theme argument allows them to explain the fact that the theme is in the genitive. The details of the structure of the resultative existential small clause of our *na*-verbs could thus be equally controversial, especially in view of the quantity interpretation of the Theme argument of *na*-verbs. I will argue, however, that once looked at from the right perspective—i.e. from the perspective of bare genitive arguments outside our *na*-verb construction and from the perspective of certain similarities with verbs such as *amass*, the analysis of our *na*-verbs is not really controversial. Nevertheless, the abundance of issues involved—such as the issues of quantity interpretation of *na*-verbs, genitive case on bare internal arguments as well as the variety of realizations for the internal structure of internal arguments, the typical nonspecificity/indefiniteness of the internal argument, etc.—will inevitably make the discussion fairly complex, so the section is unfortunately not going to make a very easy read.

Before I go into the individual issues just mentioned, which will eventually bring us to the final proposal for singly-prefixed *na*-verbs, I will repeat the general idea about their structure. A simple, singly-prefixed *na*-verb predicate, such as the one in (36), can be assigned the general structure in (37).

(36) *Peter je na-trgal rožic*.
Peter is on-plucked $flowers_{GEN}$
'Peter plucked a quantity of/some flowers.'

(37)



Ignoring the details of the internal structure of the existential small clause, a Ramchand (2008a)-style interpretation of a structure such as (37) gives us the meaning 'cause a quantity of something to come into existence' (or 'cause a quantity of something to come to exist at a particular location'; a potential further specifying PP would be embedded under the prefixal PP). The manner in which the quantity of something is caused to come into existence gets encoded with the root merged in V^0. Since the direct object is introduced by the resultative prefix rather than the verb, the structure readily derives *na*-verbs with unselected objects, such as *(*na*-)*molsti mleka* (lit. on-milk $milk_{GEN}$) 'cause there to be a quantity of milk available by milking'.

In the remaining part of section 2.1, I first show that the genitive marking of *na*-verbs' internal arguments, their indefinite interpretation and their quantity interpretation do not come from the same source (contra Pereltsvaig 2006), and that the quantity interpretation of *na*-verbs' bare internal arguments is independent of genitive case and indefiniteness (2.1.2). In 2.1.3, I point out several parallels between *na*-verbs and some other verbs, such as the English *amass* and the Slovenian *na-kopičiti* (lit. on-pile) 'pile up/cause to form a pile'. The parallels suggest that the quantity interpretation of *na*-verbs can be similar in origin to the quantity interpretation of these verbs, and they cast further doubt on the necessity of invoking VP-external material or argument quantifiers for the analysis of *na*-verbs. Via the more transparent structure that these verbs exhibit, the parallel also sets up the proposal of the structure of *na*-verbs, which is given in 2.1.4; I first offer a structure for the more transparent *na-kopičiti*/*amass* and then the structure for *na*-verbs. In 2.1.5 and 2.1.6, I discuss the structure of the various realizations of the internal structure of the internal argument of *na*-verbs, including the issues of specificity/definiteness. And in 2.1.7, I suggest more explicitly that genitive marking on a bare external argument of a predication need not depend on that argument originating as an internal argument of the predicative verb or preposition.

2.1.2 *Separating case, indefiniteness and quantity of bare arguments of* na-*verbs*

Pereltsvaig (2006) seeks to explain several characteristics of *na*-verbs as stemming from the same source, specifically, from a particular structure of the internal argument (the absence of a DP shell over a [QP/NumP [NP]] structure). These characteristics include the ban on definiteness elements, the genitive case on bare noun objects, and the ban on singular count nouns. We have already seen above, however, that the quantity interpretation of bare nouns next to *na*-verbs does not depend on their being genitive and/or indefinite, and so the restriction on the internal arguments of *na*-verbs to be quantity has to be accounted for independently. Let me briefly repeat.

As shown in (38) below, it is true that when the object is a bare genitive, the object cannot be preceded by a demonstrative (ignoring the kind reading), (38b), and we have the interpretation of quantity and therefore cannot have a single count noun object (ignoring the kind reading), (38c).

(38) a. *Tonček je na travniku na-trgal nageljčkov*.
Tonček is on meadow on-plucked carnations$_{GEN}$
'Tonček plucked a quantity of carnations in the meadow.'

b. * *Tonček je na travniku na-trgal tistih nageljčkov*.
Tonček is on meadow on-plucked those carnations$_{GEN}$

c. * *Tonček je na travniku na-trgal nageljčka*.
Tonček is on meadow on-plucked carnation$_{GEN}$

As mentioned above, though, internal arguments of *na*-verbs in spontaneous Slovenian are accusative (nominative in passive or unaccusative *na*-verbs), (39a). But as shown in (39b), in the type of information structure from (38), the object still cannot be preceded by a demonstrative (ignoring the kind reading). And as shown in (39c), the ban on singular count

noun objects holds independently of whether the object is genitive or accusative (the same is true of Czech [Filip 1999, 2005a] and presumably also of modern Russian [Filip 2005a]).

(39) a. *Tonček je na travniku na-trgal neke nageljčke.*
Tonček is on meadow on-plucked some-sort-of carnations$_{ACC}$
'Tonček plucked some carnations in the meadow.'

b. * *Tonček je na travniku na-trgal tiste nageljčke.*[19]
Tonček is on meadow on-plucked those carnations$_{ACC}$

c. * *Tonček je na travniku na-trgal nageljček.*
Tonček is on meadow on-plucked those carnations$_{ACC}$

Therefore, we can conclude that neither the indefiniteness restriction nor the quantity interpretation of *na*-verbs' internal arguments necessarily imply genitive case-marking, and so the three characteristics cannot have the same source. If they did, it should be impossible to have the first two realized without the third.

At the same time, though, this implication only goes one way. We showed that the indefiniteness restriction and the quantity interpretation of *na*-verbs' internal arguments do not necessarily imply genitive case, but we did not show that bare genitive does not imply an indefiniteness restriction and a quantity interpretation. And in fact, it seems that bare genitive *does* imply an indefiniteness restriction and a quantity interpretation, as is suggested by the following pattern. In formal Slovenian, either the accusative or the genitive can be used on the object in sentences such as (40) below (where it is clearly not any prefix that specifically selects such an argument and where the verb is formally imperfective), but the interpretation possibilities are different depending on the choice of case.

(40) a. *Nesi mu kave / rogljičkov.*
carry he$_{DAT}$ coffee$_{GEN}$ croissants$_{GEN}$
'Take him some (some quantity of) coffee / some (some quantity of) croissants.'

b. *Nesi mu kavo / rogljiček.*
carry he$_{DAT}$ coffee$_{ACC}$ croissant$_{ACC}$
'Take him some/the coffee; Take him a/the croissant.'

The different interpretation possibilities for the accusative and genitive-marked objects in (40) above can be confirmed by attempting to use the two cases with definite objects and with a singular count object, as in (41) below.

(41) a. **Nesi mu tiste kave / tistih rogljičkov / tistega rogljička.*
carry he$_{DAT}$ that coffee$_{GEN}$ those croissants$_{GEN}$ that croissant$_{GEN}$
(intended: 'Take him that/some of that coffee; Take him those/some of those croissants; Take him that/some of that croissant.')

[19] The judgement holds on neutral intonation. Special intonations and information-structure manipulations can make this sentence acceptable, because there is no restriction on accusative/nominative-marked arguments of *na*-verbs not to be interpreted as specific and/or definite, as was already shown in 1.5 above (see also below).

b. *Nesi mu *rogljička / rogljiček.*
carry he$_{DAT}$ croissant$_{GEN}$ croissant$_{ACC}$
'Take him a croissant.'

(41a) shows that the bare genitive object cannot be definite (which means that there is no evidence that the indefiniteness of bare genitive arguments with *na*-verbs has to be related specifically to *na*- or the *na*-verb), and (41b) shows that a singular count noun object cannot occur in the genitive (and so this genitive cannot get a partitive reading, just as is shown by Pereltsvaig 2006 for bare genitive objects of *na*-verbs).[20]

In summary, we showed, on the one hand, that the indefiniteness restriction and the quantity interpretation of *na*-verbs' internal arguments do not depend on genitive case, and so the three characteristics cannot have the same source; at the same time, we showed that the quantity interpretation of *na*-verbs does not depend on genitive case-marking, so it must be coming from somewhere else (what this is will become clear in section 2.1.4). On the other hand, we showed that a bare genitive argument will always get an indefinite interpretation and a quantity interpretation, regardless of the *na*-verb construction.[21]

To fend off another potential counterargument, let me add the following. We know that arguments of *na*-verbs are not restricted to bare genitives but can also be of other kinds of quantity expressions, and so if the indefiniteness is claimed to stem from the bare genitive, one can ask how come those other kinds of quantity expressions also get interpreted indefinitely. The answer to this is that those other type of quantity arguments of *na*-verbs indeed *can* be interpreted indefinitely, and in the kind of information-structure patterns that *na*-verb examples are typically given, they almost always *are* interpreted indefinitely; however, this does not affect the claim that it is only bare genitives that are structurally limited to being interpreted as nonspecific indefinite, because when an argument of a *na*-verb is some other kind of quantity expression, it *can* be read as definite as long as the context and/or the information-structure pattern supports this, which was shown with examples (33)-(34) in section 1.5.[22]

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[20] The restriction whereby bare genitive arguments can be mass or plural count nouns (i.e. quantity) but not singular count nouns appears to hold also in Croatian existential sentences, (i).

(i) a. *Na stolu je bilo jaja / *jajeta.* b. *Na stolu ima jaja / *jajeta.* (Croatian)
on table is been eggs$_{GEN}$ egg$_{GEN}$ on table has eggs$_{GEN}$ egg$_{GEN}$
'There was eggs on the table.' 'There's eggs on the table.' (Damir Ćavar, p.c.)

[21] It may thus seem that when the object of *na*-verbs is a bare genitive, quantity is encoded twice, i.e. by the *na*-verb (in one way or another), and by the genitive. This may seem problematic (in the sense of vacuous quantification), but will be explained not to be so in section 2.1.4 below.

[22] That bare genitives are structurally restricted to quantity with *na*-verbs was shown in (38) above, and that bare genitives are structurally restricted to indefiniteness is suggested by the ungrammaticality of (i) below (compare with the grammatical (33a) above, where the same sentence with *tistih 150 rožic* (lit. those 150 flowers$_{GEN}$) 'those 150 flowers' instead of *rožic* (lit. flowers$_{GEN}$) 'flowers' makes the sentence fine).

(i) * (**Tistih*) *rožic, ki so zdaj tamle v kotu, je Peter na-trgal na travniku.*
those flowers$_{GEN}$ that are now there in corner is Peter on-plucked on meadow
(intended: 'Those flowers that are over there in the corner, Peter plucked in the meadow.')

2.1.3 *Similarities between* na-*verbs and* amass

Given that we now know that the quantity interpretation of bare internal arguments of *na*-verbs does not depend on genitive case but rather, somehow, is enforced by the verb, we can proceed towards establishing a structure that will be able to derive this. To this end, I will begin by listing a number of characteristics that our *na*-verbs share with some English verbs, specifically, *amass* (and also *accumulate*), which will then lead me to suggest a structure for *na*-verbs that is basically the same as the one of Slovenian verbs *na-kopičiti* (lit. on-pile) and *na-grmaditi* (lit. on-pile) 'amass/pile up/cause sth to form a pile', with the main difference coming from the fact that in our *na*-verbs, the verbal root also encodes a specific manner in which the stuff is amassed.[23] So let us look at how such verbs behave in comparison with our *na*-verbs.

The first thing to point out is the ban on the above-mentioned verbs to cooccur with singular count noun internal arguments, which was mentioned to also hold with our *na*-verbs. As shown in (42), *nakopičiti* does not tolerate singular count noun internal arguments (ignoring the kind reading), and neither do *amass* or *accumulate*.

(42) a. **Tinček je na-kopičil roman / romana*.
Tinček is on-piled novel$_{ACC}$ novel$_{GEN}$

b. * *Tim amassed a novel* / *the novel*.
c. * *Tim accumulated a novel* / *the novel*.

And since *na-kopičiti* contains *na-* and (42a) could thus be seen as simply one of our *na*-verbs, with their usual ban of singular count objects, I add that if this verb is stripped of its prefix (and with it, of perfectivity), it still does not tolerate a singular count noun (ignoring the kind reading), (43) (and the same holds for *grmaditi* [lit. pile] 'amass').

(43) *Tinček je kopičil *roman / ✓romane*.
Tinček is piled novel$_{ACC}$ novels$_{ACC}$
'Tinček amassed/was amassing novels.'

Simply, the denotation of a singular count noun cannot be referred to as forming a mass of something. And to the extent that in a specific context, one can force a singular count noun with *na-kopičiti*—with an object like 'one (single) novel' in which 'one (single)' has to be heavily stressed—the same is not only possible with *na-kopičiti* but also with *amass* and with *na*-verbs, as in (44) (in Slovenian, this does not work with a bare noun, and with *amass*, it does not work with the noun preceded only by the indefinite article). (From here on, I will only provide examples for *amass*, leaving out examples with *na-kopičiti* in order to keep things shorter; with respect to everything mentioned below, the two behave the same.)

[23] The *Random House Webster's Unabridged Electronic Dictionary* (1996 electronic edition) assigns *amass* two meanings, 'to gather for oneself, collect as one's own' (as in *to amass a huge amount of money*) and 'to collect into a mass or pile; gather' (as in *He amassed his papers for his memoirs*); though they are clearly related, it is the first reading that is relevant here.

(44) A: *Koliko rožic je pa Petru uspelo na-trgat?*
how-many flowers$_{GEN}$ is PTCL Peter$_{DAT}$ managed on-pluck
'And how many flowers did Peter manage to pluck / amass (by plucking)?'

B: *Hja, Petru je ratalo na-trgat pa eno samo rožico*.
well Peter$_{DAT}$ is managed on-pluck ptcl one single flower
'Well, Peter managed to pluck / amass (by plucking) one single flower.'

At the same time, whereas singular count nouns are incompatible with *na*-verbs, *na-kopičiti* and *amass*, all of these verbs are acceptable with various types of quantity expressions, such as '300 flowers', 'a lot of flowers', 'four baskets of flowers', etc.; I will not repeat the various *na*-verb examples of this type that were already seen in section 1, and for *amass*, they are in (45).

(45) *Peter amassed 300 flowers* / *a lot of flowers* / *four baskets of flowers in the garage*.

Furthermore, one case of quantity direct object that Filip (1999) has reported to be fairly odd but not really ungrammatical with *na*-verbs are things such as 'three flowers' in (46a) (Filip 1999: 263 marks a comparable Czech example with ??, alongside an example with a singular count noun that she marks with *).

(46) ?*Peter je na-trgal tri rože*.
Peter is on-bought five bicycles

In section 1.6 above, I showed that (with Tatevosov 2007 and contra Filip 1999, 2000, 2005a, 2005b and Piñón 1994) this is not due to an entailment but rather to a strong implicature that the quantity of amassed stuff be large. And sure enough, at least in the absence of any supporting context, it is similarly awkward to utter ?*Peter amassed 3 bicycles*/*flowers*. At the same time, it is fine to say *Peter managed to amass only 3 bicycles*/*flowers*, just as the same was shown to be possible with *na-trgati* (lit. on-pluck) in section 1.6. So both *amass* and *na*-verbs show a strong implicature that the stuff amassed is large, but with neither *amass* nor *na*-verbs is this part of the semantics of the verb.

Now, one type of quantity expressions that *amass* does not seem happy with—in simple tense sentences, on an attempted episodic reading—are bare plurals and bare mass nouns in cases like #*Peter amassed flowers* / *water*. These are possible only on a habitual/generic reading (say, if amassing flowers used to be what Peter did for a living). In this, *amass* appears to differ from *na*-verbs, such as (38a) above, repeated here as (47).

(47) *Tonček je na travniku na-trgal nageljčkov*.
Tonček is on meadow on-plucked carnations$_{GEN}$
'Tonček plucked a quantity of carnations in the meadow.'

Importantly, though, the above incompatibility between *amass* and bare plurals/bare mass nouns is not due to the the fact that the latter are weak indefinites, since *amass* is fine with *sm flowers*, which is also a weak indefinite. Rather, it appears that the incompatibility of bare plurals and bare mass nouns with *amass* is due to the fact that—with its lack of specific manner—*amass* does not function as a 'creation' verb but needs preexistent entities that one

amasses, and bare plurals and bare mass nouns do not seem to work for this (as confirmed by the contrast between *create* and *gather* on episodic readings, as in *He created problems*/*sm problems* vs. *He gathered *men*/*✓sm men*). But unlike *amass*, our *na*-verbs clearly *can* function as 'creation' verbs (cf. section 1.4 with unselected objects), hence the difference with respect to compatibility with bare plurals and bare mass nouns. Therefore, whereas *amass* and *na*-verbs do exhibit a difference, the latter does not reflect a structural difference that would have anything to do with their 'quantity' character.

In fact, there exist cases where *amass does* occur with bare plural and bare mass internal arguments even in simple tense sentences with episodic readings. These are unaccusative uses of *amass*, i.e. cases where the bare plural/bare mass internal argument surfaces as the subject, (48).

(48) a. *Because of the inadequate slopes, cambers and drainage provisions, water amassed in patches all along their causeway and …* [internet]

b. *Problems amassed when liquidity support to foreign banks was severed from the headquarters, …* [internet]

But these are precisely non-causative uses, i.e. uses where *amass* is not used as a 'creation' verb (cf. also *He gathered *men*/*✓sm men* vs. *Men*/*Sm men gathered outside the bar*); therefore, they actually confirm the explanation suggested above. (Unsuprisingly, unaccusative *na*-verb examples with derived genitive subjects to match (48) also exist; two were given in (29)-(30) above.)[24]

In sum, with respect to various types of quantity expressions as their internal argument, *na*-verbs behave very much like *amass* does, allowing similar things (various kinds of quantity expressions), disallowing similar things (singular count nouns), and showing similar pragmatic sensitivity (such as the ? acceptability of objects such as '3 flowers' in (46) and the exceptional acceptability of 'a single flower' in (44)).

Furthermore, similar parallels can be found between *na*-verbs and *amass* with respect to compatibility with quantifiers such as 'every' and 'all' and with demonstratives. Filip (1999, 2000, 2005a, 2005b), Pereltsvaig (2006), etc., have pointed out that *na*-verbs are bad with such quantifiers and with demonstratives (ignoring the kind reading). On the one hand, I showed in 1.5 above that this is only true outside of context/with the information-structure packaging of their examples, but that there are contexts where such quantifiers can be combined with the objects of *na*-verbs[25]. On the other hand, note that as an out-of-the-blue utterance with no context, *John amassed all the bicycles* is also bad; but at the same time it is

[24] Note that despite the above mentioned *#He amassed flowers*, there *do* exist cases where a bare plural object is possible with *amass*, e.g. *He amassed huge debts*. However, as suggested by the acceptability contrast, these cases must have a different structure. Like (48), they are also non-causative and should presumably also be assigned an 'unaccusative' structure, in part similar to the structure of (48); *huge debts* would originate as the theme/subject of the result predicate and *he* would originate as the location/internal argument of the result predication, in essentially something like *Huge debts amassed on him* – even though this would appear to violate locality. It seems significant that the related verb *pile up* does not have such a use, and neither does Slovenian *na-kopičiti* (lit. on-pile) 'amass', which has all the other uses of *amass* discussed so far, including the unaccusative one in (48).

[25] The restriction is real in the case of bare genitive objects of *na*-verbs, but this is not due to the structure of *na*-verbs per se but specifically to the structure of bare genitives (cf. sections 2.1.2 above and 2.1.5 below).

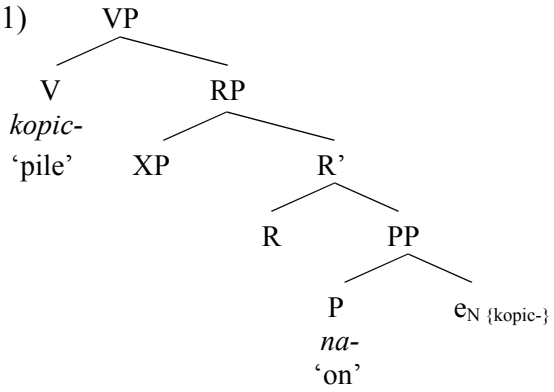
perfectly fine to say *All the* (*three thousand*) *bicycles in this warehouse were amassed in the recent police raid on Toronto's infamous "Bicycle Clinic"*.[26] Moreover, Pereltsvaig (2006) also observes that objects of *na*-verbs obligatorily take narrow scope with respect to universally quantified subjects such as 'every x'; and again, the same is true of *amass*, as in *Every Slovenian amassed 5 bicycles*.

To recapitulate, section 1 provided evidence for a resultative account of *na*-verbs and against VP-external and argument-quantifier accounts of *na*-verbs. In this section, we established some striking parallels between *na*-verbs and verbs such *amass* or *na-kopičiti*. Assuming that one will not try to derive these shared characteristics by positing some VP-external material or some verb-enforced argument quantifier in the structure of *amass*/*na-kopičiti*, this adds further support to the claim that our *na*-verbs also do not need the postulation of such material. Furthermore, the parallels established in this section, i.e. between *na*-verbs and *amass*/*na-kopičiti*, give us a way to look at the structure of *na*-verbs. In the next section, I thus first discuss the structure of *na-kopičiti*, and then use this as a basis for proposing the structure of *na*-verbs.

2.1.4 *The structure* (*of singly-prefixed*) na-*verbs*

The structure I assume for the denominal-looking *na-kopičiti* (lit. on-pile) 'amass' is in (51), whereas its unprefixed counterpart *kopičiti* would contain just the top part of (51), without the result part. (I am ignoring the internal structure of *kopic-*, i.e. *kop-ic*$_{\text{diminutive}}$*-*, and the thematic vowel.) If decomposing *amass* into *a-mass* and treating *a-* as a prepositional prefix, as one would presumably do with its French source, the structure of *amass* could also be as in (51).

(51)



Note that *kopic-* could be adjoined to V^0 either as just a root or as a root further embedded in a noun (see Kiparsky 1997, Hale & Keyser 2002, Arad 2003, Hirschbühler & Labelle 2008 for discussion). As for the prefixal PP, there are two options, and the choice between them is largely irrelevant for my purposes. One option is to see the prefix as a syntactically intransitive P, with its argument present in the conceptual structure but not syntactically (cf. e.g. Emonds 1985, McIntyre 2005, cf. also Kiparsky 1997). Alternatively, the prefix could be

[26] I am repeating footnote 23: according to *Random House Webster's Unabridged Electronic Dictionary* (1996 electronic edition), *amass* has a second meaning, 'to collect into a mass or pile; gather' (as in *He amassed his papers for his memoirs*), but I am referring to the reading 'to gather for oneself, collect as one's own' (as in *to amass a huge amount of money*).

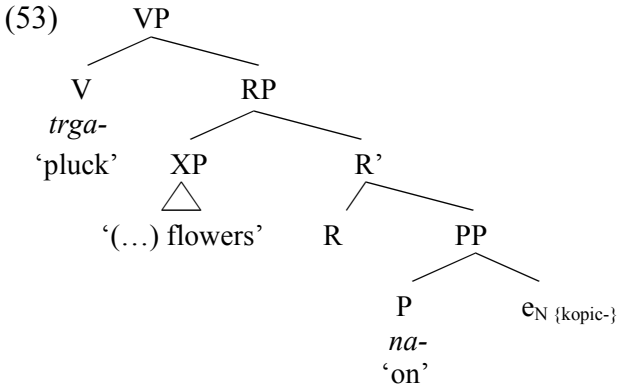
seen as having a syntactically present but obligatorily null argument (cf. e.g. Svenonius 1996), which would then get case from the prefix.[27] If one adopts the latter analysis, I would follow the general idea of what Hale & Keyser (2002, contra their earlier work) suggest for English denominal-looking verbs; they suggest that V^0 does not get its content via the argument of the prefix actually incorporating into the verb, even though there is some sort of quasi-selection relation between the two. Hale & Keyser encode this relation with a kind of indirect syntactic selection from the verb over the argument of the preposition, which they represent with the subscript index in curly brackets (op.cit.: 95-6).[28] A further-specifying PP would be embedded under the PP of *na-*.

Note that for x to be 'in pile', i.e. to form a pile, there has to be a quantity of x, and so it is quite expected that singular count nouns are not going to work with *na-kopičiti*. In other words, one normally cannot have a singular count noun such as, say, a flower forming a pile (though cf. (44) above). But since one *can* regularly have a quantity of x forming a pile, it is also clear that quantity expressions, indeed, various sorts of quantity expressions, are going to be valid candidates for the internal argument of *na-kopičiti*, and that this will not lead to any problems of vacuous quantification.

Next, let us go to the structure of *na*-verbs. For a *na*-verb predicate such as (52), I propose the structure in (53); I am leaving the internal structure of the direct object as an XP here, since it can come in various versions (se 2.1.5 below).

(52) *na-trgati rož / rože / 300 rož / 4 šopke rož*
on-pluck $flowers_{GEN}$ $flowers_{ACC}$ 300_{ACC} $flowers_{GEN}$ 4_{ACC} $bunches_{ACC}$ $flowers_{GEN}$
'pluck some flowers/300 flowers/4 bunches of flowers'
(≈'amass some flowers/300 flowers/4 bunches of flowers by plucking')
(≈'cause some flowers/300 flowers/4 bunches of flowers to be in pile (≈form a pile) by plucking')

(53)



[27] The issue here is the same as with prefixes in general, including spatial ones. For example, in *pri-laufati k hiši* (lit. at-run to house) 'come to the house running', where the prefix *pri-* is more widely treated as resultative, the prefix can be either seen as a syntactically intransitive P or as syntactically hosting an obligatorily null argument.

[28] Note that there can be such apparent 'doubling' with overt material as well, as in (i).

(i) *v največji seneni kopici na svetu na-kopičiti celo kopico slabega sena*
in biggest hay pile on world on-pile entire $pile_{ACC}$ bad hay_{GEN}
'to amass a whopping big mass of bad hay in the biggest haystack in the world'

In fact, the only real difference between these verbs and *na-kopičiti* (and *amass*) lies in the fact that with *na*-verbs, the verbal root also encodes a specific manner in which the stuff is amassed. (Incidentally, this is reflected in the definitions of many *na*-verbs in the SSKJ dictionary, which are of the type 'obtain a quantity of x by V-ing'.) A further-specifying PP, such as in *na-metati kamenje na mizo* (lit. on-throw stones onto table) 'cause there to be a quantity of stones on the table', would merge as the complement of the prefixal PP, just as in standard resultative-prefixed verbs such as *pri-laufati k hiši* (lit. at-run to house) 'come to the house running'.[29]

2.1.5 *The structure of the internal argument of* na-*verbs*

As for the structure of the internal argument of *na*-verbs, let me first repeat from above that the meaning of quantity of *na*-verbs arises independently of the internal argument. In a sense, the internal argument just has to be compatible with the meaning of the verb, or rather, with the meaning of the result predicate (i.e., it has to be such that it can be 'in pile', form a pile). I will assume here that such a restriction can come about even though—as in (53) above—the Theme is an external argument of the predication (and see section 2.1.7 below for some support for this assumption). In other words, I disagree with Piñón (1994), Pereltsvaig (2006) and Tatevosov (2007), who explain the requirement that the argument of *na*-verbs be a quantity expression by claiming that the nominal is an (only/internal) argument of the prefix and so it is a simple matter of a certain syntactic feature on the prefix that only selects for a certain type of argument.[30]

It was already pointed out above that in Slovenian, cardinal numerals are of two types: 1 to 4 (and 101 to 104, 201 to 204, etc.) behave like adjectives and do not affect the case of the head noun, while the rest behave differently in that (in structural-case positions) they themselves get structural case and assign genitive case to the head noun, so they are typically analyzed as an FP somewhere between NP and DP. At the same time, nominal complements of nouns also most typically receive genitive case. According to Piñón (1994: 496), we must thus acknowledge (54a)-(54b) as two structures in which a noun will surface in the genitive; in (54a), the QP/NumP assigns genitive to the noun, and in (54b), the higher NP assigns genitive to its complement.

(54) a. [... [$_{QP/NumP}$ [$_{NP}$]]]
b. [... [$_{NP}$ [$_{NP}$]]] (Piñón 1994: 496)

Note that working with the machinery of the time, Piñón (1994) uses the DP label rather than the QP/NumP in (45a); these days, this DP could be relabeled as QP/NumP, given that nominals with cardinal numerals can also be preceded by demonstratives, the universal quantifier, etc.

[29] I thus share the claim that this *na-* originates in the result predicate with Biskup (2007), but I do not share his claim that the prefix is also associated with a VP-external cumulative feature.

[30] Note that if this requirement were a matter of simple feature-type selection, then there is no way one can explain why in some special contexts, such as the one of (44) above, a singular count noun is nonetheless possible with *na*-verbs.

Also, remember that the format that an internal argument of a *na*-verb can occur in in affirmative sentences includes, according to Piñón's (1994) discussion of Polish *na*-verbs, at least the options in (55a)-(55e); for Slovenian, we should also add (55f).

(55) a. *sto rožic*
100$_{ACC}$ flowers$_{GEN}$
'100 flowers'

b. *košaro/kup rožic*
basket$_{ACC}$/pile$_{ACC}$ flowers$_{GEN}$
'a basket/pile of flowers'

c. *sto košar rožic*
100 $_{ACC}$ baskets$_{GEN}$ flowers$_{GEN}$
'100 baskets of flowers'

d. *stotri košare rožic*
103 $_{ACC}$ baskets$_{GEN}$ flowers$_{GEN}$
'103 baskets of flowers'

e. *rožic*
flowers$_{GEN}$
'a certain quantity of/some flowers'

f. *rožice*
flowers$_{ACC}$
'certain/some flowers'

Piñón (1994: 496) proposes that the structure of these arguments is as in (56) (again, the NumPs correspond to his DPs).

(56) a. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ *sto*/'100'] [$_{NP}$ [$_{N'}$ [$_{N}$ *rožic*/'flowers$_{GEN}$']]]]]
b. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ Ø] [$_{NP}$ [$_{N'}$ [$_{N}$ *košaro*/'basket$_{ACC}$'] [$_{NP}$ *rožic*/'flowers']]]]]]
c. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ *stotri*/'103'] [$_{NP}$ [$_{N'}$ [$_{N}$ *košare*/'baskets$_{ACC}$'] [$_{NP}$ *rožic*/'flowers']]]]]]
d. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ *sto*/'100'] [$_{NP}$ [$_{N'}$ [$_{N}$ *košar*/'baskets$_{GEN}$'] [$_{NP}$ *rožic*/'flowers']]]]]]
e. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ e$_{numeral}$] [$_{NP}$ [$_{N'}$ [$_{N}$ *rožic*/'flowers$_{GEN}$']]]]]
f. [$_{NumP}$ [$_{Num'}$ [$_{Num}$ Ø] [$_{NP}$ [$_{N'}$ [$_{N}$ *rožice*/'flowers$_{ACC}$']]]]]

((56a-e) from Piñón 1994: 496, (56f) added)

The e$_{numeral}$ in (56e) is a null element that belongs to the functional class of numerals, i.e. a functional element which has the semantics of a certain quantity, which itself depends on structural case, and which is the source of the genitive on the head noun.

With respect to (56a)-(56d), I agree with Piñón (1994), and in view of the Slovenian option in (55f), we should add something like (56f).[31] I stress that the fact that (with my relabeling) these structures only have a NumP is *not* meant to suggest that there can be no further DP-level FPs above it (contra Pereltsvaig 2006); we saw in section 1.5 above that under the right circumstances, the internal argument of *na*-verbs can be preceded by a demonstrative or the universal quantifier and not only get the kind reading, so we clearly need some DP-level FP above the NumP to allow this. At this point, it is not important whether the latter is present only when such arguments have a definite interpretation (as would seem to follow from Kallulli's 2008 claims with respect to English existential bare plural/mass arguments) or whether the latter is always present and it is only pragmatics that can make the definite interpretation unavailable (as would seem to follow from Abbott 1993 and Tham 2006). Note also that the correctness of the difference that (56a) and (56c) make with respect to the structure of the arguments in (55a) and (55c), for example, can be checked by using (55a) and (55c) with a *na*-verb in definite contexts such as those in 1.5

[31] Pereltsvaig (2006: 456) assigns arguments such as (55b) the structure [QP/NumP [NP]], with the measure expression 'basket' merged in Q/Num, so her model would also have to be expanded in order to accommodate arguments such as (55d), where the measure expression 'basket' is itself modified with a cardinal numeral.

above; and as the single-NP and double-NP structures predict, if we use (55a) in such a context, it is the 'flowers' that are definite (just as in the English *Those 100 flowers that we plucked in the meadow are ...*), and if we use (55c) in such a context, it is the 'baskets of flowers' that are definite, not the 'flowers' (just as in the English *Those 100 baskets of flowers that we plucked in the meadow are ...*).

Furthermore, I also agree with Piñón's (1994) structure for the bare genitive given in (56e) above (also shared by Pereltsvaig 2006). But in contrast to what I just said about (56a)-(56d) and (56f), I also agree with Pereltsvaig (2006) that the NumP in (56e) can*not* be topped off by higher DP-level FPs. This is shown by the fact that it does not seem to be possible to use a bare genitive as an argument of a *na*-verb in the definite contexts of 1.5, as demonstrated in footnote 22 above; and if a *na*-verb bare genitive is preceded by a demonstrative or the universal quantifier, it can only get the kind interpretation.

To repeat, then, it is not the case that internal arguments of quantity *na*-verbs/singular count noun-disallowing *na*-verbs are necessarily nonspecific indefinite. There is only one type of internal argument that is necessarily nonspecific indefinite, and that is the bare genitive. As for the rest, given the right context/information structure, they can either themselves be specific and/or definite (as in (56a) and (56f)), or the larger structure in which they occur can be specific and/or definite (as in (56b)-(56d)).

2.1.6 *A short aside on bare accusatives with* na*-verbs*

Note that if only looking at the kind of information structure patterns that *na*-verbs are most often given in, it may actually seem that whereas bare genitive arguments of *na*-verbs are always nonspecific indefinite, bare accusative arguments of *na*-verbs are in fact obligatorily interpreted as specific. Whereas (57a) and (57b) below are perfectly natural outside of any context/with this information structure, and whereas the information structure of (57c) makes it clear that the bare accusative is interpreted as definite, (57c) is not acceptable outside of any context (intuition confirmed by M.K. and A.Č.); this would make it seem that bare accusatives cannot appear in nonspecific indefinite contexts where new referents are introduced, where specificity and/or definiteness can be encoded covertly/contextually.[32]

(57) a. *Peter je na travniku na-trgal* (*nekaj*) *rož*.
Peter is on meadow on-plucked some flowers$_{GEN}$
'Peter plucked some (≈ a few) flowers in the meadow.'

b. *Peter je na travniku na-trgal neke rože*.
Peter is on meadow on-plucked some flowers$_{ACC}$
'There are some flowers that Peter plucked in the meadow.'

[32] This may also seem to be the case in Polish, based on Willim's (2008) translation of a Polish *na*-verb, with which she translates a bare accusative object as definite and a bare genitive as nonspecific indefinite, (i).

(i) *na-sypać mąkę / mąki na stolnicę* (Polish)
on-pour flour$_{ACC}$ flour$_{GEN}$ onto pastry-board
'to put the flour / (some) flour on the pastry board' (Willim 2008: 233, ex. (12))

c. *Rože je Peter na-trgal na travniku.*
flowers$_{ACC}$ is Peter on-plucked on meadow
'As for the flowers, Peter plucked them in the meadow.'

d. # *Peter je na travniku na-trgal rože.* [neutral intonation/no context: What
Peter is on meadow on-plucked flowers$_{ACC}$ flowers are you talking about?]

However, bare accusatives with *na*-verbs nonetheless *can* be read as nonspecific indefinites, as shown by (58a), and for an unaccusative/derived-subject version of a bare accusative, by (58b).

(58) a. *Peter je v jamo na-metal frnikole.*
Peter is into pit on-threw marbles$_{ACC}$
'As for the pit, Peter filled it with marbles.'

b. *Na šipi so se mu na-brale dežne kapljice.*
on glass are self he$_{DAT}$ on-gathered rain droplets$_{NOM}$
'Tiny raindrops amassed on his windshield.'

So the difference between cumulative *na*-verbs with a bare genitive argument and with a bare accusative/nominative argument really does reduce to the fact that the bare genitive argument can only be read as nonspecific indefinite, whereas the bare accusative/nominative argument can—depending on information structure and similar factors—be read either as specific and/or definite or as nonspecific indefinite. But this distinction is due only to a difference in the internal structure of the two types of bare internal arguments, not to a difference in the *na*-verb. That is, I see no good reason for claiming that there are two classes of *na*-verbs, given that they would both have to be said to ban singular count objects, and given that with arguments with any kind of overt quantity expressions (e.g. '300 flowers'), which can all be used as definite next to a *na*-verb, one could not even tell the two classes of *na*-verbs apart.[33]

2.1.7 *Quantity restriction and genitive case on bare external arguments*

2.1.7.1 As pointed out above, Piñón (1994), Pereltsvaig (2006) and Tatevosov (2007) explain the requirement that the argument of *na*-verbs be a quantity expression by claiming that the nominal is an (only/internal) argument of the prefix and so it is a simple matter of a certain syntactic feature on the prefix that only selects for a certain type of argument. As a consequence, these authors also directly explain the presence of genitive case on a bare internal argument directly. For Piñón (1994), the prefix will only select structures that contain a 'measure' feature, so the genitive on the head noun is always a consequence of the head noun being dominated by a 'measure' element, which can also come in the form of a null quantity head (cf. (56e) above). For Pereltsvaig (2006) and Tatevosov (2007), the story

[33] This is not to say that there are no *other* verbs or even no other creation verbs with a resultative *na-*. I briefly discuss one such case in section 5.1 below. But it is clear that these are structurally slightly different, since, for example, they freely allow singular count nouns as their internal arguments as well.

is much the same: the prefix will only select a QP/NumP, and so the genitive on the head noun is a consequence of the head noun being dominated by a null Q/Num.

I have proposed, however, that the quantity argument originates as the external argument of the result predicate, not as an (internal) argument of the prefix (cf. (53) above), so deriving the restriction on quantity and the genitive case cannot be done with such simple head-argument selection.[34] I have already pointed out in 2.1.2 above, however, that the meaning of quantity of *na*-verbs arises independently of the genitive case on the internal argument, since at least in Slovenian, Croatian, Czech, and spoken Russian of younger speakers, the internal argument can also be an accusative/nominative mass or bare plural noun. Therefore, it seems that the internal argument just has to be in some sense compatible with the meaning of the result predicate (i.e., it has to be such that it can be 'in pile', form a pile). This is thus essentially the same type of restriction one can observe with respect to the external argument in *John, Peter and Mary make a good team* vs. #*John makes a good team*, or in *These stones are going to make a big pile* vs. #*This stone is going to make a big pile*. The parallel of this restriction with respect to the external argument of *na*-verbs and of the sentences just mentioned is confirmed by the following parallel. It was shown in (44) above, repeated below as (59), that a *na*-verb (as well as *amass*) actually *can*, with some pragmatic manipulation, occur with a singular count noun.

(59) A: *Koliko rožic je pa Petru uspelo na-trgat?*
how-many flowers$_{GEN}$ is PTCL Peter$_{DAT}$ managed on-pluck
'And how many flowers did Peter manage to amass?'

B: *Hja, Petru je ratalo na-trgat pa eno samo rožico*.
well Peter$_{DAT}$ is managed on-pluck ptcl one single flower
'Well, Peter managed to amass one single flower.'

And in the very same way, one can imagine the exchange in (60) occurring at the end of a review of all the teams participating in an event.

(61) A: *And who makes up the last team?*
B: *Well, Peter*.

So I conclude that the idea that the requirement that *na*-verbs (or *amass*) cooccur with a quantity argument is not problematic. In fact, note that if the quantity-argument requirement on *na*-verbs were a matter of simple morphosyntactic feature-driven selection, then one does *not* expect that pragmatic manipulation will be able to override it.

At the same time, example (40) above showed that a bare genitive argument is possible in Slovenian also in contexts where it clearly cannot be any prefix that specifically selects such an argument, since the verb was an unprefixed imperfective. In Russian and Polish, bare genitives are said to be banned with imperfectives in general (cf. Paducheva

[34] Biskup (2007, fn. 2) assumes precisely that. That is, he claims that the requirement on quantity arguments can be seen as a selectional restriction on the part of the prefix, but at the same time, he merges the quantity argument as the external argument of the resultative prefix. If predicate heads do not exert selection over external arguments, as is standardly assumed (e.g. Kratzer 1996), Biskup would presumably also have to restate this requirement as something along the lines of what I am suggesting here.

1998, Rozwadowska & Willim 2004, Willim 2008), but they are possible with unprefixed perfective verbs (Paducheva 1998 has an example with 'buy' from Russian and Willim 2008 has examples with 'buy' and 'give' from Polish), where it is also clear that it cannot be a prefix that specifically selects such an argument. So the bare genitive has to be a more generally available option for the expression of arguments denoting quantity. And in that case, it should not be surprising that satisfying *na*-verbs' requirement for quantity arguments can be done with a bare genitive.

But on the other hand, the fact that in some languages, such as modern Russian of older speakers (cf. Filip 2005a), *na*-verbs can presumably *only* appear with bare arguments in the genitive and not in the accusative, may nonetheless seem to give support to the idea that genitive case of bare arguments is assigned by the prefix.[35] Furthermore, this may appear to get support in a recent account of Serbian existential sentences with genitive Themes, as in (62) below.

(62) *Na stolu ima vina*. (Serbian)
on table has wine_{GEN}
'There is wine on the table.'

For such cases, Hartmann & Milićević (2008) claim (going against the basic structure BE(THING,LOC) of Partee & Borschev 2002 or Kallulli 2008) that the Theme is genitive because it originates as the internal argument of the existential predication, where it is dominated by a genitive-assigning FP that is selected by the predicational head, in a structure like (63).

(63) $[_{\text{PredP}}\ [_{\text{Spec,PredP}}\ \text{PP}_{\text{LOC}}]\ [_{\text{Pred'}}\ [_{\text{Pred}}\ ]\ [_{\text{FP}}\ [_{\text{Spec,FP}}\ e_{\exists}]\ [_{\text{F'}}\ [_{\text{F}}\ ][_{\text{NP}}\ \text{THEME}\ ]]]]]]$

If *na*-verbs contain a kind of existential result predicate, and given that in languages like modern Russian of older speakers, *na*-verbs occur only with bare arguments in the genitive, then this analysis may seem to give support to merging the Theme/quantity argument of *na*-verbs as an argument of the prefix *na*-, even if the latter is resultative. In what follows, I will suggest that there exist predicative structures in which the external argument is obligatorily a genitive-marked quantity expression, and in which it is not plausible to treat this argument as an argument of the predicative head. And if this is so, then even this last possible argument for taking quantity arguments as arguments of the prefix *na*- (i.e. the obligatoriness of genitive marking on bare arguments of *na*-verbs) loses strength.

[35] It is actually not clear to me whether there really exists a Slavic language that categorically disallows bare accusative arguments with *na*-verbs. They are possible in Slovenian (formal and spontaneous), in Croatian, and in Czech (Filip 1999), in Polish (Piñón 1994 gives examples where a bare accusative is starred, but Willim 2008: 233 gives an example with a bare accusative, cf. footnote 32), and they are possible in modern Russian of younger speakers (cf. Filip 2005a; and Filip 2000: 49 gives a Russian example with a bare accusative without any further qualification). It thus seems quite likely that they would also be possible in modern Russian of older speakers, at least when the context makes it clear that they have to be interpreted as definite, as in section 1.5 above (e.g. '$\text{fish}_{\text{PL.ACC}}$ which he on-cought yesterday have already gone bad') (see also 2.1.6 above for the importance of context/information structure with bare accusatives with *na*-verbs in Slovenian).

2.1.7.1 Consider the case patterns in some expressions with a bare genitive Theme and a predicative quantity PP, such as (64)-(66) (which, incidentally, disallow singular count noun Themes, unless they get a kind reading).

(64) a. *Papirja* / *Romanov je na tone*.
paper$_{GEN}$ novels$_{GEN}$ is on tons
'Paper is / novels are aplenty.'

b. *Papirja* / *Romanov ima na tone*.
paper$_{GEN}$ books$_{GEN}$ has on tons
'She has paper / novels aplenty.'

(65) a. *Papirja* / *Romanov je na pretek*.
paper$_{GEN}$ books$_{GEN}$ is on overflow
'Paper is / novels are aplenty.'

b. *Papirja* / *Romanov ima na pretek*.
paper$_{GEN}$ books$_{GEN}$ has on overflow
'She has paper / novels aplenty.'

(66) a. *Papirja* / *Romanov je v izobilju*.
paper$_{GEN}$ books$_{GEN}$ is in plenty
'Paper is / novels are aplenty.'

b. *Papirja* / *Romanov ima v izobilju*.
paper$_{GEN}$ books$_{GEN}$ has in plenty
'She has paper / novels aplenty.'

The question is whether the Theme in these cases originates as the subject of predication or as the complement (in the (b) examples, the predication in question is clearly a second predication ('[he has [books aplenty]]'), whereas in the (a) examples, it may also be so, but with an unexpressed location encoding the first predication, cf. Partee & Borschev 2002). If the Theme is the complement of predication, the explanation is easy, that is, in the spirit of Hartmann & Milićević (2008), PredP can be said to select some sort of a quantificational FP, which in turn selects the Theme and assigns it the genitive.

Given that the PP *na tone* (lit. on tons$_{ACC}$) also occurs prenominally, as in *na tone papirja* (lit. on tons$_{ACC}$ paper$_{GEN}$) 'tons of/plenty of paper', it would seem quite natural to claim that both sentences in (64) derive from a structure with [*na tone* [*papirja*]] merged as a complex Theme argument. However, the same does not seem motivated for (65) and (66), given that the PPs *v izobilju* (lit. in plenty$_{LOC}$) 'aplenty' and *na pretek* (lit. on overflow$_{ACC}$) 'aplenty', whose Themes are likewise genitive, cannot occur prenominally: **v izobilju papirja* (lit. in plenty$_{LOC}$ paper$_{GEN}$), **na pretek papirja* (lit. on overflow$_{ACC}$ paper$_{GEN}$). Of course, one could come up with an obligatory movement story to prevent these and still derive (65)/(66) from structures with [*v izobilju* [*papirja*]] and [*na pretek* [*papirja*]] merged as a complex Theme argument in the complement position of a PredP; but as far as I can see, there is no motivation for such a move. Therefore, I offer this pattern as tentatively suggesting that genitive case on Theme arguments of existential/locative structures can arise in a way that is *not* trivially a matter of selection by a predicative head as in Hartmann & Milićević's (2008) account of Serbian existentials.

Furthermore, in view of the fact that bare Themes in Serbian existentials (at least on the 'list' reading) also allow nominative marking, one might expect the quantity expressions in (64)-(66) to also show a genitive/nominative alternation. The situation is a mixed one, however, with only one of the quantity expressions showing a variant with the Theme in the nominative, whereas the other two obligatorily occur with genitive-marked bare Themes, (67).

(67) *Romani so* (*tukaj*) **na tone* / **na pretek* / ✓*v izobilju*.
books$_{NOM}$ are here on tons on overflow in plenty
'Novels are aplenty (here).'

And moreover, while a nominative Theme works with *v izobilju* in a 'be'-predication, that is, in the counterpart of (66a), it does not seem to work in a 'have'-predication, that is, in the counterpart of (66b), compare (67) above and (68) below.

(68) * *Tone ima romane v izobilju.*
Tone has novels$_{NOM}$ in plenty

So once again, I find it highly unlikely that case patterns such as the ones in (64)-(68) can nonstipulatively be explained by having the bare genitive Themes originate as complements of a PredP. Rather, it seems that even obligatory genitive case on bare Theme arguments of predicative structures can arise in a way that is not trivially a matter of selection by a predicative head and in a way that is not predictable from the fact that the basic structure is of a certain type (e.g. a PP predication with a quantity Theme). In other words, even obligatory genitive-marking on the bare Theme of an existential predicate need not show that the Theme originates as an internal argument; it could also originate as the external argument of the existential predication. In a sense, the fact that different Slavic languages show different possibilities in terms of case marking on *na*-verbs' bare internal arguments is essentially similar to the fact that different predicative quantity PPs in Slovenian show different possibilities in terms of case marking on bare Theme arguments. (This is, of course, not an explanation of the case-marking facts but just a data-based rebuttal of a possible explanation.)

To conclude, even though languages such as the Russian of older speakers only allow a bare internal argument of *na*-verbs to occur in the genitive, this does not constitute evidence that this bare object is an internal rather than external argument of the result predicate. Therefore, this fact is also not an argument against the structure I proposed in (53), in which internal arguments of *na*-verbs uniformly originate as external arguments of the result predicate.

2.2 *Na-* stacked over another prefix

Section 2.2.1 lays out the proposed two-VP structure of doubly-prefixed *na*-verbs (i.e. of verbs with *na-* stacked over another prefix). It also briefly discusses their interpretation, aspectual effects, and linearization, although in terms of these issues, the same things hold for verbs with this *na-* stacked over another prefix as I have already said of the doubly-prefixed *na- se* construction in chapter 1, so I do not repeat them here. In section 2.2.2, I mention the issue of the realization of internal arguments of the two VPs, proposing that there can only be one because the construction exhibits obligatory argument sharing, which is derived as case-motivated across-the-board movement. This is also what is behind a difference between singly- and doubly-prefixed *na*-verbs, whereby only the former can occur with objects not selected by their input (verbal root and prefixed verbal root, respectively).

2.2.1 *Structure, interpretation, aspectual effects and linearization*

Let us now turn to the structure for the verbs with *na-* stacked over another prefix. Some Russian examples are given in (69) below (more Czech and Russian examples can be found in Filip 2005b, Pereltsvaig 2006, Romanova 2007 and Tatevosov 2008), and a constructed

Slovenian example loosely based on (69a) is given in (70) (see section 5.6 below for comments on the naturalness of doubly-prefixed *na*-verbs in Slovenian and its implications for the VP-external account of this *na*- and other prefixes).

(69) a. *Konduktor uže na-ot-ryvala biltikov*. (Russian)
ticket-seller already on-off-tore tickets$_{GEN}$
'The ticket-seller has prepared a lot of little tickets by tearing them off the roll.' (Romanova 2007: 273)

b. *na-vy-sižívat* (Russian)
on-out-sit
'hatch (a quantity of)' (Romanova 2007: 2, fn. 1)

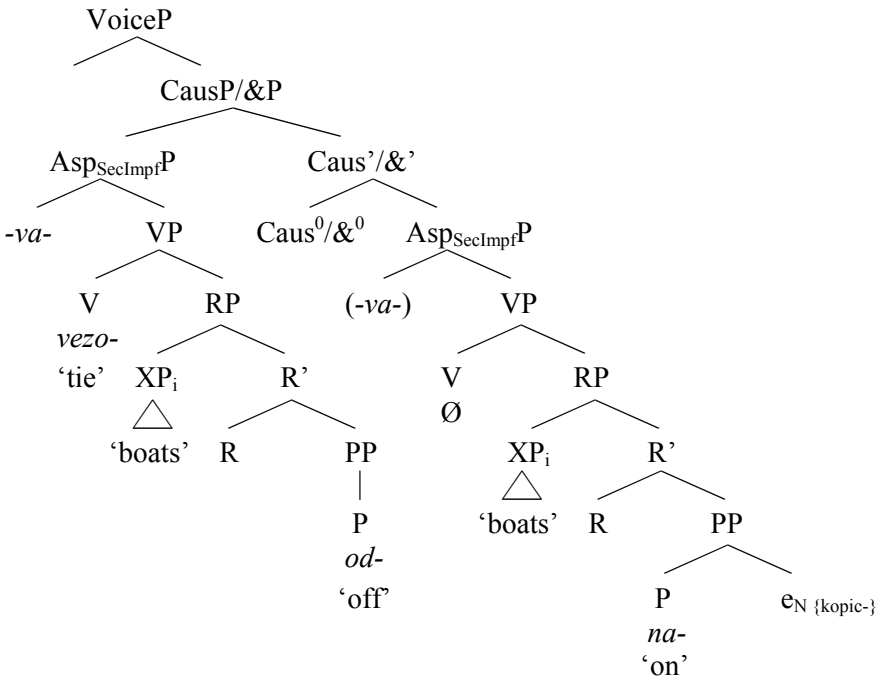
c. *Ja ponimaju, čto imeja pod rukoj knigu možno na-vy-dërgivatj citat*. (Russ.)
I understand that having under hand book possible on-out-pull$_{INF}$ quotes$_{GEN}$
'I understand that having a suitable book handy, one can pull out of it lots of quotes.' (Romanova 2007: 182)

d. *Vasja na-ot-kryval dverej*. (Russian)
Vasja on-off-cover doors$_{GEN}$
'Vasja opened a certain amount of doors successively.' (Tatevosov 2007: 534)

(70) *Mornarka je na-od-vezovala že precej čolnov*.
sailor is on-off-tied already rather-a-lot boats$_{GEN}$
'The sailor has prepared a lot of boats by untying them.'

I propose that the doubly-prefixed verbs in (69)-(70) have a structure with two VPs, which are concatenated under a single Tense node with the same mechanism that was employed in chapter 1, i.e. the conjunction-like CausP that dominates the main-frame resultative VP. A secondarily-imperfectivized resultative VP is thus merged in Spec,CausP, providing manner, while the other VP is in the complement of Caus. This structure is outlined in (71) below, which has the ingredients of (70).

(71)



Especially from Romanova's (2007) translation of (69a), it is clear that the combination of the verb and the stem-adjacent prefix provides the manner in which the quantity argument is, in her translation, 'prepared'. The main-frame resultative VP has the structure that was proposed in (53) for singly-prefixed *na*-verbs, and it is located in the complement of CausP. The other resultative VP is located in Spec,CausP. Following Lidz & Williams (2002), this is assumed to be the locus of the manner VP (cf. chapter 1), and so the structure in (71) gives us the meaning 'cause there to exist/be a quantity of boats [by untying them]', 'cause boats to "be in/form a pile" [by untying them]', thus rather directly capturing Romanova's gloss.

The structure in (71) also gets us the fact that *na*- appears to perfectivize its secondarily-imperfectivized input, that is, it typically perfectivizes the event of preparing/amassing boats. This perfectivization will be implemented in the same way as in ordinary cases of resultative prefix-triggered perfectivity (see Klein 1995 and Bohnemeyer & Swift 2004 for possibilities, also Svenonius 2004: 242 and Ramchand 2004/2008b). In accordance with the discussion in sections 3.3, 4.1 and 4.4.2 of chapter 1, a double realization of the secondary imperfective *-va-* is either ruled out due to haplology, or the nonrealization of the *-va-* of the main projection line is somehow related to the fact that the V which this Asp$_{SecImpf}$P dominates is null. In principle, however, the main-frame event (i.e. the event of preparing/amassing boots) should also be interpretable as a secondary imperfective (which is why I include that *-va-* as well but have it parenthesized). As discussed in section 3.3 of chapter 1, this is possible in principle, although the fact that even singly-prefixed *na*-verbs tend to resist secondary imperfectivization (for which see section 5.2 below), this reading will obviously be hard to get. (Again, as discussed in section 3.3 of chapter 1, it seems that for some Slovenian speakers, this reading can be easier to get with some verbs that allow an additional vowel change, as the Slovenian verb in (70), which can have *na-od-vez<u>o</u>-va-ti* and *na-od-vez<u>a</u>-va-ti*.) Similarly, whereas two scopes of several types of adverbials (but not manner adverbs) should in principle be possible, as was shown to be the case with the *na-PRF-V se* and some *na- se* cases from chapter 1, two scopes of adverbials

with these *na-PRF*-verbs will presumably be hard to detect. The meaning of the construction is something like 'cause there to be/prepare a quantity of tickets by tearing them off of a roll'; if one tears tickets off of a roll with their left hand, one will inevitably also be preparing tickets with their left hand, and if one tears tickets off of a roll in the first car of the train, one will inevitably also be preparing tickets in the first car of the train, etc.

As for how this structure gets to yield the attested linearization, i.e. *na-od-vezovati*, I will only note here that as was explained in chapter 1 for linearization of doubly prefixed *na-se* cases, it can be done with head movement of the prefixes (as well as with remnant phrasal movement of the prefixes). But as explained in chapter 1, we need to assume that head movement first takes place from inside the specifier of CausP, and then the prefix of the main-frame is rolled up and attached onto *od-vezova-* before this whole complex continues its way up to SubjectAgr^0 to get the subject agreement suffix.[36] For more details, including the nature of CausP, the nature of the null V, and the reasons for why there can be only one overt verb root despite two V's, I refer the reader to chapter 1, sections 4.3 and 4.4.2-4.4.3.

2.2.2 *Argument sharing between the two VPs*

The structure in (71) contains two VPs, each with its own RP. Therefore, we have two internal argument positions. However, doubly-prefixed *na*-verbs all occur with a single direct object (cf. (69)-(70) above). In this section, I first discuss the phenomenon of argument sharing in the context of serial verb constructions, outlining some proposals for deriving it (2.2.2.1). Against this background, I then propose that the two VPs in our doubly-prefixed *na*-verbs share their internal argument, i.e. the external argument of their RPs (2.2.2.2). Finally, 2.2.2.3 mentions two further issues that may seem to differentiate doubly-prefixed *na*-verbs from singly-prefixed *na*-verbs, i.e. selectional properties of the doubly-prefixed *na*-verb with respect to its input and an aspect of the interpretation of doubly-prefixed *na*-verbs, both of which are shown to follow from the proposal.

2.2.2.1 *Argument sharing in serial verb constructions*

It is well-known in the literature on serial verbs, which are standardly assumed to contain multiple VPs dominated by a single TP, that some such constructions with two transitive verbs show a restriction with respect to the realization of the internal arguments of the VPs, namely, that they can occur with only one (overt) internal argument (cf. Muysken & Veenstra 2006). For example, Baker & Stewart (2002) discuss three kinds of serial verb constructions/SVCs in languages such as Edo, Nupe and Yoruba. What is of interest for my purposes is the consequential SVC, which has two transitive VPs and only one (overt) internal argument, as in (72).

(72) *Òzó ghá gbè ẹ̀wé khiẹ̀n*. (Edo)
Ozo FUT hit goat sell
'Ozo will kill the goat and sell it.' (Baker & Stewart 2002)

[36] As in chapter 1, I ignore the thematic vowel here (*na-od-vez-o-va-*), but I note that the structure is compatible with the latter being a realization of a verbalizing head (as per Jabłońska 2007).

Baker & Stewart (2002) argue that although we only see one internal argument in (72), this SVC with two transitive verbs in fact contains two internal arguments, but that one is obligatorily realized as a null pronominal coreferential with the overt object. The structure they assign to consequential SVCs is one where the VP constituted by 'kill goat' represents the main VP, which has the second VP, i.e. the VP of 'sell *pro*', ajoined to it, as in the simplified structure in (73).

(73) $[_{\text{Voice'}}\ [_{\text{Voice}}\ ]\ [_{\text{vP1}}\ [_{\text{vP1}}$ goat hit$]\ [_{\text{vP2}}$ sell *pro*$]]]$ (simplified from Baker & Stewart 2002)

I refer the reader to the original text for details about Baker & Stewart's (2002) structure, their reasons for why the argument in the adjoined VP is a *pro* rather than a trace, for why it cannot be an overt DP, for why it must be coreferential with the main-frame internal argument, and for how they approach case issues. The lesson I take from Baker & Stewart (2002) is that at least in principle, it might be possible for one internal argument in my two-VP structure of doubly-prefixed *na*-verbs in (71) to be realized by an obligatorily null pronominal which is obligatorily coindexed with the overt internal argument.

At the same time, Baker & Stewart's (2002) *pro*-based implementation of the two-VP structure for consequential SVCs has been challenged in some subsequent work on SVCs. Jeoung (2006) argues that whereas it is clear that semantically, the 'killing' and the 'selling' of (72) must have the same internal argument, Baker & Stewart's (2002) account with *pro* has nothing that will force *pro* to be coreferential with the main-frame internal argument. Jeoung (2006) thus proposes to follow the spirit of the movement analysis of control to derive the obligatory object sharing, so that Baker & Stewart's (2002) *pro* should actually be seen as a trace/copy left behind after the movement of the overt internal argument (in (72), the 'goat'). And given that his structure of consequential SVCs is not one of complementation but rather adjunction, Jeoung (2006) proposes that movement in these structures proceeds sideways (à la Nunes 2001), at a point where the two VPs have not yet been connected, thereby making sure that there is no violation of the ban on movement out of adjuncts (i.e. the Condition on Extraction Domain).

(74) $[_{\text{VP1}}\ [_{\text{VP1}}$ goat$_i$ hit-V^0$]\ [_{\text{VP2}}$ <goat>$_i$ sell-V^0 $]]$ (adapted/simplified from Jeoung 2006: 206)

sideward movement

Jeoung (2006) does not discuss why the two argument positions could not be realized by two different DPs, but it seems that this would be due to the fact that whereas we have two VPs, each of which requires an argument to satisfy its thematic requirements, we only have one accusative case projection (along with one subject position/VoiceP, one TP, etc.). So Jeoung's (2006) sideward-movement implementation of Baker & Stewart's (2002) insight offers another possibility for approaching the argument realization in my structure from (71) above, that is, in doubly-prefixed *na*-verbs.

Another work that argues against Baker & Stewart's (2002) *pro*-based account of argument sharing is Choi (2003), who discusses a Korean argument-sharing SVC, as in (75).

(75) *Chelswu-ka sakla-lul kkake mek-ess-ta*. (Korean)
Chelswu$_{\text{NOM}}$ apple$_{\text{ACC}}$ peel eat$_{\text{Past.DC}}$
'Chelswu peeled the apple and ate it.'

Choi (2003) agrees with Baker & Stewart's (2002) idea that such SVC have the structure where one VP is adjoined to the other VP, although she argues—contra Baker & Stewart—that it is actually VP1 that is adjoined to VP2, not the other way round, so that the final configuration of such SVCs is as in (76).

(76) $[_{VP2}\ [_{VP1}\ [...]]\ [_{VP2}\ [...]]]$ (postcyclic/Adjunction merge)
(adapted/simplified from Choi 2003, her (22a))

Furthermore, she argues that the adjunction configuration in (76) is derived postcyclically (in the sense of Stepanov 2001), whereas the starting configuration is actually one with VP1 merged as the complement of VP2, as in (77), which is derived with cyclic merge.

(77) $[_{VP2}\ [_{Spec,VP}\ apple_i\ ][_{V2'}\ [_{V2}\ eat\ ]\ [_{VP1}\ [_{Spec,VP1}\ <apple>_i\ ]\ [_{V1'}\ [_{V1}\ peel\ ]]]]]$ (cyclic merge)
(adapted/simplified from Choi 2003, her (22a))

It is at this point that argument sharing is ensured, via regular A-movement. The argument of V1, i.e. 'apple', moves up and becomes the argument of V2 as well. The reason why the two internal-argument positions cannot be realized by distinct DPs can again be due to case. And then post-cyclically, the adjunction configuration from (77) above is arrived at.

Also in a similar spirit is the account that Hiraiwa & Bodomo (2008) propose for argument sharing in a Dàgáárè SVC, (77').

(77') *ò dà sɛ́ lá nɛ́nè òò* (Dàgáárè)
3rd.sg Past roast Focus meat eat
'He roasted meat and ate it.' (Hiraiwa & Bodomo 2008: 796)

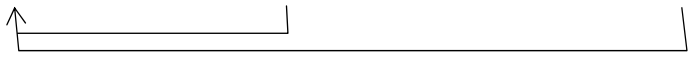
Hiraiwa & Bodomo propose that such serial verbs originate in a 'double-headed' structure, where an AspP dominates two distinct AspPs, as in $[AspP_{1+2}\ [AspP_1\ [VP_1\ ]]\ [AspP_2\ [VP_2\ ]]]$. The sharing of the internal argument of the two VPs is implemented with Citko (2005)-style parallel merge which creates a symmetric, multidominant structure, in which the object is merged with each of the two verbs at the same time, and which only becomes antisymmetric in the course of the derivation.

Finally, let me mention how Lidz & Williams (2002) implement argument sharing in the Kannada resultative SVC that I mentioned in chapter 1 when introducing the conjunction-like CausP. An example is in (78).

(78) *Hari kabbinavannu chappateyaagi taTTida.* (Kannada)
Hari $metal_{ACC}$ $flat.be(come)_{PastPtcp}$ $hammer_{Past.3.Sg.Masc}$
'Hari hammered the metal flat.' (Lidz & Williams 2002: 113)

Lidz & Williams propose that (78) has the 'result' VP (i.e. 'flat.be(come)') merged as the complement of a conjunct-like CausP and the 'means' VP (i.e. 'hammer') as the specifier of the CausP, as in (79).

(79) $[_{vP}\ [_{DP1}$ metal $]\ [_{v'}\ [_{CausP}\ [_{Caus'}\ [_{VP}\ [\ t_1\ ]\ [_{V}$ flat.be(come) $]]\ [_{Caus}\ ]]\ [_{VP}\ [\ t_1\ ][_{V}$ hammer $]]]\ [v_{agent}]]]$



(adapted from Lidz & Williams 2002: 111)

Lidz & Williams further argue that (78) exhibits argument sharing whereby the logical object of the 'means' VP is also the logical subject of the 'result' VP; that is, the construction shows argument sharing, with the internal argument 'metal' seen as being an argument of both VPs. As for the reason why the argument positions of the two VPs cannot be filled by distinct DPs, Lidz & Williams explicitly claim that this is because the structure contains only one internal-argument case. The argument sharing is implemented with Across-The-Board movement, i.e. co-extraction from within the two arguments of Caus/from within the two VPs, as shown by the arrows under the structure in (76).

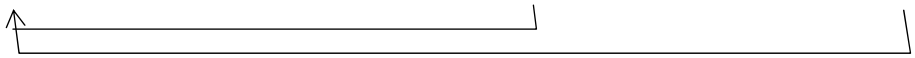
In summary, we saw that argument sharing is well-known from the literature on serial verb constructions, and that even though there seems to be little consensus on the technical implementation of the phenomenon (cf. also Muysken & Veenstra 2006), there *is* consensus that the phenomenon is real and that it has to be accounted for one way or another. In section 2.2.1, I adopted Lidz & Williams' (2002) CausP to concatenate the two VPs in doubly-prefixed *na*-cases (cf. (71) above). In the next section, I will also follow them in my approach to argument sharing in doubly-prefixed *na*-verbs.

2.2.2.2 *Argument sharing in doubly-prefixed* na-*verbs*

2.2.2.2.1 In the general spirit of Baker & Stewart (2002), Lidz & Williams (2002), Choi (2003), Jeoung (2006), Muysken & Veenstra (2006), Hiraiwa & Bodomo (2008), etc., I thus propose that even though our doubly-prefixed *na*-verbs show up with one internal argument, this does not mean that they cannot have two VPs. In fact, Romanova's (2007: 273) translation of her example from (69a) above—i.e. 'The ticket-seller has prepared a lot of little tickets by tearing them off the roll.'—is suggestive in this respect, as it clearly reflects the intuition that the structure contains two internal arguments but that they are correferential. Also, it seems clear that (80) below cannot be used to describe a situation in which one caused there to be a quantity of boats by untying some other boats. I propose, therefore, that doubly-prefixed *na*-verbs such as (70)/(80) indeed have a two-VP structure, as in the structure (71)/(81), and that the fact that the two argument positions (i.e. the two Spec,RPs) cannot be filled with two distinct DPs is due to the presence of only a single structural case projection.

(80) *Mornarka je na-od-vezovala že precej čolnov*.
sailor is on-off-tied already rather-a-lot boats_{GEN}
'The sailor has prepared a lot of boats by untying them.'

(81)
$[_{XP}\ [_{DP/NumP}$ *biltikov*$_i$ $]\ [_{X'}\ [_{X^\circ}\ ]\ [_{CausP}\ [_{Spec,CausP}\ [_{VP}\ [_{V}$ *rvá-* $]\ [_{RP}$ *t*$_i$ *ot-* $]]]\ [_{Caus'}\ [_{Caus^\circ}\ ]\ [_{VP}\ [_{V}\ ]\ [_{RP}$ *t*$_i$ *na-* $]]]]]$



In (81), the external argument positions of the two ResultPs (i.e. the positions hosting the arguments that would normally end up as direct objects of prefixed verbs) are occupied by traces. Both of these are coindexed with a DP/NP in the specifier of some Infl-level functional projection that is responsible for structural case. What we get, then, is an Across-The-Board configuration. As pointed out by Lidz & Williams (2002) in the context of their Kannada SVC, such an ATB-style co-extraction from within the two VPs should work like any familiar ATB case, given that our two VPs are in a typical coordination relation, i.e. the specifier and the complement of the conjunction-like CausP.

The extracted argument in (81) is labeled as DP/NumP. This reflects the fact that just like section 2.1.5 established for singly-prefixed *na*-verbs, doubly-prefixed *na*-cases can also have a bare genitive argument (cf. (69)/(70) above). Such an argument can only have a structure that is smaller than a full DP, specifically, a NumP. We know this since such an argument can only be interpreted as nonspecific indefinite (whereas arguments other than bare genitives *can* be read as specific and/or definite).

As was discussed at length in section 2.1, the case of the extracted argument can be accusative or genitive. In the case of accusative, there is little doubt that we are dealing with structural case. If the argument sharing is a result of case-driven ATB movement, however, I have to assume that the genitive case of *na*-verbs' internal arguments is also an instance of some sort of structural case. In 2.1.7, I tentatively claimed that this genitive was not assigned by a predicative head (or an FP in its complement) to an internal argument of predication. This does not mean, however, that this case cannot be structural. In fact, it is clear that although even singly-prefixed *na*-verbs can have an internal argument in the genitive, this does *not* license the presence of another argument in the accusative. Similarly, when the subject of an existential sentence is in the genitive, as was shown to be possible in certain cases in Croatian, this does not license the expression of another nominal in the nominative. So whatever the origin of the genitive with *na*-verbs is, its presence bleeds structural accusative (and the presence of the genitive on subjects of existential sentences bleeds the presence of the nominative). Therefore, it does not seem problematic to assume that this genitive is also assigned somewhere outside the VP, and that in doubly-prefixed *na*-verbs, the ATB-extracted arguments would end up in the position where this genitive is assigned.

To summarize, our doubly-prefixed, two-VP *na*-cases contain two arguments, but the two VPs exhibit obligatory argument sharing, which is derived as case-motivated across-the-board movement. In the next section, I will briefly mention why some competing accounts of *na*-verbs would, as far as I can see, *also* have to assume argument sharing, even though none of them mentions it.

2.2.2.2.2 Since I argued that our doubly-prefixed *na*-verbs contain two argument-introducing prefixes in two resultative VPs, and since, at the same time, such cases can only occur with one internal argument, I posited that these constructions exhibit argument sharing between the two VPs. The previous section explained how the argument sharing can be derived. Thus, the fact that unlike the doubly-prefixed *na- se* construction from chapter 1, this doubly-prefixed *na*-construction can only have one internal argument need not be a problem for my account. But before I leave this issue, note that even though Tatevosov (2007, 2008) and Pereltsvaig (2006) do not discuss this (though both actually give examples with doubly-prefixed *na*-verbs themselves and even use the stacking as evidence of *na*-'s VP-externality), these facts would presumably either be problematic for them, or they would have to assume something very much along the lines of what I just proposed.

For example, Tatevosov (2008) explicitly treats unselected object-introducing prefixes as resultative, so in cases such as Romanova's (2007: 2, fn. 1) Russian example *na-vy-sižívat* (lit. on-out-sit) 'hatch a quantity of', where the stem-adjacent prefix licenses an unselected object, he has to treat *vy-* as resultative and thus as introducing an argument. At the same time, Tatevosov (2007) treats quantity arguments of *na*-verbs as introduced by a VP-external *na-*. So for *na-vy-sižívat* (lit. on-out-sit), Tatevosov (2007, 2008) has to posit the presence of *two* arguments, an argument of *vy-* and an argument of *na-*, be they realized by two different nominals and the argument of *vy-* is covert, or by one and the same nominal moving through both positions in a kind of argument-sharing fashion. Similar considerations apply to Pereltsvaig (2006). So even if one saw obligatory argument sharing that I posited as a problem for my account, it should be noted that at least some of the competing accounts fare no better on this issue.

2.2.2.3 *Lack of certain argument structure effects*

Before concluding the discussion of the structure of doubly-prefixed *na*-verbs, the following two subsections will mention two differences between singly- and doubly-prefixed *na*-verbs, both of which can be seen as naturally following from my account, and as presenting problems for the competing analyses of *na*-verbs.

Section 1 included several examples with unselected objects and with blocked objects, all of which contained singly-prefixed *na*-verbs. Since I proposed that the main backbone of doubly-prefixed *na*-verbs is the same as in the case of singly-prefixed *na*-verbs, one might expect to see unselected objects also with doubly-prefixed *na*-verbs. An issue to keep in mind, however, is the obligatory argument sharing between the two resultative VPs: any argument that is an argument of *na-* is also an argument of the prefix of the Spec,CausP-internal VP.

For example, section 1 showed that verbs such as *na-letati* (lit. on-fly) can introduce unselected objects such as '300 hours', i.e. *na-letati 300 ur* (lit. on-run 300 hours) 'accumulate 300 hours by flying'. If the same is attempted with a doubly-prefixed *na*-verb, we get ungrammaticality, as in **na-od-vezovati 300 ur* (lit. on-off-tie 300 hours; attempted 'pile up 300 hours by untying'). In this case, '300 hours' would be an unselected object with respect to the input, i.e. *od-vezovati* (lit. off-tie) 'untie'. But since the object of *na-od-vezovati* (lit. on-off-tie) 'cause there to be by untying' is obligatorily shared by the RPs of both VPs, this is not possible, since the only interpretation for *na-od-vezovati 300 ur* (lit. on-off-tie 300 hours) would be 'cause there to be 300 hours_i by untying 300 hours_i'.

At the same time, section 1 showed that *na-* can change the argument structure of a verb so that (at least on a naive first attempt) it blocks an argument that the base verb happily combines with, as in (**na-*)*molsti krav* (lit. on-milk milk_{GEN}) 'milk cows' (vs. *(*na-*)*molsti mleka* (lit. on-milk milk_{GEN}) 'obtain a quantity of milk'). And again, because the argument of a doubly-prefixed *na*-verb is also an argument of the stem-adjacent prefix, such an effect is prevented with doubly-prefixed *na*-verbs: the argument of a doubly-prefixed *na*-verb must not be an unselected object with respect to the singly-prefixed input to *na-*.

In terms of selection-property changes, doubly-prefixed *na*-verbs thus only share one type with singly-prefixed *na*-verbs, namely, the one whereby the argument has to be a quantity expression; they do not, however, share the licensing of unselected objects and the exertion of argument blockages. My account with two VPs which share the internal argument actually *predicts* this split. On the other hand, this difference in the

presence/absence of unselected objects and argument blockages is unexpected on *na*-as-quantifier accounts such as Romanova (2007), Filip (1999, 2005a, 2005b) and Svenonius (2004: 236).

2.2.2.4 *'Creation'-verb interpretation*

This section mentions another aspect in which singly- and doubly-prefixed *na*-verbs appear to differ, and which also seems to follow from the proposed structures above but not from the competing accounts of *na*-verbs.

In view of some of the things that I said in previous sections, particularly in section 1, it may seem that the interpretation of (some) doubly-prefixed *na*-verbs is different from that of singly-prefixed *na*-verbs. Consider Tatevosov's (2007: 534) Russian example from (69d) above, i.e. *na-ot-kryvat' dverej* (lit. on-off-cover $\text{doors}_{\text{GEN}}$) 'open a quantity of doors'. In such cases, it seems odd to claim that the doors were 'created' in this event, in any literal sense of the word 'create'. However, if the interpretation is 'cause there be a quantity of doors by opening them', there is nonetheless a way in which the argument can be seen as in some sense 'created' in this event. For example, we merely have to assume something like 'cause there be a quantity of doors RELEVANT IN THE CONTEXT by opening them' (or even 'cause there be a quantity of doors AT A LOCATION by opening them'), and so if one causes there to be a quantity of doors by opening them, the only way a quantity of doors can relevantly be made to exist by being opened is if the new quantity of doors is a quantity of opened doors.

In fact, the issue may be the same as in the case of *na-molsti krav* (lit. on-milk cows_{GEN}), which I said above was impossible on a naive first attempt but may be interpretable upon accommodation as 'cause there be a quantity of cows RELEVANT IN THE CONTEXT', which boils down to 'milked cows'. The 'cows' are clearly not newly created, but in the sense of 'milked cows', they can count as new. One would expect that this option is harder with singly-prefixed *na*-verbs, since 'cows' are never an argument of 'milk' and so such an interpretation can only be achieved through pragmatic accommodation. In the case of doubly-prefixed *na*-verbs, however, the internal argument *is* also an argument of the Spec,CausP-internal VP, so there may be no need for pragmatic accommodation.

On the one hand, then, this interpretational difference between singly-prefixed *na*-verbs and doubly-prefixed *na*-verbs can actually be seen as following from my account. And on the other hand, this difference is problematic for the accounts of Romanova (2007), Filip (1999, 2005a, 2005b), Svenonius (2004: 236), Pereltsvaig (2006) and Tatevosov (2007), none of which can, as far as I can see, derive such a difference between the two types of *na*-verbs.

2.3 Summary of section 2

This concludes the proposal section of my discussion of *na*-verbs. I proposed that *na*-verbs are resultative, which explains argument structure changes. I argued that their internal argument originates as the subject of a result predicate, and that they essentially have the structure of verbs like *amass*, with the difference that the explicit manner component of *na*-verbs makes it possible for them to serve as creation verbs. The structure captures the restriction to quantity arguments, and it also captures the fact that the arguments of such verbs, which are often indefinite, can also be definite when the information structure

supports this. The only exception to this are *na*-verbs with bare genitive arguments, with which the argument can only be nonspecific indefinite; this, however, is a consequence of the structural properties of bare genitive arguments, not of *na*-verbs. The proposed structure is the same both for singly-prefixed *na*-verbs and for doubly-prefixed *na*-verbs, with the difference that the latter have the 'manner' part encoded with a VP rather than with just a root in V^0. The two VPs in doubly-prefixed *na*-verbs were proposed to exhibit internal-argument sharing. This claim is supported by some differences between singly- and doubly-prefixed *na*-verbs with respect to argument-structure effects.

3. Counterarguments and counterexamples from Romanova (2007)

This section is split into the following parts. In 3.1, I address the counterargument that unselected objects with *na*-verbs are rare. In 3.2, I look at Romanova's (2007) 'unergative *na*-verbs' counterexamples, arguing that quite likely, none of them are in fact counterexamples (i.e. are not unergative). In 3.3, I point out that if such counterexamples are real, they are just as much a problem for Romanova (2007) as for any other existing account of *na-*.

3.1 *(Putative) scarcity of unselected objects*

Commenting on an unselected-object *na*-verb example, Romanova adds that "the cases where the stuff in the created 'pile' is different from the original argument of the verb are fairly rare" (op.cit.: 212, fn. 22), thus downplaying the importance of unselected-object *na*-verbs due to their being "fairly rare". At the same time, however, she also states that "most *na*-verbs have internal arguments" (op.cit.: 176; underlining added), and also that the *na*-verbs that do not have an overt measurable argument (though the latter must be present in the context!) are "a small group" (op.cit.: 187; underlining added), and that "objectless *na*-verbs can sometimes seem to be exceptions" (op.cit.: 207); even if her 'counterexamples' could not be explained (though most of them can, see below), her "fairly rare" argument thus clearly loses all strength, as it can just as well be used to argue in the opposite direction, as was assumed, say, in Pereltsvaig (2006).

Note also that Spencer & Zaretskaya (1998b), who argue that their Russian quantificational *pri*-prefixation should be seen as resultative, also state that "some of the *pri*-verbs" (op.cit.: 121; underlining added) occur with objects that are clear cases of unselected objects, that "a few cases" show an unselected reflexive (op.cit.: 122; underlining added) and that "*pri*-verbs permit (albeit sporadically) unselected objects" (op.cit.: 132; underlining added), but it is nonetheless precisely the cases of unselected objects that motivate their analysis.[37] Similarly, Zeller (2001: 482) argues that German verbs with a seemingly

[37] I am in no way suggesting here that Spencer & Zaretskaya's (1998b) *pri*-verbs are to be treated the same way as our *na*-verbs. In fact, I would claim that they are substantially different. *Pri-* on Spencer & Zaretskaya's (1998b) *pri*-verbs is originally a result modifier. On their list of Russian *pri*-verbs (op.cit.: 134-5), almost half (of a total of around 60) have *pri-* stacked over another prefix (just as in the Slovenian *pri-vz-digniti* [lit. at-up-lift] 'lift up a little'), where *pri-* is clearly just a modifier of result (see section 4.4.4 in chapter 1). But since the presence of a result modifier *presupposes* the presence of result, it was possible for the result-encoding prefix to disappear, and so we get verbs that are prefixed only with *pri-* and at the same time have an unselected object. In these cases, one will either claim that *pri-* stacks over a covert prefix, thereby having a uniform analysis for

completive aspectual particle, which almost always seem to occur with selected objects, are nonetheless resultative on the basis of a few cases where the object nonetheless *can* be shown to be an unselected object, as in *den Ballon* *(*an*-)*blasen* (lit. the balloon on-blow) 'inflate/blow up the balloon'.

Also, before claiming that *na*-verbs show few unselected objects, one should establish how frequnt *na*-verbs are in the first place, and in this respect I note—in view of the fact that *na*-verbs are some sort of 'creation' verbs—that there are other prefixes that are used for deriving creation verbs. For example, as for creation uses of prefixed verbs from the Slovenian base verb *coprati* 'perform magic', the internet attests a creation use for 4 prefixes: *pri-coprati* / *s-coprati* / *za-coprati* / *na-coprati* 'conjure up' (preferences differ among speakers). And whereas these other verbs do not require quantity objects (i.e. they have a more regular creation-verb structure), they all *can*, obviously, occur with a quantity object, and so any of them can easily be seen as claiming the ground of *na*-verbs.

Moreover, *na*-verbs being a kind of 'creation' verbs, it should also be kept in mind that there may well be whole classes of verbs that this *na*- occurs with for which it should actually be *expected* that there will be virtually no unselected objects. For example, the Slovenian *na*- combines with manner-of-speaking verbs (which are fairly abundantly present in the SSKJ dictionary), as in *na-blebetati vse mogoče neumnosti* [lit. on-babble] 'produce/utter all kinds of stupidities by babbling' (SSKJ dictionary); it is natural that in the case of just about any of these *na*-verbs, the object will also be possible with the unprefixed verb, just as is the case with English particle verbs such as *shout out*, *scream out*, *sing out*, etc. But nonetheless, cases such as *(*na*-)*tresti cel kup neumnosti* (lit. on-shake entire pile stupidities$_{GEN}$) 'say really lot of stupidities' clearly suggest that the object of *na*-verbs based on manner-of-speaking verbs should also be seen as introduced by *na*-, not by the verb.

In addition, our *na*-verbs can also be used to assert existence in quantity in a changed location for a preexisting object (as in *na-metati kamnov v jamo* [lit. on-throw rocks into pit] 'cause there be a quantity of rocks in the pit'), in which case they are not even expected to host unselected objects. Similarly, section 2.2.2.3 above explained why unlike singly-prefixed *na*-verbs, doubly-prefixed *na*-verbs will not host unselected objects at all.

And finally, as should have become clear from section 1 above, unselected-object *na*-verbs are not in fact that rare, but they are not always recognized as unselected-object verbs; for example, they include cases such as *na-letati 300 ur* (lit. on-fly 300 hours) 'accumulate 300 hours flying', which Romanova (2007) considers unergatives with an adjunct measure expression, but which were shown in 1.4.2 to actually be cases of transitive *na*-verbs with an unselected object. And at the same time, even if unselected-object *na*-verbs were rare, for those that are attested and for new ones that can readily be formed (at the obvious price of sounding neologist), a resultative account offers an explanation, whereas no other account offers even a partial explanation of how the unselected object with *na*-verbs is licensed (Spencer & Zaretskaya 1998b: 123); and if—as seems to be suggested by Romanova's (2007: 178) remark that when *na*- attaches to an unergative verb, the verb will be a neologism—new coinages are just a freak incident, one wonders why we could not do the same without *na*- simply by adding an argument quantifier (if *na*- is an argument quantifier, as per Filip 1999, 2005a, 2005b) or an event quantifier (if *na*- is an event quantifier, as per Romanova 2007).

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all instances of *pri*- with the meaning of 'partly', or one will claim that in these cases, *pri*- directly encodes the meaning of a 'modified state', as in 'partly open' (cf Spencer & Zaretskaya 1998b, Strigin & Demjjanow 2001).

3.2 So let us have a closer look at Romanova's (2007) claim that *na-* can sometimes occur on unergative intransitives. As just mentioned, Romanova (2007) acknowledges that such cases are few, and as I also just mentioned, this claim includes cases which are misanalyzed as unergative, such as *na-letati 300 ur* (lit. on-fly 300 hours) 'accumulate 300 hours flying'. Some other cases that she considers unergative intransitive *na*-verbs will be discussed now, keeping in mind her added statement that such cases are context-dependent (similarly, Pereltsvaig 2006: 457, fn. 25 notes that omission of the object may be possible if pragmatically supported).

The following are the Russian *na*-verbs that Romanova (2007) mentions as verbs that cannot occur with a direct object[38]: *na-dyšatj* (lit. on-breathe) 'breath a lot, so that it becomes warm in some closed space', *na-toptatj* (lit. on-trample) 'trample a lot, so that the floor becomes dirty', *na-kuritj* (lit. on-smoke) 'smoke a lot, so that the air becomes foggy', *na-boletj* (lit. on-ache) 'ache (psychologically) a lot, so that the emotion has to be let out' (op.cit. 2007: 187) (and later on also *na-grustit'* [lit. on-be.sad] 'make a lot of blues', op.cit. 206). However, she later shows that these verbs can appear with expressions such as *mnogo* 'a lot', as in (84) below.

(84) *Vse eti ljudi tak mnogo na-dyšali i na-poteli, čto v* (Russian)
all these peope so much on-breathed and on-sweated that in
vozduxe stojal počti tuman.
air stood almost mist (Romanova
'All these people breathed and sweated so much that it was almost misty.' 2007: 207)

Romanova (op.cit. 206) calls these adverbials. However, there is no a priori reason why *mnogo* 'much, a lot' could not be an object here, as it can clearly be used as (part of) an object elsewhere, quite comparably to English cases such as *I did a lot today; I haven't done much/enough; I don't have much, but I'm not poor; He can really say a lot in five minutes*, etc. That the verbs in (84) are typically used just with *mnogo* 'a lot' and nothing else can simply be some sort of idiomatization. In fact, one may not even need to invoke idiomatization: the problem with an expressed object other than 'a lot', 'enough', etc., may be going in the direction of the infelicity of *shelve sth on a* #(*kitchen*) *shelf*. That is, it may just be that the object would have been something very close to a cognate object, or something that can easily be seen as a most canonical product of the activity of the verb; this is suggested by Romanova herself, who states that these verbs denote events which amount to a creation of some quantity of stuff, which is implied by the meaning of the verb, such as SMOKE in the case of *na-kuritj* (lit. on-smoke) or WARMTH in the case of *na-dyšatj* (lit. on-breathe) (op.cit. 204). And moreover, according to my informants (linguist and nonlinguist alike), (85) does not sound idiomatic, for which the 'hot air' would be left out, but it is certainly acceptable.

[38] Romanova's wording is actually that they "cannot have an overt measurable nominal" (op.cit.: 187), which can easily be understood as the claim that the nominal is present covertly. However, this is not what is meant there, since Romanova's next sentence states that these cases are problematic for Pereltsvaig (2006) and Filip (1999, 2005a, 2005b), who claim that *na-* is directly linked to an object.

(85) *Ivan na-dyšal* (*siljno*) *mnogo toplogo vozduxa pod odejalom*. (Russian)
Ivan on-breathed very much hot air under blanket
'Ivan caused there to be a lot of warm air under the blanket by breathing.'

So on the one hand, it is not true that these *na*-verbs cannot have objects. On the other hand, they occur with a measure expression such as *mnogo* 'much', which can plausibly be seen as functioning as (part of) an object.[39,40]

A second type of Romanova's unergative Russian *na*-verbs is of the type *na-begatj na rekord* (lit. on-run for record) 'to have practice running for such a long time and with such high intensity that all that results in a record' (op.cit.: 188). Again, it is quite plausible to posit a covert object here, as PPs such as 'for a record' presuppose something like 'enough (of something)', as in 'enough (of something) for a record', 'a quantity (of sth) that will suffice for a record', etc. And indeed, one can easily find cases where such a PP licenses the omission of objects in clearly transitive verbs, as in (86a), with its 'have for a new bike'. In English, something like *enough* seems to be necessary in the translation of (86a); but in some cases that can be omitted in English too, and in fact, these include cases that translate a Slovenian *na*-verb, as in (86b).

(86) a. *Šparam že dva mesca, pa še zmeraj nimam za nov bicikel*.
save already two months but still always not-have for new bike
'I've been saving for 2 months, but I still don't have enough for a new bike.'

b. *Šparam že dva mesca, pa še zmeraj nisem na-šparal za nov bicikel*.
save already two months but still always not-am on-saved for new bike
'I've been saving for 2 months but I still haven't saved up (enough) for a new bike.'

So it is clear that PPs of this type can license the unexpression of an object, including cases with *na*-verbs such as Romanova's example mentioned above (i.e. 'accumulate enough running/practice hours for a record'), where, not surprisingly, 'enough' can also be added.

The only objectless example from Romanova (2007) that is not from one of the two groups just mentioned is (87) (which she uses in discussing some other issue concerning *na*-verbs, not as arguing for the existence of unergative *na*-verbs).

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[39] In the Slovenian counterparts of (84) and (85), with the *na*-predicate occurring just with *ogromn* 'a lot', the objecthood of this measure expression can also be shown with the 'do so' constituency test, as in (i)-(ii). This test cannot be used for Russian, however, because Russian does not make use of a dummy 'do', instead using gapping or a repetition of the same verb (Arthur Stepanov, p.c.).

(i) * *Prva skupina je v te sobi na-dihala ogromno, druga pa je to naredila bolj malo / še več.*
first group is in this room on-breathed a-lot second PTCL is this did rather little even more

(ii) *Prva skupina je v tej sobi ogromno na-dihala včeraj, druga pa je to naredila danes.*
first group is in this room a-lot on-breathed yesterday second PTCL is this did today
'The first group breathed up a lot of breath in this room yesterday, and the second group did so today.'

[40] Romanova (2007: 207) also mentions that *na-kuritj* (lit. on-smoke) 'smoke a lot, so that the air becomes foggy' shows just the opposite behavior from *na-dyšatj* (lit. on-breath): it works with *siljno* 'strongly' and *očenj* 'very' but only marginally (??) with *mnogo* 'much'. According to my informants, however, *na-kuritj* is perfectly fine with *mnogo*. As for the acceptability with *siljno* 'strongly' and *očenj* 'very', note that both of these can serve as modifiers of *mnogo* 'much', as in *siljno*/*očen mnogo* 'very much', and so even if it is just one of these that is used next to one of these *na*-verbs, it can still be functioning as (part of) an object.

(87) *Intervju udalosj na slavu – ja nazadavala idiotskix voprosov,* (Russian)
interview managed.self on glory I on-asked idiotic questions
a diakon na nix na-otvečal.
and deacon on them on-answered
'The interview turned out to be great – I asked a lot of stupid questions,
and the deacon answered them.' (Romanova 2007: 198)

Again, the absence of the object in (87) is context-dependent, and again, an object would have been a cognate object, that is, the type of object most likely to be elided. And just as one would guess, (87) also works with an expressed object such as 'idiotic answers'.

3.3 With respect to some examples where a direct object is said to be impossible, Romanova states that "the existence of such constructions directly contradicts the prediction made by Filip (2005a) and Pereltsvaig (2006) about syntactic and semantic constituency of *na-* and direct objects" (Romanova 2007: 188), i.e. that it directly contradicts the prediction of an analysis where the quantified object is introduced by the prefix; this, of course, also includes Piñón (1994), Svenonius (2004: 236), Tatevosov (2007) and the account advanced here. The assumption behind this statement is that these cases are problematic for the accounts just mentioned but not for the event-quantifier account of Romanova (2007).

However, Romanova adds that in such examples, "the implication of accumulation is present in the context" (2007: 187) (cf. also Pereltsvaig 2006: 457, fn. 25), and then assumes that "the precise nature of scale for measuring does not have to be explicitly represented in grammar, but is a part of the encyclopedic information provided by the verbal stem" (op.cit. 206). If we want a system with direct syntax-to-semantics mapping—which is the approach Romanova (2007) takes otherwise, not shying away from null elements at all (cf. her chapter 3 with null PathP), and for lack of which she explicitly criticizes Filip's and Pereltsvaig's accounts of *na-* (Romanova 2007: 222)—then such a 'contextual' scale will also have to be represented in the syntax, especially in view of the fact that such examples are few (see 3.2 above). But if such a 'contextual' scale is to be represented in the syntax, then Romanova's account—with its idea of deriving the accumulation of *na*-verbs via a connection of the VP-external event-quantifying *na-* and some scalar element—will have just as much of a problem with these examples as any of the other accounts mentioned above, that is, in a system with direct syntax-to-semantics mapping, Romanova will also have to posit the covert presence of a scale-encoding element.

4. *Na-* as a superlexical/VP-external prefix

In this section, I review two recent proposals that analyze *na-* as originating outside the VP, namely, Romanova (2007) (section 4.1) and Pereltsvaig (2006) (section 4.2), pointing out their drawbacks more directly than was already done in the previous sections, and all in one place; I also offer some comments on Tatevosov's (2007, 2008) claims (section 4.3), since there seem to be some unclarities about the syntactic structure that *na*-verbs are assumed to have there. A reader who was convinced by the evidence in the previous sections, however, can easily skip this section and go straight to section 5.

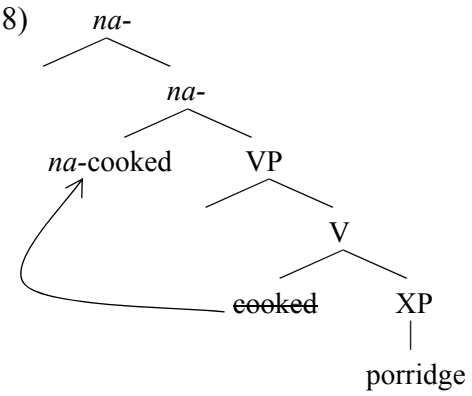
A recent VP-external account is also given in Borer (2005b), which, however, I will not mention here; a review, as well as some obviously fatal drawbacks, can be found in Romanova (2007). Furthermore, I will not review Filip's (2005a, 2005b) account; Filip sees

the internal argument as semantically combining with the prefix and then this combination as composing with the verb, whereas morphosyntactically, she considers the verb as combining with the prefix into a complex head and then this complex head as selecting the argument (Filip 2005b: 139). As pointed out in Tatevosov (2007: 535), this analysis creates a bracketing paradox and prevents one from reading the semantics directly off the syntax; as such, it is—in my view—inherently inferior to an account that can achieve a direct syntax-semantics mapping. Also, several shortcomings of the basic idea of *na-* instantiating an argument quantifier have already been pointed out at various points in section 1. I will also not review any further the account of Piñón (1994), who—like Filip (2005a, 2005b)—also sees the prefix and the verb as combining into a complex V^0, but the bracketing-paradox objection cannot be raised against this account since it appears that it is not the prefix that is seen as introducing the argument but rather the complex prefixed verb; an argument against this proposal would thus boil to the advantage that a phrasal account of resultatives has over a complex-head account of resultatives, and I will not go into this here.

4.1 Romanova (2007)

Romanova's (2007) proposal for the quantificational use of the non-reflexive-introducing *na-*, as in *na-varit' kaši* (lit. on-cook $\text{porridge}_{\text{GEN}}$) 'cook some porridge', is given in (88) below (cf. op.cit.: 222), with *na-* instantiating a VP-external quantifier over events (which indirectly quantifies over the internal argument, as is known from French 'quantification at a distance').

(88)

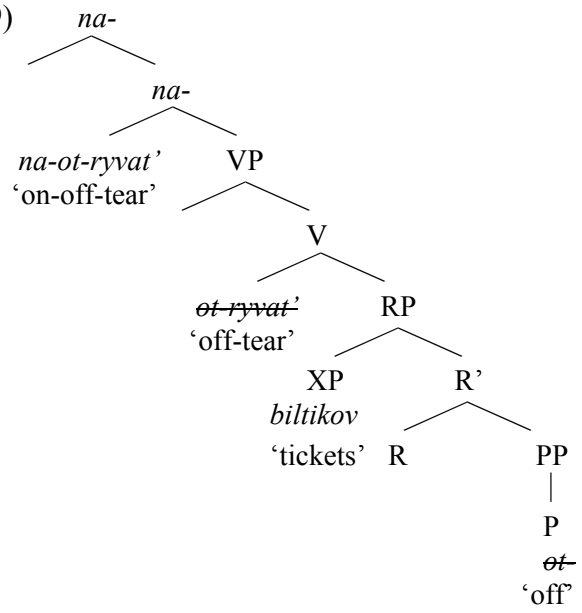


The problems that this proposal faces are the following. Firstly, the proposal may be able to derive the selectional restrictions discussed by Filip (1999, 2005a, 2005b), Babko-Malaya (1999: 52), Pereltsvaig (2006: 467) and Romanova (2007) with respect to the type of nominal that is admissible as a direct object (i.e. a mass noun or a plural noun but not a singular count noun). However, since (88) introduces the object as an object of the verb root (complement of V) and *na-* is just a quantifier over events, it seems that the structure cannot derive *na*-verbs with unselected objects and blocked objects. Now, Romanova (2007: 202) suggests that "what outwardly looks like 'selection' of the direct object by *na-* is the selection of a particular scale". The idea appears to be that *na-* selects a particular scale, and so it determines what the VP can be and what it cannot be. However, this does not solve the problem at hand. Such scale-selection from *na-* should only be sensitive to quantificational/scale properties of the VP, i.e. whether the VP is (appropriately) quantifiable

or not. So the scale-selection cannot prevent *na-* from combining with VPs such as 'milk cows' in (20) above, or 'eat olives' or 'drink wine', which certainly provide approapriate scales. Also, the scale-selection cannot derive unselected objects either. Whenever we combine the VP-dominating *na-* with a VP, the s-selectional requirements of V must already have been met. *Na-* can then only judge the quantificational properties of the VP. So it simply cannot be possible to combine *na-* and a VP with an unselected object, since there is nothing in the VP to license the unselected object. It cannot be that *na-* will combine with a VP and somehow reach into the VP and override the s-selectional properties of the verb root which must have been met when the V combined with the object. [41]

Secondly, as acknowledged by Romanova in a footnote (2007: 219, fn. 29), her system—with a scale-sensitive event-quantifying *na-*—is set up so that transitive *na-*verbs require the rhematic position (complement of VP, rather than Spec,VP), i.e. their internal argument has to be merged as Ramchand's (2008a) Rheme (complement of VP), not as an Undergoer (Spec,VP); in (88) above, the rhematic position is the XP node. However, as is shown, for example, in her example in (1c) above (i.e. *na-ot-ryvat' biltikov* [lit. on-off-tear $\text{tickets}_{\text{GEN}}$] 'prepare a lot of tickets by tearing them off the roll'), *na-* can also stack over a resultative/internal prefix. But in such cases, the complement-of-VP position will not, in her system, be available for the internal argument since it will have been taken up by the ResultP of the internal prefix, along the lines of (89) below.

(89)



In short, her system with a scale-sensitive event-quantifying *na-* is set up so that it relies on internal arguments of *na-*verbs to originate in the rhematic position (complement of VP, as in (88) above), but in cases where *na-* is stacked over an internal prefix, her system fails to make this position available. And especially given that the presence or absence of the ability to stack is one of her motivations for spliting prefixes into VP-internal and VP-external, this

[41] Not introducing unselected objects as arguments of the prefix would be especially odd in view of Romanova's overall approach to prefixation, since with respect to cases that she considers internal/lexical (rather than external/superlexical) prefixation, she introduces unselected objects precisely as arguments of the prefixal resultative secondary predicate.

problem can hardly be ignored.[42] Furthermore, as already pointed out in section 2.2.2.3, this account presumably cannot explain the difference in the behaviour of singly- and doubly-prefixed *na*-verbs with respect to the presence/absence of unselected objects and argument blockages.

Thirdly, as mentioned in 3.3, Romanova offers a few examples where a direct object is said to be impossible, pointing out that their existence falsifies the prediction of any account that associates the internal argument directly to the prefix (op.cit.: 188), but adding that in such examples, "the implication of accumulation is present in the context" (2007: 187). However, if we want direct syntax-to-semantics mapping—which is the approach Romanova (2007) explicitly takes otherwise—then such a 'contextual' scale should also be represented in the syntax, especially since such examples are few (cf. 3.1). But if so, then Romanova's account, which derives the accumulation of *na*-verbs via a connection of the event-quantifying *na*- and some scalar element, has no advantage over accounts that link the internal argument directly to the prefix; for direct syntax-to-semantics mapping, she likewise has to postulate either some covert rhematic element in the complement of the VP or some covert element in some other position that can provide a scale. (And as I suggested in 3.2, it is very likely that her putatively 'unergative' *na*-verbs are all covertly transitive anyway.)

Fourthly, as mentioned above, Filip (2005a) has pointed out that *na*- can only target direct internal arguments but not external arguments or indirect internal arguments, cf. (15) above. However, if the only thing important for *na*- were the existence of some scale along which the event can be measured, it is not clear why this scale could not be provided by an indirect internal argument or a PP argument of a ditransitive verb, especially since at least with a combination of the right type of internal arguments, such arguments *can* contribute to telicity, as shown in (90) below [the stars on the *for-x-time* adverbial in (90a)-(90a') hold if we ignore the repetitive reading where the same people get water several times, and if we ignore a result-state adverbial reading of *for 20 minutes*; whereas (90b)-(90b') also appear to get some sort of repetitive reading, this is due to the fact that *people* are made up of individuals, but it is crucially different from (90a)-(90a') in that there is no need that any single individual get water more than once].

(90) a. *His job was to give water to 20 people* (**for twenty minutes* / ✓*in twenty minutes*).
a'. *His job was to give 20 people water* (**for 20 minutes* / ✓*in twenty minutes*).
b. *His job was to give water to people* (✓*for twenty minutes* / ?*in twenty minutes*).
b'. *His job was to give people water* (✓*for 20 minutes* / ?*in twenty minutes*).

Fifthly, note also that with respect to the impossibility of examples such as (18c)/(19c) above (i.e. the Russian **na-grabit' proxožih* [on-rob passers-by$_{GEN}$] (intended: 'rob many passers-by')), a *na*-verbs-as-creation-verbs account can suggest that one normally does not 'create' passers-by by robbing (see the discussion in 1.4.1 above). But if *na*-verbs do not actually require an object but rather any kind of scale over which *na*- can exert its quantificational force, then it is unclear why one could not measure the event of robbing

[42] Romanova's account could bypass this problem if she assumed that such structures contain two VPs, and so the Spec,CausP-internal VP would contain an internal prefix, and the main-frame complement-of-VP position would be free. But if a two-VP account is needed anyway, a two-VP account where *na*- is also resultative clearly has greater explanatory power. Alternatively, she could bypass this problem if she gave up her account of internal prefixes as sitting in a resultative complement of the VP, but then the whole dichotomy of internal/external has to be redone.

passers-by with the number/quantity of passers-by that have been robbed, that is, why the quantity of passers-by could not provide the scale for the robbing event.

And finally, Romanova (2007) seeks to parallel *na-* specifically with an event quantifier of the type known from French quantification at a distance (cf. footnote 8 above), i.e. an event quantifier which indirectly quantifies over the argument. However, as was already mentioned in section 1.5, the argument of *na*-verbs can sometimes be modified by the universal quantifier 'all', and so on Romanova's account, such cases would have an event-quantifying *na-* indirectly quantifying over an argument which is already quantified over by 'all', so the argument would end up being quantified over by two different quantifiers at the same time. And indeed, the *na*-sentences in (33) do not work in French if one attempts to combine a QAD 'a lot' and an object preceded by a universal quantifier, (91), further showing that *na-* cannot be a QAD-type event-quantifier which indirectly quantifies over the argument. And in fact, even one of the most common types of *na*-verbs turn out to be problematic if *na*-verbs are paralleled to French QAD, namely, *na*-verbs with objects such as '300 flowers', which would also mean double quantification and which is also impossible in French QAD structures.

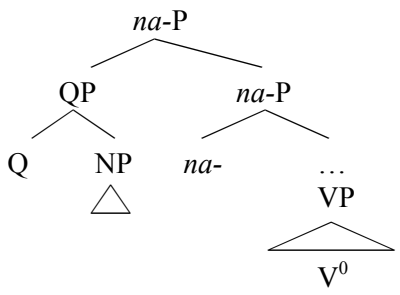
(91) * *C'était dans le pré que Jean a beaucoup cueilli toutes les* (French)
this-was in the meadow that Jean has a-lot picked all the
fleurs qui se trouvent dans le coin là.
flowers which refl find in the corner there
(intended: 'It was in the meadow that J. picked all the flowers that are over there in the corner.') (Paul Hirschbühler, p.c.)

In short, Romanova's (2007) account fails to account for unselected-object *na*-verbs and for doubly-prefixed transitive *na*-verbs. If one assumes direct syntax-to-semantics mapping, it does not seem to fare any better on the rare *na*-verbs without an overt internal argument than a resultative account, since both have to posit the presence of some null element. It fails to account for the fact that *na-* cannot target incremental-theme arguments of verbs like 'eat' and 'drink' and that it cannot target indirect internal arguments and PP arguments of ditransitives. And it fails to accommodate cases where the internal argument is preceded by the universal quantifier 'all'.

4.2 Pereltsvaig (2006)

Another recent account of *na-* as VP-external is advanced in Pereltsvaig (2006), who gives *na*-sentences the structure in (92). This structure is like the structure of Romanova (2007) (see (88) above) in that *na-* is introduced above the VP, but differs from the latter in that it sees *na-* as an argument-introducing element; according to Pereltsvaig (2006), the genitival argument of *na*-sentences, such as *cvetóv* in *na-rvát' cvetóv* (lit. on-pluck flower$_{GEN}$) 'pick a lot of flowers' in (1a), is introduced by the prefix rather than the verb stem (which I argued to be correct in section 1 above). The argument is genitival because the prefix does not select a full DP but a smaller structure that consists of an NP dominated only by a QP (where QP stands for a DP-internal projection that is sometimes also labeled NumP, not for the DP-dominating FP that hosts generalized quantifiers); the genitive on the NP is thus assigned by the QP (not directly by *na-*, just as in Piñón 1994), whereas the QP gets structural object case.

(92)



(Pereltsvaig 2006: 466+437)

Whereas the claim that the genitival argument is introduced by the prefix straightforwardly explains unselected objects (by detaching them from the verbal stem), the account nonetheless has to posit a peculiar stipulation on *na-* whereby the latter will only select some incremental-theme arguments but not others (such as the arguments of 'eat' and 'drink', as in (9)-(10) in 1.2), and furthermore, it will also have to come up with an unlikely story of how *na-* can nonetheless introduce a non-incremental-theme argument when the VP also contains a directional PP (as in (11)-(12) in 1.2.3 above). And more importantly, Pereltsvaig's structure raises a more general issue with respect to the realization of arguments: (92) leaves it unclear why such structures cannot get two arguments in addition to the subject, that is, why they cannot get an argument of *na-* and an argument of the verb/V at the same time. In Pereltsvaig's view, *na-* is an argument-introducing head, and given that it is above the VP, its introducing an argument should presumably happen in a similar manner as, say, in the case of a high/VP-embedding applicative head; but the latter introduces an argument *in addition* to the argument of the verb, it does not introduce an argument *at the expense of* the argument of the verb (e.g. Pylkkänen 2002). It appears to me that the only way to ban the symultaneous occurrence of two arguments is by blaming it on case, saying that the argument of V cannot get structural accusative as the latter has been taken up by the argument of *na-* (i.e. by the overt or covert Q, whereas the head noun of *na-*'s argument gets genitive from the Q). However, at least in view of argument-introducing heads such as applicatives, this is also odd; applicatives get case—in many languages the dative—independently of the case of the argument of the verb, that is, applicative heads introduce an argument *and* provide it with case, while *na-* would have to be seen as introducing an argument but *not* providing case for it, letting it rely on structural case and thus preventing the realization of the argument of V.

Now, this failure of hosting two arguments (in addition to the subject) can perhaps be explained if one claims that internal arguments are *always* introduced in an FP above the VP (cf. Borer 2005b), and that the semantics of *na-* (the semantic relation that *na-* establishes with its complement) is of a different kind than the one of high applicatives and as such only accepts an argumentless VP as its complement but not the VP-embedding object-introducing FP. For the benefit of the doubt, one may leave this option open, although firstly, I find it quite hard to see how this could be implemented so that it would semantically make sense, and secondly, nothing like that is suggested or worked out in Pereltsvaig's paper. And on the other hand, this failure of hosting two arguments could be explained by claiming that the structure actually *does* have two argument positions, but that it is one argument that obligatorily realizes both, i.e. starts VP-internally and then moves up to Spec,*na-*. However, as far as I can see, accepting this would result in the loss of an explanation for the presence of unselected objects with singly-prefixed *na-*verbs; if the argument started out as an

argument of V, it would have met V's selection restrictions before moving up, and so we could not get unselected objects.

Furthermore, note that what leads Pereltsvaig to the conclusion that *na-* is a VP-external prefix is the resistance of *na*-verbs to be secondarily imperfectivized, the fact that *na-* can be found stacked over an internal/resultative prefix, and the failure of *na*-verbs to form gerunds. However, it was suggested in section 2.2.2 of the Introduction and in chapter 1 that these three diagnostics of prefix externality are problematic (cf. also section 5 below). Among other things, they also diagnose the Slovenian reflexive-introducing *na-* of the *na- se* construction as external/superlexical. And in addition, note that the line of research that promotes these diagnostics as valid (Svenonius 2004, Ramchand 2004/2008b, Tatevosov 2008, etc.) typically puts such external/superlexical prefixes not only above the VP, but also above the subject-introducing projection (a position Pereltsvaig does not argue against). And if *na-* is above the subject-introducing projection, it would be more than just controversial to claim that the object is introduced in the projection of *na-*, i.e. higher than the subject. Moreover, such a configuration would make it even harder to explain why—in addition to the subject and the argument introduced by *na-*—such *na-* sentences cannot contain another internal argument, introduced either in the VP or in whichever projection between the VP and the subject-introducing projection it is that internal objects are normally introduced.

In short, then, Pereltsvaig's structure in (92) can hardly be seen as unproblematic.[43]

4.3 Tatevosov (2007, 2008)

As noted in fn. 2 above, Tatevosov (2007) is explicit about *na*-verbs containing a result state (specifically, a result state of something being in quantity) and about attributing the result state directly to *na-*; for example, he states that "we have every reason to conclude that it is the prefix *na-* that introduces a state argument into the semantic representation of CVs [=cumulative verbs]" (op.cit. 541), and that "*na-* contributes, among other things, *the distributive meaning* and *the result state* to the interpretation of an event predicate it applies to, while the measure function comes from an argument QP" (op.cit. 541) (where QP = NumP).[44] At the same time, however, the only syntactic structure of *na*-verbs he mentions in

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[43] For the sake of completeness, let me add that as already noted in section 1.5 above, the proposal would also have to be modified to at least optionally allow the *na*-introduced argument to be a DP (not just a QP/NumP), as the internal argument of *na*-verbs can be definite. Furthermore, as already noted in footnote 31 above, the proposal is also problematic in that it assigns *na*-verbs' arguments such as *vedro vode* (lit. bucket $water_{GEN}$) 'a bucket of water' as well as arguments such as *pet rož* (lit. five $flowers_{GEN}$) 'five flowers' the structure [QP/NumP [NP]], with the measure expressions 'bucket' and 'five' merged in Q/Num (op.cit.: 456-7); the model would have to be expanded in order to accommodate arguments such as *pet veder vode* (lit. 5 $buckets_{GEN}$ $water_{GEN}$) '5 buckets of water', where the measure expression 'bucket' is itself modified with a cardinal numeral. However, these two problems in themselves would not have disproved the VP-externality of *na-*.

[44] In (i), I give the formula he assigns to *na-*, followed by his prose translation of the formula.

(i) $\| \text{na-} \|^{g,c} = \lambda R_{<e,<v,t>>} \lambda P_{<e,t>} \lambda s \lambda e \exists x [P(x) \wedge \text{WDISTR}(R)(x)(e) \wedge Q(s)(x) \wedge \text{cause}(s)(e)]$ (Tatevosov 2007: 536)

"[...], *na-* denotes a relation between two-place predicates of type <e,<v,t>>, properties of individuals of type <e,t>, states and events.[3] *Na-* first applies to a verbal predicate with event and individual arguments to yield a function from nominal predicates to functions from states to events. Then it applies to a nominal predicate to yield a relation between events and states. The variable ranging over individuals gets existentially bound. *Na-*verbs, therefore, are not argument-taking, but property-incorporating. *na-* requires the relation R between individuals and events be weak distributive (WDISTR [...]). *Na-* introduces a state argument into the semantic representation, and relates events from the original extension of a verbal predicate to states these events cause

his (2007) article is the one from Pereltsvaig (2006) (see (92) above), with *na-* heading a *na-*P above the VP, and with the internal argument of *na*-verbs introduced in a QP in the specifier of *na*-P; although he does not explicitly state this, from what I can see, he adopts this structure. Moreover, in Tatevosov (2008), he explicitly calls this *na-* a vP-dominating superlexical prefix.

Therefore, I can only say that with respect to the claim that *na*-verbs are resultative and that it is the prefix that introduces the result state, I completely agree. As for the claim that this prefix is vP-external, it depends on the actual structure Tatevosov would assume. If it is true that Tatevosov (2007) adopts Pereltsvaig's (2006) structure for such verbs, then all the problems mentioned in the previous section apply. And if the structure is to be one with a vP-external *na-* but different from Pereltsvaig's structure, then I cannot comment on it until it is made explicit. And thirdly, as for the compatibility of the claims that *na-* introduces a result state and an argument and that it is vP-external, I just note that I do not know of a proposal that introduces result state predication above the vP and none is mentioned in Tatevosov's work. Furthermore, Tatevosov (2008) follows the line of work of Svenonius (2004), etc., in introducing the result predication and arguments associated with resultative/lexical/internal prefixes in a resultative small clause, and so the result state- and argument-introducing *na-* should presumably also be analyzed in this way. And if a model is devised that will introduce result predication and arguments above the vP for *na*-verbs, then one will have to show why the result predication and argument is introduced above the vP only in the case of *na-* but not also with what Tatevosov (2008), Svenonius (2004), and other proponents of the VP-internal/VP-external split of prefixes call internal/lexical/resultative prefixes. (For Tatevosov's 2007 claim about *na-* also directly encoding distributivity, see section 5.5.2 below.)

5. Some further issues regarding *na*-verbs and my proposal

This section discusses some further issues concerning *na*-verbs, most of which have to do with characteristics that have been seen—in the context of either our *na-* or other putatively VP-external prefixes—as supporting a VP-external account. Section 5.1. discusses a possible link between *na*-verbs and another, simple/non-quantity kind of creation verbs with the prefix *na-*. Section 5.2 argues that the resistance of *na*-verbs to secondary imperfectivization cannot be taken as support for *na-*'s VP-externality, and more generally, for any prefix's VP-externality. Section 5.3 discusses *na*-verbs from the perspective of acceptability with *in-x-time* and *for-x-time* adverbials; 5.4 discusses *na*-verbs against the background of Svenonius' (2004) claim that the absence of zero/root-nominalizations signals a prefix's VP-externality. Section 5.5 first discusses the restriction of *na*-verbs to imperfective and indeterminate-motion imperfective base verbs, aguing against Romanova's (2007) suggestion that this supports the position that *na-* is VP-external, and the it extends this to argue against Tatevosov's (2007) claim that part of *na-*'s semantics is also weak distributivity. Section 5.6 discusses the productivity of *na*-verbs, the naturalness of doubly-prefixed *na*-verbs, and the productivity of the *na- se* construction, suggesting that the lack of parallels between these within a single language (Slovenian) as well as across languages (Slovenian vs. Russian) argues against a VP-external account of *na-*. Section 5.7 shows that our *na*-verbs do not

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(in [(231)], Q is a free variable over relations between ordinary objects and states of type <e,<v,t>>)." (Tatevosov 2007: 536)

allow result-modification with *pre-*, which is expected on the account advanced here, and that this distinguishes them from the *na- se* construction, confirming the separate structures that I proposed for them.

5.1 A non-quantity 'creation' use of *na-*

Besides our *na*-verbs, which were said to be some sort of 'creation' verbs, there exists another kind of creation verbs with the prefix *na-*, which do *not* show any restriction on their argument being a quantity argument; one example is in (93a), and a SSKJ dictionary-based unselected-object example is in (93b).

(93) a. *na-štrikati pulover*
on-knit $\text{sweater}_{\text{ACC}}$
'knit up a sweater'

b. *Studenec so* *(*na-*)*jokale vile*.
$\text{brook}_{\text{ACC}}$ are on-cried fairies
'It was the fairies that created the brook by crying.'

Some Russian examples of this type are in (94) (the 'over-' and 'too much' in Spencer & Zaretskaya's 1998a translations are clearly due to an implicature; Spencer & Zaretskaya 1998a: 19 also classify the use of *na-* in (94a) as belonging to the semantic group "creation/acquiring").

(94) a. *On na-el sebe puzo*. (Russian)
he on-ate self_{DAT} $\text{paunch}_{\text{ACC}}$
'He acquired a paunch by overeating.' (Spencer & Zaretskaya 1998a: 19)

b. *On na-sidel sebe gemorroj*. (Russian)
he on-sat self_{DAT} $\text{haemorrhoid}_{\text{ACC}}$ (Spencer &
'He gave himself a haemorrhoid by sitting too much.' Zaretskaya 1998a: 19)

c. *V otpuske v Grecii on na-jel ogromnoje brjuxo*. (Russian)
in vacation in Greece he on-ate huge $\text{belly}_{\text{ACC}}$
'On his vacation in Greece, he ate his belly huge.' (Svenonius 2004: 234)

The objects in (93)-(94) are all effected objects, they are read indefinitely, and the predicate is used to introduce a referent into the discourse; and by modifying the information structure, these objects can all be read as definite.[45] These characteristics link these (non-quantity) verbs with *na-* and the quantity *na*-verbs from above. And such non-quantity verbs with *na-*

[45] Whereas Spencer & Zaretskaya's (1998a) translation of (94a), i.e. 'acquire a huge belly', is in line with this statement, Svenonius' translation of (94c), i.e. 'eat one's belly huge', is not. But note that with neutral intonation/in the information structure in (94c), one cannot modify 'belly' in (94c) with the reflexive possessive 'his own', which should be fine if the meaning were comparable to 'eat one's belly huge'. To be able to modify 'belly' with 'his own', one would need to change the information structure, for example as in 'As for his belly, he acquired it on his vacation in Greece'.

can, of course, host quantity objects, including bare genitive objects, as in (95), which is based on (94c).

(95) *Na šokoladnoj fabrike on na-jel sebe* (*mnogo*) *prišikov*. (Russian)
in chocolate factory he on-ate self$_{DAT}$ many pimples$_{GEN}$
'At the chocolate factory, he ate (a lot, by implicature), so that as a result, he had a quantity of pimples/many pimples.'

The difference between such verbs and our quantity *na*-verbs is only in the fact that the latter can *only* have a quantity argument. Structurally, this can be captured with a minimal difference; the *na*-PP in the result part of our *na*-verbs was said to contain something like $e_{N\ \{kopic\text{-}/\text{'pile'}\}}$, which explains the restriction on the resultee being a quantity and gives us the meaning that the resultee argument forms a pile; the *na*-PP in the result part of non-quantity creation verbs with *na*- could then simply contain something like $NP_{\{svet\text{-}/\text{'world'}\}}$, which would give the meaning that the resultee argument exists, and would also explain why there is no restriction on the resultee being a quantity. (As for the dative in (94)-(95), I would assume that it is embedded under the prefixal PP, just like a further-specifying directional PP.)

This parallel in the structure of the two types of 'creation' verbs with *na*- could well be the reason why some quantity *na*-verbs may shift to simple, non-quantity creation verbs. Such shifts may even be observable 'in process', as there exist verbs for which some speakers will only acknowledge a quantity *na*-verb use, i.e. one that shuns singular count noun objects, whereas others will also accept a simple creation use and singular count noun objects. Verbs of this type may include *na-kvačkati* (lit. on-crochet), *na-tkati* (lit. on-weave), *na-plesti* (lit. on-knit), etc. (this may be reflected in the SSKJ dictionary as well, which assigns *na-tkati* (lit. on-weave) two meanings, 'obtain a quantity of something by weaving', i.e. the quantity *na*-verb use ('amass by weaving'), and 'weave up', i.e. the simple creation-verb use that allows singular count objects, whereas *na-kvačkati* (lit. on-crochet) is only assigned the quantity *na*-verb use).[46] Such shifts clearly make much more sense if both uses of *na*- are resultative than if they are radically different, one having *na*- as a resultative element and one having *na*- as either an argument-quantifier (Filip 1999, 2005a, 2005b, Svenonius 2004: 236) or a VP-external event-quantifier (Romanova 2007)/argument-introducing head (Pereltsvaig 2006).

5.2 Secondary imperfectivization

Pereltsvaig (2006: 468) notes that Russian *na*-verbs cannot derive secondary imperfectives, which she takes as evidence for a VP-external status of *na*-. In section 2.2.2.2 of the Introduction, I already mentioned some brief remarks, in the context of the *na- se* construction, as to why the secondary-imperfectivization tests is problematic. Below, I will argue that this test clearly cannot be used as a diagnostic for *na*-verbs, and that it is problematic also more generally.

[46] The shift should in principle be possible in both directions, but since a simple creation use is clearly more neutral and versatile than the 'amass' use—especially since it can also be used with quantity arguments and thus come very close in meaning to quantity *na*-verbs—it would be quite expected that it will predominantly go in one direction.

5.2.1 The appeal of the explanation that the VP/vP-external hypothesis of external/superlexical prefixes has lies in the fact that it can explain the failure of secondary imperfectivization structurally; external/superlexical prefixes are said to attach above the VP/vP and higher than the projection of the secondary imperfective (cf. Svenonius 2004). Such an explanation in terms of scope (relative hierarchical height) predicts clear situations, with secondary imperfectivization generally possible with internal/lexical/resultative prefixes and with secondary imperfectivization *always* impossible with external/superlexical prefixes; if external/superlexical prefixes sit above the $Asp_{SecImpf}$ projection, they will *never* be able to form secondary imperfectives. Such a structural explanation has great appeal, but if the situation with external/superlexical prefixes proves not to be categorical, then such a structural/scope explanation simply *cannot* be correct.

And indeed, unlike Pereltsvaig (2006), Svenonius (2004: 230) describes the cumulative use of Russian *na-* not as disallowing secondary imperfectivization but as as sometimes allowing secondary imperfectives, Filip (2005a) states that Russian secondary imperfectives of *na*-verbs "exclude the progressive interpretation […] at least under the most normal circumstances", and Russell (1985: 61) actually states that "the derivability of secondary impferfectives from *na-* perfectives denoting quantity [...] appears haphazard and arbitrary. For example, the verb *nadelat'* 'do, make a quantity of' has no secondary imperfective, while *nagotovit'* 'prepare, make a quantity of' has the derived imperfective *nagotavlivat'*".[47] So the situation is clearly not as clear-cut as a simple scopal approach predicts.

Now, in view of inconsistencies in the case of Russian *na*-verbs, Svenonius (2004: 231) suggests that we could allow the option of this prefix sometimes exceptionally merging either above or below the $Asp_{SecImpf}$ projection; this, however, is completely ad hoc. It would be warranted if one could have every verb combine with both *na-*'s, i.e. if every verb could combine with a *na-* that scopes over the secondary imperfective and if every verb could combine with a *na-* that scopes below the secondary imperfective (the former should be easily proved, for the latter less so, but one should think of a way to prove it). If all verbs could be shown to combine with both *na-*'s, then the postulation of two *na-*'s would be warranted and the account would be in the same spirit as, say, that of Butler (2003) (and also Hacquard 2007) for root vs. epistemic modality, whereby *can* is merged above TP for an epistemic reading and below it for a root reading; however, this makes sense given that the two readings of *can* are not dependent on particular verbs, both readings are available with more or less any verb. With *na-*, though, there are no such regularities, so two possible sites of attachment make a prediction that is very wrong.

Furthermore, even though the semantics of the Russian *na-*—which by assumption would also mean its syntax—seems perfectly matched in Russian and Slovenian, the degree to which these verbs resist secondary imperfectivization appears to differ somewhat between the two languages; Russian appears to allow it more than Slovenian, where a secondary imperfective of most *na*-verbs sounds forced. And again, this does not yield to a crosslinguistic difference in the scope of attachment of the secondary imperfective, because

[47] Russell (ibid.) also uses this pair to show the arbitrariness of Isačenko's (1960) idea that those procedurals/superlexicals which form secondary imperfectives are really lexically distinct from their simplexes, that is, that they are not procedurals but have been reanalyzed as lexical; there seems nothing else about this pair that would warrant this conclusion, in particular, none of them accepts a singular count noun as its internal argument.

if a secondary imperfective is forced in Slovenian, or if it is formed with one of those *na*-verbs that sound fine with it, it is still clear that it scopes over *na*-.

5.2.2 Filip (2005a) states that Russian secondary imperfectives of *na*-verbs "exclude the progressive interpretation […] and instead they have an iterative or a generic (habitual) interpretation, at least under the most normal cicumstances". If this were a complete regularity, then a scopal account would still be feasible if one claimed (as does not seem implausible) that the iterative reading is derived higher in the structure/above *na*-, and the progressive reading is derived higher in the structure/below *na*-. However, Filip's hedge "under the most normal cicumstances" seems to preempt this option. Further, we would still be left with the problem that in Slovenian, most *na*-verbs resist secondary imperfectivization altogether, on either reading; and we will likewise still have the problem of why Russian shows the contrast noted by Russell (1985) with respect to *nadelat'* 'do, make a quantity of' and *nagotovit'* 'prepare, make a quantity of'. And moreover, if a secondary imperfective is forced in Slovenian, or if it is formed with one of those *na*-verbs that sound fine with it, a progressive interpretation is also available, even if it requires some imagination.

5.2.3 As for why the formation of secondary imperfectives, at least on their progressive reading, tends not to work, or why it is often said not to work, I can point out a few things. First, in languages such as Russian and Polish, one factor contributing towards the overall claim that *na*-verbs shun secondary imperfectivization may be the fact that bare genitives are impossible (at least on the progressive reading) in imperfective sentences in general, whether the imperfective is primary or secondary, and with *na*-verbs as well as other verbs (Paducheva 1998, Willim 2008). (This restriction is independent of *na*-verbs, as shown by the fact that in formal Slovenian and in Serbo-Croatian, it does not hold, and by the fact that some *na*-verbs with an argument with an overt quantity expression *can* be secondarily imperfectivized, see Russell 1985: 61.)

But more generally, note that Gehrke (2008b: 177-181) argues that the so-called 'empty' prefixes are not VP-external (contra Ramchand 2004/2008b) but internal/resultative, and that the fact that they typically do not form secondary imperfectives has to do with the fact that the verbs with such prefixes are incremental theme verbs. If *na*-verbs are a kind of 'creation' verbs, they are, of course, incremental theme verbs, so in this respect, they behave as other incremental theme verbs. Furthermore, Gehrke [op.cit.: 179, fn. 42] also notes that the Russian *pro-čitat'* (lit. through-read) 'read through' is one of few such verbs that does form a secondary imperfective; she states that the form usually gets an iterative reading, but then also adds that in the right context, a progressive reading is also available. So with respect to the preference for an iterative reading over a progressive one, as well as with respect to the fact that in the right context, a progressive reading is nonetheless available, *na*-verbs also behave like other incremental-theme verbs. Furthermore, remember that section 5.1 mentioned another type of 'creation' verbs with *na*- (where the object can also be a singular count noun), as in (93)-(94) above; and not surprisingly, the Russian examples in (94) (which Svenonius 2004/Spencer & Zaretskaya 1998a consider to be resultative) and the Slovenian ones in (93) all resist secondary imperfectivization, especially on the progressive reading. So our quantity *na*-verbs' resistance to secondary imperfectivization, particularly on the progressive reading, is quite in parallel to both other incremental-theme verbs in general and also more narrowly to other creation verbs, for which even those who advance the VP-internal/VP-external split claim that they are VP-internal/resultative.

Of course, it is not really clear why various kinds of incremental-theme verbs would shun secondary imperfectives, and in fact it seems that they do so to different extents in different languages (out of Slovenian, Russian and Bulgarian, resistance is strongest in Slovenian, then Russian, and then Bulgarian, where according to Svenonius 2004 most prefixed verbs allow secondary imperfectivization). For *na*-verbs, Russell (1985: 71-2) concludes that the reason why they may often lack derived secondary imperfectives or derive only iterative secondary imperfectives is due to the fact that they are achievements rather than accomplishments (where both achievements and accomplishments, of course, contain a result state subevent); on this view, the question would just be reformulated as why *na*-verbs should only be achievements. But one way or another, this is a question that apparently has to be approached independently of the issue of prefix VP-internality/VP-externality. And let me note that the *-ing* form of some incremental-theme particle verbs in English is also degraded on the progressive reading (*He read up to the second chapter* vs *When I came into the room, he was reading up to the second chapter*), and also the *-ing* form of some non-particle *na*-verb counterparts (*When I came to the port, he was just counting 24 ships* [on the reading 'he was just coming up with the total of 24']), but noone has claimed that this is because such verbs contain some VP-external material that scopes over the progressive. (See also Dimitrova-Vulchanova 2003 for the claim that one type of English resultatives regularly shuns the progressive reading of the *-ing* form.)[48]

5.2.4 In sum, this section has suggested that resistance to secondary imperfectivization, or to the progressive reading of a secondary imperfective, cannot be used to claim that our *na*-verbs have a VP-external prefix. More generally, it has cast more doubt on the validity of secondary imperfectivization as a VP-externality diagnostic for prefixes in general, since secondary imperfectivization is shunned even by certain other prefixed verbs, which are more standardly seen as resultative.

5.3 *Na*-verbs and *in-x-time*/*for-x-time* adverbials

Some putatively externally prefixed verbs show infelicity with the *in-x-time* adverbial (and one, namely, the pofective *po-*, may show ungrammaticality with it), and this is sometimes offered as further support for the claim that such prefixes are VP-external rathre than resultative.

With respect to compatibility with the durative and time-span adverbial, Filip (2000: 52) considers Russian *na*-verbs as ungrammatical (*) with the *for-x-time* adverbial and as infelicitous with the *in-x-time* adverbial (#). Ramchand (2004: 341, 2008b: 1697-8) adds a

[48] In arguing against Filip's (2003) distinct treatments of spatial Goal and Source prefixes (which had also been argued against in Žaucer 2002: 76-84, 2005a: 283-285), Gehrke (2005, 2008a, 2008b: 235-244) argues convincingly that the *po-* that stacks on Czech resultative-prefixed *od-skočit* (lit. off-jump) 'jump away' is not an external prefix but rather a modifier of the result (the claim had also been made in Žaucer 2002: 78, 2005a: 290, fn. 13). Gehrke does not give a structure, but one way or another, the prefix should sit somewhere inside the VP-internal result part of the clause (see chapter 1 for two options). In the context of the same discussion, though, Gehrke (2008b: 236, fn. 8) also states the following: "Under the distinction between internal and external verbal prefixes, drawn in chapter 5, Czech *po-* behaves like an external prefix in all respects." If this is true, that is, if such *po*-prefixed verbs shun secondary imperfectivization, then this is another indication that secondary imperfectivization—and in fact all of the other putative VP-externality tests—are not valid diagnostics.

refinement, noting a difference in the behavior of *na*-verbs with bare genitive objects and *na*-verbs with objects with an overt expression of quantity, such as 'a basket of flowers'. On the one hand, she marks the combination of a bare genitive *na*-verb with the *for-x-time* adverbial as ungrammatical (*) and with the *in-x-time* adverbial as degraded (?), as in (96a) below;[49] and on the other hand, she marks the combination of an overt-quantity-expression *na*-verb with the *for-x-time* adverbial as ungrammatical (*) and with the *in-x-time* adverbial as grammatical, (96b).

(96) a. *Olja na-brala gribov ?za čas / *čas.* (Russian)
Olga on-picked mushrooms$_{GEN}$ in hour hour (Ramchand 2004:
'Olga picked a lot of mushrooms in an hour.' 241/2008b: 1697-8)

b. *Olja na-brala korzinu gribov za čas / *čas.* (Russian)
Olga on-picked basket$_{ACC}$ mushrooms$_{GEN}$ in hour hour (Ramchand 2004:
'Olga picked a basket of mushrooms in an hour.' 241/2008b: 1697-8)

First, of all, as was already noted in footnote 4 in chapter 1 (with respect to this issue in the context of the *na- se* construction), achievements are also known to often sounds odd with the *in-x-time* adverbial, and when combined with achievements, the *in-x-time* adverbial often seems to be closer to the meaning of 'after an hour' (see Piñón 1997, also Romanova 2007: 24, fn. 9, etc.). And secondly, and specifically with respect to *na*-verbs, note that if the combination of a *na*-verb and a bare genitive object has a meaning close to 'cause there to be an (indeterminate) quantity of x', then it actually need not be very surprising that the *in-x-time* adverbial is degraded, as it is odd to measure the emergence of an indeterminate quantity of something with a specific time-span adverbial. In fact, the only thing that can come out of all the peculiarities of the combinations of the *in-x-time* and various types of resultative structures is the position that the unacceptability of the *in-x-time* adverbial is clearly no conclusive indicator of a construction's non-resultativity. And indeed, this has been well-established in several recent studies of Germanic adjectival-resultative constructions, particle-verb constructions and Goal-PP directed-motion constructions, which suggest that although all of these constructions often come with an interpretation that makes the *in-x-time* adverbial acceptable[50], this is not at all a hard-and-fast rule (McIntyre 2003, Svenonius 2004, Folli & Harley 2006, Wechsler 2005, Rappaport Hovav & Levin 2005, Borer 2005b, Cappelle 2005, etc.); at the same time, the first three of these studies suggest that even when the *in-x-time* adverbial is not acceptable, such constructions contain a VP-embedded small clause, and Wechsler (2005) also treats some resultatives as ECM constructions regardless of the *in-x-time*'s unacceptability, and Rappaport Hovav & Levin (2005) treat such *in-x-time*-shunning resultatives/particle-verbs with a lexical-semantic subevent predicate, which—translated into a syntactic model—equals a small clause. So to conclude, on the one hand, *na*-verbs are natural with the *in-x-time* adverbial when combining with an object with an overt quantity expression, they may be infelicitous with the *in-x-time*

[49] Curiously, commenting on the example that tests this, Ramchand (2004: 341, 2008b: 1697-8) states that on *na*-verbs, the test gives "ungrammaticality for both 'in an hour' and 'for an hour' if the object is genitive" and does not have an explicit measure. In the example, though, the *for-x-time* is marked * and the *in-x-time* is marked ?.

[50] This interpretation is typically called telic, but since telicity is, at the same time, often taken to mean the presence of a stative small clause, I do not use this term.

adverbial when they combine with a bare genitive object, but that may not really be surprising, and finally, it appears that the unacceptability of the *in-x-time* adverbial should really not be used as indicating a construction's non-resultativity at all.

5.4 'Root nominalizations'

In view of Svenonius' (2004) use of the absence of nominalizations and especially 'root/zero nominalizations' as a diagnostic of a prefix's VP-externality, let me note that the vast majority of *na*-verbs listed in the SSKJ dictionary do not have corresponding zero-nominalization forms. From some of these *na*-verbs, root nominalizations can be coined (at the price of sounding neologist), and from many, they seem practically impossible (for example, from all *na*-verbs based on a manner-of-speaking verb, such as *na-blebetati* [lit. on-babble] 'produce/utter babbling', *na-čebljati* [lit. on-chatter] 'produce/utter chattering', *na-čvekati* [lit. on-chat] 'produce/utter chating', *na-drdrati* [lit. on-rattle] 'produce/utter rattling'). In fact, the SSKJ seems to contain root/zero nominalizations which are common Slovenian words from only five non-singular count noun selecting *na*-verbs (*na-nos* [lit. on-carry] 'alluvium', *na-bor* [lit. on-gather] 'collection', *na-sad* [lit. on-plant] 'plantation', *na-kup* [lit. on-buy] 'purchase' and *na-vlaka* [lit. on-drag] 'junk (useless things one accumulated)'); and interestingly, all of these are restricted to occurring only with mass or plural count nouns as internal objects, so one cannot claim that their corresponding verbs have been reanalyzed as resultative.[51]

Note also that of the two non-quantity creation verbs with *na-* in (94) above (i.e. *na-jest' sebe puzo*/*ogromnoje brjuxo* [lit. on-eat self$_{DAT}$ paunch/huge belly] 'acquire a paunch/huge belly by eating' and *na-sidet' sebe gemorroj* [lit. on-eat self$_{DAT}$ hemorrhoid] 'acquire a hemorrhoid by sitting'), which are mentioned in Svenonius (2004: 234) and Spencer & Zaretskaya (1998a: 19) as resultative, neither forms a root/zero nominalization (even though other root/zero nominalizations containing the root of the base verb exist from both); so it seems that from what are more generally considered resultative creation/acquiring verbs with *na-*, root/zero nominalizations may well be scarce too.

So once again, given that our quantity *na*-verbs were shown to require a resultative treatment, this suggests that the absence of zero-nominalizations cannot be a reliable diagnostic for VP-externality. And on the other hand, if one were to insist on treating these *na*-verbs as VP-external and keep the absence of zero nominalizations as a particular structure-detecting diagnostic (i.e. a consequence of root/zero nominalizations from *na*-verbs being ruled out structurally), they will need to explain why these few zero nominalizations from *na*-verbs nonetheless do exist. In addition, they may have to explain why even those non-quantity creation verbs with *na-* that they would also treat as resultative appear to largely resist root/zero nominalizations.

[51] The SSKJ also lists five root/zero nominalizations which neither me nor two other informants had heard before and for which Google returns one, two, zero, zero and zero hits, respectively, so they can safely be said not to exist in modern Slovenian: *na-grabek* (lit. on-rake) 'what one accumulates by raking', *na-met* (lit. on-throw) 'snowdrift', *na-mlatek* (lit. on-thresh) 'what one accumulates by threshing', *na-nesek* [lit. on-carry] 'what one accumulates by carrying', and *na-stržek* (lit. on-grate) 'what one accumulates by grating'. If coined, though, these all sound possible and their meanings are predictable.

5.5 Restriction to imperfective and indeterminate-motion imperfective base verbs

5.5.1 *Imperfective and indeterminate-motion imperfective base verbs only*

Romanova (2007: 196-197) mentions that in Russian unprefixed aspectual pairs, *na-* mostly (though not exclusively) attaches only to imperfective base verbs and only to non-directed-motion/indeterminate-motion imperfective base verbs (but mostly not to perfective base verbs and to directed-motion/determinate-motion imperfective base verbs), which appears to be another thing that groups this *na-* with external prefixes and sets it apart from internal prefixes. I will not try to work out an explanation for this patterning here, but I do wish to point out two things. The first is that the restriction is not exceptionless: the input to *na-* is perfective in, say, *na-kupitj* [lit. on-buy] 'buy a lot of, amass' and a directed-motion/determinate-motion imperfective in *na-nesti* [lit. on-carry] 'bring a lot of dirt' (both from Romanova 2007: 196-7, fn. 17). According to Filip (2000), the input to *na-* can sometimes also be perfective in doubly-prefixed *na*-verbs, as in the Russian example *na-vy-nosit* [lit. on-out-carry] 'to amass by taking out' (op.cit.: 75). And the second thing I wish to point out is that this type of restriction can be found in several contexts that are typically seen as resultative, as I show next.

Firstly, we saw in chapter 1 that the same restriction holds of *na-* in the *na- se* construction, which was shown to contain an unselected object-introducing resultative *na-*. Secondly, as also noted by Romanova (2007), spatial prefixes (i.e. prefixes in manner-of-motion constructions) often show a similar restriction but to the opposite value, i.e. they often attach only to directed-motion/determinate-motion base verbs, but Romanova, among others, still treats them as resultative, i.e. as originating lower than V, so the restriction could not be a matter of top-down selection. Thirdly, some English particle constructions show a similar restriction: *The comedian farted out the anthem* is normally only possible on either a repetitive reading of *fart* or on a reading where there is a single but necessarily long fart, but it is not normally possible on a reading where there is a single momentary/'semelfactive' fart, even though *fart* can otherwise also be read as expressing a single momentary/'semelfactive' fart. Fourthly, a similar restriction holds in the accompanied-motion variant of the *way*-construction (though not its caused-motion variant, cf. Jackendoff 1990: 216, Goldberg 1997), so that one cannot *belch one's way out of the restaurant* on a single momentary/'semelfactive' belch reading of *belch*, and one can *jump one's way over the field* but not #*jump one's way over a half-a-meter ditch* (Goldberg & Jackendoff 2004, Jackendoff 1997: 546). Fifthly, the same restriction holds of the 'time'-*away* construction, where one can only *sneeze the afternoon away* on a repetitive reading of *sneeze* (Jackendoff 1997: 537). Sixthly, the same restriction holds in the so-called perdurative use of the Slovenian *pre-* and Russian *pro-*, which will be argued to be resultative in chapters 3 and 4. And finally, as opposed to *pri-skočiti*^{PF} (lit. at-jump$_{SEMELFACTIVE}$) 'win by jumping once', *pri-skakati*^{PF} (lit. at-jump$_{ITERATIVE}$) 'win by jumping repeatedly' seems to be the more common form of this unselected-object verb to use in Slovenian even in the ski-jumping sentence *Peterka si je v zadnji seriji pri-skakal zlato kolajno* (lit. Peterka self is in last round at-jumped$_{ITERATIVE}$ gold medal$_{ACC}$) 'With his last-round jump, Peterka won the gold medal', where the adverbial 'in the last round' mandates that he jumped just once, as each jumper gets just one jump per round; and similarly, it is *pri-streljati*^{PF} (lit. at-shoot$_{ITERATIVE}$) 'win by shooting several shots' rather than *pri-streliti*^{PF} (lit. at-shoot$_{SEMELFACTIVE}$) 'win by shooting a single shot' that is used in the shooting-competition sentence *Rajmond si je z zadnjim*

strelom pri-streljal zlato kolajno (lit. Rajmond self$_{DAT}$ is with last shoot at-shot$_{ITERATIVE}$ gold medal$_{ACC}$) 'With his last shot, Rajmond won the gold medal', even though the adverbial 'with the last shot' mandates that it was the single last shot that won him the medal.

So the fact that in Russian unprefixed aspectual pairs, *na-* mostly attaches only to imperfective base verbs and only to non-directed-motion/indeterminate-motion imperfective base verbs can hardly be evidence of its VP-externality, or for that matter, of any prefix's VP-externality.

5.5.2 *Weak distributivity as part of the semantics of* na-?

On a related note, I can add at this point that the restriction to imperfective and indeterminate/nondirected motion verbs may in fact be what lies behind the distributivity that is typically associated with events described with *na*-verbs. According to Tatevosov (2007: 535), an expression such as '*na*-throw rocks$_{GEN}$ into pit' (as in (11b) above) gets the reading 'accumulate a quantity of rocks throwing them into the pit successively', and this is because weak distributivity is part of the semantics of *na-* (as in the formula in footnote 19 above) (in this Tatevosov argues against Filip 2000, 2005a, 2005b, who does not build this into the semantics of *na-*). I think, though, that this is probably also not part of the semantics of *na-*, but rather results from the interaction of a nominal that denotes a group of individuated entities ('rocks') and the repetitive reading that the imperfective base verb gets in this construction. This seems most obvious with *na*-verbs consisting of motion verbs, in the case of which only indeterminate/nondirected motion verbs can combine with *na-* but not determinate/directed motion verbs. Since this is a restriction that obtains in various types of resultative constructions, both in Slavic and in English (as was just pointed out in 5.4.1 above), it does not seem warranted to build it into the semantics of *na-*. Furthermore, note that the English verbs *amass* and *accumulate* are also restricted to quantity internal arguments, and if not exclusively then it is at least most typically that such predicates will be interpreted with the quantity argument coming into existence (somewhere) step by step, which boils down to part by part; however, when *amass* and *accumulate* are decomposed, it presumably won't be the resultative head that will be attributed distributivity (and even less will the two be analyzed as containing a VP-external head that encodes distributivity).

And in addition, if weak distributivity was indeed part of the semantics of *na-*, then we presumably predict one of the following two options: (A) *na*-verbs will not be acceptable with nonindividuated mass-noun internal arguments such as 'rice', as these would be undistributable; or (B) the denotation of 'rice' in such sentences should be partitioned to make a distributive interpretation possible, i.e. 'rice' should be read as, say, 'servings of rice'. However, (A) is not correct since sentences like '*na*-cook (a lot of) rice$_{GEN}$' are perfectly normal and in fact very typical (cf. e.g. (11b) above), and (B) is not correct since 'rice' in such sentences does not get any kind of partitioned interpretation.

So I do not think that weak distributivity is part of the semantics of *na-*; however, as the correctness of this claim is irrelevant for the main point I am arguing here, I will not discuss it any further.

5.6 Productivity

Note that the SSKJ dictionary contains no examples of *na-* stacked over another prefix, and whereas they can be constructed, they are—unlike at least some examples in Russian—quite

artificial (confirmed by M. K. and A. Č.). At the same time, *singly*-prefixed *na*-verbs are completely normal in Slovenian (also abundantly present in the SSKJ); and given that these behave the same in Slovenian and Russian, if one claims that *na-* is VP-external in Russian, they will also have to claim that it is VP-external in Slovenian. But then they also predict, incorrectly, that in terms of stacking this *na-* over another prefix, there will be no differences between the two languages.

Also, note that such constructued doubly-prefixed *na*-verbs are nowhere close in naturalness to the cases of the stacked *na-* from chapter 1, i.e. the doubly-prefixed cases of *na- se* (confirmed by M. K., A. Č. and F. Marušič). On the one hand, this is another indication that even if they can be related at some level, the two constructions merit separate treatments (contra Filip 2005a, 2005b) (see 5.7 below). On the other hand, it goes to show that having conventionalized a double-VP structure of one type does not mean that any double-VP structure will work equally naturally, or at all. This is presumably no different from different types of serial-verb constructions, of which one language has more and another has fewer, even though the existence of the structure necessary for one type may suggest that another type will also exist, as the necessary structure exists in another type of serial verb construction. The same goes for English cases such as *The kids played leapfrog across the room* and *Martha danced mazurkas across the room*, which are well-known potential counterexamples to the Direct Object Restriction on English resultatives. Rather than taking such cases to invalidate this generalization (as in Rappaport Hovav & Levin 2001), some have suggested that in these cases, "the verb and the object together form some sort of complex predicate" Goldberg & Jackendoff (2004: 556), or that the case of *dance mazurkas* is "probably best analyzed as involving a complex verb *dance mazurkas*" Young Shim & den Dikken (2007: fn. 5). Whatever the 'complex predicate/verb' is supposed to exactly mean, the existence of such a structure does not mean that it will necessarily become pervasive in English.[52]

5.7 *Na*-verbs (and the *na- se* construction) and result-modifying prefixation

As mentioned in sections 3.2, 3.3 and 4.4.4 of chapter 1 and in footnote 37 above, one type of prefix is a modifier of result, as in (97b). (Note that in (97), *na-* does not have the use discussed in this chapter but a use similar to the English *up* in *fill up*).

(97) a. *na-polniti*
on-fill
'fill up, fill full'

b. *pre-na-polniti*
over-on-fill
'fill up too much, overfill, fill too full'

Since the stem-adjacent resultative prefix in (97) encodes something like 'full', this prefix-encoded meaning can be modified with the stacked prefix to derive the meaning 'fill up too much', 'make too full'. But if we attempt such result-modification on our *na*-verbs, it turns out that it is not possible, as shown in (98).

[52] McIntyre (2004: 564) and Mateu (2005: 75) offer a different hint about these cases, namely, that the PP is an adjunct rather than a resultative complement of the verb. However, on Folli & Harley's (2006: 133-6) tests, this PP appears to come out as an argument rather than adjunct.

(98) a. *na-molsti mleka*
on-milk milk$_{GEN}$
'obtain a certain quantity of milk by milking'

b. * *pre-na-molsti mleka*
over-on-milk milk$_{GEN}$
(intended: 'obtain too much milk/too large a quantity of milk by milking')

If *na*-verbs are some sort of creation verbs, then this is expected: one cannot modify the meaning of the result predicate of 'x cause y to exist' with 'too much', i.e. 'too much exist, overexist'. (Note that *na*-verbs do not ban argument modification with elements such as 'too much', as in *na-molsti preveč mleka* (lit. on-milk too.much milk$_{GEN}$) 'obtain too much milk/too large a quantity of milk', so that what prevents (98b) cannot be the indeterminacy (or, in Filip's 1999, 2005a, 2005b view, the vagueness) of the quantity.)[53]

Furthermore, the distinct behavior with respect to result-modifying prefixation confirms my separate treatment of the *na- se* construction from chapter 1 and the *na*-verbs from this chapter. As was shown in sections 3.2 and 3.3 of chapter 1, the *na- se* cases can naturally occur with this result-modifying *pre-*; due to their meaning of something like 'make oneself full of …'/'get one's fill …', result-modification with *pre-* can be used to derive 'make oneself more thn full of …'/'get more than one's fill …'. This difference is also an argument against Filip's (1999, 2000, 2005a, 2005b) unified account of these two *na-*'s (for which she also has to claim that the reflexive in the *na- se* construction is not introduced by the prefix, Filip 2000, fn. 11 in the prepublication version on her website and http://www.semanticsarchive.net/, absent in the published version).[54]

6. Conclusion

This chapter offered a detailed discussion of the non-reflexive-introducing use of the *na-* which is typically called cumulative/accumulative/quantificational and which is typically treated as VP-external. Contrary to this position, I argued that this *na-* is resultative and that these *na*-verbs are some sort of creation verbs. This explains the possibility of unselected objects and argument blockages. I also argued that these *na*-verbs are very close in structure to English verbs such as *amass* (but with the verbal root providing the manner component), which accounts for their resistance to singular count noun objects. The structure that was proposed contains an 'there-be'/existential result predicate, with the direct object originating as its subject. This explains the fact that the object can be nonspecific indefinite.

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[53] Istratkova (2006: 18) gives the Bulgarian example *pre-na-reža* (lit. over-on-cut) 'cut into pieces again' and considers *na-* a cumulative (her 'excessive') external prefix. However, this is a different use of *na-*, as clearly shown by the fact that it easily takes singular count noun objects, that the latter cannot be unspecific indefinite, etc. (also noted in Pereltsvaig 2006: 460). This *na-* is also internal/resultative, contributing the P part of the paraphrase 'cause be in pieces'. The 'many' in Istratkova's gloss 'cut into many pieces' is an implicature, and Istratkova's verb can thus only be used of something that had been cut up before and then glued back together and now cut into pieces again.

[54] Pereltsvaig (2006) and Romanova (2007) only mention *na- se* in footnotes (Pereltsvaig 2006: 457, fn. 24 and 465, fn. 28; Romanova 2007: 84, fn. 12 and 175, fn. 2 and 183-4, fn. 6); the footnote status of the *na- se* construction suggests that it is probably considered as in some way different from *na*-verbs, but the contents of these footnotes actually suggests that it is considered to be an instance of what I called *na*-verbs. Piñón (1994), on the other hand, clearly separates them, mentioning in a footnote that whereas *na- se* is "clearly related to accumulative *na-*, the two are both morphosyntactically and semantically distinguishable" (op.cit.: 505-6, fn. 11), and so do Spencer & Zaretskaya (1998a), who consider the *na*-verbs as non-resultative/quantificational and the *na- se* examples as resultative (op.cit.: 22, 24-5).

Doubly-prefixed *na*-verbs were proposed to have a two-VP structure. One VP is merged as the complement of a conjunction-like CausP, providing the result, the other is merged in Spec,CausP, providing the manner. Just like in chapter 1, one of the Vs of such a two-VP structure is null. The positing of a null V in these cases, which appear to have two resultative prefixes on a single verb, rescues the widely-held assumption that there can be only one independent resultative secondary predicate per verb. The double-VP structure was further proposed to be characterized by argument-sharing, a phenomenon familiar from multiple-VP structures of some serial verb constructions. The argument sharing is responsible for the fact that when stacked over another prefix, *na-* does not license objects that are unselected with respect to its prefixed-root input.

I also argued that characteristics such as the restriction to imperfective and indeterminate-motion imperfective base verbs, and the resistance that *na*-verbs show to secondary imperfectivization, cannot be taken as support for *na-*'s VP-externality. And needless to say, I treated these *na*-verbs as fairly different from the *na- se* construction of chapter 1, even though *na-* was proposed to be resultative in both cases. Since the two-VP structure of doubly-prefixed *na*-verbs was proposed independently of the two-VP structure in chapter 1, this chapter can also be seen as giving independent support to the general idea of multiple-VP internal-prefix accounts of some prefixes that may appear to be external.

Finally, note that in chapter 1, I claimed that the *na- se* construction *always* gets a double-VP parse when *na-* is stacked over another prefix, but that it *can* also get a double-VP parse when *na-* is the only prefix (in the latter case, the Spec,CausP-internal VP is not resultative). This option is evidenced with singly-prefixed *na- se* data that exhibit, for example, ambiguous scope of adverbials. One may wonder whether the same is possible with the *na*-verbs discussed in this chapter. In principle, there is no reason why this should not be possible. However, given the meaning of the construction, two scopes of adverbials will be hard to detect with any kind of *na*-verbs, as was pointed out in 2.2.1, so it may be quite hard to distinguish such a two-VP parse of a singly-prefixed *na*-case from its single-VP parse.

Chapter 3: On a temporal/aktionsart/perdurative use(s) of Slovenian *pre-* and Russian *pro-*

This chapter discusses a perfectivity-triggering use of the prefix *pre-* in Slovenian which is somehow temporal/adverb-like and as such a potential candidate for a functional analysis. An initial example is given in (1). In Russian, a similar use is exhibited by *pro-*, as in (2), and also by *pere-*, although discussions of this use in Russian typically focus on *pro-*. This is reflected in this chapter, where I leave *pere-* aside (see Flier 1975, 1985 for some contrasts).[1]

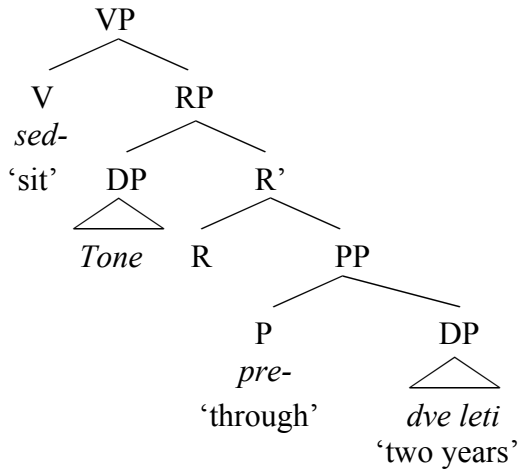
(1) *Tone je v arestu pre-sedel *(dve leti).*
Tone is in prison through-sat two years
'Tone was in prison for two years / Tone spent two years sitting in prison.'

(2) a. *Ivan pro-sidel *(čas).* (Russian)
Ivan through-sat hour
'Ivan sat for an hour / spent an hour sitting.' (Fowler 1994/Svenonius 2004)

b. *Petja pro-sidel v tjur'me *(5 let).* (Russian)
Petja through-sat in prison 5 years (Borik 2002:
'Petja was in jail for 5 years / spent 5 years in prison.' 57/2006: 80)

I argue that the Slovenian *pre-* in (1) is resultative, and that at least on one parse the temporal expression functions as the direct object rather than as an adjunct, which makes it an unselected object (section 1). The same is suggested for the Russian *pro-* in (2) (with Schoorlemmer 1995, contra Fowler 1994, Borik 2002/2006, Svenonius 2004, Ramchand 2004/2008b, Gehrke 2008b, Romanova 2007). Section 2 discusses the *in-x-time* adverbial in the context of *pre-*verbs, section 3 gives an analysis. I propose that the sentential subject originates as the subject of the result and the temporal expression as the complement of the resultative prefix. With the ingredients of (1) above, the starting configuration is as in (3).

(3)



[1] *Pro-* is very limited and largely unproductive as a verbal prefix in Slovenian, and it forms no verbs of the type discussed here with *pre-* (cf. Vidovič Muha 1993: 179, Bajec 1959: 70). Most typically, *pro-*verbs from other Slavic languages match *pre-*verbs in Slovenian (though also *spre-*/*izpre-*verbs, *s-*verbs, etc.).

The subject of result is then promoted to sentential subject position, and the complement of the resultative prefix is promoted to sentential object position. Before concluding, section 4 briefly discusses the consequences of my analysis for some of the widely used diagnostics of VP-externality. The findings of this chapter, where a 'temporal' use of Slovenian *pre-* /Russian *pro-* turns out to be brought about by a resultative prefix, will motivate the point of departure for chapter 4, where another use of Russian *pro-* and another use of Slovenian *pre-* will be discussed and will also be argued to be resultative, though with different structures.

0. Background

Whereas the 'temporal' uses of Slovenian *pre-* have not received any syntactic treatments in the literature, those of Russian *pro-* have, but with largely conflicting claims. The use of Russian *pro-* in (2) is typically discussed as an Aktionsart prefix use, as in Borik (2002/2006), Filip (1999, 2005a) (who calls this use 'perdurative') or Forsyth (1970) (who groups *pro-* with the so-called pofective/delimitative *po-* under 'duratives'). This suggests that a model which syntactically splits prefixes into VP-internal and vP-external would treat it as vP-external, and Ramchand (2004/2008b), Romanova (2007), Gehrke (2008b) and Svenonius (2004) explicitly do so. For example, Svenonius states that while this use can require a temporal adverbial (cf. (2) above), the argument structure of the verb remains unaffected, and so the behavior "is consistent with both the prefix and the temporal adjunct being added outside the verb phrase" (Svenonius 2004: 236). In a similar spirit, Fowler (1994) treats this use of *pro-* (but also Russian prefixes in general) as originating in a functional projection in the Infl domain. The difference with respect to Svenonius is that Fowler treats *pro-* as a functional head, while for Svenonius all vP-external prefixes originate as PPs (either in Spec,AspP or adjoined to vP). The position of Babko-Malaya (1999) is less clear to me; at this point, I will just note that she also mentions this *pro-* in Russian as 'superlexical' (though it is left out of the discussion altogether in Babko-Malaya 2003).

On the other hand, Schoorlemmer (1995: 235-7) claims that one should distinguish two types of *pro*-verbs in Russian, one of which takes a temporal expression as an argument and the other as an adjunct (Klima 1974: 27-8 also makes this claim in a brief remark on Russian *pro-spat'* 'through-sleep', and Gehrke 2008b: 175 states that unlike Russian *pro-*, its Czech cognate takes the temporal expression as an argument). Schoorlemmer thus holds only the second one of these two uses as an 'Aktionsart' prefixed verb, and on such an account, only the second type would be a candidate for a vP-external FP account.[2] Example (4) is one

[2] Schoorlemmer's (1995) model does not treat any Russian prefixes as argument-introducing result predicates. But it still treats one type of verbs with *pro-* (and verbs with inceptive, terminative and pofective prefixes and the *-nu-* suffix) as different from more or less those prefixed verbs that are seen as internally prefixed verbs in Svenonius (2004). With predicates containing what Svenonius (2004) sees as internally prefixed verbs, telicity is calculated via Verkuyl's (1993) [+SQA] in a VP-dominating AspP (and so when a verb has such a prefix, this is really a result of the fact that compositionally calculated telicity forces the use of a perfective verb). With predicates containing verbs prefixed with *pro-*, inceptive prefixes, etc. (i.e. with what Svenonius sees as vP-external prefixes), telicity is marked on the VP-dominating AspP inherently. In some sense, the model thus derives the same distinction as Svenonius' model, but given that it does not discuss how prefix-triggered argument-structure changes come about, I will mostly leave this model out of the discussion. As far as I can see, it cannot explain how prefixes change a verb's argument structure, and it cannot predict that the two types of prefixes will differ along their effects on argument structure. See Młynarczik (2004) for a summary and a critique of Schoorlemmer's model.

of the (three) examples Schoorlemmer (1995) gives as instantiating the type of *pro*-verbs which she sees as containing an adjunct temporal expression (the judgement is also hers). (5)-(6) add two further examples from Fowler (1997) and Borik (2002/2006), which would clearly fit with Schoorlemmer's second type of *pro*-verbs (though these authors do not endorse Schoorlemmer's distinction and consider all temporal expressions with *pro*-verbs as adjuncts).

(4) *Vasja pro-valjal duraka do utra*. (Russian)
Vasja through-play $fool_{ACC}$ until morning
'Vasja spent all night playing the fool.' (Schoorlemmer 1995: 101)

(5) *Galja pro-poloskala vse utro bel'e*. (Russian)
Galja through-washed all morning $laundry_{ACC}$ (Fowler 1997: 160; word-for-
'Galja spent all morning washing the laundry.' word gloss RŽ)

(6) *Petja pro-sidel v tjur'me do starosti*. (Russian)
Petja through-sat in prison till old-age (Borik 2002: 55/2006: 77; w-for-w
'Petja stayed in prison till he was old.' gloss and translation RŽ)

My reason for devoting some space to this use or these uses of *pre-*/*pro-* is that, as I just mentioned, some authors who syntacticize prefixed verbs have analyzed one of them, and some both of them, as non-resultative. At the same time, however, both are normally seen as triggering perfectivity (e.g. Vidovič-Muha 1993 for Slovenian *pre-*, Schoorlemmer 1995, Borik 2002/2006, etc., for Russian *pro-*), and on accounts such as Brecht (1985), Klein (1995), Strigin & Demjjanow (2001), Bertinetto (2001), Žaucer (2002), Arsenijević (2006, 2007), etc., this suggests that they should be resultative. It is against this background that the discussion of chapters 3 and 4 will be cast. As both of these uses will be argued to be resultative, and as the use of *pro-* in chapter 4 is also attested with *pro-* stacked over another prefix, these chapters will also tie in with the discussion in chapters 1 and 2, where some doubly-prefixed 'verbs' were argued to contain two resultative prefixes and, despite appearances, two VPs.

Before concluding these introductory lines, I should add two notes on the acceptability of some of the examples given so far. First, my informants say that 'all morning' in (5) should be either at the end of the sentence or before the verb. Second, my informants say that outside of context and without focus intonation, Fowler's/Svenonius's (2a) above requires some modification to be a normal sentence, such as 'in prison', 'cross-legged', etc.—this is actually already unexpected if that *pro-* is purely aspectual/temporal (and is reminiscent of the situation in *He spent an hour sitting*, where either *sitting* will be focused or some modification will be added, as in *He spent an hour sitting on the balcony*).

1. *Pre*-verbs with a temporal-expression direct object

Durative adverbial adjuncts in Slovenian, and to some extent in Slavic more generally, are morphosyntactically equivalent to arguments. They are not preceded by a preposition and they bear accusative case (cf. Szucsich 2001, Morzycki 2004). The temporal expression in (1)-(2) could thus in principle be either a durative adverbial adjunct or an internal argument. In the discussion of Russian *pro-*, it is sometimes assumed without demonstration that the

temporal expression in (2) is an adjunct (e.g. Ramchand 2008b: 1697, fn. 4). The following six subsections will present six pieces of evidence for treating the temporal expression in Slovenian (1) as a direct object rather than as an adjunct: obligatoriness of the temporal expression, modification of the temporal expression, genitive of negation, delinking of the verb's notional object, passivization and relativization, and the 'do so' constituency test. If the temporal expression in (1)-(2) is a direct object, it is an unselected object, and the prefix is thus plausibly a resultative prefix. The argumentation will mostly use Slovenian *pre-*, though Russian *pro-* will also feature in the discussion, and the applicability of the claims to Russian *pro*-verbs will be explicitly mentioned at the end of each subsection.

1.1 Obligatoriness of the temporal expression

The first thing that suggests that the temporal expression is an internal argument is the fact that it is obligatory, as shown in (8) (cf. also (2) above for Russian).

(8) *Tone je na balkonu pre-sedel* *(*dve uri*).[3]
Tone is on balcony through-sat two hours
'Tone was on the balcony for 2 hours / Tone spent 2 hours sitting on the balcony.'

Of course, as stressed in Borik (2002/2006), obligatory adjuncts are not unprecedented (e.g. *behave* #(*well*), *weigh* #(*62 kilos*), *last* #(*2 hours*)). However, observe that in (9), which differs from (8) only in the presence/absence or *pre-*, 'two hours' is not obligatory at all.

(9) *Tone je na balkonu sedel* (*dve uri*).
Tone is on balcony sat two hours
'Tone was in prison for two hours / Tone spent two hours sitting on the balcony.'

Therefore, the obligatoriness of 'two hours' in (8) must have different roots than that of *well*/*62 kilos*/*2 hours* in *behave* #(*well*), *weigh* #(*62 kilos*), *last* #(*2 hours*), that is, it cannot be simply the pragmatics of the expression that requires it (cf. Goldberg & Ackerman 2001) but rather, in some way or other, the presence of the prefix. Now, if the temporal expression in (8) is really an adjunct, an explanation for its obligatoriness will have to be something along the lines of what Fowler (1994) suggests for the *pro*-sentences, i.e. that the prefix is an operator/head that requires overt manifestation of a temporal expression (say, in its Spec, as per Fowler 1994). However, while this would make sense if the syntactic head were null, it is unusual when it is overt (as our prefix), since overt syntactic heads which are specified for a specific value of the category they express normally do *not* require the presence of an adverb(ial) with the same semantics. For example, a [+past] Tense head realized with an overt affix typically does not require an overt temporal adverbial (even though it may often cooccur with one), a [+durative] Aspect head realized with an overt affix typically does not require an overt aspectual adverbial, etc. In this sense, an explanation of the contrast between

[3] I will gloss the prefix *pre-* with 'through' in all my examples. This is not meant to suggest that every use of *pre-* will have a parallel in the English *through*. *Over*, *across* and *past* would often come closer, as also shown by the fact that when *pre-* is (optionally) doubled by a PP in clearly spatial contexts, it can be doubled by either 'through' or 'over'; *pre-vrtati* (*skozi*) *desko* (lit. *pre*-drill through hole) 'drill through a board', *pre-skočiti* (*čez*) *ograjo* (lit. *pre*-jump over fence) 'jump over the fence' (*pre-*'s cognate preposition *prek* nowadays survives mostly in formal language). To avoid placing too much weight on the gloss, I will just use 'through'.

(8) and (9) in terms of an argument 'two hours' vs. adjunct 'two hours' can explain the difference with less stipulation; as a resultative predicate, *pre-* introduces an argument (which then surfaces as the direct object).

Note also that the so-called 'pofective' *po-* (as in the Russian *po-sidet'* [lit. PO-sit] 'sit a little/for a while'), with which Borik (2002/2006) seems to align the Russian *pro-* in (2), *can* but *need not* cooccur with a further-specifying temporal expression (cf. Borik 2002: 55/2006: 77), even though *pro-* is said to contribute a meaning such as 'a long time' and *po-* a meaning such as 'a little time' (Forsyth 1970: 24 says that *po*-verbs "suggest a short period of time", *pro*-verbs "a longer period", Schoorlemmer 1995: 100 dubs *po-* with "short while" and *pro-* with "longer while", Filip 1999: 203 with "a relatively short period of time" and "a relatively long period of time", Flier 1985: 41 speaks of *po-* and *pro*-verbs with "short and long periods of time, respectively").[4] So, even though obligatory adjuncts are not unprecedented, given that the *pro-/pre-* and *po-* should presumably contribute similar temporal event modification, this difference in the obligatoriness of the temporal expression is nonetheless quite mysterious if the latter is a durative temporal adjunct in both cases.[5]

Finally, Svenonius's (2004) account—where *pro-* is a PP either in the Spec of an FP or adjoined to the vP (Svenonius is not clear on this detail with respect to *pro-*)—may also have a technical problem with the presence of the temporal expression. If the prefix is in the Spec of a measure/aspect FP, it is essentially an adverbial conveying the semantics of a null F^0 (in the style of Cinque 1999, 2004, 2006). Therefore, it is not only unclear *why* an additional temporal adverbial has to be present, it is also unclear *where* it can be merged, with the Spec already taken up by the prefix. And if the prefix is adjoined to the vP, then the temporal adverbial would also be adjoined to the the vP, and so we would expect sentences with only the temporal adverbial but no prefix to behave exactly the same as those with both. However, those with the prefix are aspectually different from those without it (the former being perfective and the latter imperfective, as is standardly assumed and will also become obvious in section 2).

In short, the obligatoriness of the temporal expression in *pre*-sentences is problematic for the claim that the temporal expression is an adjunct both empirically and theoretically. The argumentation from this subsection applies equally to Slovenian *pre-* and Russian *pro-*.[6]

[4] The preposition *po-* has many very different meanings and various meanings of *po*-prefixed verbs probably exhibit different uses of the preposition, so I simply gloss it here as PO-.

[5] Note that the temporal expressions in (4)-(6) are also obligatory, despite their not being direct objects. However, in chapter 4, it will be argued that despite not being direct objects, they are not adjuncts either. So their obligatoriness will stem from their being complements of a resultative prefix.

[6] Ramchand (2004: 340/2008b: 1695) gives the Russian *Petja pro-sidel v tjur'me* (lit. Petja through-sat in prison) 'Petja sat in prison for a certain time' as grammatical. This would suggest that the temporal expression is *not* obligatory. Ramchand credits Borik (2002) as the source of the example, but in discussing this sentence, Borik has a star on the brackets around the temporal expression and states that such cases "usually require explicit reference to the duration" and that "the sentence is ungrammatical without such reference" (op.cit.: : 57-8). Moreover, Ramchand's later version of the paper (2008b) first reproduces this example without the temporal expression (op.cit.: 1695), but later gives the sentence with the temporal expression 'five years' and states that "for these verbs, the bare measure seems to actually be required here, unless contextually strongly implied" (op.cit.: 1697). My informants also reject the sentence without the temporal expression.

1.2 Modification of the temporal expression with unprefixed verbs and with *pre*-verbs

The second thing that can be used to argue against an adjunct analysis for the temporal expression in (1) is the fact that there exist *pre*-prefixed cases that appear perfectly parallel to (1) and in which the expression simply cannot be functioning as an adjunct. Consider (10).

(10) a. *Tone je pre-spal* (*celo*) *predavanje* / ... (*celo*) *predavanje pre-spal*.
Tone is through-slept whole lecture whole lecture through-slept
'Tone slept through the (entire) lecture.'

b. *Tone je pre-sedel večer na balkonu* / ... *večer pre-sedel na balkonu*.
Tone is through-sat evening on balcony evening through-sat on balcony
'Tone spent the evening sitting on the balcony.'

If we compare (10) with (11), it turns out that 'lecture' and 'evening' cannot function as durative adverbials on their own; they can function as such only when modified with 'whole', a numeral ('three evenings'), a demonstrative ('that evening'), etc. (the same holds for the English temporal expressions in the translations of (11)).[7]

(11) a. *Tone je spal* *(*celo*) *predavanje* / ... *(*celo*) *predavanje spal*.
Tone is slept whole lecture whole lecture slept
'Tone slept the entire lecture.'

b. *T je sedel* *(*cel*/*tisti*) *večer na balkonu* / ... *(*cel*/*tisti*) *večer sedel na balkonu*.
T is sat whole/that evening on balcony whole/that evening sat on balcony
'Tone sat on the balcony the whole evening / that evening.'

So, the temporal expressions in (10) clearly function as arguments—indeed, as unselected objects—not as (bare-DP durative adverbial) adjuncts. This makes the temporal expression an unselected object, which suggests the prefix is a resultative argument-introducing prefix.

In principle, of course, one could still claim that while this may be so, the temporal expressions such as 'five hours' or 'two years' in the *pre*-example in (1) are different and are nonetheless adjuncts. After all, what I just showed with the contrast between (10) and (11) cannot be shown for the temporal expressions such as 'two years' in (1). However, a clearly undesirable consequence of such a stance is that we would posit quite radically different structures for two sets of examples that simply do not seem to be radically different. In one case, we would acknowledge a quite literal predicative (VP-internal/resultative) use of the locational preposition *pre-* 'through'/'over'/ 'across, while in the other we would treat *pre-* as a (vP-external) aspectual head or adverb(ial).

As a quick remark on Russian, note that while things may be less clear than in Slovenian with respect to *some* temporal nominals, one can nonetheless easily find cases such as (12a), where the temporal expression can only be an unselected object. Since the

[7] The second version is included in (11a)-(11c) since this is the more neutral word order for these cases; for the sake of direct comparison, both word orders were included also in (10), though there, both word orders seem perfectly natural.

modifier 'whole' is obligatory in the unprefixed version in (12b) but optional in the *pro*-example in (12a), we know that it *must* be possible to parse the temporal expression in (12a) as an internal argument.

(12) a. *Ivan pro-sidel* (*vse*) *utro v tjur'me*. (Russian)
Ivan through-sat whole morning in prison
'Ivan spent the (whole) morning in prison.'

b. *Ivan sidel* *(*vse*) *utro v tjur'me*. (Russian)
Ivan sat whole morning in prison
'Ivan sat in prison the whole morning.'

This means that Fowler (1994, 1997), Borik (2002/2006), Svenonius (2004), Ramchand (2004/2008b), Romanova (2007), Gehrke (2008b), etc., will at least have to settle for Schoorlemmer's (1995) stance whereby *pro*-verbs fall into two types, with one of which the temporal expression *does* function as a direct object.

1.3 Genitive of negation

The third argument for seeing the temporal expression of *pre*-verbs as a direct object comes from the genitive of negation. Direct objects in Slovenian (with prefixed or unprefixed verbs) undergo genitive of negation, whereby their accusative marking is swapped for genitive under sentential negation. As shown in (13), the same happens with accusative-marked temporal expressions with *pre*-verbs.

(13) a. *Tone je* (*v arestu*) *pre-sedel tri leta / Tone je pre-spal predavanje*.
Tone is in prison through-sat 3 $\text{years}_{\text{ACC}}$ / Tone is through-slept $\text{lecture}_{\text{ACC}}$
'Tone spent three years in prison.' / 'Tone slept through the lecture.'

b. *T.* (*v arestu*) *ni pre-sedel treh let*. / *T. ni pre-spal predavanja*.
T in prison not-is through-sat 3 $\text{years}_{\text{GEN}}$ / T not-is through-slept $\text{lecture}_{\text{GEN}}$
'Tone didn't spend 3 years in prison.' / 'T. didn't sleep through the lecture.'

And at the same time, (14) shows that the genitive of negation does *not* affect accusative-marked bare DP durative adverbials; the bare DP adverbials in the positive sentences in (14a) *do* not and *can*not turn genitive in the negated (14b)-(14c).[8]

[8] The situation seems different in the presence of the n-word *niti* 'not even'. In such cases, the adverbial can sometimes optionally turn genitive, as in (i), but this genitive seems to be due directly to *niti*. This is suggested also by the fact that such genitivization has restrictions, one being a ban on overt numerals, (ii), which does not obtain when a *niti*-modified noun is a direct object in a negated sentence, (iii) (cf. Borovikoff 1997).

(i) *Tone v arestu ni sedel niti minute / minuto*.
Tone in prison not-is sat not-even $\text{minute}_{\text{GEN}}$ $\text{minute}_{\text{ACC}}$
'Tone didn't sit in prison even for a minute.'

(ii) *Tone v arestu ni sedel niti *treh minut / ✓tri minute*.
Tone in prison not-is sat not-even $\text{three minutes}_{\text{GEN}}$ $\text{three minute}_{\text{ACC}}$
'Tone didn't sit in prison even for three minutes.'

(14) a. *Tone je* (*v arestu*) *sedel tri leta / Tone je celo predavanje spal*.
T is in prison sat three years$_{ACC}$ / T is entire lecture$_{ACC}$ slept
'Tone was in prison (for) three years.' / 'Tone slept the entire lecture.'

b. *Tone* (*v arestu*) *ni sedel tri leta / *treh let*.
T in prison not-is sat three years$_{ACC}$ / three years$_{GEN}$
'Tone was in prison (for) three years.'

c. *Tone celo predavanje ni spal / *Tone celega predavanja ni spal*.
T entire lecture$_{ACC}$ not-is slept / T entire lecture$_{GEN}$ not-is slept
'Tone didn't sleep the entire lecture.'

Now, I can add that accusative is not always impossible under negation for cases like (13b), compare (15).

(15) *Tone* (*v arestu*) *ni pre-sedel tri leta* (*ampak dve leti*).
T in prison not-is through-sat three years$_{ACC}$ but two years$_{ACC}$
'Tone was in prison not (for) three years (but two years).'

However, this is restricted to contexts with contrastive focus, i.e. 'didn't spend three years in prison but two years'. So it seems clear that such cases are not counterexamples to the claim just made on the basis of the genitive of negation with respect to the direxT-object vs. adjunct status of the temporal expression with *pre*-verbs and with unprefixed verbs. Quite possibly, such cases do not involve sentential negation but negation of smaller constituents.[9]

In summary, although there are some confounding factors, the difference between the systematic availability of the genitive of negation on the temporal expression with *pre*-verbs, as in (13), and its complete unavailability when the temporal expression is clearly an adjunct, as in (14), is quite striking. And as far as I can see, it can only get a plausible explanation if

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(iii) *Tone ni izgubil niti treh minut*.
Tone not-is lost not-even three minutes$_{GEN}$
'Tone did not even lose three minutes.'

[9] Similarly, the genitive need not show up under negation in cases such as (i). Again, these require focus on the temporal expression. One option is that the accusative 'two seconds' is part of a Kayne-(2003/2005)-like bigger structure, *A/THE-PERIOD (WHICH IS) two seconds (OF-TIME)* (see below for more discussion). One way or another, it is clear that such cases are *not* evidence that the temporal expression in cases like (i) is not part of an argument, since in the very same way, we can get accusative under the obligatorily transitive verb 'use', (iia), where the temporal expression is clearly (part of) an argument. Quite like in (i), this case-marking variability also shows up with *non-temporal* measure-expression modifiers, as in (iib). The genitive 'two seconds' in (i) and (ii) can thus presumably either be a direct object on its own or part of a bigger structure with a null noun.

(i) *Tone v arestu ne bo pre-sedel niti dve sekunde / dveh sekund*.
Tone in prison not will through-sit not-even two seconds$_{ACC}$ / two seconds$_{GEN}$
'Tone won't spend even two seconds in prison.'

(ii) a. *Tone za to nalogo ne bo porabil niti dve sekunde / dveh sekund*.
Tone for this task not will use-up not-even two seconds$_{ACC}$ / two seconds$_{GEN}$
'Tone won't spend even two seconds on this task.'

b. *Tone ni popil niti dva litra mleka / niti dveh litrov mleka*.
Tone not-is drunk not-even two liters$_{ACC}$ milk$_{GEN}$ / two liters$_{GEN}$ milk$_{GEN}$
'Tone finished not even two liters of milk.'

we are witnessing a structural difference whereby the temporal expression functions as an adjunct in one case and as a direct object in the other. The fact that the temporal expression can systematically undergo genitive of negation thus lends further support to treating the temporal expression with *pre*-verbs as an argument. Due to the absence of genitive of negation on direct objects in Russian, this test cannot be used to determine the structural status of the temporal expression with Russian *pro*-verbs such as (2) above.

1.4 Non-cooccurrence of the temporal expression and the verb's notional object

1.4.1 If the temporal expression of *pre*-verbs indeed functions as a direct object rather than an adjunct, then we expect that it will normally be impossible to stick in another accusative-marked object (such as the notional object argument of the unprefixed counterpart of the *pre*-verb). This prediction is borne out. (16a) shows that the incremental Theme object *Zdravljica* can normally occur with *kruliti* 'squeal' in the absence of *pre-* (with the meaning 'sing the *Zdravljica* song squealingly'). In (16b), however, the occurrence of *Zdravljica* is blocked.

(16) a. *Pijani gostje so krulili* (*Zdravljico / pesmi*) *celo noč*.
drunk guests are squealed Zdravljica$_{ACC}$/songs$_{ACC}$ all night$_{ACC}$
'The drunk guests squealed Zdravljica/songs all night.'

b. *Pijani gostje so pre-krulili* (**Zdravljico /*pesmi*) *celo noč*.
drunk guests are through-squealed Zdravljica$_{ACC}$/songs$_{ACC}$ all night$_{ACC}$
'The drunk guests squealed (*Zdravljica) the night away.'

If *pre-* is a (vP-external) aspectual functional element and if *celo noč* 'the whole night' is an adjunct in both (16a) and (16b), we are left with a surprising difference. On the other hand, if *celo noč* 'the whole night' is an adjunct in (16a) but a direct object in (16b), then the difference in the acceptability of the verbal root's selected argument is expected (see Jackendoff 2002: 83 for the same reasoning regarding the temporal expression in his 'time'-*away* construction).

In short, the ban on the cooccurrence of the notional object and the temporal expression gives us another argument for seeing the temporal expression as a direct object rather than a durative adjunct. This test works for the temporal expression with Slovenian *pre*-verbs but not with Russian *pro*-verbs, since Russian *pro-* has the additional use from (4)-(5) above. In the next subsection (1.4.2), I address some complications that may seem to go against this conclusion but will be shown to arise due to a different use of the prefix *pre-*. This discussion presents a digression from the main argumentation, so unless doubting the conclusion just drawn, this subsection will best be skipped, jumping straight to section 1.5 on p. 156.

1.4.2 The grammaticality facts presented in (16a)-(16b) hold also if *kruliti* 'squeal' and *pre-kruliti* 'through-squeal' are substituted by, say, *peti* 'sing' and *pre-peti* 'through-sing'. However, if (16b) is fitted with *pre-peti* (lit. through-sing) in the *secondary imperfective* form, i.e. *pre-pevati*, the sentence is fine. Since this is considerably less obvious (though in principle it also holds) in the case of the secondary-imperfective form of *pre-kruliti* (lit. through-squeal), I avoided *pre-peti* in (16). But to avoid having this raised as a counterargument, I will explain what underlies this change in the acceptability of (16b),

which seems to go hand in hand with the change from the basic prefixed form to the secondary imperfective.

Pre-peti appears to have two uses (the *SSKJ* dictionary also lists a third one, 'to outsing', and there may be a marginally possible fourth one, but these can be ignored at this point). In use A, it occurs with a temporal expression functioning as the direct object (*pre-peti popoldne* 'sing through the afternoon'). This is the use from (1), discussed so far with the help of *pre-sedeti* 'sit through' and *pre-spati* 'sleep through'. In use B, *pre-peti* occurs with a non-abstract/non-temporal direct object, which seems to be s-selected by the verbal root 'sing', i.e. 'song', as in (17a). This is the same use we find in, say, *pre-orati njivo* (lit. through-plow field) 'plow through the field'. In use B, the secondary imperfective form of this verb can freely occur with both a durative temporal expression *and* an s-selectionally ordinary argument of 'sing', (17b).

(17) a. *Tone je pre-pel Zdravljico* (*od začetka do konca*) (*v 3 minutah*).
Tone is through-sang Zdravljica from beginning to end in 3 minutes
'Tone sang Zdravljica through from beginning to end in 3 minutes.'

b. *Tone je pre-peval Zdravljico* *(*celo*) *noč*.
Tone is through-sang$_{IMPF}$ Zdravljica entire night
'Tone was singing Zdravljica through all night long. / … was singing Zdravljica over and over all night.'

But unlike in use A, for which I have argued that it exhibits an internal-argument temporal expression, the temporal expression in use B really *is* a durative adjunct. This is why it is only possible with the secondary imperfective form, while the non-secondary imperfective form in (17a) patterns with *in-x-time*. That the temporal expression in (17b) is an adjunct can be tested with the tests outlined in sections 1.2 and 1.3 above. For example, the noun 'night' in (17b) has to be modified by something like 'entire' (as shown in 1.2, only *noč* 'the night' is unambigously a direct object, while *celo noč* 'the entire night' can be an object or an adjunct). The temporal expression in (17b) is thus actually licensed in the very same way as durative adjuncts are licensed with more or less any verb in the secondary imperfective.

Just like *pre-peti*, the verb *pre-igrati* (lit. through-play) 'play through' also productively shows the two distinct uses of (16) and (17). On the other hand, even though the two uses are in principle possible also with *pre-kruliti* (lit. through-squeal), the use in (17) is simply not readily recognized with this verb. In fact, even the use in (16b) is not really an attested form of *pre-kruliti* (lit. through-squeal); the form *pre-kruliti* is not listed in the SSKJ dictionary at all. But (16b) is judged like a perfectly normal productive coinage, while the pattern underlying the well-attested use of *pre-peti* in (17) is apparently more restricted in its productivity with new forms, and so the use of *pre-kruliti* in (16b) is immediately interpreted in the right way while the use of *pre-kruliti* in (17) would require extra effort. We are thus seeing two patterns, one very easily generalizable to new forms and the other—though well-attested with verbs such as *pre-peti* (lit. through-sing) and *pre-igrati* (lit. through-play)—less readily generalizable to new forms. (See Schoorlemmer 1995: 101, fn. 24 for a similar situation with the Russian *pro-igrat'* (lit. through-play) 'play through'.)

Note also that even though the verb in the B use of *pre-peti* (lit. through-sing) and *pre-igrati* (lit. through-play) appears to be s-selected by the base verb (cf. (17)), this is not so, as shown by *pre-igrati* (lit. through-play) in the context of sport, where it means 'fake

out', as in *(*pre*-)*igrati Maradono*$_{ACC}$ 'to fake out Maradona, play one's way past Maradona'. In sum, the data discussed in this subsection do not challenge the conclusion drawn in the previous subsection (1.4.1), where it was concluded that the presence of the temporal expression with *pre*-verbs blocks the expression of the varbal root's notional object, which shows that the temporal expression functions as the direct object rather than an adjunct.

1.5 Passivization and relativization

1.5.1 The core facts

The next piece of support for treating the temporal expression as an internal argument rather than adjunct comes from passivization. As shown in (18), sentences based on *pre*-verbs such as *pre-sedeti* (lit. through-sit) and *pre-spati* (lit. through-sit) can be passivized, and more generally, these verbs can form passive participles used in reduced relatives. Both of these processes require an internal argument. (18a)-(18b) show participial passives, (18c) shows a *se*-passive.

(18) a. *Tisto poletje so bile z moje strani mnoge noči pre-spane brez*
that summer are been from my side many nights through-slept without
deke, ker sem stanoval v hiši brez klime.
blanket as am lived in house without airconditioner
'That summer, I slept without a blanket many nights, living in a house with no airconditioning.'

b. *Tako majhna kazen je bila skoraj vedno pre-sedena brez ugovorov*.
such small penalty is been almost always through-sat without complaints
'Such a small penalty was almost always sat out without any complaints.'

c. *Tako majhna kazen se je skoraj vedno pre-sedela brez ugovorov*.
such small penalty SE is almost always through-sat without complaints
'Such a small penalty was almost always sat out without any complaints.'

d. *Vsaka tri leta, pre-sedena v arestu, bi bila stran vržen cajt*.
every three years through-sat in prison would be away thrown time
'Every three years, spent in prison, would be a wasted time.'

e. *ne-pre-spane noči* (SSKJ)
not-through-slept nights
'sleepless nights'

f. *ure, pre-sedene na sestankih* (SSKJ)
hours, through-sat on meetings
'hours spent at meetings'

And as one would expect, passivization (participial or with *se*) and the formation of passive participles used in reduced relatives are not possible with the same verb without a prefix, as shown in (19).[10]

[10] Unlike what is claimed for Russian (Schoorlemmer 1995, Beedham 1998), Slovenian shows no categorical aspectual restrictions on the participial passive, so the impossibility of (19) cannot be blamed on aspect.

(19) a. * *Tako majhna kazen je bila skoraj vedno sedena brez ugovorov.*
such small penalty is been almost always sat without complaints

b. * *Tako majhna kazen se je skoraj vedno sedela brez ugovorov.*
such small penalty SE is almost always sat without complaints

c. * *Vsaka tri leta, sedena v arestu, bi bila stran vržen cajt.*
every three years sat in prison would been away thrown time

d. * *ne-spane noči*; * *ure, sedene na sestankih*
not-slept nights hours, sat on meetings

In fact, the temporal expression in the ungrammatical (19c) has just the right shape to act as an aspectual adjunct (cf. ✓'sit in prison every three years'). If relativization of such adjuncts were somehow possible, then (12c) should be okay. Since it is not, and since the prefixed (18d), with a (superficially identical) temporal expression *is*, the temporal expression of (18d) must be an internal argument.

In short, the possibility of forming passives and passive participles used in reduced relatives shows that *pre*-verbs link the temporal expression as a direct object, since these processes require an internal argument. In the next subsections, I first address some complications with respect to the argument just presented (contextualization in 1.5.2 and apparently non-agreeing passives in 1.5.3), and then I briefly apply the passivization test to the Russian *pro-* (1.5.4).

1.5.2 Importance of contextualization

The literature sometimes offers non-contextualized attempts of passivization, such as Fowler's 1994: 179 starred passive version of the Russian (2a) above (which, incidentally, was noted to be imperfect even in its active version unless equipped with focus stress or some modification). It is important to note, therefore, that while passivization is possible, it is restricted in the sense that it requires proper contextualization. Jackendoff (1997: 536; 2002: 82) similarly observes that passivization of his 'time'-*away* construction works only with proper contextualization (one of his two examples is *In the course of the summer, many happy evenings were drunk away by the students before they finally realized there was serious work to be done*). With respect to an explanation of this restriction, I will follow Jackendoff (ibid.) in admitting that I do not have one. But I also add that an explanation for the need for proper contextualization nonetheless seems easier to envisage than an explanation for why passivization is possible if these temporal expressions are really adjuncts rather than arguments. Devising a convincing explanation for this seems especially improbable in the light of the contrast between the passivizable contextualized *pre*-examples, (18), and their non-passivizable contextualized *pre*-less counterparts, (19).

Besides contextualization and/or the accumulation of modificational material, specificity and definiteness can also help in smoothing out passivized *pre*-structures (possibly through a contextualizing effect), as shown in (20).

(20) ?(*Ta prve*) *dve ure sta bile pre-sedene pred tevejem, …*
DEF first two hours are been through-sat before TV
'(The first) two hours were spent sitting in front of the TV…'

Of course, definiteness or specificity can sometimes be required for independent reasons, as with the numeral-modified temporal NP that acts as the antecedent of the relative in (21).

(21) *(*Ta prve/Tiste/Vsake*) *dve ure, ki sta bile pre-sedene pred tevejem, …*
DEF first those every two hours that are been through-sat before TV
'(The first/Those/Every) two hours that were spent sitting in front of the TV…'

However, the fact that relativization is possible in fact provides another indication that the temporal expression functions as the direct object (Schoorlemmer 1995, cf. also brief remarks in Klima 1974: 27-8 and Chvany 1975: 265-6). And importantly, neither an attempt at relativization itself nor the latter combined with making a numeral-modified temporal NP definite, can make the unprefixed counterpart acceptable, (22).

(22) *(**Ta prve/Tiste/Vsake*) *dve ure, ki sta bile sedene pred tevejem, …*
DEF first those every two hours that are been sat before TV

So on the one hand, we showed the importance that contextualization can have on the acceptability of passivized *pre*-verbs, which has not always been taken into consideration in the literature. On the other hand, we showed that even with contextualized examples, the contrast between *pre*-verbs and their unprefixed counterparts is still perfectly clear, strengthening the position that the temporal expression with the former is an internal argument and with the latter an adjunct. In addition, we showed that the temporal expression occurring with a *pre*-verb can serve as the antecedent of a relative and the temporal expression occurring with its unprefixed counterpart cannot, which further supports our position.[11]

1.5.3 Apparently non-agreeing passives

In addition to the ordinary passives discussed above, as in (23a), *pre*-verbs marginally also allow an apparently non-agreeing passive, (23b).

(23) a. ?*Vsak dan sta ble na štacjonu pre-sedene skor dve ure.*
every day are been$_{FEM}$ on train-station through-sat$_{FEM}$ almost two hours$_{FEM}$
'Every day, almost two hours were spent sitting at the train station.'

[11] Some temporal expressions which are frequently used as adjuncts may be harder to use otherwise. For an argument-parse of *ves čas/cajt* 'all the time' in (i), some further modification seems helpful.
(i) *Tone je ves* ?(*tist*) *čas/cajt* / *ves čas/cajt* ?(*k mu je še ostal*) *pre-sedu pred tevejem.*
Tone is all that time / all time that he$_{DAT}$ is still left through-sat before TV
'Tone spent all the time / all that time / all the time he had left in front of the TV.'

b. ?*Vsak dan je blo na štacjonu pre-seden(o) skor dve ure*.[12]
every day is been$_{NEU}$ on train-station through-sat$_{NEU}$ almost two hours$_{FEM}$
'Every day, almost two hours was spent sitting at the train station.'

Example (23b), which exhibits a lack of agreement between 'two hours' on the one hand and the auxiliary and the participles on the other, shows that we can also have a passive structure where the noun in the temporal expression was not taken as heading the object. In principle, this could be a case of impersonal passive, a structure that may be marginally possible in Slovenian with both transitives and intransitives. And if this were the case, then these cases would contain a *pre*-verb and no internal argument, which would be a problem for the claim that *pre-* is a resultative, argument-introducing prefix. (Note that if (23b) indeed turned out to be a case of impersonal passive, this would not affect the argument made above based on agreeing passives, so at best, this would mean that *pre-* can *also* be a non-argument-introducing prefix.) I will now try to argue that these non-agreeing passives are not impersonal passives. The discussion will get a bit convoluted, but since but the general idea will partly resurface in a discussion of some unconvential cases in chapter 4, I will engage in it even though the issue is not terribly important at this point.

Note that even if (23b) leaves open the option of an impersonal-passive analysis, the sentence could in principle also be a counterpart of the English non-agreeing version of the transitive-verb structure in (24).

(24) *Almost two hours were/was spent sitting on the train station*.

While the object is headed by the noun 'hours' in the agreeing version in (24), the non-agreeing version in (24), and with it (23b), could be analyzed with 'two hours' as part of a structure with a null noun, something like 'two hours OF TIME' or 'A/THE PERIOD (OF/WHICH IS) two hours (OF TIME)' (cf. Kayne 2003/2005). Indeed, that (23b) is probably not just an impersonal-passive structure is suggested by its non-prefixed counterpart in (25), which is either ungrammatical or at least appreciably worse than (23b).

(25) **Vsak dan je blo na štacjonu seden skor dve ure*.
every day is been$_{NEU}$ on train-station sat$_{NEU}$ almost two hours$_{FEM}$

Further, it seems that non-restrictive relativization using the wh-word used in free relatives can also be applied to structures such as the *pre*-verb passive in (23b), as in (26a) below; the latter is again marginal, but it nonetheless does not compare in its degradation to its unprefixed counterpart in (26b).[13]

[12] The parenthesized 'o' is the standard default inflection (neuter singular), but the structure is probably more at home in the spoken language, where dialects like mine do not have the 'o'.

[13] Positing a null N is needed for such measure expressions independently, as suggested by the fact that they can occur as subjects without agreement on the predicate, (i), while subjects in Slovenian generally require agreeing predicates. 'Two liters/hours' here presumably occurs in a structure such as 'THE QUANTITY (OF/WHICH IS) two liters/hours (of time/milk)'. (The same holds for the English translations.)

(26) a. ?? *Dve ure, kar je blo pre-seden na štacjonu, …*
two hours$_{FEM}$ which is been$_{NEU}$ through-sat$_{NEU}$ on train-station
'Almost two hours, which was spent on the train station, …'

b. * *Dve ure, kar je blo seden na štacjonu, …*
two hours$_{FEM}$ which is been$_{NEU}$ sat$_{NEU}$ on train-station

Therefore, the non-agreeing passivizations and relativizations need not be impersonal passives. Now, I mentioned two options for the partly null structure in which 'two hours' appears in the non-agreeing passives and relativizations, namely, 'two hours OF TIME' or 'A/THE PERIOD (OF/WHICH IS) two hours (OF TIME)'. The first one, however, cannot be correct. If (23b) contained 'two hours OF TIME' as the direct object, then we would expect the participle to be genitive-marked, since the null noun under the measure expression 'two hours' would presumably be genitive (judging on the basis of its overt counterpart). But genitive marking of the participle only seems possible when 'time' is overtly there, as shown in (27).

(27) *Vsak dan je blo na štacjonu pre-sedenga skor dve ure* *(?*cajta*).
every day is been$_{NEU}$ on station through-sat$_{NEU.GEN}$ almost two hours$_{FEM}$ time $_{GEN}$
'Every day, almost two hours of time was spent sitting at the train station.'

The internal argument in such non-agreeing passive *pre*-sentences thus cannot be 'two hours OF TIME'. Therefore, let us consider the second option from above, i.e. 'A/THE PERIOD (OF/WHICH IS) two hours (OF TIME)' (which is in fact closer to Kayne 2003/2005).[14] In such a structure, we need *not* expect genitive-marking on the participle, on the assumption that the noun PERIOD is a neuter one, as feminine/masculine nouns as subjects of passives would be expected to trigger feminine/masculine agreement. Among the possible overt nouns, Slovenian does have such options, e.g. *obdobje* 'period$_{NEU}$'. However, it may actually make more sense to assume that the noun is something abstract, e.g. 'SOMETHING$_{temporal}$', which could easily be expected to be a neuter/default-agreement triggerer. And with a structure such as 'A/THE PERIOD (OF/WHICH IS) two hours (OF TIME)', we would also not expect genitive marking under genitive of negation. I conclude, then, that the lack of genitive agreement on the participle need not be a problem, the non-agreeing passives need not be impersonal passives, and such *pre*-verbs can still be seen as transitive and the *pre-* as an argument-introducing prefix.

Moreover, if the lack of genitive agreement were taken as evidence that we are dealing with an impersonal passive with an intransitive verb in which the temporal

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(i) a. *Dva litra (mleka) bo / bosta preveč.*
two liters milk$_{GEN}$ will-be$_{SG}$ will-be$_{DU}$ too-much
'2 liters (of milk) is / are gonna be too much.'

b. *Dve ure (cajta) ne bo / bosta zadost.*
two hrs time$_{GEN}$ not will-be$_{SG}$ will-be$_{DU}$ enough
'2 hours (of time) is / are not gonna be enough.'

c. *Dve ure je / ?sta dolga doba.*
two hours is are long period
'Two hours is a long time.'

[14] See Kayne (2003/2005) also for a discussion of the nullness of THE and OF in similar English expressions. Similarly, the infinitival *to* apparently has to be null when occurring next to a null verb HAVE, as in *want TO HAVE a beer* (McCawley 1979, Ross 1976, Larson, den Dikken & Ludlow 2006, Marušič & Žaucer 2006b).

expression cannot be an argument, then by the same reasoning, examples such as (28), which contain the obligatorily transitive verbs *po-piti* (lit. PO-drink) 'drink up' and *po-rabiti* (lit. PO-use) 'use up', should also be analyzed as exceptionally intransitive with a measure adjunct instead of the object. This conclusion would be forced on us because the participles in (28) also do not allow the genitive when the measure expression is on its own; at the same time, these verbs allow the non-genitive-marked participle just like the *pre*-verb in (23b) above, (29).[15]

(28) a. *Včer je blo na zabavi po-pitga skor dva hektolitra* *(*vina*).
yesterday is been$_{NEU}$ on party PO-drunk$_{GEN}$ almost two hectoliters wine$_{GEN}$
'Almost two hectoliters of wine was drunk at yesterday's party.'

b. *Za to je blo po-rabljenga skor dve ure* *(?*cajta*).
for this is been$_{NEU}$ PO-used$_{GEN}$ almost two hours time$_{GEN}$
'Almost two hours of time was spent on this.'

(29) a. *Včer je blo na zabavi po-pit(o) skor dva hektolitra* (*vina*).
yesterday is been$_{NEU}$ on party PO-drunk$_{NEU}$ almost two hectoliters wine$_{GEN}$
'Almost two hectoliters (of wine) was drunk at yesterday's party.'

b. *Za to je blo po-rabljen(o) skor dve ure* (*cajta*).
for this is been$_{NEU}$ PO-used$_{NEU}$ almost two hours time$_{GEN}$
'Almost two hours (of time) was spent on this.'

Likewise, of course, these sentences also have the counterparts of the agreeing version in (23a), with the participle 'used up' agreeing with the feminine dual 'hours' and the participle 'drunk up' agreeing with the masculine dual 'hectoliters'. The pattern that was demonstrated for 'two hours' (and 'two hectoliters') obtains with measure expressions generally, so that expressions such as *ogromno* 'a lot', *celo noč* 'whole/all night', *cel hektoliter* 'all hectoliter', etc., behave in the same way.

Therefore, if we assume that in the examples above, 'two hours' occurs in a structure such as 'A/THE PERIOD (OF/WHICH IS) two hours (OF TIME)', then the agreement facts are not a problem and we can still assume that the non-agreeing passives of *pre*-verbs contain an internal argument. And regardless of our assumptions regarding the structure of 'two hours', cases like (28) show that we cannot conclude just on the basis of the lack of genitive agreement in (23b)/(27) that their 'two hours' is not an argument, since then we would also have to treat 'drink up' and 'use up' in (28) as exceptionally intransitive. Thus, what may seem like impersonal passives of *pre*-verbs can still be ordinary passives based on a transitive verb, and *pre-* can thus be seen as an argument-introducing prefix in these cases as well.

Let me sum up the sections on passivization of *pre*-verbs. Firstly, passivization and relativization from *pre*-verb examples are possible, which confirms the claim that the temporal expression is an argument rather than an adjunct. At the same time, they are restricted by contextualization and by specificity/definiteness factors (which has sometimes

[15] I say non-genitive, since the form corresponds to both neuter singular accusative and neuter singular nominative, so in principle, it could be either of the two.

been ignored in the literature when applying this test to the Russian *pro*-). Secondly, the non-agreeing passives are most likely not impersonal passives, which means that we have not yet met any intransitive *pre*-verbs. Thus, *pre*- can be considered to be an argument-introducer in all of those passive sentences. On the assumptions outlined in the Introduction to this thesis, this means that *pre*- is a resultative prefix. And thirdly, many temporal expressions in *pre*-verb sentences at least *can* be parsed as occurring inside bigger structures with null elements. The several possible construals may then act as confounding factors and be another reason why temporal expressions such as 'two hours' are sometimes hard to passivize and/or relativize. But the data presented in this section suggest that this does not warrant considering them as adjuncts.

1.5.4 Russian pro-

1.5.4.1 In the previous subsections of 1.5, we saw that Slovenian *pre*-verbs allow passivization and the use of passive participles in reduced relatives, and that the temporal expression can also act as the antecedent of ordinary relatives. Given that the section on modification of the temporal expression (1.2) suggested that the temporal expression with Russian *pro*-verbs can also be parsed as an object, I will do a quick check on how *pro*-verbs fare with respect to passivizaton, especially in view of the fact that Borik (2002: 59/2006: 81), Fowler (1994: 179) and Chvany (1975: 266) state that passivization of such cases is impossible.

Given proper contextualization, (30a) *does* allow the use of passive participles in reduced relatives, as shown in (13b) ((13b) is of the same type as Fowler's 1994: 179 and Borik's 2002: 59/2006: 81 uncontextualized examples; Chvany 1975 gives no examples).

(30) a. *Petja pro-sidel v tjur'me *(5 let).* (Russian)
Petja through-sat in prison 5 years (Borik 2002: 57/2006: 80; w-f-w
'Petja spent 5 years in prison.' and prose translation mine)

b. *Pjat let, prosiženny e v tjur'me, byli by poterej vremeni.* (Russian)
five years through-sat in prison been would waste time
'(The) 5 years spent in prison would be a waste of time.'

In parallel with the Slovenian (19d), the attributively used participial passive in (31) is also judged as possible (though unlike in Slovenian, this is not the idiomatic way of saying this).

(31) *mnogo ne-pro-spanih nočej* (Russian)
a-lot not-through-slept nights
'many sleepless nights, many nights spent without sleeping'

Furthermore, (32), which tests for the possibility of relativizing the temporal expression, is also unproblematic (Schoorlemmer 1995, Klima 1974: 27-8, Chvany 1975: 266).

(32) *Pjat let, kotorije Petja pro-sidel v tjur'me, prošli nezametno.* (Russian)
five years which Petja through-sat in prison went-by unnoticed
'The 5 years that Petja spent in prison went by unnoticed.'

For (32) to work, the temporal expression must have been parsed as an object. Similarly, if one substitutes 'five years' from (30a) with *čas* 'hour' from Fowler's (1994) (2a) above, the latter can be relativized, as in (33) below. But just as is the case with (2a), which is odd in its present form (at least under neutral intonation), (33) will normally need some additional modification to be natural, such as 'in prison', 'with his legs crossed', etc. (unless 'sit' is contrastively focused, or 'the hour' gets some emphatic modification, e.g. 'an entire hour').

(33) (*Tot*) *čas, kotorij Ivan pro-sidel*… (Russian)
this hour which Ivan through-sat
'The hour that Ivan spent sitting…'

It appears, then, that to the extent that passivization fails with some *pro*-examples of the type in (30a), this must stem either from the general factors that were mentioned in the previous section with respect to passivization of Slovenian *pre*-structures (i.e. contextualization; specificity/definiteness; agreement issues with temporal expressions such as 'five years' or 'hour'), or from some limitations (not understood by me) on the productivity of the participial passive in Russian (cf. also Romanova 2007: 5-6 and 26, fn. 11).[16,17] In addition, there may be idiosyncratic reasons that are specific to particular *pro*-verbs.[18,19] However, the temporal expression of *pro*-examples of the type in (30a) in general

[16] In the discussion of the reflexive/*sja*-passive in Russian, which is typically taken to be completely impossible with perfective verbs, Schoorlemmer (1995: 208) argues that strictly syntactically, the latter nonetheless *is* possible with perfective verbs, as shown by some well-contextualized examples in the "very restricted context" of "non-actual sense", such as the "hypothetical perfective future". So this is another case where Russian passivization, even if of a different type (i.e. the *sja*-passive), is restricted by some ill-understood contextual factors. Schoorlemmer gives no explanation for the restriction. (Grammaticality judgments being "very much context dependent" is also a characteristic of "mediopassives" in Polish [Jabłońska 2007: 149, fn. 5.])

[17] Schoorlemmer (1995: 234) notes also that Russian unprefixed perfective transitives with the semelfactive *-nu-*, such as *sunut'* 'shove', do not passivize. Slovenian participial passives with such verbs need proper contextualization, but they are not impossible as a class; *Peter je bil sunjen v rebra* (lit. Peter is been shoved into ribs) 'Peter got shoved in the ribs', with the *-ni*-inflected unprefixed verb, is clearly grammatical.

[18] Schoorlemmer (1995: 236-7) gives (ia) as a *pro*-sentence that shuns passivization and relativization, (iib).

(i) a. *Skripač pro-igral vsju noč'.* b. **Noč' kotoruju skripač pro-igral*…
violinist through-played all night night which violinist through-played
'The violinist spent the whole night playing.'

This verb may be an especially infelicitous test-case. *Pro-igrat'* is ambiguous between 'pass time playing' and 'squander gambling'. In the second meaning, it is mainly used with non-temporal objects such as 'one's fortune/luck/money'. My informants have difficulty interpreting (ia) and (ib) with the first meaning and consequently say that even (ia) should have a #. Similarly, the 'spend-time-playing' reading is blocked at first with the Slovenian counterpart of (ia), since *pre-igrati*—though in principle it *can* mean 'pass time playing'—is mostly used with non-temporal objects in the meanings 'play a song through' and 'play one's way past someone (in sports)'. But if *igrati* 'play' is changed for *špilati* 'play' as the input to *pre-*—where *pre-špilati* is not lexicalized in any way—the blocking effect disappears and (ib) also becomes okay.

[19] Fowler (1994: 179) states that even the second NP in Russian *pro*-examples such as *My pro-šli Zund* (lit. we through-went Zund) 'We passed Zund' is not a direct object but a non-argument measure phrase (in the Spec of a VP-external PrefixPhrase), since it fails to passivize. Note, however, that especially outside of context, ?*Zund was passed by us* is also degraded (as is, in fact, ?*The night was passed by us reading*, unlike the active *We passed the night reading*). And again, Russian relativizations such as 'the town that we just through-went was Zund' (as well as the English *The town that we just passed was Zund*) are fine. Cf. also Davison's (1980: 45-6) contrast between *Dinner was sat through by all in stony silence* and **The night was typed through by Susan*, where a structural account of the acceptability difference seems hardly imaginable.

must be parsable as the direct object, because otherwise it should not be possible for the data from (30b)-(33) to be grammatical. I conclude, therefore, that Borik (2002/2006), Fowler (1994, 1997), Svenonius (2004), Ramchand (2004/2008b), Romanova (2007) and Gehrke (2008b) fail to discriminate between two types of Russian *pro*-verbs, and that at least some of their examples *do* contain a temporal expression which functions as the direct object (or at least *can* be parsed as the direct object). This is in congruence with Schoorlemmer (1995: 236-7), who claims that with one of the two types of *pro*-verbs, the temporal expression acts as an object.

Some other *pre*- and *pro*-cases that are problematic with respect to passivization and relativization, such as the other one of Borik's (2002: 59/2006: 81) and some of Schoorlemmer's (1995) examples, will be discussed in chapter 4, since they instantiate the construction where the temporal expression indeed does not function as the direct object.

1.6 The 'do so' constituency test

My last argument in support of the claim that the temporal expression of *pre*-verbs is an internal argument rather than an adjunct is based on Jackendoff (1997: 536; 2002: 82), who points out that in the 'time'-*away* construction, "contrasted time adjuncts can be stranded under VP ellipsis, but, as is typical of VP complements, the time phrases in the 'time'-*away* construction cannot".

As shown in (34a)-(34b) below, the bare DP durative adverbial is an adjunct and as such not part of the referent of the 'do so' pro-form. Conversely, the ungrammaticality of (34c)-(34d) suggests that the temporal expression from the *pre*-examples in (1) above *is* part of the referent of the 'do so' pro-form. (In (34c)-(34d), the verb used as the pro-verb contains a different root from the one used in (34a)-(34b). The change is needed because the antecedent is imperfective in (34a)-(34b) and perfective in (34c)-(34d), so the only potentially acceptable form in (34c)-(34d) would be *narediti*; in (34a)-(34b), only *početi* works.)

(34) a. *Jan je na tleh sedel pet ur, Juš pa je to počel tri ure.*
Jan is on floor sat 5 hours Juš PTCL is this done$_{IMPF}$ 3 hours
'Jan sat on the floor (for) five hours, while Juš did so (for) three hours.'

b. *Jan je spal popoldne, Juš pa je to počel dopoldne.*
Jan is slept afternoon, Juš PTCL is this done$_{IMPF}$ morning
'Jan slept in the afternoon, while Juš did so in the morning.'

c. * *Jan je na tleh pre-sedel pet ur, Juš pa je to naredil/počel tri ure.*
Jan is on floor through-sat five hours Juš PTCL is this done$_{PF}$/done$_{IMPF}$ 3 hours

d. * *Jan je pre-spal popoldne, Juš pa je to naredil/počel dopoldne.*
Jan is slept afternoon, Juš PTCL is this done$_{PF}$/done$_{IMPF}$ morning

The pair in (34) thus exhibits yet another contrast between bare DP adverbials and the temporal expression in *pre*-examples. The behavior of (34b) on the 'do so' test shows that the temporal expression in *pre*-examples discussed so far functions as an internal argument, not as an adjunct. As mentioned in chapter 2, the 'do so' test cannot be used in Russian,

because Russian does not make use of a dummy 'do', instead using gapping or a repetition of the same verb (Arthur Stepanov, p.c.).

1.7 Summary of section 1

In sections 1.1-1.6, I discussed the internal-argument vs. adjunct status of the temporal expression in *pre*-examples like (1) above. I argued that there is ample evidence that the temporal expression functions as the direct object of the *pre*-verb rather than as a durative-adverbial adjunct. The evidence consisted of six types: the obligatoriness of the temporal expression (1.1); the absence of the need for modification of the temporal expression (1.2); genitivization under negation (1.3); the non-cooccurrence of the verb's notional argument and the temporal expression (1.4); the availability of passivization and passive participle forms from *pre*-verbs, and the availability of relativizing the temporal expression (1.5); the behaviour on the 'do so' constituency tests (1.6). It was shown that the durative temporal expression with non-*pre*-prefixed verbs behaves differently from the temporal expression cooccurring with *pre*-verbs with respect to all of these characteristics. The difference was attributed to an argument/direct-object status of the temporal expression with *pre*-prefixed verbs and its adjunct status with their non-*pre*-prefixed counterparts. I concluded, therefore, that the temporal expression of *pre*-sentences is an unselected object, introduced by the resultative prefix *pre-*.[20]

At the end of each section, I also commented on the applicability of the particular argument to Russian *pro*-sentences such as (2) above, and three of the arguments were found to apply to Russian *pro*-cases as well (1.1, 1.2, 1.5). Most importantly, sections 1.2. and 1.5.4 showed that at least in some cases, the temporal expression accompanying Russian *pro*-verbs can (though perhaps need not) be parsed as a direct object (with Schoorlemmer 1995, contra Borik 2002/2006, Fowler 1994, 1997, Svenonius 2004, Ramchand 2004/2008b, Romanova 2007 and Gehrke 2008b). With *pro*-verbs derived from bases such as *sidet'* 'sit', this makes the temporal expression an unselected object, which in turns means that the prefix in these cases is a resultative prefix. It also became clear that difficulties with passivization may not always be a reliable indicator that the temporal expression is an adjunct.

2. Change of state or no change of state?

Slovenian *pre*-examples and Russian *pro*-examples such as (35)-(36) are normally considered perfective (e.g. Vidovič Muha 1993, Forsyth 1970, Schoorlemmer 1995, Borik 2002/2006).

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[20] Object- vs. adjuncthood is sometimes tested with extraction from weak islands, as suggested to me by Marcel den Dikken. In languages which show 'weak' weak-island effects, direct objects tend to extract easily but adjuncts never do. The failure of extraction of *200 pounds* in (i) thus suggests that it is not a direct object.
(i) *John weighs 200 pounds*. (ii) * *How many pounds do you wonder whether John weighs?*
This does not work in Slovenian. On the one hand, extraction of direct objects is fairly degraded, (iii). On the other hand, there is no relative difference: to the extent that direct objects can extract, adjuncts can, too, (iv).
(iii) ?? *Kok knjig, se sprašuješ, če je Jan prebrou?*
how-many books refl wonder if is Jan read
'How many books do you wonder whether Jan read?'
(iv) ??*Kok* (*kil*), *se sprašuješ, če je Jan tehtu?*
how-many kilos refl wonder if is Jan weighed
('How many kilos do you wonder whether Jan weighed?')

(35) *Tone je v arestu pre-sedel dve leti*.
Tone is in prison through-sat two years
'Tone was in prison for two years / Tone spent two hours sitting in prison.'

(36) *Petja pro-sidel v tjur'me *(5 let)*. (Russian)
Petja through-sat in prison 5 years (Borik 2002: 57/2006: 80; w-
'Petja was in jail for 5 years / spent 5 years in jail.' for-w and 2nd translation RŽ)

If they contain a result subevent and thus a change of state, then this is not surprising given the hypothesis that the prefix-introduced change of state triggers perfectivity (Brecht 1985, Klein 1995, Strigin & Demjjanow 2001, Bertinetto 2001, Žaucer 2002, Arsenijević 2006, 2007; but see also fn. 14 of the Introduction). Consider, however, the examples in (38).

(38) a. *Tone je pre-sedel v arestu pet let / *v petih letih*.
Tone through-sat in prison five years / in five years
'Tone was in prison for five years; Tone spent 5 years in prison.'

b. *Petja pro-sidel v tjur'me pjat' let / *za pjat' let*. (Russian)
Petja through-sat in prison five years / in five years (Borik 2002: 56/2006:
'P. was in prison for 5 years / spent 5 years in prison.' 78; w-for-w RŽ)

On the basis of (38b), Borik (2002: 56/2006: 78) claims that Russian *pro*-verbs accept the durative adverbial and shun the *in-x-time* adverbial (also Gehrke 2008b: 153, 160, 166, 171). She concludes, therefore, that on one of the standard telicity/change-of-state tests, they come out as atelic/containing no change-of-state. In what follows, I will argue that this conclusion is incorrect, and that such predicates *do* contain a change of state in their denotation.

There are two independent issues that are of importance here (and Borik in principle *does* take them as independent, though they inevitably get mixed up in examples such as (38)). The first is the claim that the temporal expression in (38) is an adjunct rather than an argument, the second is the claim that the *in-x-time* adverbial is ungrammatical. In section 1, I argued against the first claim. In this section, I will focus on the claim that the *in-x-time* adverbial is impossible, and suggest that this is not really the case.

First of all, given that the temporal expression 'five years' in (38)—whether a direct object or an adjunct—is obligatory, it is not correct to test whether the sentence accepts the *in-x-time* adverbial in the absence of the temporal expression, as in (38) (cf. also Nossalik 2007: 6). On the one hand, if 'five years' is a direct object and the *in-x-time* adverbial—as is standardly assumed (e.g. Borer 2005b)—is an adjunct, then the latter cannot substitute the direct object (even if they are both temporal expressions). And given the obligatoriness of the direct object, the sentence will be ungrammatical without it regardless of the *in-x-time* adverbial. On the other hand, if 'five years' is an obligatory adjunct, it need not be reasonable to expect that an adjunct of a different type will be able to replace it. So the (un)acceptability of the latter should be tested *in the presence* of the temporal expression. However, since the latter expresses a time period, it is immediately obvious that the addition of an *in-x-time* adverbial—if grammatically possible—will require some unusual pragmatic conditions. But consider (39).

(39) a. *Ker je tekma trajala 30 minut, je torej nujno res, da je Tone*
as is match lasted 30 minutes is thus necessarily true that is Tone
pre-sedel tekmo v točno 30 minutah.
through-sat match in exactly 30 minutes
'As the game lasted 30 minutes, it must be true that Tone sat through the game in precisely 30 minutes.'

b. *Ker ima dan 24 ur, je nujno res, da če je Tone pre-sedel cel dan,*
as has day 24 hours is necessarily true that if is Tone through-sat whole day
ga je pač pre-sedel v 24 urah.
it is PTCL through-sat in 24 hours
'If the day has 24 hrs, then it must be true that if Tone sat through the whole day, he sat through it in 24 hrs.'

c. *Ker je Tone (v arestu) pre-sedel 5 let, je lahko res samo to, da jih*
as is Tone in prison through-sat 5 years is PTCL_{MOD} true only this that them
je pre-sedel v 5 letih, ne pa da jih je pre-sedel v 3 letih.
is through-sat in 5 years not PTCL that them is through-sat in 3 years
'As Tone sat out 5 years in prison, it can only be true that he sat them out in 5 years and not that he sat them out in 3 years.'

d. *V tem filmu junak v arestu pre-sedi 5 let; ampak če pritisnem*
in this movie hero in prison through-sits 5 years but if press
'hitro previjanje', bo pa 5 let pre-sedel v 10 sekundah.
fast forwarding will PTCL 5 years through-sit in 10 seconds
'In this movie, the hero spends 5 years in prison. But if I hit fast-forward, he'll spend his 5 years in prison in 10 seconds.'

One might want to say that (39a)-(39b) differ from (38) in that they contain an internal argument rather than a clear temporal measure expression, but there are two problems with this. First, the internal argument is thus an unselected object, cf. **sedeti tekmo (v 30 minutah)* 'sit the game (in 30 minutes)', and so 'through-sit the game' would have to be treated as crucially different from 'through-sit 5 years'; clearly an unwelcome result. And second, this trick will not work for (39c-d), which contain the same predicate as (38), i.e. 'through-sit 5 years in prison'. This suggests that the explanation for the result in (38) is thus the following. On the one hand, if 'five years' is left out, the sentence is *grammatically* impossible irrespective of the *in-x-time* adverbial. On the other hand, sticking in the *in-x-time* adverbial *in addition to* the temporal expression 'five years' will normally result in *pragmatic* deviance since the sentence already contains a temporal measure expression. If the denotation of the *in-x-time* adverbial matches that of the direct-object temporal expression, then we normally get redundancy, with only rare contexts, such as in (39a)-(39c), making such doubling acceptable; if the denotation of the *in-x-time* adverbial clashes with that of the obligatory temporal expression, suitable contexts may only exist in alternative worlds, as in (39d). But

importantly, grammatically speaking, our *pre*-verbs *do* allow the *in-x-time* adverbial, which thus confirms their change-of-state character.[21]

Note also that it will not work to simply brush the examples in (39) and the context-dependent acceptability of the *in-x-time* adverbial with *pre*-verbs aside as some marginal, pragmatically licensed phenomenon, since it would then remain unclear why such a use of the *in-x-time* adverbial does not work in the examples in (40), for which the same context has been set up.

(40) a. *Tone je sedel* (*v arestu*) *5 let / od 1998 do 2003, *torej je sedel* (*v arestu*) *v 5 letih*.
Tone is sat in prison 5 yrs from '98 to '03 so is sat in prison in 5 yrs
'Tone sat (in prison) for 5 years / from '98 to '03, so he …'

b. *Tone je včeraj laufal maraton 2 ure 15, *torej ga je laufal v 2 urah 15*.
T is yesterday ran marathon 2 hrs 15 so it_{ACC} is ran in 2 hrs 15
'Testerday, Tone ran the marathon 2:15, so he ran it in 2:15.'

c. *Tone je po-sedel* (*v arestu*) *par minut, *torej je po-sedel* (*v arestu*) *v par minutah*.
T is PO-sat in prison few minutes so is PO-sat in prison in few minutes
'Tone sat in prison for a while, a few minutes, so he …'

If the temporal expression in (37) is really an adjunct rather than an argument and if that *pro-* is really just another vP-external/functional element (as per Svenonius 2004, Ramchand 2004/2008b, Romanova 2007, Gehrke 2008b), or if the temporal expression in (37) is really an adjunct rather than an argument and if the *pro-* is just some sort of perfectivizer/quantizer (as in Borik 2002/2006), then (40a) contains the very same VP-predicate as (37) and (39c), i.e. 'sit (in prison) five years'. In addition, (40b) shows that the *in-x-time* adverbial is also not licensed in this way with the non-result-state type of quantity predicates mentioned in section 2.3.3 of the Introduction. And (40c) contrasted with (39c) shows—in view of Forsyth's (1970), Flier's (1985) and Borik's (2002/2006) co-grouping of *pro-* and *po-*—that the delimitative/pofective *po-* in this case also behaves differently from *pro-*, one allowing and the other shunning the *in-x-time* adverbial.

In fact, one can observe the same kind of behavior with verbs such as 'spend' in Slovenian and English. As shown in (41a), 'spend' naturally accepts the *in-x-time* adverbial when its internal argument is *not* a temporal expression; but when the internal argument *is* a temporal expression, (41b), the *in-x-time* adverbial is infelicitous. And as shown in (41c), the *in-x-time* adverbial can be okay if a plausible context is set up, quite parallel to *pre*-examples in (38).

(41) a. *Denar sem porabil* (*za sladoled*) *v 3 urah*.
money am used for ice-cream in 3 hours
'I spent the money (on ice-cream) in 3 hours.'

[21] Jackendoff (1997: 540) briefly notes that the 'time'-*away* construction is telic but that "apparently because the time period is already specified", the standard (a)telicity tests fail, as in **Lois and Clark danced two blisfull hours away for/in a month*. In contexts similar to those given in (39) for *pre*-verbs, it could likewise be shown that the *in-x-time* adverbial in principle *is* possible with the 'time'-*away* construction.

b. *Zadnji 2 uri sem porabil* (*za nakupe*) (*#v dveh urah*).
last 2 hours am used for shopping in two hours
'I spent the last two hours (for shopping) (*in two hours).'

c. *Če sem* (*za to*) *porabil 2 uri, mora biti res, da sem ju porabil v 120 minutah*.
if am for this used 2 hrs must be true that am them used in 120 minutes
'If I spent 2 hours (for this), then it must be true that I spent them in 120 minutes.'

To summarize, *pre*-verbs license the *in-x-time* adverbial, but for pragmatic reasons, the latter is only felicitous under very special circumstances (and the same holds for 'spend' verbs when they occur with a temporal-expression as their internal argument). The acceptability of the *in-x-time* adverbial shows that such predicates contain a change of state in their denotation (are telic). Since this type of prefixation triggers perfectivity, this is also in accordance with the hypothesis that prefix-triggered perfectivity is a result of a change of state (Brecht 1985, Klein 1995, Strigin & Demjjanow 2001, Bertinetto 2001, Žaucer 2002, Arsenijević 2006, 2007).[22]

3. Structure of *pre*-verbs

I have concluded that the temporal expression occurring with *pre-* verbs functions as the direct object, and that since at least some of the verbs that occur with *pre-* in this use certainly do not introduce any internal arguments on their own (such as 'sit'), it can only be the case that the temporal-expression direct object is introduced by the prefix. I have also concluded that *pre*-verbs can combine with an *in-x-time* adverbial, in the right context, and that in contrast to their unprefixed counterparts (such as 'sit'), they thus contain a change-of-state. Both of these characteristics of *pre*-verbs show that *pre-* is a resultative prefix.

Though the most important point has thus been made, one would ideally want to determine how exactly the prefix introduces its temporal argument. In principle, the temporal expression could originate either as the subject/external argument of the prefixal small clause or as the internal argument of the prefix. As will become clear from section 3.1.1, it does not seem that one of the options is eminently more appropriate, even if one takes the meaning of the prefixal P *pre-* 'through, over, across' quite seriously. Nonetheless, I will propose that the direct-object temporal expression originates as the internal argument of *pre-* and the sentential subject originates as the external argument of *pre-*'s small clause, in a structure with two VP-internal arguments (3.1.2). In sections 3.1.3 and 3.1.4, I will offer two further sets of data that support this choice of analysis, and in section 3.2, I will also comment on a possible objection to this structure and on an alternative possibility in the spirit of McIntyre's (2004) event paths.

[22] *Pre*-verb structures also do not combine with the result-state adverbial, whose availability is another indicator of the presence of telicity/change-of-state (cf. Dowty 1979, Piñón 1999, Kearns 2007). However, it is well-known that while the availability of the result-state adverbial is an indication of a result state, it is not the case that every change-of-state structure admits the result-state adverbial. The indisputably telic/change-of-state *spend the day hiking* or *spend 30 dollars* is such a predicate (cf. Piñón 1999 on some of these issues); the achievement *x reached the summit*, with its result state of x being on the summit (cf. Dowty 1979, Moens & Steedman 1987, Piñón 1997), also seems to shun the result-state adverbial; and Willim (to appear) claims that spatial *prze*-verbs in Polish also shun the result-state adverbial. The same disclaimer applies with respect to a related telicity test, i.e. the availability of a restitutive reading for 'again', which *pre*-verbs also seem to fail.

3.1 Temporal expression as the internal argument of resultative *pre-* rather than as external argument of prefixal small clause

3.1.1 Initial evidence

Examples of the following type are quite common: the Slovenian *Komisija ne more iti kar tako prek tega dejstva* (lit. committee not can go_{INF} just like-that over this fact) 'The committee can't just ignore this fact', or the English *John is finally over this*, *You should get over it*, *We'll go over the details later*. These all involve metaphorical uses of the English *over* and Slovenian *prek* 'over' where, for example, *this* is the internal argument of *over*, and *over this* is predicated of *John*. So in the light of our interest in the structure of the *pre-* prefixed examples above, these examples point towards an analysis where the prepositional/prefixal PP is predicated of the argument which later ends up in the sentential-subject position, and where the argument that the prefix introduces starts out as the internal argument of the prefix and gets promoted to the direct object position.

The same applies to the Slovenian *skoz* 'through' and the English *through*, which show uses that suggest that *skoz* 'through'/*through* can be used as heading a secondary predicate designating the final location in a metaphorical motion of the sentential subject. Some English examples: *John went through your stuff*; *We've gotten through three chapters already* (Jackendoff 1996: 332, Fn. 14); *I still have half of my beer left, but I actually think I won't get through it* (J.M. at the *Aulde Dubliner* pub, Ottawa, Dec. 2006); *It's a health hazard for guests and staff when five players get through six cigarette packs during a three-hour game* (*The Epoch Times*, Dec. 29, 2006–Jan. 4, 2007); *He's been/gone through all sorts of things*. And some Slovenian examples: *iti še enkrat skozi vse naloge* (lit. go still once through all exercises) 'go over all the exercises again', *priti skozi polovico vaj* (lit. come through half $exercises_{GEN}$) 'get through half of the exercises'. Such cases seem to motivate an account that will have the temporal expression of *pre*-verbs originating as the internal argument of the prefix and the sentential subject as the subject of the small clause.

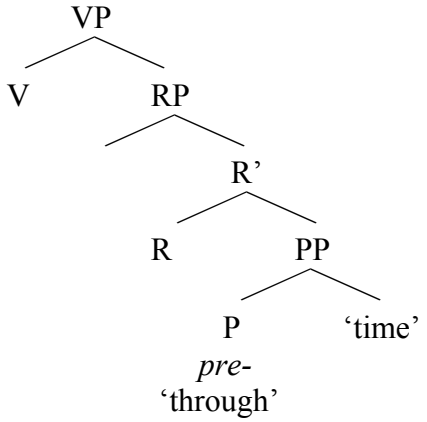
In fact, McIntyre (2004) indeed analyzes the direct object in *read the book through* as originating as the complement of *through*, i.e. as the conceptual Location of *through*, and then getting subsequently promoted to the direct object position. He notes that this explains certain similarities between *read the book through* and the prepositional verb *read through the book*; applied to Slovenian, we are thus aligning the prefixed *pre-listati knjigo* (lit. through-leaf the book) 'leaf through the book' and the prepositional *listati skozi knjigo* (lit. leaf through the book) 'leaf through the book'.[23] Also in this spirit is the view whereby *pre-* verbs such as *pre-bedeti noč* (lit. through-wake night) 'spend the night awake' express an event where the 'waker' metaphorically moves through the night (Vidovič Muha's 1993: 176, Bajec 1959: 63, as well as Janda 1986: 143 for Russian *pere*-verbs, Tchizmarova 2005: 202, 2006: 28 for Bulgarian *pre*-verbs).[24]

[23] The two differ in that the prefixed version is perfective and as such entails a change of state while the prepositional version does not.

[24] Syntacticians tend to be sceptical about syntactic structures built on such metaphorical interpretations as being too much in the spirit of cognitive linguistics. In formal semantic literature on aspect, however, abstract/metaphorical paths are far from uncommon; cf. Krifka (1998), Filip (1999), Hay *et al*. (1999), etc., who see change-of-state predicates as motion along abstract paths/scales. Also, it should be noted that formal syntax has recently widely considered the direct object construction (*John gave Mary a book*) as containing possession

Furthermore, Svenonius (2003) extends UTAH-like ideas from the verbal domain to the prepositional domain, claiming that just as had been proposed for the Theme and the Agent in the verbal domain, Location/Ground always originates as an internal argument of P and Locatum/Figure always originates as the external argument of P (Spec of little *p*). When this seems to be violated in the surface output, we are dealing with unaccusative P's (in analogy with unaccusative V's). In the same spirit, McIntyre (2004: 538) notes that a "passive-like operation acting on a preposition" may be involved in particle-verb structures such as *wipe the table off* [=wipe dust off the table] or *pour the bucket out* [=pour water out (of the bucket)] (cf. also Levin & Sells 2007, but also Blom 2005: 198-192 for a different view). Romanova (2007: 95-99, 110-114) suggests the same for some cases of Russian prefixation. Therefore, if the temporal expression in our *pre*-verbs is the conceptual Location of *pre-*, as the above examples and paraphrases would seem to suggest, then according to Svenonius' hypothesis, the temporal expression can only originate as the internal argument *pre-*, not as the subject of the small clause. The tree in (42) presents the basics of this analysis graphically.[25]

(42)



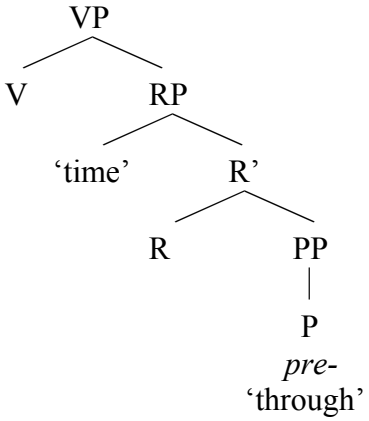
Despite the data above, however, it is nonetheless not totally clear that the temporal expression could not also be seen as the Locatum, getting metaphorically displaced with respect to some implicit, contextually specified entity. One use of *over* that could perhaps be seen as pointing in this direction is found in *The game is over*. The metaphorical uses of *through* in *The rehearsal went through without problems*, *I'm through with explaining my situation*, *Once the lecture was through…* or the Slovenian *podplati so skozi* (lit. soles are through) 'the soles have a hole (have been worn through)' exhibit the same pattern, potentially suggesting seeing the temporal expression in *pre*-verbs as the conceptual

(*Mary HAVE/BE-WITH a book*) and its prepositional counterpart (*John gave a book to Mary*) as containing motion or location (*book GO to Mary/COME-TO-BE-AT Mary*) (cf. Harley 2003, Beck & Johnson 2004, etc.). Given that these frames also include sentences such as *John told Mary the news*/*John told the news to Mary*, similar metaphorical interpretations (*Mary HAVE/BE-WITH the news*; *the news GO to Mary/COME-TO-BE-AT Mary*) in fact seem to be quite widely assumed among formal syntacticians as well.

[25] Particles/prefixes are sometimes seen as intransitive Ps (Emonds 1985), so that their internal argument would be seen as syntactically absent (even if present in the conceptual structure). In such a model, our *pre-* would thus differ from typical (uses of) prefixes/particles in having a syntactically present internal argument (such a special status is also assumed in McIntyre 2004 for the particle *through* in *read the book through*). On the other hand, in a model such as Svenonius (1996), where particles normally have a syntactically present but covert pronominal complement, *pre-* would be special in having an overt and non-pronominal complement.

Locatum, i.e. merging the temporal expression as the subject of the prefix. Note that this need not violate Svenonius' hypothesis, it only changes the way the temporal expression is conceptualized, i.e. as Locatum rather than Location. This analysis is given in tree format in (43).

(43)



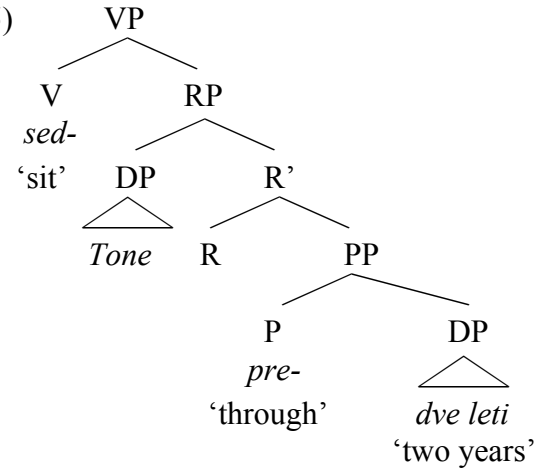
But then again, while it is conceivable to see these uses of *through* as containing such a lexicalized/idiomatic interpretation of *through*, these cases may nonetheless also be seen in one of the following two ways. First, the P could be seen as having a null complement, as in something like 'The lecture is (≈has run) through its course', and secondly, one could claim that the NP in *The game is over*, *The lecture is through*, *The rehearsal went through*, or the Slovenian 'the soles are through' in fact originates as the complement of *over/through* and is only subsequently promoted to the position of the sentential subject; if so, we would be witnessing an unaccusative use of *over/through*. This may also suggest that the canonical position for the *through*-related argument in examples such as *read the book through* or its Slovenian prefixed-verb counterpart *pre-brati knjigo* is as the complement of the particle/prefix. And if this is so, then it may not be unreasonable—at least in the absence of better evidence for one or the other position—to generalize from this also to the cases with the temporal expression as the direct object of *pre*-verbs. So it seems that even if things are not perfectly clear, all of the data *do* yield to the analysis in (42), i.e. with the temporal expression as the internal argument of *pre-* rather than as the external argument of the small clause. The next subsection adds some further details about this proposal.

3.1.2 The structure and the derivation

In some more detail, the structure of canonical *pre*-verbs such as (44) below is proposed to be as in (45) (ignoring the locative adjunct). (Essentially the same structure is proposed in Svenonius 2004: 223 for the Russian spatial predicate *pere-letet' granicu* (lit. through-fly border) 'fly across the border'.)

(44) *Tone je v arestu pre-sedel dve leti*.
Tone is in prison through-sat two years
'Tone spent two hours sitting in prison.'

(45)



Tone subsequently raises to the sentential subject position, and the temporal expression gets promoted to direct object. The structure is thus analyzed as a directed-motion predicate—with the motion taking place in time rather than space—paraphrasable as 'x sit & x BECOME through two years/the-afternoon/…'. In essence, we have a derivation which is like the derivation of unaccusative structures with respect to the sentential subject, which originates VP-internally, but is unlike standard unaccusative structures in that the structure eventually also has an accusative-marked direct object. Since the latter originates below the nominal that ends up as the sentential subject, there is no problem of locality. As was mentioned in 1.5.3 above, 'two years' can presumably also be parsed as a modifier within a larger nominal projection headed by a null noun, 'A/THE PERIOD (OF/WHICH IS) two years (OF TIME)' (cf. Kayne 2003/2005). On this parse, it is this larger projection that sits in the complement of the prefix in (45).

As already mentioned in footnote 25 above, the analysis in (45) suggests that *pre-* is in some way special among prefixes, since resultative prefixes typically only license arguments via their external argument position, whereas *pre-* is claimed to license an argument via its internal-argument position. If the internal argument of particles/prefixes were seen as syntactically absent, then our *pre-* would differ from most other (uses of) prefixes/particles in being able to have a syntactically present argument (such a special status is assumed in McIntyre 2004 for the particle in *read the book through*). And if the internal argument of particles/prefixes is normally a syntactically present but covert pronominal complement (Svenonius 1996), *pre-* would be special in having an overt and non-pronominal complement. Assuming the second view, we can posit that the reason why the internal argument is promoted to the direct object position is due to the fact that *pre-* is an unaccusative P (cf. Svenonius 2003, 2004) and thus cannot assign prepositional case. One way or another, a special status has to be assumed for *pre-*, but this brings us adherence to the UTAH, with Location invariably originating as the internal argument of P (Svenonius 2003). Also, this is not unprecedented, as the same has been proposed precisely for (one

possible) counterpart of *pre-* in Germanic languages, namely, the English *through* (McIntyre 2004).[26]

To summarize, I propose that *pre*-verbs have their temporal-expression direct object originating as the internal argument of *pre-* and the sentential subject as the external argument of the small clause. In addition, I propose that *pre-* belongs to a set of prefixes that are special in being transitive, or if all prefixes are seen as transitive, in being able to have overt internal arguments.

3.1.3 Additional evidence from 'denominal' pre-*verbs*

In this section, I offer another piece of support for the claim that the temporal expression of *pre*-verbs originates as the complement of *pre-* rather than as the external argument of the small clause, that is, for the structure in (42)/(45) over the one in (43). The evidence comes from 'denominal' *pre*-verbs such as *pre-zimiti* (lit. through-winter) 'spend the winter', *pre-nočiti* (lit. through-night) 'spend the night'.

Compared to the rest of the *pre*-verbs seen so far, such verbs are interesting in that they are normally intransitive, requiring neither an object nor a temporal expression in any other form, (46) (although, as is usual with 'denominal' verbs, a doubling/further-specifying object such as 'the longest winter of his life' is in principle possible).[27]

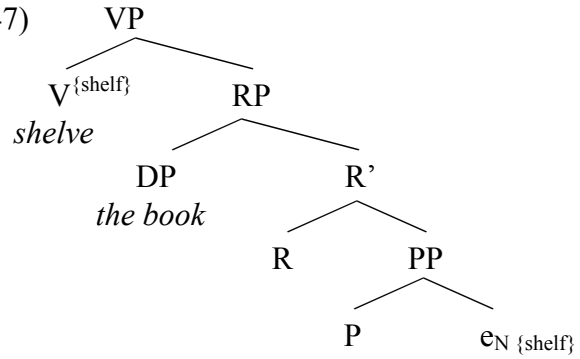
(46) *Medved bo pre-zimil / pre-nočil v živalskem vrtu.*
bear will through-winter through-night in animal garden
'The bear will winter/spend the winter in the zoo / spend the night in the zoo.'

Hale & Keyser (2002) interpret the fact that 'denominals' such as *shelve* can occur with a further-specifying PP (as in *shelve the book on a windowsill*) as evidence for the position that such 'denominals' do not involve standard noun incorporation (see section 2.1.4 in chapter 2). Instead, they argue that such constructions have *shelve* inserted directly in V^0, *the book* as the external argument of a small clause, and *windowsill* as an internal argument of the preposition *on*. When there is no overt further-specifying PP (as in *shelve the book*), we have a null P with a null internal argument that is in some sort of quasi-selection relation with *shelve* (which they represent with braced indices), as in (47) (Hale & Keyser 2002: 95, adapted to the RP model).

[26] Cases that look just like our *pre*-verbs exist also in Hungarian, (i).
(i) *Péter át-aludta a délutánt*. (Hungarian)
Peter through-slept the afternoon-ACC
'Peter slept through the afternoon.' (Kiss 2006: 25)

[27] Due to the difference in the presence/absence of the requirement for a temporal expression between these verbs and those discussed before (e.g. in (1)), a vP-external FP account of *pre-* presumably has to treat these two types of verbs as crucially different, even though the meaning contributed by *pre-* seems to be exactly the same.

(47)



Compared to 'denominals' such as *shelve*, with which the further-specifying element is a PP, the *pre*-verbs in (46) can in principle occur with a further-specifying object (such as 'the longest winter of his life'), so they likewise do not involve real incorporation but rather have 'winter' inserted directly in V^0 and the potential further-specifying object originating in the prefixal small clause (and getting promoted to direct object due to *pre-*'s failure to assign case).[28]

On the analysis of *pre*-verbs in (42)/(45) above, the structure would thus have 'the bear' as the subject of the small clause and the overt further-specifying object or the null $NP_{\{winter\}}$ as the internal argument of *pre-*. On the analysis of *pre*-verbs in (43), we would have 'the bear' originate as the sentential subject (say, Spec,vP) and the overt further-specifying object or the null $NP_{\{winter\}}$ as the external argument of the small clause of *pre-*. I will now suggest that causative uses of *pre*-verbs in (46) favor (42)/(45) over (43).

As already mentioned, the *pre*-verbs in (44) typically occur without a temporal-expression object, but at the same time, these verbs also show the causative uses in (48).

(48) a. *Ohrovt pre-zimimo v zračnem in hladnem prostoru*. (SSKJ dictionary)
kale through-$winter_{1PS.PL}$ in ventilated and cool place
'Kale should be wintered in a well-ventilated and cool place.'

b. *pre-nočiti gosta* (SSKJ dictionary)
through-night guest
'to put up a guest for the night'

If we assume that these causativizations are possible due to the presence of the small clause, as in the English *jump the horse over the fence* (cf. Rappaport Hovav & Levin 1995: 111, Hoekstra 2004: 387, fn. 15, Folli & Harley 2005: 105, Folli & Harley 2006: 123), then the analysis of *pre*-verbs in (42)/(45) would give us the structure 'x cause kale be through winter' and 'x cause guest be through night'. On the other hand, the analysis of *pre*-verbs in (43) does not give us any sensible structure. We either miss a position to introduce 'kale' (e.g. 'x cause night be through'), or we encode an interpretation that does not make sense (e.g. 'x cause night be through kale') and whose structure would problematically have to posit either a regular non-expression of the subject of result, in violation of standard views about the realization of subjects (cf. the EPP principle), or incorporation of a subject into the

[28] If these were cases of real incorporation, a head-movement account of the linearization of *pre-* would predict the wrong output, namely, **zim-pre-*.

verb, in violation of standard views about incorporation. Therefore, the causative use of the special *pre*-verbs in (46)/(48) lends support to the claim that the object of *pre*-verbs originates as the internal argument of *pre-* rather than as the external argument of the prefixal small clause. Furthermore, the very existence of causative versions of our *pre*-verbs can be taken as support for the view that the structure of *pre*-verbs contains two VP-internal arguments, since it is known that unergative and transitive verbs typically do not undergo lexical causativization (Folli & Harley 2006, McIntyre 2004, etc.).

3.1.4 Additional evidence from some adverbial data

In this section, I offer another piece of data that seems to favor the structure in (42)/(45) over the one in (43). The relevant data comes from the contrasts that (49)-(50) below show with respect to the acceptability of some manner adverbials, which will be claimed to tentatively suggest that *pre*-verbs are directed-motion structures, which is only possible if their sentential subject originates as the subject of the result predicate, which, in turn, means that the temporal expression can only be the internal argument of *pre-*.

(49) a. ?? *Večino kariere je pre-igral za CSKA*.
most career is through-played for CSKA
'He spent most of his career playing for CSKA.'

b. * *Večino kariere je za-igral za CSKA*.
most career is behind-played for CSKA
(intended: 'He wasted most of his career playing for CSKA.')

(50) a. *Pobča sta* (??*o tem*) *pre-filozofirala celo popoldne*.
boys are about this through-philosophized all afternoon
'The boys spent the whole afternoon philosophizing about this.'

b. *Pobča sta* (**o tem*) *za-filozofirala celo popoldne*.
boys are about this behind-philosophized all afternoon
'The boys blew the whole afternoon philosophizing about this.'

The only overt difference between the (a) and (b) versions of (49)-(50) is that the (a) versions contain a *pre*-verb and the (b) version contain the same base verb prefixed with *za-*. At the same time, the adverbials are marginally acceptable in the (a) sentences/with *pre*-verbs but not in the (b) versions/with *za*-verbs. (The contrasts were confirmed by M. K., A. Č. and L. Marušič; (49a) was actually heard in half-spontaneous speech, uttered by a TV commentator[29], but the reaction of M. K., A. Č. and L. Marušič was that this is not really possible, though not as impossible as (49c).)

The contrasts between (49a)/(50a) and (49b)/(50b) seem reminiscent of a contrast that Williams (2005: 104-5), drawing on Jackendoff (1990: 212), observes between manner adverbs in uncontroversial causative complex predicates, e.g. resultative-adjective structures, on the one hand, and the *way*-construction and the ordinary directed-motion construction on

[29] Andrej Stare (TV SLO2) during the 2008 Halifax ice-hockey world-championship final between Canada and Russia (final score: Russia 5 – Canada 4).

the other. Williams points out a contrast between these structures with respect to the placement of manner adverbs: in clear causative structures, the adverb cannot get a manner reading when sitting between the object and the resultative, contrast (51a) and (51b) ((51b) can only be interpreted with the adverb modifying the state of the gate's being open). On the other hand, he notes that in the *way*-construction and in ordinary directed-motion structures, such as (52)-(53), this is not the case.

(51) a. *Al (ferociously) kicked the gate open (ferociously).*
b. # *Al kicked the gate ferociously open.* (Williams 2005: 104)

(52) *Al slashed his way masterfully through the dense bush.* (Williams 2005: 105)
(53) *John swam frantically across the pool.* (Williams 2005: 106)

Williams discusses this distinction in arguing that the *way*-construction and the ordinary directed-motion construction are not causative complex predicates. Unlike in Williams' examples, the *pre-*/*za-* contrasts in (49)-(50) are not related to the placement of the adverb(ial). However, we are observing an acceptability contrast between the *pre*-sentences and the *za*-sentences, the latter of which are plausibly causative, given that they are extensions of clearly causative uses such *za-piti celo plačo* (lit. behind-drink whole salary) 'drink away the whole salary' (note also that M. K. volunteers the explanation that (49b), unlike (49a), has the meaning of 'waste', as in 'waste the afternoon by philosophizing').

So if we assume that unlike the causative *za*-predicates, *pre*-predicates are non-causative directed-motion structures, we have something of a parellel with Williams' observations. The causative *za*-verbs will have the more common resultative-particle/prefix structure, i.e. one where the direct object originates as the subject of the result predicate. And then, if prefixed directed-motion structures such as *pri-teči (k reki)* (lit. at-run to river) 'run to the river' or *pre-leteti na drugo stran* (lit. over-fly to other side) 'fly over to the other side' are analyzed as containing a small-clausal prefix/PP, with the subject originating as the subject of the prefixal small clause (as is more or less standard, cf. Svenonius 2004 or Spencer & Zaretskaya 1998a), then the only way the *pre*-structures in (49)-(51) can be directed-motion structures is if the sentential subject originates as the subject of the resultative small clause. And if this is the case, the temporal-expression direct object can only originate as the internal argument of the prefix.

Now, if (49)-(50) contain complex predicates, one would expect such adverbials to only be able to modify the whole complex predicate and not to have access to just the V-part. This is, I assume, precisely the reason why both (a) and (b) examples are in general rejected. At the same time, though, it seems plausible that an adverbial that scopes over the whole complex event will be easier to accommodate in a non-causative structure: that is, it will be easier to infer that if we have an event with a hockey player 'metaphorically moving through the career playing', and this was done "for a team/CSKA", he played for CSKA; and if we have an event with a hockey player 'causing the career to be wasted by playing', and this was done "for a team/CSKA", we will infer that he purposefully blew his career for the benefit of CSKA (which is indeed a possible reading of (49b), it is just not a pragmatically salient scenario). In fact, judgments regarding adverbial acceptability (and interpretation) in English directed-motion structures—and presumably especially those with metaphorical motion—are also often not very sharp and tend to lack firm cross-speaker agreement (cf. Jackendoff 1997: 535, Rappaport Hovav & Levin 2001: 775-7, Williams 2005: 105-6, 152).

In sum, the contrasts between (49a)/(50a) and (49b)/(50b) are another piece of evidence that supports the position that the sentential subject of *pre*-verbs originates as the subject of the resultative small clause and the temporal-expression direct object originates as the internal argument of *pre-*.

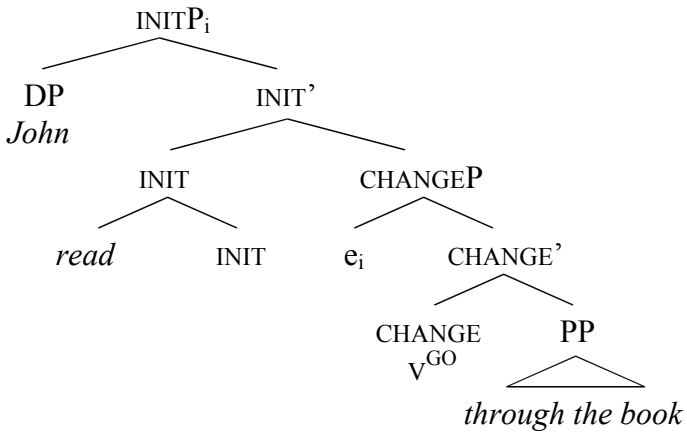
3.2 On a possible objection to (45) and on an alternative account

In this section, I discuss the alternative approach that might posit that the external argument of the resultative small clause is not what ends up as the sentential subject but rather the event of reading (via a variable). In the context of this alternative, I also discuss the possible objection that despite the structure I proposed for *pre*-verbs in (45), i.e. with the subject originating VP-internally, such predicates do not exhibit standard unaccusativity diagnostics.

In an article mostly dealing with other types of particle verbs, McIntyre (2004) analyzes *John read the book through* with *the book* as a promoted complement of the particle *through*, but proposes that rather than with what ends up as the sentential subject, the subject of the small clause (his Spec,ChangeP) is filled with a covert variable coindexed with the upper, initiating subevent (his vP-like InitP), as can be seen in (54): (54a) gives the conceptual structure behind his syntactic structure, and (54b) gives the syntactic structure ((54b) is mine, constructed on the basis of McIntyre's general path-of-event structure on p. 556 and the discussion at various points in the paper).

(54a) $[_{\text{Event}}\ \text{DO}(\text{john},\text{read})]_i\ \&_{\text{contemp}}\ [_{\text{Event}}\ \text{GO}([_{\text{EVENT}}]_i,\ [_{\text{Path}}\ \text{through book}])]$ (McIntyre 2004: 540)

(54b)



In a rather different implementation, the same basic idea also underlies Arsenijević's (2006, 2007) account of 'external' prefixes in Slavic. The interpretation of McIntyre's structure in (54) is thus something like 'John read & his reading went through the book', while my structure in (45) above would be interpreted as 'Tone sat & he went through two years'.

McIntyre (2004: 539-41) argues that an analysis with the motion seen as affecting the agent of reading rather than the event is not implausible per se and may be appropriate for some cases, but it nonetheless cannot replace his path-of-event analysis. However, the evidence McIntyre uses to support this claim only contains his intransitive structures. For example, he mentions that contrary to the prediction this analysis makes, the German counterparts of the intransitive sentences he is concerned with do not exhibit unaccusativity, as reflected by their selecting *haben* 'have' rather than *sein* 'be'. But there exist many

transitives that have been argued to involve two VP-internal arguments and exhibit either this not other standard unaccusativity diagnostics. For example, the German transitives *erreichen* 'reach', *vergessen* 'forget', and the non-agentive transitive *kriegen* 'get' also select 'have' but have nonetheless been analyzed with the sentential subject originating VP-internally (Rapp & von Stechow 1999: 180 for *erreichen* 'reach' and *vergessen* 'forget', McIntyre 2005 for *kriegen* 'get'). Similarly, despite the absence of any standard unaccusativity characteristics, the sentential subject of many types of English *have* and *get* sentences has been claimed to originate VP-internally (e.g. McIntyre 2005, Richards 2001, Harley 2003, den Dikken 1995, Pesetsky 1995, etc.). Other transitive structures have also been suggested to have a sentential subject that originates low in the VP, such as *the shit* in *The shit hit the fan* (Marantz 1997), and they do not seem to behave anything like intransitive unaccusative structures on any of the standard diagnostics (which, of course, are based on generalizations made on the basis of the behaviour of a group of intransitive verbs). Like all of these, our *pre*-sentences, which I analyzed as containing a VP-internal sentential subject, also do not exhibit any standard unaccusativity diagnostics.[30] Although at the same time, as pointed out in 3.1.3 above, given that unergative and transitive verbs typically do not undergo lexical causativization (Folli & Harley 2006, McIntyre 2004, etc.), the existence of causative versions of our *pre*-verbs can be taken precisely as diagnosing a structure with no external argument.[31]

Note that McIntyre (2004) argues against the path-of-entity analysis for (English and German) cases such as *read the book through*, so I wish to stress that I am *not* saying that he would necessarily object to the analysis in (45) for the structures I discuss. I principally mentioned his proposal to preempt the potential 'unaccusativity' objection.

In fact, I am not on principle unsympathetic to McIntyre's idea of event-paths. The idea shares what I see as the most important point of this chapter, that is, a resultative treatment of particles/prefixes that some analyze as 'aspectual', 'functional', vP-external, etc. However, with respect to the data I discussed in this chapter, it probably falls short of

[30] I actually do not think there exist tests in Slavic that would even identify *all* intransitives with a VP-internal subject (cf. also Jabłońska 2007: 40-45), even though some may reliably single out *subsets* (cf. Pesetsky 1982, Cetnarowska 2000a, 2000b, 2002, Harves 2003, 2006, Schoorlemmer 1995, 2004, Marvin 2003). For example, the attributive use of the past participle or the use of the past participle in reduced relatives may be restricted to unaccusatives. But sound-emission directed-motion prefixed verbs, which would standardly be analyzed as unaccusative (cf. Keller & Sorace 2003: 69-70), all fail the test (e.g. *včeraj pri-žvižgali fant* [lit. yesterday at-whistled boy]; intended 'the boy that came whistling'). The same holds for many ordinary manner-of-motion prefixed verbs, even with a nonagentive inanimate undergoer (e.g. *do desnega robnika pre-drseli avto* [lit. to right curb through-slid car]; intended 'the car that skidded over to the right curb'). Similarly, Schoorlemmer (1995, 2004) claims that if a Russian prefixed intransitive takes secondary imperfective, it is unaccusative. Again, Slovenian sound-emission directed-motion intransitives fail this test, e.g. *pri-jokati* (lit. at-cry) 'come crying' vs. #*pri-joka-va-ti* (lit. at-cry$_{\text{IMPF}}$), and so do many ordinary directed-motion prefixed intransitives.

[31] The other two arguments of McIntyre's (2004: 540) come from: 1) a contrast between two types of intransitives with respect to German impersonal passive, which may be revealing as to the structure of the intransitive examples he discusses but presumably say nothing about transitive things like 'read the book through'; and 2) from the observation that some obvious path-of-entity structures show a difference from his intransitive structures, as exhibited by the presence/absence of the unselected reflexive in the German literal counterpart of 'I worked myself through the book' (for McIntyre, path-of-entity) and of 'I worked through the book' (for McIntyre, path-of-event); if this reasoning were to be extended to transitive structures, one would have to only accept a path-of-entity analysis when there is an unselected reflexive. However, then the reflexiveless 'John ran into the store' has to be an event-path structure too; but in German and Dutch, such cases behave as unaccusative (e.g. take 'be', not 'have').

explaining at least the 'denominal' *pre*-verbs from section 3.1.3. And from a theoretical point of view, it is not clear to me how McIntyre's structure is supposed to work with respect to case (he does not discuss the issue). Since the event-coindexed variable sits in a position which is, in other particle verbs, occupied by an argument that ends up accusative, one might think that the variable is also going to take up accusative case. However, if this is so, then *the book* would need case from somewhere else, and with nominative and accusative given away, it could only be said to have prepositional case, which doesn't seem to be the case in any obvious way in *read the book through* or with the temporal expression in Slovenian *pre*-verbs. Also, at least within standard approaches to case, it is presumably problematic to claim that the higher argument (i.e. the variable) originates in a position whose arguments normally end up getting structural/accusative case but that in our case, this argument is forced to get oblique case because the accusative is taken by the argument that originates lower down, as the complement of the prefix—the lower-originating argument should not be getting precedence over the higher-originating one.[32]

One might, of course, say that the variable is something like PRO, which does not need case (structures with a caseless PRO in such a position have been proposed—without event-paths—for 'selected' resultatives in Bowers 1997, Lin 2004, etc.). However, the status of PRO is anything but clear. Some authors have suggested that PRO actually does not exist, and control structures are to be analyzed with movement (Hornstein 2001, etc.). Some authors have argued that PRO *does* get case-marked (Sigurdhsson 1991). And Kratzer (2005), discussing adjectival resultatives, argues that many analyses of PRO in standard control structures such as infinitival clausal complements—for the analysis of which PRO was initially proposed—actually will not allow PRO in a position such as the one occupied by McIntyre's variable. And if the variable is not PRO or something of the sort, and it sits in a position that normally hosts an argument that (eventually) gets case-marked, we likely end up with three DPs in need of case and only two sources of case.[33]

Another potential take on this issue is that the thing in Spec,RP is not a variable/nominal but the actual vP/InitP or VP/ChangeP, which is then remerged higher up (if I understand correctly, this is assumed—for 'external' prefixes in general—by Arsenijević 2006, 2007). As such, the element would not need case, and so the accusative could be taken by the extra nominal. Such vP/VP elements in Spec,RP would be just like CP complements to transitive verbs. Indeed, there clearly exist prefixed verbs in which the resultative argument seems to be a CP, such as *raz-ložiti, da* ... (lit. apart-lay that) 'explain that …',

[32] Although it might seem that this is actually just what happens in the double object construction, with the higher argument getting oblique case, the difference is that in these constructions, the higher argument is *not* posited as originating in a position whose argument will get accusative if the lower argument is not present/expressed. Rather, it gets oblique *regardless* of the presence of the accusative argument.

[33] There might be another way out for the event-path approach, i.e. by seeing *through* in *read the book through* as an unaccusative P—but that goes against what McIntyre (2004) says for *through*, though along the lines of what he says for *out* in *pour the bucket out*. Just as the subject of result in *pour the bucket out* [=*pour water out of the bucket*], i.e. *water*, can presumably only be left implicit, since there is no case available for it, so the event-variable subject of result in *read the book through*—if the latter is seen as 'x read & x's-reading BECOME through the book'—could be seen as being implicit and as such not in need of case. But assuming that for reasons of EPP, the *position* of the subject of result has to be filled (and assuming there is no null expletive available for this in English, as seems reasonable based on sentential expletives), this would mean that while in the conceptual structure, the subject of result is the event, syntactically, it is the complement of *through* that moves through Spec,RP (further on to sentential object position). As far as I can see, this cannot make sense semantically.

*(*za*-)*bičati, da* ... (lit. behind-whip that) 'assert that …' or *(*raz*-)*tolmačiti, da* ... (lit. apart-interpret that) 'explain that …'; the last two examples even contain an unselected CP object. However, I know of no CP-selecting prefixed verbs which would suggest that since the CP does not use up the accusative, this licenses the use of another NP.

All in all, then, although I am not, on principle, against the event-path analysis, I will stick to the currently better worked-out model, which presumably also has the advantage of being better able to capture the 'denominal' *pre*-verb data from section 3.1.3.[34]

4. 'External' diagnostics: secondary imperfectivization, root nominalizations, non-spatial/temporal meaning, restriction to imperfective inputs, etc.

Before concluding this chapter, let me briefly point out the relevance that the results of this chapter have for the diagnostics often used for determining that a prefix is VP-external/non-resultative.

By showing that *pre*-verbs contain a resultative prefix, we have provided another argument against the reliability of secondary imperfectivization and root nominalizations as diagnostics of non-resultativity. That is, our *pre*-verbs resist secondary imperfectivization quite strongly, on both the progressive reading and the repetitive reading (??*pre-sedevati*/??*pre-sedati popoldne* [lit. through-sit afternoon] 'be spending the afternoon sitting') (and the Russian *pro*-verbs appear to be less resistant to secondary imperfectivization on the repetitive reading, whereas they also shun the progressive interpretation). If forced, however, the secondary imperfective get its usual scope, i.e. it scopes over the prefix. And in fact, even an attempted progressive reading of some related English sentences gives fairly odd resuls, as in ??*He is sleeping the afternoon through*.

The same goes for the diagnostic of nominalizations and, more specifically, root nominalizations. There exists nothing like **pre-sed* (*popoldneva*) [lit. through-sit afternoon$_{GEN}$] or **pre-lega* (*popoldneva*) [lit. through-lie afternoon$_{GEN}$], despite the fact that the corresponding *pre*-verbs exist that both *sed* and *lega* are existing forms (e.g. *dvo-sed* 'a two-seater', *lega* 'position').

Note also that even if some parts of this thesis might lead one to jump to the conclusion that it is a two-VP structure that is responsible for resistance to secondary imperfectivization and the inexistence of root nominalizations, which might allow one to preserve these characteristics as diagnostics for single-VP prefixed verbs, the present chapter rules this option out at least for secondary imperfectivization, since *pre*-verbs are simple resultative structures, with a single VP, and still resist secondary imperfectivization.

Furthermore, as the reader can check for themselves, all *pre*-verbs in this chapter contain an imperfective base verb. Indeed, in this use, *pre-* does not attach to perfective base verbs at all, which shows again that such a restriction cannot be used as a diagnostic of VP-externality.

And finally, our *pre*-verbs also demonstrate that the argument whereby a prefix with a somehow temporal/aspectual meaning has to be in the Infl domain clearly cannot be correct.

[34] See also Toivonen (2006), who analyzes the English continuative *on* in cases such as *The people talked on* as predicated over *the people*, thus going against McIntyre (2004), who analyzes this *on* as predicated over the event of talking (but cf. also McIntyre 2007: 9 for some comments on Toivonen 2006).

5. Conclusion

This chapter discussed the structure of *pre-*/*pro*-verbs of the type initially exemplified with the Slovenian *pre*-example in (1) and with the Russian *pro*-examples in (2). I showed that at least on one possible parse, the temporal expression in all of these must function as the direct object rather than as an adjunct. For *pre*-verbs, evidence for this was drawn from data involving the obligatoriness of the temporal expression, the absence of the requirement for modification of the 'temporal' head noun, the genitive of negation, the non-cooccurrence of the temporal expression and the verb's notional object, passivization and relativization, and the 'do so' constituency test. For *pro*-verbs, a subset of these types of evidence led me to the same conclusion.

I reasoned that if a *pre-*/*pro*-verb contains an intransitive base such as 'sit' and the temporal expression functions as the direct object, this means that we are witnessing an unselected direct object. And given that the availability of such an unselected object depends on the presence of *pre-*/*pro-*, I concluded, in accordance with the assumptions laid out in the Introduction, that *pre-*/*pro-* must be functioning as a resultative secondary predicate.

Then I discussed two posibilities for the internal structure of the result predicate, concluding that the sentential subject of *pre*-verbs originates as the subject of the result predicate (Spec,RP) and the direct-object temporal expression of *pre*-verbs originates as the internal argument of the resultative prefix. I thus essentially proposed that these complex predicates are cases of metaphorical directed motion in time. I also showed that despite some claims to the contrary, *pre*-verbs do accept the *in-x-time* adverbial, providing a pragmatically plausible context has been set up. I also showed that the resultative analysis of *pre*-verbs casts further doubts on the reliability of the widely used diagnostics of prefix VP-externality. The results of this chapter, where a 'temporal' use of Slovenian *pre-*/Russian *pro-* turns out to be brought about by a resultative prefix, will motivate the point of departure for chapter 4.

Chapter 4: A second aktionsart/perdurative use of Slovenian *pre-* and Russian *pro-*: *pre-*/*pro-*verbs with the verb's notional object

This chapter builds on the findings of chapter 3. It complements the picture drawn there for the perdurative *pre-* in Slovenian and the perdurative *pro-* in Russian. The first part of this chapter discusses the use of *pre-* exemplified in (1a), a use that Russian *pro-* does not appear to have, (1b).

(1) a. *Včer sva se pa* *(*ogromn*) *pre-smejala*.
yesterday are self PTCL a-great-deal through-laughed
'Yesterday we laughed a lot / spent a lot of time laughing.'

b. * *V te dni Ivan mnogo pro-smijal-s'a*. (Russian)
in these days Ivan a-lot through-laughed-self

The main features of this use of *pre-* are the obligatory presence of a measure expression such as 'a lot', 'very much', etc., and the possibility for the verb to occur with a direct object, as in (1a). In the second part of this chapter, I discuss a closely related use of the Russian *pro-*, illustrated in (2).

(2) a. *Ivan pro-smijal-s'a / pro-ulybal-s'a do utra*. (Russian)
Ivan through-smiled-self / through-laughed-self till morning
'Ivan smiled/laughed till the morning.'

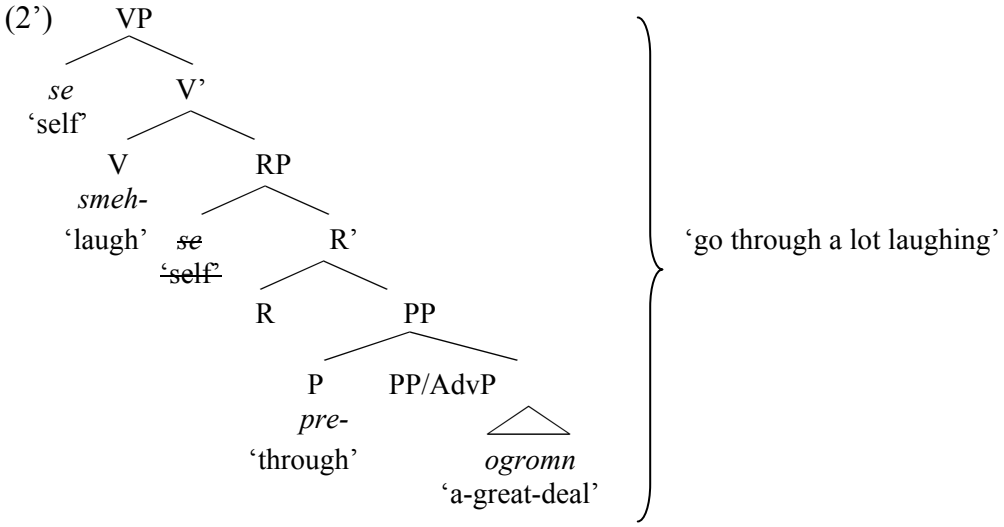
b. *Galja pro-poloskala bel'e vse utro*. (Russian)
Galja through-washed laundry$_{ACC}$ all morning (Fowler 1997: 160, modified
'Galja spent all morning washing the laundry.' word order, w-for-w RŽ)

The main features of the *pro*-construction are the obligatory presence of a temporal expression such as 'till morning', 'all morning', etc., and the possibility for the verb to occur with a direct object. This use is not shared by the Slovenian *pre-*, so that 'till morning'/'all morning' cannot replace the measure expression in (1).

Due to the occurrence of a 'selected' direct object, examples such as those in (2) have been taken to exhibit a VP-external prefix (e.g. Schoorlemmer 1995). Many authors have even generalized from such examples to the *pro*-construction from chapter 3 and proposed that *pro-* is a VP-external prefix in all its uses with the approximate interpretation of 'spend time V-ing', and that the temporal expression cooccurring with it is never a direct object (Fowler 1994, 1997, Svenonius 2004, Ramchand 2004/2008b, Romanova 2007, Gehrke 2008b). This stronger claim has been argued against in chapter 3. The present chapter will propose that the constructions in (1) and (2) are also resultative and that they are also directed-motion/manner-of-motion constructions. Just as in chapter 3, the prefix will be seen as introducing the measure/temporal expression as its internal argument. But unlike in the construction in chapter 3, the measure/temporal expression will not be promoted to the direct object position. Instead, I will claim that the measure/temporal expression can survive without being promoted to the direct object position because it is categorically not a nominal but an adverbial (sometimes with a null P, as is typically claimed for bare DP adverbial

adjuncts). The prefix will thus be seen as selecting for a nonnominal argument, an option that will be corroborated with a substantial body of data from English and Slovenian 'temporal' verbs and prepositions taking nonnominal arguments. Taking the ingredients of (1a) above, the proposed structure for (1a) and (2a) is as in (2').

(2')



In some cases, this *pre-* and *pro-* also occur stacked over another resultative prefix~~, as in (2'')~~. Along the lines of the doubly-prefixed constructions in chapters 1 and 2, these constructions will be proposed to differ from the general makeup of (2') only in that their structure contains two resultative VPs. The null-headed VP of *pre-*/*pro-* will represent the main projection line, being in the complement of the conjunction-like CausP/&P. The other resultative VP will be merged in Spec,CausP/&P. Cases like (2b) may be treated along the same lines, with a double-VP structure, but with a nonresultative VP merged in Spec,CausP.

The chapter is (dis)organized as follows. Section 1 will present the main data from the Slovenian *pre*-construction and propose the structure. Section 2 will provide some support for the claim that the measure expression can be seen as a nonnominal adverbial. Section 3 will extend the proposal to the Russian *pro*-construction. Section 4 concludes the chapter, and an appendix (section 5) provides an excursus on the failure of passivization and relativization in certain contexts that resemble *pre-*/*pro-*verbs without the verb's notional object, suggesting that such failure cannot be taken as conclusive evidence that an expression does not function as (part of) a direct object.

Before I get into the discussion, let me just note that once one use of a certain prefix (in this case *pre-* and *pro-*) with a meaning 'pass time V-ing' is found to be resultative (chapter 3), it seems more reasonable to me to try to work out a resultative account also for those uses of *pre-*/*pro-* which seem to work differently but nonetheless bring in more or less *the same* meaning. Simply settling for a radically different treatment of the two uses of *pre-*/*pro-* and analyze the other uses of *pre-*/*pro-* either as IP-level functional structure-related material or as *v*P adverbials seems unsatisfying.

1. Directed-motion with 'a lot' as a complement to Slovenian *pre-*

1.1 Core data

To start off, consider the lengthy set of sentences in (3)-(8) below (variants of which are all attested on the internet).[1]

(3) *V arestu smo pa *(velik (hudga)) pre-trpel.*
in prison are PTCL a-lot bad-things$_{GEN}$ through-suffered
'In prison, we suffered a lot / we went/suffered through a lot (of bad things).'

(4) *Tiste cajte smo pa *(velik/bolj mal) pre-plesal.*
those times are PTCL a-lot rather little through-danced
'Back then, we danced a lot/rather little / we spent a lot of/rather little time dancing.'

(5) *Tiste cajte smo ga *(velik) pre-žural.*
those times are it a-lot through-partied
'Back then, we partied a lot / spent a lot of time partying.'

(6) *Včer sva se pa *(ogromn) pre-smejala.*
yesterday are self PTCL a-great-deal through-laughed
'Yesterday we laughed a lot / spent a lot of time laughing.'

(7) *Vsi njegovi prijatelji, s katerimi se je v preteklosti *(toliko) pre-kregala ...* (www)
all his friends with which self is in past so-much through-scolded
'All his friends, with whom she has quarreled so much in the past, …'

(8) *Včer smo se *(ogromn) pre-vozil.*
yesterday are self a-great-deal through-driven
'Yesterday we drove a lot / spent a lot of time driving.'

(9) a. *Lansk let sem pa svojga šefa *(ogromn) pre-sekiru.*
last year am PTCL my boss$_{ACC}$ a-great-deal through-pestered
'Last year, I pestered my boss a lot / spent a lot of time pestering my boss / put my boss through a lot of pestering.'

b. *Lansk let pa šefa nisem *(prav velik) pre-sekiru.*
last year PTCL boss$_{GEN}$ not-am really a-lot through-pestered
'Last year, I didn't pester my boss a whole lot / didn't spend a whole lot of time pestering my boss / didn't put my boss through a lot of pestering.'

[1] I gloss *velik(o)*/*mal(o)* with 'a lot'/'a little', *ogromn(o)*/*ful* with 'a great deal' and *precej* with 'a good deal'. Formally, these expressions could be either quantifying adverbs ('greatly') or some sort of quantifying determiners ('a great amount'). The parenthesized *o*'s indicate the difference between standard Slovenian and my dialect. In the examples, I only use the *o*-less form, since some of the examples are fairly colloquial.

The first thing these sentences have in common with the *pre*-examples from chapter 3 is the obligatory presence of a measure expression ('a lot'/'rather little'/'that much'/etc.), with the difference that in this case it is not a temporal expression. Another thing they share with the *pre*-examples from chapter 3 is the fact that the base verb in (3)-(8) has to be imperfective.[2] The similarities end, however, when we look at the argument structure. With *pre*-verbs in the preceding chapter, the verb's notional argument was said to be impossible (chapter 3, section 1.4), while this does not seem to be the case with (3)-(9).

Now, in the case of (3), which is based on the intransitive or cognate-transitive *trpeti* 'suffer', it might seem that we have a transitive structure with 'a lot (of bad things)' serving as the sentential object. In the same vein, it might seem that in (4), which is based on the optionally transitive *plesati* 'dance', we have a transitive structure with 'rather little (dancing)' as the sentential object, i.e. 'rather little' with some sort of a null verb-cognate NP as its complement.

However, (5)-(9) clearly cannot be explained like that, as they are based on transitive base verbs. Example (5) is based on the so-called 'idiomatically' clitic-transitive *žurati ga* 'party' (in the sense of the English *to bus it*). Example (6) is based on the so-called inherently reflexive *smejati se* 'laugh' (where, I assume, inherently reflexive in some sense equals syntactically transitive[3]). Example (7) is based on the 'reciprocal' reflexive-marked *kregati se* (lit. scold self) 'quarrel' (which I also assume to somehow equal syntactically transitive; this use has also been called 'accusative-indefinite' in Rivero & Milojević Sheppard 2003 and 'unspecified-object' in Golędzinowska 2004). Example (8) is based on a reflexive-marked motion verb *voziti* 'drive' (cf. Golędzinowska 2004). And example (9) is based on the transitive *sekirati* 'pester'. So, the sentences in (5)-(9)—with their various types of sentential (accusative/genitive) objects—clearly show that the measure expressions 'a lot'/'rather little'/etc. cannot be sentential (accusative/genitive) objects in these *pre*-structures.

Similar facts (i.e. obligatoriness of the measure expression, restriction to imperfective inputs, apparent lack of argument-structure effects) have been taken as important evidence for the claim that the Russian perdurative *pro-* is an external prefix. Borik (2002/2006) claimed so in a semantic framework, and several other authors claimed so in syntactic frameworks. *Pro-* is treated either as a functional structure-related element in the IP-domain (an aspectual/measure head or a PP in the specifier of such a head), as in Fowler (1994), Schoorlemmer (1995), and possibly Svenonius (2004), or as an adverb-like element adjoined to *v*P (possibly Svenonius 2004).[4] If we extend this reasoning to the case at hand, we would have to conclude that (3)-(9) contain a non-resultative, functional/vP-external *pre-*. Below, I will argue that this conclusion is not correct, that this *pre-* is also resultative, that the measure

[2] This requirement is not due simply to the presence of the frame adverbial, as shown by the presence of a perfective verb in an expression with a similar meaning and a frame adverbial, (i).

(i) *V tistem obdobju smo dal skoz velik plesanja.*
in that period are$_{1P.PL}$ given$_{PF}$ through a-lot dancing$_{GEN}$
'In that period, we experienced/did a lot of dancing'.

[3] For Babby (2006), this reflexive would be morphological rather than syntactic, but he still claims (op.cit.: 15) that such reflexives suppress structural accusative case, thereby preventing a direct object. In a morphology-in-syntax approach, these are typically associated, in one way or another, to the sentential accusative/genitive object (cf. Golędzinowska 2005: 133, 2004: 114-5, Jabłońska 2007, but also Rivero 2005: 1110-2).

[4] Svenonius (2004) is not explicit about which of the two types of externals this use of *pro-* belongs to.

expression is introduced as the complement of the resultative *pre-*, and that the structure of such examples is also that of directed-motion constructions.[5]

1.2 The nature of 'a-lot'/'rather little'/etc.

I said that the measure expressions 'a lot'/'rather little'/etc. cannot be sentential (accusative/genitive) objects in (3)-(9), so let me start by asking what they are. Two answers come to mind. The first is that 'a lot'/'rather little'/etc. in (3)-(9) could be simply quantifying over the event—e.g. over the event of 'laughing' in (6)—just as *ogromn* 'a great deal' does in the prefixless (10a), and similarly to *pogost* 'often'/*velikrat* 'many times' in (10b) and *dolg* 'long' in (10c).

(10) a. *Tiste cajte smo se ogromn smejal.*
those times are self a-great-deal laughed
'In those days we laughed a lot.'

b. *Tiste cajte smo se pogost/velikrat smejal.*
those times are self often many-times laughed
'In those days we laughed often / many times.'

The second possibility is that 'a lot'/'rather little'/etc. could be introduced as the complement of the prefix *pre-*, something along the lines of the second and third English translations given for example (3), i.e. *suffer through a lot* (cf. also *go through a lot*, *live through a lot*) and *undergo a lot*.[6] This way, we would again be heading towards an analysis in the general spirit of directed-motion constructions. In the next subsections, I will test out the two possibilities, arguing that the correct answer is the second one, i.e. that the measure expression is introduced as the complement of *pre-*.

1.2.1 'A-lot'/'rather little'/etc. as an adverb(ial) quantifying over the event

The option that 'a lot'/'rather little'/etc. simply quantify over the event is not easy to disprove, but I will try to give three arguments against this solution. The first is based on a comparison between *pre-*sentences and their unprefixed counterparts with (other kinds of) even quantifiers (1.2.1.1), the second is based on passivization data (1.2.1.2), and the third is based on an aspectual difference between *pre-*sentences and their unprefixed counterparts with 'a lot'/'rather little'/etc. (1.2.1.3).

1.2.1.1 First, if 'a lot' is simply quantifying over the event of laughing in (6), then—based on the similarity between (10a) and (10b-c)—we might expect 'a lot' to be substitutable for the event-quantifiers from (10b), i.e. *pogost* 'often' and *velikrat* 'many times'. As shown in (11), though, this is not the case.

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[5] The meaning of these *pre-*sentences can sometimes seem quite similar to that of structures such as *na-laufati se* (lit. on-run self) 'get a lot of running done/run oneself exhausted' from chapter 1. However, only the *na-*sentences contain an *unselected* reflexive, so the two are structurally quite different.

[6] Note that in *suffer through a lot*, *a lot* is quite obviously the complement of *through*, as shown, among other things, by the absence of stress on *through*. In *undergo a lot*, *a lot* is the complement of *under-*, as shown by the unselected-object status of *a lot of bad things* in *(*under*)go a lot of bad things*.

(11) * *Tiste cajte smo se pogost/velikrat pre-smejal*.
those days are self often many-times through-laughed
(intended: 'In those days we laughed often / often spent time laughing.')

A problem with this reasoning, however, is that 'often'/'many-times'/etc. are Doetjes's (2007) *frequency adverbs* while 'a lot'/'rather little'/etc. are her *degree adverbs*, and so it could be that *pre-*, if functional, is below the FP of 'often'/'many-times'/etc. If so, then this could be the reason why 'often'/'many-times'/etc. will not be able to satisfy *pre-*'s presence-of-adverb requirement. This could be corroborated by the fact that if, in addition to 'often', (11) is also added *ogromn* 'a great deal', the sentence becomes grammatical, getting interpreted as 'In those days we often laughed a lot / spent time laughing a lot'.

1.2.1.2 Another potential indication of the fact that 'a lot'/'rather little'/etc. do not function as simple event-quantifying adverbs in (3)-(9) comes from passivization. Consider (12), which gives the passives of (3) and (4).

(12) *Takrat je blo velik pre-plesanga / velik* (*hudga*) *pre-trpljenga*.
then is been a-lot through-danced$_{GEN}$ a-lot (bad$_{GEN}$) through-suffered$_{GEN}$
'A lot of dancing was done back then. / A lot (of bad stuff) was gone through back then.'

In (12), the passive participle—which agrees with the object that has turned subject—carries genitive case, which can only come from agreement with the expressed or non-expressed genitive complement of the quantifier 'a lot'. If *velik* 'a lot' is an event-quantifying adverb, the genitive on the participle is mysterious. Rather, such passive structures are presumably quite on a par with the English *A lot has been gone through*.

Of course, a possible problem with this reasoning is that not all of the sentences from (3)-(9) behave the same under passivization; (6a) (i.e. 'through-laugh self a lot') and (8) (i.e. 'through-drive self a lot'), with their reflexives, cannot be passivized at all, and when passivizing the transitive (9) (i.e. 'through-pester the boss a lot'), the element that turns subject is 'the boss', as in (13).

(13) *Lansk let je bil pa naš šef ogromn pre-sekiran*.
last year is was PTCL our boss a-great-deal through-pestered
'Last year, our boss was pestered a lot / was put through a lot of pestering.'

Now, it is important to note that if 'a lot' originates as the complement of the prefix, as I claim, this distinct behavior is actually not problematic. The reason why it is 'our boss' that is promoted to the subject position in (13) is simply the fact that 'a lot' originates lower down, quite in parallel to the contrast between *We went through a lot – A lot has been gone through* vs. *We put our boss through a lot – Our boss has been put through a lot*, where *a lot* can be promoted to the subject position only in the first case, while the higher-situated *our boss* takes precedence in the second case. Based on this, we also know that the thing that should get promoted in (6a) (i.e. 'through-laugh self a lot') and (8) (i.e. 'through-drive self a lot') is the reflexive, but predicates with the reflexive do not passivize outside of this construction either. The same applies also to the nonpassivizable example in (5) (i.e.

'through-party it a lot); in passivizing (5), it would be the idiomatic-'it' that would take precedence over 'a lot', but predicates with the idiomatic-'it' do not passivize outside this construction either (just like the English *to bus it*). However, despite the fact that the passivization facts are unproblematic for my account, proponents of a functional/*v*P-adverbial account of *pre-* could—although in my view quite unattractively—in principle still say that despite the apparent similarity between (3)-(4) and (5)-(9), 'a lot'/'rather little'/etc. may be arguments in cases like (3) and (4) but not in (5)-(8), for which a functional/*v*P-adverbial account has not been disproved.

Furthermore, we just saw that *velik hudga* 'a lot of bad things' is an argument in (3), and if in (5)-(9), *velik* 'a lot' were really an event-quantifier, then we could expect that—using the separate templates of (3) and (5)-(9)—a sentence could be constructued that could contain the argumental 'a lot of bad things' *as well as* the event-quantifying 'a lot'. But as shown by (14), this is not possible ((14) seems ill-formed, not just pragmatically infelicitous due to redundancy). This suggests that even in (5)-(9), 'a lot'/etc. are not event-quantifiers.

(14) *V arestu smo pa* (**velik*) *velik hudga* *pre-trpel*.
in prison are PTCL a-lot a-lot bad-things through-suffered
'In prison, we suffered a lot / we suffered through a lot (of bad things).'

1.2.1.3 And finally, on an account along the lines of the treatments of Russian *pro-* in the references above, i.e. on an account according to which *pre-* is a measure-type/aspect-type functional element or a *v*P-adjoined adverbial, the measure expression 'a lot'/'rather little'/etc. would—in the spirit of Cinque (1999)—presumably be associated with the same functional projection. Therefore, we would expect that all of the interpretational effects that *pre-* contributes to its unprefixed-verb predicate will also be contributed to the same unprefixed-verb predicate by 'a lot'/'rather little'/etc. on its own, without *pre-*. This expectation, however, is not borne out, as the two types of sentences differ in terms of aspect. Specifically, while the *pre*-sentences in (3)-(9) and the sentences combining the same unprefixed-verb predicates with 'a lot'/'rather little'/etc. are the same in terms of Borer's (2005b) version of Krifkian quantization, they differ with respect to the *in-x-time* diagnostic. Even though (15a) is a bit unusual—due to the connotation of *being able* to get a lot of laughing done in half an hour—it is in marked contrast to the more or less impossible (15b).

(15) a. *Tiste cajte smo se v pol ure ogromn pre-smejal*.
those times are self in half hour a-great-deal through-laughed
'Back then, we did/could do a lot of laughing in five minutes.'

b. */?? *Tiste cajte smo se v pol ure ogromn smejal*.
those times are self in half hour a-great-deal laughed

Therefore, on the Cinquean assumption mentioned above, the only way to maintain a functional or *v*P-adverbial account for the *pre-* sentences in (3)-(9) is by saying that their 'a lot'/'rather little'/etc. are not measure expressions associated to *pre-*. But then one will have a hard time explaining where the need for the measure expression comes from, especially since the measure can be either 'large' or 'small' (cf. the acceptability of either 'a lot' or 'rather little' in (4)), which presumably prevents accounts invoking presupposition.

As for the more ordinary use of the *in-x-time* adverbial, in which the latter measures the time it takes for the event/change of state to complete, note that while this use of the *in-x-time* adverbial shows that a change of state is present, it is not the case that whenever there is a change of state, this use of the *in-x-time* adverbial will be possible (most notably the case with achievements, cf. Piñón 1997). In the cases at hand, the problematic thing may be the 'indeterminacy' of the quantity expression 'a-lot/a-great-deal/etc.' (such predicates are still quantized, however, on Borer's 2005b version of Krifkian quantization, since despite cumulativity, they are not divisive). In the same way, *He spent ages at the beach / sitting and smoking* does not allow the *in-x-time* adverbial, even though *spend* presumably always contains a change of state and, not unexpectedly, does not allow the *for-x-time* adverbial even when combined with *ages*, regardless of contextual factors (*He spent ages at the beach* *(*that is, for a whole two years*)).

1.2.1.4 To conclude this subsection, I take the contrasts discussed as suggesting that 'a lot'/'rather little'/etc. of the *pre*-sentences of (3)-(9) cannot be seen as simple event-quantifiers.[7] Note also that I argued in section 1.1. of chapter 3 that although obligatory adjuncts are not unprecedented, the make-up of those *pre*-examples nonetheless makes the obligatoriness of the measure expression problematic for accounts such as Fowler (1994) and Svenonius (2004) for technical reasons. As the argument extends to the *pre*-construction of this chapter with basically no difference, I will not repeat it here.

So if we reject the 'a-lot'-as-event-quantifier approach, this leaves us with the alternative approach mentioned above, i.e. seeing 'a lot'/'rather little'/etc. in (3)-(9) as the complement of *pre-*.

1.2.2 'A lot'/'rather little'/etc. as the complement of *pre-*

1.2.2.1 Proposal

In this section, I outline the general proposal for the 'a-lot'-as-complement-of-*pre-* approach, claiming that this *pre*-construction also exhibits a directed-motion predicate, but that unlike in the case of the *pre-* directed-motion construction from chapter 3, the complement of *pre-* (with some possible exceptions) does not surface as the direct object, which is why this

[7] Ideally, one would want to be able to have support for this conclusion from the 'do so' constituency test as well. If the measure expression is a VP-internal complement of the prefix, it will have to be part of what the 'do so' pro-form replaces. (i) clearly shows that next to an unprefixed 'laugh', 'a-lot' can be left outside the denotation of the VP pro-form. With respect to (ii), however, the test is inconclusive. On the one hand, (ii) sounds odd but not ungrammatical, which would suggest that 'a-lot' is an adjunct outside the scope of the VP pro-form. On the other hand, it seems clear that the interpretation of (ii) is not the one from (i) but rather something like 'we laughed a lot rather rarely', that is, one where the VP pro-form replaces 'laughed a lot', not just 'laughed' (judgment confirmed by M.K. and A.Č.); this would suggest that 'a lot' is part of the VP. I do not know what to make of these facts. At this point, I have to leave the 'do so' test aside as inconclusive.

(i) *Takrat smo se ogromn smejal, kasnej smo pa to počel bolj mal.*
then are self a-lot laughed later are PTCP this done rather little
'In those days we laughed a lot, while later on we did that less.'

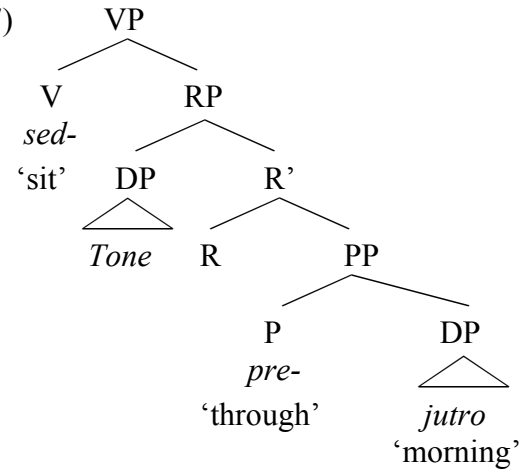
(ii) ? *Takrat smo se ogromn pre-smejal, kasnej smo pa to počel bolj mal.*
then are self a-lot laugher later are PTCP this done rather little
'In those days we laughed a lot, while later on we laughed a lot rather rarely.'

complement can only be realized by some measure expressions that presumably do not need structural case but cannot be realized by expressions such as, say, 'morning'.

Given that the sentences in (5)-(9) above exhibit the measure expression alongside sentential (accusative/genitive) objects, we know that the measure expression 'a lot'/'rather little'/etc. has to be introduced as something other that the sentential (accusative/genitive) object. At the same time, we know that *pre-* 'through' appears in directed-motion constructions (I gave examples in chapter 3 for both spatial and metaphoric/temporal directed-motion predicates with *pre-*; a spatial-motion example is *pre-leteti na drugo stran* [lit. over-fly to other side] 'fly over to the other side'). And we also know that *pre-* also appears in caused-motion constructions, as in *pre-valiti kamen na drugo stran* (lit. over-roll rock onto other side) 'roll the rock over to the other side'. In view of all this, an obvious option that presents itself is to try and treat the 'temporal' *pre*-sentences under discussion here as another instantiation of directed-motion, with an LCS-style representation—for (6) above—along the general lines of 'x laugh & x BECOME through a lot'. This would presumably draw a rather close parallel between these *pre*-sentences and the second English translation/paraphrase given for (3), i.e. *suffer through a lot*. Nevertheless, there will have to be a difference between sentences like (6) and the sentences discussed in chapter 3, such as (16) below, which I assigned an LCS representation such as 'x sit & x BECOME through the-morning' and a tree representation such as (17).

(16) *Tone je pre-sedel jutro na balkonu.*
Tone is through-sat morning on balcony
'Tone spent the morning sitting on the balcony.'

(17)

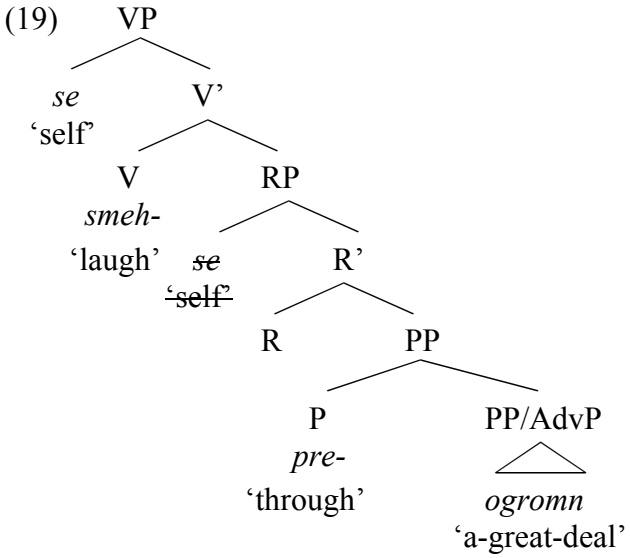


In the analysis of sentences like (16), I said that the temporal expression originates as the internal argument of *pre-* but ends up as the sentential (accusative/genitive) object because the prefix cannot assign its prepositional case. But with respect to the sentences in (3)-(9), I just said that 'a lot'/'rather little'/etc. cannot be functioning as the sentential (accusative/genitive) object since the object of the base verb is retained in this type of sentences. The LCS-style representation just given above for (6), i.e. 'x laugh & x BECOME through a lot', should thus be modified to 'x laugh-self & self BECOME through a lot' or 'x

laugh & self BECOME through a lot', with a tree representation for (6), repeated below as (18), as in (19).[8]

(18) *Včer sva se pa* *(*ogromn*) *pre-smejala*.
yesterday are self PTCL a-great-deal through-laughed
'Yesterday we laughed a lot / spent a lot of time laughing.'

(19)



The question we are faced with, then, is what licenses the occurrence of the internal argument of *pre-*, given that it cannot be structural (accusative/genitive) case—which is taken away by the reflexive—and given that with the construction in (16), it was not possible for this argument to get prepositional case. The answer that I suggest is that unlike 'morning' from (16), which is a DP, the measure expression 'a lot'/'rather little'/etc. is an adverbial and as such does not need case. For bare DP adverbials, it is typically assumed that they get case through a null P (à la Larson 1985, McCawley 1988, Morzycky 2004), and given that the complement of *pre-* is a measure expression, the same can be invoked. If the correct analysis of such inherent case is indeed by positing a null P, this would mean that in this case, the prefixal preposition takes a non-nominal/PP complement. For now, I will simply assume that this option is available. In the second part of this chapter, I will try to provide some support for this position. So I assume that unlike 'morning' in (16), 'a lot'/'rather little'/etc. can be the complement of *pre-* even when sentential-object accusative/genitive case is not available, as in (18).

The claim that we need a different analysis for sentences like (5)-(9) and for those in (16) is confirmed by the fact that unlike in, say, (18)—where the inherent reflexive of *smejati se* 'laugh' freely coexists with *ogromn* 'a great deal'—the same reflexive is ruled out in a sentence like (20), which is a direct counterpart of (16) but with *sedeti* 'sit' changed for *smejati se* 'laugh'. In other words, if *smejati se* 'laugh' cooccurs with *ogromn* 'a great deal'

[8] At this point, I will simply assume that the reflexive instantiates a 'selected' element with respect to 'laugh', and so (18) has the structure of 'selected resultatives', with the reflexive moving through Spec,VP as well. See below for discussion, but note that my main claim does not depend on this and would work equally with an 'unselected resultative' structure, i.e. with the reflexive merged only in Spec,RP.

as the complement of the non-case-assigning *pre-*, the structure is fine because *ogromn* 'a great deal' does not rely on structural accusative/genitive case marking. But if it cooccurs with the DP *jutro* 'morning', the structure is ruled out because *jutro* 'morning' could only rely on structural accusative/genitive, but the latter is taken up by the reflexive.[9]

(20) * *Tone se je pre-smejal jutro (na balkonu).*
Tone self is through-laughed morning on balcony
(intended: 'Tone spent the morning laughing (on the balcony).'

To conclude, the basic structure I proposed for cases such as (18), i.e. 'through-laugh self a-lot', is a kind of directed-motion structure with the inherent reflexive of the base verb preserved and also serving as the subject of the prefix. In reflexiveless cases such as (3)-(4), which are based on the intransitive 'suffer'/'dance', the sentential subject would be introduced as the subject of the prefix and would subsequently move up to be identified also as the 'sufferer'/'dancer', in a standard unaccusative structure. However, besides sentences such as (3)-(4) and (6)/(18), there as some other examples in (5)-(9) that warrant some discussion with respect to the position of their direct object, which I turn to in the next section.

1.2.2.2 On the structure in (19), transitive directed-motion constructions, and the parallels between directed-motion constructions and the pre-*sentences*

In this section, I first add some general comments on the 'selected resultative' structure in (19) and explain why I tentatively assume the 'selected-resultative' structure in (19). Then I point out how *pre*-sentences such as (18), with the base verb's argument structure apparently retained, do not disprove the resultative analysis of *pre-* but rather strengthen it. And then I discuss the structures of the rest of the *pre*-sentences in (5)-(9) that I have not mentioned yet in the preceding section.

The structure in (19) assumes that the inherent reflexive in verbs such as *smejati se* 'laugh' is merged as an ordinary direct object—even though it is not an actual referential pronoun (cf. Alboiu *et al*. 2004). This assumption/the structure in (19) may have one wondering whether I am thus not implying that *pri-smejati se* (lit. at-laugh self) 'come laughing' is a causative structure—which native speakers intuitively do not feel it to be—so I will now briefly outline my admittedly very simplistic and non-committing view of directed-motion constructions.

It is well known that directed-motion constructions with prefixed verbs include not only intransitive cases such as *pri-laufati* (lit. at-run) 'come running' but also transitive cases such as *pri-nesti darilo* (lit. at-carry present) 'bring a present', *od-peljati prtljago* (lit. away-drive luggage) 'drive away the luggage', etc. The structure of these cases is controversial.

On the one hand, we have model A, where resultative prefixes sit in a small clause and where the verb is obligatorily detached from its object (along the lines of Hoekstra 1988, 2004: 341-3, Zeller 2001, McIntyre 2004, Mateu 2005, Folli & Harley 2006, etc.). In such models, the transitive directed-motion cases can get two analyses: they can be seen as cases

[9] This argument can also be used to show that in some Russian *pro*-cases based on intransitive predicates, the temporal expression *does* act as the sentential object, and that the latter are *not* the same as the *pro*-sentences based on transitive predicates (contra Fowler 1994 and Borik 2002/2006, and with Schoorlemmer 1995).

of caused motion (structurally equal to causative resultatives with unselected objects such as *run one's shoes threadbare*, cf. Mateu 2005), or they can potentially be seen also as non-causative resultatives where the external argument/sentential subject is doing some carrying, which happens symultaneously with the luggage moving to the end location, but these two subevents of carrying and of the luggage ending up in the end location are not necessarily in a causative relation (extending McIntyre 2004; and cf. also Folli & Harley 2006).

On the other hand, we have model B, such as Bowers' (1993, 1997), where 'selected resultatives' are distinguished from 'unselected resultatives' in that in the former the verb selects its argument, which controls a PRO in the subject position of the result phrase. In such a model, the transitive directed-motion cases above would presumably fall under 'selected resultatives' (cf. also Wechsler 2005, Lin 2004).

Our transitive directed-motion cases appear to diffed from, say, clear unselected resultatives such as *run one's shoes threadbare*, in that they impose an obligatory temporal dependence on the two subevents and in being non-causative (cf. Rappaport Hovav & Levin 2001), but at least on one of the two versions of the A model, that appears to still be compatible with both major approaches, A and B.

Unfortunately, I am not able to provide any argument on which to decide between these options. In what follows, I will use structures that correspond most closely to the proposal of Bowers, with his PRO-analysis supplanted by a movement analysis (à la Ramchand 2008a). The reason for this choice stems from the hard-to-support intuition that the reflexive in directed-motion constructions based on inherently reflexive verbs (e.g. *pri-smejati se* [lit. at-laugh self] 'come laughing') is not an unselected reflexive. One piece of data potentially supporting this intuition is the combination of the following three facts. When we form a prefixed directed-motion predicate from sound-emission verbs such as *cviliti* 'squeal', which can never have a reflexive outside the directed-motion construction, the directed-motion construction will also not tolerate it, as seen in (21). When we form a prefixed directed-motion predicate from a verb such as *jokati* (*se*) 'cry', optionally inherently reflexive verbs outside the directed-motion construction, the reflexive is optional also in the prefixed directed-motion construction, as seen in (22). And when we form a prefixed directed-motion predicate from a verb such as *smejati* *(*se*) 'laugh', which is an obligatorily inherent-reflexive verb outside the directed-motion construction, the reflexive is obligatory also in the prefixed directed-motion construction, as seen in (22).

(21) *Tončka* (**se*) *je pri-cvilila domov*.
Tončka self is at-whined home$_{\text{DIRECTIONAL}}$
'Tončka came home whining.'

(22) *Tončka* (*se*) *je pri-jokala domov*.
Tončka self is at-cried home$_{\text{DIRECTIONAL}}$
'Tončka came home crying.'

(23) *Tončka* *(*se*) *je pri-smejala domov*.
Tončka self is at-laughed home$_{\text{DIRECTIONAL}}$
'Tončka came home laughing.'

These data seem to tentatively suggest that non-causative directed motion constructions have a 'selected resultative' structure.[10]

At the same time, the patterning of the reflexive in (21)-(23) is highly significant for the main topic of this discussion, i.e. the analysis of *pre*-sentences such as (3)-(9) or (18) above. Interestingly, if we put the base verbs from (21)-(23) into the *pre*-construction, the results are exactly the same: the reflexive is impossible with *cviliti*, it is optional with *jokati*, and it is obligatory with *smejati se*, (24)-(26).

(24) *Tončka* (**se*) *je takrat ogromno pre-cvilila*.
Tončka self is then a-great-deal through-whined
'Back then, Tončka spent a lot of time whining.'

(25) *Tončka* (*se*) *je takrat ogromno pre-jokala*.
Tončka self is then a-great-deal through-cried
'Back then, Tončka spent a lot of time crying.'

(26) *Tončka* **se*) *je takrat ogromno pre-smejala*.
Tončka self is then a-great-deal through-laughed
'Back then, Tončka spent a lot of time laughing.'

The parallel between the spatial directed-motion constructions in (21)-(23) and the temporal *pre*-sentences in (24)-(26) is quite striking and strongly suggests that *pre*-sentences are to be treated as temporal directed-motion constructions rather than as having the prefix merged as a VP-external IP-level functional element. In addition, the parallel is instructive with respect to caution that is necessary before concluding that since the argument structure of the base verbs is retained in (24)-(26), *pre-* must be VP-external; simply, the fact that the argument structure of those base verbs is retained in (24)-(26) says nothing about VP-externality of the prefix, unless one also accepted to treat *pri-* in (21)-(23) as VP-external.[11]

So let us now have a look at the rest of the sentences from (3)-(9), in view of the 'selected resultative' structure in (19). Starting with cases like 'through-drive self a-lot' in (8), they are clearly amenable to the same analysis I gave for 'through-laugh self a-lot' in (19), despite the fact that the reflexive in this case is normally not seen as an inherent reflexive because the verb 'drive' is not a reflexivum tantum, cf. *voziti se* (lit. drive self) 'drive', *voziti potnika* 'drive (a/the) passenger', *voziti avto* 'drive (a/the) car'. Golędzinowska (2005: 133) points out that Jackendoff (1990) analyzes English verbs of motion like *run* as containing semantic Themes/Undergoers which are not realized as syntactic objects, and verbs of bodily processes like *laugh* as similar motion predicates with syntactically

[10] I acknowledge that it may still not be impossible that the reflexive in the prefixed directed-motion constructions just mentioned would nonetheless be merged only as the subject of the small clause, detached from the verb. Most importantly, despite this choice that I make, the main idea is not inextricably linked to this particular choice and can be reworked in other accounts.

[11] Obviously, none of the accounts that split prefixes into VP-internal and VP-external can do so, given that they offer the fact that a prefix is used spatially as one of the prime characteristics of VP-internal/resultative prefixes (e.g. Svenonius 2004, Romanova 2007). In addition, as mentioned in section 2.3.2 of the Introduction, the only sensible way of explaining the fact that prefixes can turn sound-emission verbs (such as *kokodakati* 'cackle') into directed-motion predicates, i.e. predicates used to express the meaning where 'one comes to be at a location (by/while) cackling' is if the prefix adds a resultative small clause.

unrealized semantic Themes/Undergoers. Golędzinowska (ibid.) suggests that the inherent reflexive in the Polish 'laugh' could be a syntactic reflex of the Theme that stays unrealized in English (extrapolating from Oya 2002, this contrast between Polish and English would be due to the fact that English lacks a weak reflexive pronoun). Following this reasoning, and knowing that the transitive *drive a passenger* corresponds to Slovenian *voziti potnika* and the intransitive *drive* (as in *He drove to work*) corresponds to Slovenian clitic-reflexive *voziti se*, it seems quite unproblematic to treat the reflexive in Slovenian 'through-drive self a-lot' in the same way we treated the inherent reflexive of 'through-laugh self a-lot' in the structure in (19).

Further, our *pre*-examples in (3)-(9) above included the case of (5), 'through-party it a lot', which contains a predicate with an idiomatic non-reflexive clitic pronoun (in the sense of the English *to bus it*), i.e. *žurati ga* 'party'. Even though such pronouns are idiomatic, it seems that they can still be treated as occupying the same position(s) as the reflexive in (19). This would mean, then, that 'it' is somehow iconic of a conceptual theme argument or a verb-cognate object/the 'partying' which is seen as going through a lot (in a way similar as the nominal *one's way* of the *way*-construction is assumed to be "iconic of a conceptual theme argument" in McIntyre 2004: 526, or "understood as a person […] extended through space (and, as a consequence […] through time" in Marantz 1992: 185). Also, the idiomatic pronoun actually seems to be somewhat similar to the inherent reflexive. As mentioned above, the verb *žurati* also occurs without *ga*, and it is quite impossible to say what the semantic difference between the two uses is. In fact, this equally applies to optionally reflexive verbs, such as *jokati* (*se*) 'cry' or *smučati* (*se*) 'ski', whose semantics also seem to be quite the same regardless of the presence or absence of the reflexive. Moreover, just like the inherent reflexive, the idiomatic 'it' is also preserved in spatial directed-motion constructions, as in (27).

(27) *Na vlaku smo ga žural k norci, kvartal, popival, muzko nažigal,*
on train are it partied as madmen played-cards drunk music played
no, in tm enkrat prot jutru smo ga tko pr-žural do Lublane.
so and there sometime towards morning are it thus at-partied to Ljubljana
'We partied like crazy on the train, playing cards, drinking, playing music loud,
and sometime towards the morning, we thus arrived, partying, to Ljubljana.'

Therefore, I think that it is not unwarranted to place the idiomatic 'it' in the same position as the inherent reflexive. This means, of course, that (5) differs from (6) in that the entity undergoing motion 'through a lot' is not, syntactically speaking, the same entity that is named by the subject. Syntactically, we have a transitive, object-oriented directed-motion construction (i.e. a structure where the sentential object is the subject of the result), but since 'it' is non-referential and may be interpreted as something like *one's way* in the *way*-construction, we may still intuitively perceive the sentential subject as undergoing the motion. (*He bussed it into downtown Montreal* would presumably get the same treatment.)

Further, our sentences in (3)-(9) included a *pre*-sentence based on the reciprocal (or accusative-indefinite/unspecified-object) marked *kregati se* (lit. scold self) 'quarrel'. Seeing this *se* as an ordinary direct object is probably less controversial than the inherent reflexive. At the same time, such predicates also easily occur in directed-motion constructions (without a causative feel), as in *Celo pot gor sta se kregala, pol sta na vrh mal posedela, pol sta se pa od-kregala nazaj dol* 'They quarrelled all the way going up, then sat a bit on the summit, and

then they quarrelled their way back down'. I assume that using the structure in (19) for these should not be problematic either.

Finally, our *pre*-examples in (3)-(9) above also included the case of (9), 'through-pester the boss a lot'. Unlike the rest of the sentences from (3)-(9), which are all attested on the web with all the important ingredients they contain in (3)-(9) (i.e. *pre*-, 'a lot/rather little/etc.', the same base verb and the reflexive/the idiomatic 'it'), (9) is attested on the web only with a reflexive or other clitic pronouns (e.g. *ga* 'him') instead of full NPs such as 'boss'. However, M. K. and A. Č. confirm my judgment of (9)—with a full-fledged 'my boss'—as acceptable. But as opposed to spatial directed-motion sentences built on the predicates mentioned so far, spatial directed-motion sentences built on *sekirati* 'pester'—such as *pri-sekirati šefa (domov)* (lit. at-pester boss home) 'get the boss home by pestering (him)'—do seem to have a causative feel. If the causative/non-causative feel suggests a difference in the structure, then the object of (9), unlike the objects of (3)-(8), may be detached from the verb.

In fact, there may be more than one parse for (9). As for the plausibility of the one with the object detached from the verb (despite the fact that 'the boss' seems to be selected by 'pester' and despite the fact that *sekirati* 'pester' is a normally obligatorily transitive verb, except in habitual contexts such as 'He likes to pester'), note that Hoekstra (1988: 130) argues that in resultatives based on the Dutch *pesten* 'tease', the object is detached from the verb despite appearances. So, it could be that (9) indeed has a causative structure with an intransitively used *sekirati*. The LCS for (9) would then be something like 'x $\text{CAUSE}_{\text{pester}}$ & the-boss GO/BECOME through a-lot', making (9) quite parallel to 'put the boss through a lot (by pestering)'. But if we look at the English *to pester* or *to bug* (which are obligatorily transitive in the very same way as Slovenian *sekirati*, including the exceptional habitual cases like *Well, he just likes to pester*), it turns out that while they do occur in resultatives, these are normally only those types of resultatives for which Williams (2005; cf. also Goldberg 1997) argues that they should be treated differently from the *run-onself-exhausted* type. Specifically, they only occur in the *way*-construction and the 'removal' construction (or more generally 'forcibly directed motion' construction; Williams 2005: 107, Fn. 27): *he pestered his way to the top …*, *John pestered Jim into the art studio*, *John pestered him into doing it*. In other resultative structures, *pester* is not too happy, e.g. **John pestered her crazy/nuts/sick/exhausted*, **John pestered himself silly/exhausted*. Following Levin & Rappaport Hovav (1995), Williams (2005) actually claims (though he does not offer a structure) that the object in the 'removal' construction is in fact selected by the verb. If this is true[12], and if *sekirati* 'pester' behaves like its English counterpart, then the argument in (9) may in fact be selected by the verb and the sentence can simply be given the structure in (19), with 'pester' interpreted as a verb/V in an object-oriented directed-motion structure, with the argument of the base verb undergoing motion, as in cases such as *od-vleči voziček* (lit. away-haul cart) 'haul the cart away', *pri-peljati prtljago* (lit. at-drive luggage) 'bring the luggage, drive the luggage to a place'. For reasons of simplicity, I will thus assume that this is the correct analysis, as it allows me to use (19) for all of the examples in (3)-(9).[13]

[12] One type of examples that are possibly problematic for this claim are cases like *pester the hell out of somebody*. While this should clearly belong to the 'removal' construction, *the hell* cannot be selected by *pester*.

[13] A potentially confusing thing to get out of the way: in addition to the one in (9) (i.e. 'through-pester the-boss a-lot'), *pre-sekirati* (lit. through-pester) can occur in another but on the surface misleadingly similar construction, (i).

So to sum up, (5)-(9) provided *pre*-sentences in which the argument structure of the base verb seems to be retained. In this section, however, rather than providing evidence against a resultative analysis of this *pre*-, such data actually support such an analysis, since in spatilly-interpreted directed-motion sentences, the same aspects of the argument structure are *also* retained. I interpreted the data discussed in this section as tentatively suggesting that such prefixed directed-motion constructions are 'selected resultatives', thus supporting the structure in (19).

1.2.2.3 Degraded pre-*sentences: blocking, telicity, second VPs in complex predicates, etc.*

In the preceding sections, it was shown that the *pre*-construction is possible with predicates which include the internal argument of the base verb, with (5)-(9) exemplifying this claim (though for (9), I also mentioned the possibility that the object only *appears* to be an argument of the base verb). I wish to stress, however, that not all such examples are equally acceptable, and many are just impossible. In this section, I will go through some degraded *pre*-sentences, sometimes suggesting a reason for their degraded status and other times not. The main purpose of this section is simply to show that there is a lack of productivity associated with this construction that one would not expect on a *v*P-external/functional account of *pre*-, but which is less surprising on a resultative treatment of *pre*-.

1.2.2.3.1 With some cases of degradation, the problem presumably lies in the fact that the combination of *pre*- and the base verb in question is commonly found in another use of *pre*-, and so the restriction is one of blocking. This could explain cases like (28) below, where the 'sing-Zdravljica-through' reading of *pre-peti* is obstructing the reading 'spend time singing Zdravljica'.

(28) ?? *Tiste cajte smo pa ogromn pre-pel Zdravljico*.
those times are PTCL a-great-deal through-sung Zdravljica
(int.: 'In those days, we sang Zdravljica a lot / spent a lot of time singing Z.')

A blocking problem has also been suggested to be behind the unavailability of the reading 'spend all night reading Anna Karenina' with the Russian *pro-čitat' Annu Kareninu vsju noč'* (lit. through-read A.K. all night), since the combination of *čitat'* and *pro*- is commonly used for 'read (sth) through' (Fowler 1994: 183, Fn. 7). Similarly, (29) below is somewhat degraded, even though judging by the normally transitive English *scratch*, which occurs in the *way*-construction and the 'removal' construction (e.g. *he scratched his way to the top*,

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(i) *Takrat sem pa šefa ornk/fajn/dodobra pre-sekiral*.
then am PTCL boss well/well/thoroughly through-pestered
'That time, I gave my boss a good/thorough pestering.'
It is clear, though, that (i) should be treated separately from (9), since the degree(-like) adverb(ial)s in (i) cannot replace 'a lot/rather little/etc.' in (3)-(8). Example (i) shows another use of *pre*-, i.e. one that exploits the 'through and through' extension of *pre*-'s basic meaning (cf. Tchizmarova 2006), which is also found in *(temeljito) pre-učiti* (lit. thoroughly through-study) 'study sth in detail', *pre-rešetati (skoz in skoz)* (lit. through-riddle through and through) 'riddle smb through and through', *(ornk) pre-vetriti* (lit. well through-wind) 'thoroughly revise', etc. Indeed, the adverbs in (i) (but not 'a lot/rather little/etc.' in (3)-(8)) can also be replaced by *skoz in skoz* 'through and through'. Such a use of *sekirati* 'pester' is somewhat novel to me but is attested on the web. *Pre-šimfati* (lit. through-criticize) can likewise occur in both constructions.

scratch the sticker off of the table) but not in other resultative structures (e.g. **he scratched him dead*, **he scratched himself silly/exhausted*), the normally transitive *praskati* 'scratch' would be expected to work in the *pre*-construction just like *sekirati* 'pester' in (9).

(29) ?*Ker je mel uši, smo ga/Tadeja takrat velik pre-praskal*.
as is had lice are him/Tadej$_{ACC}$ then a-lot through-scratched
'Since he had lice, we scratched him a lot / spent a lot of time scratching him.'

The reason for the slight degradation of (29) may also be blocking, the interfering reading being 'go throughout him scratching, scratch him through from head to toe', even though *pre-praskati* is not commonly used with this meaning (or any other meaning, for that matter; the SSKJ dictionary does not list such a verb at all). Perhaps, then, we have to invoke something like interference/blocking from a more salient potential reading rather than from an actually existing one. Now, Fowler (1994: 183, fn. 7) claims that if forced, cases like his 'through-read Anna Karenina all night' can also get the reading 'spend all night reading A.K.'. He marks the sentence with ??, noting that only a few speakers acknowledge the reading. I would say the same for the Slovenian (28); if forced, it is possible. However, I still think that if *pre-* is treated as functional/*v*P-external, the degradation is suprising and a blocking explanation hard to invoke. At the same time, such blocking effects are less surprising if we are dealing with several possible uses of a VP-chunk/complex predicate with a resultative *pre-*.

1.2.2.3.2 Furthermore, even though blocking seems to be involved with some of the degradations, other cases of degradation have other causes. For example, (30) below is completely unacceptable even for permissive linguist speakers (L. Marušič), let alone naïve speakers, and this is despite the fact that *pre-jesti* (lit. through-eat) has no commonly assigned meaning at all, nor is it getting any potential interfering interpretation.

(30) a. **Med vojno smo ogromn meso pre-jedl*.
during war are a-great-deal meat through-eaten
(Intended for (a)-(c): 'During the war we ate meat a lot / spent a lot of time eating meat.')

b. * *Med vojno smo ogromn pre-jedl meso*.
during war are a-great-deal through-eaten meat

c. **Med vojno smo meso ogromn pre-jedl*.
during war are meat a-great-deal through-eaten

One reason for its degraded status may lie in the fact that the construction seems to be subject to a restriction whereby the manner part of the complex predicate, e.g. 'laugh' in 'through-laugh a-lot' or 'pester (the boss)' in 'through-pester the-boss a-lot', has to be not only formally 'imperfective'—in the standard Slavic-linguistics sense—but rather

imperfective and atelic (in the sense of direct-object imposed quantity).[14] Now, for a pragmatically sensible interpretation (i.e. 'spend a lot of time eating meat'/'eat meat a lot'), 'meat' should get a nonspecific interpretation, but (inside non-iterative complex events) subjects of result states are known to be restricted to specific NPs. With a specific reading of 'meat', the sentence could mean 'spend a lot of time eating some piece of meat', with the same piece of meat eaten iteratively—obviously a pragmatically deviant meaning—while the meaning 'take a lot of time to eat the meat' is unavailable since the manner/means part of the complex predicate has to be atelic and 'eat the piece of meat', when in the presence of a temporal expression, is normally read as telic even though the verb is formally 'imperfective' (cf. *Tone je jedel šnicel 5 minut* (lit. Tone is eaten schnitzel 5 minutes) 'It took Tone 2 minutes to eat the schnitzel'). At the same time, note that on a functional/*v*P-external account of this *pre-*, the degradation of (30) is fairly surprising given that the same predicate with the same measure expression but without the prefix, as in (31) below, is completely unproblematic. (If this explanation is correct, then it extends also to (28), which can also work only if the manner part of the complex predicate, i.e. 'sing Zdravljica', is forcibly read iteratively; the degradation of (28) would then not be due only to blocking.)

(31) *Med vojno smo ogromn jedl meso.*
during war are a-great-deal eaten meat
'During the war we ate meat a lot.'

An explanation along the lines just hinted at is supported by *pre*-structures with color verbs such as *rumeneti* 'to yellow' or *zeleneti* 'to green'. Such color verbs have two meanings (as pointed out for Polish by Jabłońska 2007), a stative one and an inchoative one, and as shown in (32) below, the verb is imperfective in both cases. But as can be seen from (33), when such verbs occur in the *pre-* construction, they can only get a stative reading but not an inchoative, i.e., telic reading.

(32) a. *List je zelenel* (*na veji*).
leaf is greened on branch
'The leaf hung on the branch, green.'

b. *List je* (*počasi*) *zelenel.*
leaf is slowly greened
'The leaf was slowly becoming green.'

(33) *Takrat sem pa ogromn pre-zelenel.*
then am a-great-deal through-greened
✓'Back then, I spent a lot of time being green.'
*'Back then, I spent a lot of time becoming green (in one nongreen-to-green event).'

Similarly, the *pre*-construction disallows the use of the so-called 'determinate/directed' motion verbs such as *nesti* 'carry$_{DET}$' or *peljati* 'drive$_{DET}$', which are imperfective but presumably always contain a goal in their structure. The construction only allows the 'indeterminate/non-directed' counterparts *nositi* 'carry$_{INDET}$' or *voziti* 'drive$_{INDET}$', as in (8) above with its *pre-voziti se* (lit. through-drive self) 'spend time driving'. This confirms that the manner predicate of the complex predicate has to be not only imperfective but rather

[14] Cf. Flier 1985 for this claim with respect to Russian *pro*-verbs, and see section 5.5.1 of chapter 2 for the similar restriction on the English *spend time V-ing* and the accompanied-motion variant of the *way*-construction.

imperfective and atelic, a restriction similar to what we have already seen in the previous chapters.[15]

And yet another degraded *pre*-sentence is in (34), but this one is different from the previous ones in that it can certainly not be degraded due to the restrictions just discussed, as it actually contains the 'indeterminate/non-directed' verb which is fine in the *pre*-sentence in (8) above (*pre-voziti se* [lit. through-drive self] 'spend time driving').

(34) ?? *Takrat smo pa ogromn pre-vozil kolo*.
then are PTCL a-great-deal through-driven bicycle$_{ACC}$
'Back then, we rode the bike a lot / did a lot of bike riding / spent a lot of time riding the bike.'

At the same time, note that *voziti kolo* is ambiguous between 'ride the bike' and 'drive/carry a/the bike in a vehicle'. McIntyre (2004: 548) suggests that rare English causativized unergatives such as *I work them hard* or *I run the machine* involve stacked Init(iation)Ps; *voziti kolo* (lit. drive bike) 'ride the bike' may be a comparable case (contrast with *voziti tovor* 'drive cargo'). Whether a stacking of InitPs is called for or not, it is interesting to note that on this use, verbs such as *work* seem to resist the resultative construction (e.g. #*I worked them exhausted*, **The coach worked the team to the Stanley cup*). Of course, this is no explanation, but it is another parallel between the *pre*-construction and the formation of resultatives, and at the same time, if *pre-* is a VP-external element, there is no reason why (34) should not work.

1.2.2.3.3 To sum up, whereas cases such as (5)-(9) contain *pre*-sentences in which the argument structure of the base verb seems to be retained, transitive predicates that can enter the *pre*-construction are actually very restricted. On the one hand, they show restrictions that we have already seen as associated with some resultative constructions in the previous chapters, and on the other hand, I pointed out some cases which a VP-external analysis can hardly explain in any nonstipulative way.

Now, *pre*-sentences such as (30) above are totally unacceptable even for permissive linguists, let alone naïve speakers, and (34) are severely degraded. At the same time, after repeating (30) to myself for a while, I am able to accommodate it with the meaning 'spend a lot of time eating meat'. In cases where such examples are accommodated, however, it is quite uncontroversial to assume that one has forced additional structure into the tree proposed in (19) above. Quite likely, this would mean that we formed a two-VP structure; the main projection line consists of a resultative VP, which includes *pre-*, a null V, and a CausP, whereas the specifier of CausP hosts the VP of 'eat meat' (cf. section 4.4.3 of chapter 1 for discussion, or section 1.2.2.4 below for the general structure). Such structure may thus well instantiate something along the lines of the well-known English motion predicates such as *The kids played leapfrog across the park* and *Martha danced mazurkas across the room* for which, as noted in chapter 2, Goldberg & Jackendoff (2004: 556) note that it seems that in this case "the verb and the object together form some sort of complex predicate", and

[15] This is again reminiscent of the *way*-construction, which, according to Marantz (1992: 188), accepts "intransitive activity verbs and transitive verbs with intransitive habitual or repetitive readings" but does not accept "intransitive change-of-state verbs".

Young Shim & den Dikken (2007: fn. 5) note that this case is "probably best analyzed as involving a complex verb *dance mazurkas*".[16,17]

1.2.2.4 Stacking this pre- *over another internal prefix*

In this section, I put forth some cases in which this *pre-* is found stacked over another prefix, and propose that they have a double-VP structure that is along the general lines of the doubly-prefixed structures in chapters 1 and 2.

Observe the sentence in (35a), which contains the idiosyncratically/internally prefixed secondary imperfective verb *za-jebavati se* (lit. behind-screw self) 'fiddle' as the input to *pre-*; just as was the case with the stacked prefixes in chapters 1 and 2, *pre-* makes the entire construction perfective, even though the input is a secondary imperfective. I propose the structure in (35b).

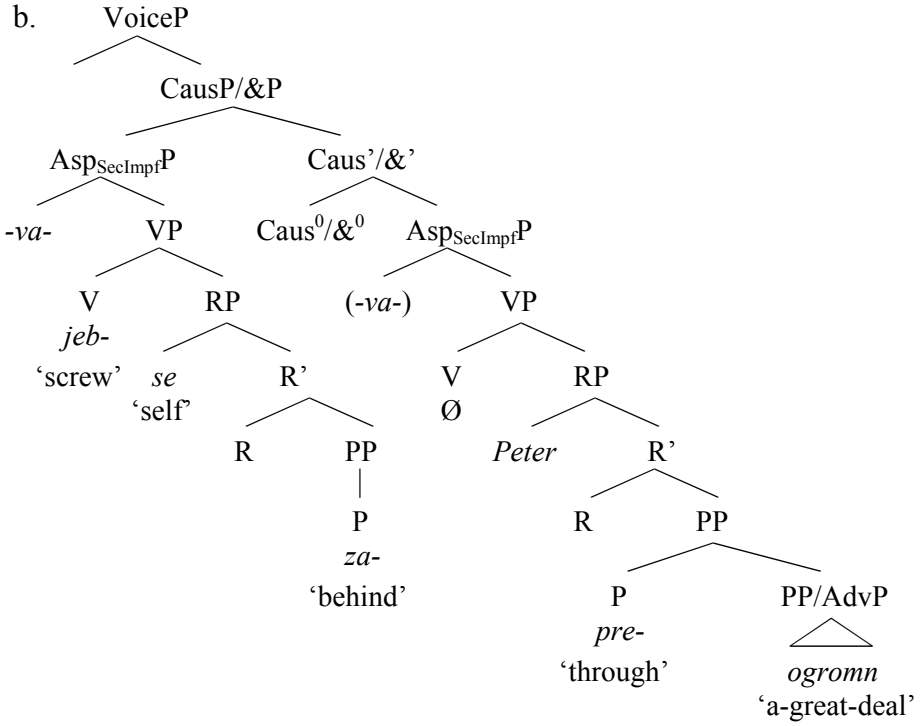
[16] Note that such constructions are known not to be very generalized, and to be restricted in certain ways. For example, Goldberg & Jackendoff (2004: 556) and Young Shim & den Dikken (2007: fn. 5) claim that for a resultative reading, the object in *dance mazurkas* must be non-referential. Young Shim & den Dikken (ibid.) also note that if *mazurkas* is changed to *the mazurkas*, the sentence resists the resultative reading. However, similar sentences with the determiner are accepted as grammatical, albeit odd, by native speakers (e.g. *Verna Rose Grimes, aged 103, of Sand Lake, won the jackpot, grabbed her bingo bag and danced the polka into heaven on Tuesday, December 28, 1999* (a native speaker-confirmed example from a www obituary)). Also, Goldberg & Jackendoff (ibid.) and Young Shim & den Dikken (ibid.) state that passivization of such cases is impossible, in agreement with Rappaport Hovav & Levin (2001: 771). But Mateu (2005: 75), citing p.c. from Heidi Harley, notes that these "facts […] are not so clear-cut" and offers some potential counterexamples.

[17] See also Lin (2004: 115), where Mandarin a subject-oriented resultative serial verb construction, as in (i), is proposed to contain a complex predicate/VP inside a resultative complex predicate/VP. Lin (2004: 101) shows that the 'internal' VP is also restricted to containing nonreferential nominals.

(i) *Zhang*$_1$*san*$_1$ *qi*$_2$ *lei*$_4$ *le*$_5$ *ma*$_3$. (Mandarin)
Zhangsan ride tired LE horse
'Zhangsan rode the horse, and Zhangsan got tired as a result.' (Lin 2004: 113)

(35) a. *S tem se je pa Peter ogromn pre-za-jebavu.*
with this self is PTCL Peter a-great-deal through-behind-screwed
'Peter spent a lot of time fiddling with this.'

b.



The main projection line contains the resultative VP that hosts *pre*-, the measure expression as its complement and what ends up as the sentential subject as its external argument. The other VP, which is situated in Spec,CausP/&P, hosts the overt verbal root, the resultative prefix *za*-, and the unselected reflexive that the latter introduces. This VP provides the manner component of the whole predicate (i.e. 'fiddling with this'), and the main-frame VP contributes the meaning 'go through a lot'/'spend a lot of time'. In short, such cases with *pre*- stacked over another prefix can be analyzed with the same mechanisms that were independently proposed for the two-VP structures in chapters 1 and 2. For the measure expression, I am still assuming that it survives despite the fact that the reflexive takes up accusative because it can get inherent case (in the same way that bare DP adverbials get inherent case; see 1.2.2.1 above, and 2 below for motivation for this). With respect to linearization and other consequences of the structure in (35b), see chapter 1.

Note that *za-jebavati se* (lit. behind-screw self) 'fiddle' is lexicalized, which presumably helps make (35a) a perfectly normal example (quite abundantly attested on the internet). However, this does not mean that the structure can be simpler than in the doubly-prefixed cases discussed in chapters 1 and 2. This is suggested, for example, by the presence of the secondary imperfective and by the presence of the adverbial 'with this', which is clearly intepreted as modifying the Spec,CausP-internal VP.

Unlike (35a), and possibly a few other cases where the prefixed input is lexicalized, other cases of stacking of this *pre*- over another prefix will be accompanied by some degradation, as in (36); moreover, many cases will be simply impossible.

(36) a. ?*Med tisto afero je pa Clinton velik pre-za-rdeval*.
during that scandal is PTCL Clinton a-lot through-behind-reddened
'During that scandal, Clinton blushed a lot / went through a lot of blushing.'

b. ??*Takrat sem pa ogromn pre-za-vezoval čevlje*.
then am PTCL a-great-deal through-behind-tied shoes$_{ACC}$
'Back then, I tied up shoes a lot / spent a lot of time tying up shoes.'

As is typically the case, stacking an internal prefix over another internal prefix is generally smoothest when the inside prefixed-verb predicate is intransitive, as in (36a), harder when the inside prefixed-verb predicate is transitive but used with a clitic, (35), and hardest when the inside prefixed-verb predicate is transitive, as in (36b) (note that any such contrast is quite a blow to a *v*P-external account of *pre-*). At the same time, the scopal relations in and the meanings of (36) are perfectly predictable.[18]

1.3 Conclusion to section 1 (Directed-motion with 'a lot' as a complement to *pre-*)

In section 1, I argued that cases such as (3)-(9) can be seen as directed-motion structures, with the measure expression (e.g. 'a-lot/a-great-deal/a-little/etc.') originating as the complement to resultative prefix *pre-*. The reason why the construction can accept transitive predicates lies in the fact that the measure expression is some XP that does not rely on structural case, probably similarly to bare DP adverbials. Therefore, we do not need a functional/vP-external account of *pre-* to explain the possibility of transitive predicates in the construction. In fact, the close parallel with respect to the realization of inherent reflexives in spatially-interpreted directed-motion constructions with prefixed verbs on the one hand and in *pre-*sentences provides strong arguments for analyzing the *pre-*construction as a case of metaphorically/temporally-interpreted directed motion. Furthermore, whereas the *pre-*construction licenses some cases of preserved argument structure of the base verb, there are numerous restrictions on what kind of transitive predicates can occur in it. Some restrictions, I showed, repeat certain by now familiar restrictions from the prefix uses discussed in the preceding chapters, and some appeared to be quite unexplainable for a functional/vP-external account of *pre-*. Lastly, I showed that rarely, this *pre-* can also be found stacked over another prefix, in which case the same mechanisms and structures from chapters 1 and 2 can be used to derive the construction with two resultative prefixes.

2. Funny complements of verbs, prepositions, and *pro-*/*pre-*prefixes

In the previous section, I suggested that the measure expression in Slovenian *pre-*sentences originates as the complement of the prefix *pre-* and is licensed as such because it does not depend on structural case marking, presumably due to being inherently case-marked. This use is not shared by Russian *pro-*; however, (2) above, or (37) below, show that Russian has a very similar use, where the counterpart of Slovenian measure expressions such as *veliko* 'a lot' are Russian measure expressions such as *do utra* 'till morning', *do starosti* 'till old age',

[18] In commenting on (33), I mentioned that the input to *pre-* could not be the inchoative reading of *zeleneti* ('to become/be becoming green') but only its stative reading ('to be (somewhere) green'). In (36a), however, 'blush' is secondarily imperfectivized and as such gets the unproblematic repetitive reading.

dolgo ‘long’, *očen dolgo* ‘very long’, *s polunoči do utra* ‘from midnight till morning’, etc. (Klima 1974: 28, Schoorlemmer 1995: 235, Borik 2002: 58/2006: 81 and Gehrke 2008b: 173, 175).[19]

(37) *Petja pro-sidel v tjur’me* *(*do starosti*). (Russian)
Petja through-sat in prison to old-age (Borik 2002: 55/2006: 77;
‘Petja stayed in prison till he was old.’ w-for-w and translation RŽ)

Formally, all of these appear to be adverb(ial)s. Due to their nonnominal looks, the above references assume such temporal expressions in Russian *pro*-sentences to be adjuncts. However, if the Slovenian measure expression can function as the complement of the prefix because it is licensed by not depending on structural case marking, then the same should be feasible for the Russian temporal expressions of *pro*-verbs as well. In this section, I will first outline two ways in which such adverbials could function as arguments, and then I will offer some indirect support for the position that it is not unreasonable to posit nonnominal complements for verbs such as those with Slovenian temporal *pre-* and Russian temporal *pro-*. I will put forth several uses of Slovenian and English verbs which are normally seen as obligatorily transitive, but sometimes occur with measure or temporal-measure expressions that at least on the surface seem to be adverbial rather than nominal (e.g. *spend*). I will conclude that an analysis whereby these temporal expressions are adverbial arguments is indeed plausible.

2.1 Categorially non-canonical arguments

In their discussions of Russian *pro*-sentences, Schoorlemmer (1995), Borik (2002/2006), etc., consider Russian measure expressions *dolgo* ‘long’, *do utra* ‘till morning’, etc., as adverbs/adverbials and as such as adjuncts. As already mentioned, though, the fact that they are formally adverbs/adverbials does not necessarily mean that they can only function as adjuncts and never as arguments. The same goes for Slovenian *dolg(o)* ‘long’, *ogromno* ‘a great deal’, etc. There are at least two implementations according to which things such as *dolg(o)* ‘long’ and *ogromno* ‘a great deal’ can function as arguments.

One implementation whereby the temporal expression in cases like (37) could be treated as an argument is to say that next to a *pre-*/*pro*-verb, an adverb(ial) such as *dolgo* ‘long’, *ogromno* ‘a great deal’ or *do jutra* ‘till morning’ is actually part of an ordinary object headed by a null time-denoting noun (cf. Kayne 2003/2005). Based on the suggestion from section 1.5.3 of chapter 3 above, we could have a structure like ‘A/THE PERIOD (WHICH IS) till

[19] Fici (1999: 91-2) counters this position, stating that the temporal expression in Russian can only be a bare accusative adverbial but not an adverb like *dolgo* ‘long, a long time’. Her example is **On pro-rabotal dolgo* (lit. he pro-worked long). My informants, who confirm the acceptability of Schoorlemmer’s and Borik’s examples with *dolgo* ‘long’, also confirm that Fici’s example is more or less bad, but that it becomes normal when some manner/place modification is added (‘with his eyes closed’, ‘out in the cold’ …). The problem of Fici’s example is thus not in the adverb (and is reminiscent of *He spent a long time sitting* (*on the balcony*), where *on the balcony* can normally be left out only in certain contexts, e.g. if something in the rest of the sentence gets contrastive emphasis, if the sentence is a reply to *Why are his knees stiff?*, etc.). At the same time, note that the need for manner/place modification is mysterious if *pro-* is an aspect/measure-FP element.

the morning'. Such strings are possible overtly in Slovenian (e.g. *obdobje do penzije* (lit. period till morning)).[20]

Another implementation could be along the lines of Neeleman's (1997) "PP arguments". Neeleman considers sentences such as *Under the bed is a good hiding place* (op.cit.: 100) or the Dutch sentence in (39).

(39) *Dat ik door de polder zou willen afraden.* (Dutch)
that I through the polder would want to-advise-against (Neeleman 1997: 91)

He argues that such PPs behave comparably to DP arguments (1997: 92-3). In the case of (39), for example, this is shown by the fact the PP is obligatory and that it has to denote a path; if we use a DP argument, it will also be obligatory, and it can be one that denotes a path. So the PP is an argument, not an adjunct. At the same time, Neeleman claims that this argument is categorially simply a PP, not a DP with a deleted determiner+noun (such as ~~*de route*~~ *door de polder* 'the route through the polder').[21] Interestingly, the parallel between Neeleman's PP argument and DP argument can be straightforwardly extended to our *pre-/pro*-examples: the nonnominal temporal expression is obligatory and denotes a temporal path, and the *pre-/pro*-verbs (in our analysis actually the prepositional prefixes *pre-/pro*-) can, as we saw in chapter 3, also occur with obligatory nominal objects which denote temporal paths.

Therefore, there do exist ways in which one could analyze expressions such as *do penzije* 'till retirement' or *dolgo* 'long' as arguments or as parts of arguments. In the next section, I will present some cases for which one will obviously want to say that their nonnominal(-looking) temporal expressions function as (parts of) direct objects.

2.2 Nonnominal(-looking) temporal-expressions as complements of 'need', 'spend'

Slovenian exhibits some interesting uses of the verbs *rabiti* 'need' (also 'use'), *porabiti* 'use up, spend' and *vzeti* 'take'. Just like their English glosses, these normally all require a direct object, as in *rabiti* *(*nov bicikel*) 'need a new bicycle', *porabiti* *(*vso hrano/ves denar*) 'use up all the food/spend all the money', (*Tonetu*$_{DAT}$) *vzeti* *(*denar*) 'take the money from Tone'. But when used in some temporal contexts, these verbs seem to occur without a direct object, (40). At the same time, however, they require something (superficially) adverbial; (40a)-(40b) contain temporal PPs, (40c-h) contain what seems like a temporal adverb or adverbial.

[20] Another variant of the null-noun approach could be in the spirit of what Baker (2003: 321-2) proposes for cases like *depend* *(*on friends*). Based on word order facts, he claims that the PP is "an obligatory adjunct with respect to the syntax", but that the complement of V contains a coindexed and theta-marked NP empty category, which is what makes the adjunct obligatory. So, in our case, *do penzije* 'till retirement', *dolg(o)* 'long', etc., could then indeed be syntactic adjuncts, but at the same time obligatory due to their coindexation with a null noun in the complement of *pre-/pro-*. However, Baker's word order effects seem hard to apply to Slovenian due to its largely free word order, so I will leave this option aside.

[21] Neeleman's (1997: 93) reason for this claim is that in cases where the PP is not path or location, such deletion is not possible. Thus, the deletion would, for him problematically, have to be specific to nouns denoting paths and locations. If the cases involve actual null nouns rather than deletion (i.e. lexical items with no phonological specification), this perhaps need not be a problem; see Kayne (2003/2005), as well as the discussion of this issue in the context of some cases with apparently null verbs in van Riemsdijk (2002) and Marušič & Žaucer (2005, 2006a). See also Barbiers (2000, Fn. 16).

(40) a. *Ma lih <u>do penzije</u> bo **rabu**, da se bo nauču francosk!*
but right to retirement will needed that self will taught French
'It'll take him just about till he retires to learn French.'

b. *<u>Od jutra pa do polnoči</u> sva **rabla**, da sva bicikel spet sestavla.*
from morning and to midnight are needed that are bicycle again assembled
'It took us from morning till midnight to put the bicycle together again.'

c. *Tone je **rabu** <u>ful dolg</u> (<u>cajta</u>), da se je nauču francosk.*
Tone is needed very long time$_{GEN}$ that self is taught French
'It took Tone a very long time to learn French.'

d. *<u>Čist predolg</u> je **rabu**, da je pršu ven pogledat, kdo zvoni.*
totally too-long is needed that is come out to-see who rings
'It took him way too long to come out to see who's at the door.'

e. *Za to nalogo sem **porabu** <u>precej dalj</u> (<u>časa</u>), kt sem mislu, da bom.*
for this exercise am up-used a-lot longer time$_{GEN}$ than am thought that will
'This exercise took me way longer than I thought it would.'

f. *Ne vem, <u>kako dolgo</u> mi je **vzelo**, preden sem opazil, da…* (www)
not know how long I$_{DAT}$ is took before am noticed that
'I don't know how long it took me to notice that…'

g. *<u>Čist predolg</u> mi je **vzel**, da sm te najdu.*
totally too-long I$_{DAT}$ is took that am you$_{ACC}$ found
'It took me way too long to find you.'

As may have become clear from some of the translations in (40), similar cases exist in English with the normally obligatorily transitive *spend*, *take* and *need*. (41a)-(41b), (42a) and (43a) below seem to contain an obligatory temporal PP. (41c)-(41e), (42b-c) and (43b) seem to contain obligatory adverbs.

(41) a. *We **spent** <u>till 10:30</u> bird-watching along the ridge before having breakfast.*
b. *Still, we survived; we **spent** <u>till after 8pm</u> coding but we survived.*
c. *I didn't **spend** (<u>very</u>) <u>long</u> there, but I can still tell you a few things about the place.*
d. *I didn't **spend** <u>long enough</u> there to realize what the situation was like.*
e. *I **spent** <u>forever</u> (talking) on the phone with the customer-service representative.*

(42) a. *It **took** him <u>till 10:30</u> to realize that…*
b. *It **took** him <u>rather long</u> to realize that…*
c. *He **took** <u>way too long</u> to correct the exams.*

(43) a. *She was curious in knowing the price right there on the spot, but I told her that I **needed** <u>till Friday</u> to make the decision.*

b. *He might **need** way longer to recover than anyone expects right now*.

In fact, this use is quite productive, especially with *spend* and *take*; the internet provides numerous examples (including most of (41)-(43)), which native speakers readily confirm (at least when the sentences are served with proper contextualization). And while some of these verbs (e.g. *spend*) can occur either with a nominal or a nonnominal(-looking) temporal expression, (41) above vs. (44a) below, others (e.g. *take*) can actually *only* occur with nonnominal(-looking) temporal expressions. This is shown by (44b), where a nonmodified *afternoon*—which cannot function as a durative adjunct (cf. *He slept the* *(*whole*) *afternoon*)—is impossible. The same holds of Slovenian *vzeti* 'take'.

(44) a. *He spent the* (*whole*) *afternoon bird-watching along the ridge*.
b. *It took me the* *(*whole*) *afternoon to do that*.

Note that one cannot brush these aside as some functional uses of *spend*/*take/need*, i.e. with *spend*/*take/need* occupying some F^0 rather than V^0, since we would then end up with a sentence with no VP, i.e. with a structure with the extended projection of V but without the V itself.

The fact that despite its nonnominal appearance, the temporal expression *long enough* of (41d) functions as a direct object is suggested also by word order facts, (45). The temporal expression can only occur right after the verb and before the locative adjunct, while the order '*spend*–locative–*long*' is bad, (45a)-(45b) and (46a)-(46b). Given that in an intransitive structure with *long* used as (or in) an adjunct, the 'V–locative–*long*' order (i.e. the opposite from the order found with *spend-long* predicates) is perfect, as in (45c) and (46c), one can only conclude that *long* in (45a) and (46a) should be treated as (part of) the direct object. (Possible word order effects cannot be appealed to with *pre-/pro*-verb predicates due to the largely 'free' word order in Slavic.)

(45) a. *I didn't spend long enough there to realize what…* [V *long enough there*]
b. * *I didn't spend there long enough to realize what…* *[V *there long enough*]
c. *I didn't stand there long enough to realize what…* [V *there long enough*]

(46) a. *I didn't spend* (*very*) *long there, but I can still tell you…* [V *long there*]
b. * *I didn't spend there* (*very*) *long, but I can still tell you…* *[V *there long*]
c. *I didn't stand there* (*very*) *long, but I can still tell you…* [V *there long*]

In fact, both 'long' and some PPs do not only occur as (part of) the complement of verbs, they also occur as (part of) the complements of prepositions, which likewise normally take nominal complements (*for money*, *till/before the next morning*). (47)-(48) reveal nonnominal complements of Ps in both Slovenian and English.

(47) a. *Tone ni prišel **za** (zelo) dolgo*.
Tone not-is come for very long
'Tone didn't come *for (very) long*.'

b. *Ej, tud* ***čez*** *ful dolg se mo še zmer o tem pogovarjal*.
hey also over very long self will$_{1P.PL}$ still always about this converse
'Hey, even after a very long time we'll still talk about this.'

c. *od zdajle* ***do*** *čez pol ure / **do** čez 14 dni*
from now till after half hour till after 14 days
'from now till half an hour from now / till two weeks from now'

(48) a. *... and it wasn't* ***till*** *long that I found out that ...* (internet)
b. ***Before*** *long, we'll all be selling our shirts to buy cigarettes*. (internet)
c. *... and it wasn't* ***till*** *after 3 p.m. that I found out that ...*
d. *... from 9:30 p.m.* ***till*** *past midnight ...* (internet)

We have seen, then, that some transitive verbs and prepositions, in both Slovenian and English, accept what are or seem to be nonnominal expressions as their complement. Moreover, these were not only nonnominal expressions, they were more particularly some sort of nonnominal temporal expressions. So in the same vein, it is not unreasonable to think that adverbial(-looking) expressions like 'till morning', 'long', etc., could in principle also be introduced as complements of the prefix *pre-*/*pro-* and function as arguments of either *pre-*/*pro-* themselves or of *pre-*/*pro*-verbs, just like their English counterparts are introduced as complements of *spend*. Interestingly, verbs such as *spend* have both a temporal use and a more general measure use, i.e. their object can be a temporal expression or some other measure expression, as in *We spent* {*all the way home/the first 2 kilometers/five miles*} *talking about that crazy experience*. Quite in parallel, the object of our *pre-/pro*-verbs can likewise be both a temporal expression or some other measure expression (see Vidovič Muha 1993 for *pre-*, Fowler & Yadroff 1993 for *pro-*). This gives one more reason not to think it impossible that just like the English *spend*, *pre-*/*pro*-verbs could develop a use that similarly allows them to occur with a nonnominal(-looking) temporal expression as the direct object.

Now, such uses may well be partly idiomatized. For example, if the temporal expression is seen as part of a direct object with a null noun, then the contrasts in (49) probably force us to say that the null noun simply happens to be selected by some verbs but not by others.

(49) a. *I spent a lot of time* / *two hours* / *a long time* / *a while* / *till 3 p.m. bird-watching*
b. *I killed a lot of time* / *two hours* / **a long time* / **a while* / **till 3 p.m. bird-watching*
c. *I lost a lot of time* / *two hours* / **a long time* / **a while* / **till 3 p.m. bird-watching*

In this respect, seeing the temporal expression as a nonnominal complement of the verb (à la Neeleman 1997) may seem to be at an advantage since it can approach these contrasts through c-selection, with only *spend* selecting either a nominal or an adverbial complement. But on the other hand, this approach may face a problem with respect to (50), since it might presumably predict that *spend* will also accept the adverbial *for a while/for a long time* as its complement.

(50) *We spent* (**for*) *a while / a long time bird-watching on the ridge*.[22]

Further, both approaches can only invoke idiomatic restrictions with respect to the failure of *much* or *a lot* on an attempted temporal interpretation in (51); without an overt *time*, the sentence with *a lot* and *much* gets the interpretation 'a lot of/much money'.

(51) *I didn't spend long* / *a lot* #(*of time*) / *much* #(*time*) *there*, *but*…

Similarly, both approaches presumably have to accept idiosyncratic reasons for the contrast which the concrete/nontemporal and the temporal (or more generally measure) use of *spend* show with respect to manner/location modification; in stark contrast to (52a), (52b-c) do not really work without some modification, regardless of the favorable lead-up context.[23]

(52) a. *Last night I went gambling and spent 30 dollars*.
b. *Last night I went gambling and spent two hours* *(*gambling/doing that*).
c. *As for the bus ride to Ottawa, I decided to stand and managed to spend all the way* *(*standing/like that*).

2.3 Conclusion for section 2

We saw ample evidence for the position that adverbial(-looking) temporal expressions, such as PPs 'till the morning', 'from two to three', etc., can sometimes quite productively act as both complements to verbs and complements to prepositions, in both English and Slovenian. It is clear that one way or another, one will want to treat these nonnominal(-looking) measure expressions as the complement of or as part of the complement of these verbs and prepositions. Moreover, the verbs and prepositions that we saw occurring with nonnominal(-looking) complements were in fact all used as parts of predicates with a temporal or more generally measure meaning. Therefore, these data can be taken as indirect support for allowing the possibility that Slovenian temporal *pre*-verbs and Russian *pro*-verbs, or rather, the prefixal prepositions *pre-*/*pro-* in *pre-*/*pro*-verbs, will also be able to occur with nonnominal(-looking) temporal expressions as complements.

I mentioned two possible accounts for such cases, a Kayne (2003/2005)-style analysis—according to which the object of (37) would be something like 'A/THE PERIOD (OF/WHICH IS) till old.age'—and a Neeleman (1997)-style analysis— according to which the object of (37) would be a categorially nonnominal 'till old age'. Unfortunately, it is not clear that either of the approaches would have a clear advantage over the other; I pointed out that they each have some advantages and some disadvantages. But one interpretation of such a situation is that they are both needed. So to the extent that there are cases that are problematic for a null-noun approach, I will assume that something like a Neeleman (1997)-style approach must be available.

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[22] (50) also shows a contrast between the temporal expression in such *spend*-sentences and in sentences where it may indeed be an obligatory adjunct, namely *The war lasted* *((*for*) *thirty years*), where a *for*-adverbial is fine.

[23] The fact that 'long' can act as a quantifier with a few temporal nouns, e.g. *dolgo časa*$_{GEN}$/*let*$_{GEN}$ 'a long time'/'many years', but not with other temporal nouns, e.g. *veliko*/**dolgo ur*/*stoletij* (lit. a-lot/long hours$_{GEN}$/centuries$_{GEN}$) 'many hours/centuries', as well as nontemporal nouns, e.g. *veliko*/**dolgo metrov*/*plastične folije* (lit. a-lot/long meters$_{GEN}$/plastic wrap$_{GEN}$) 'many meters/a lot of plastic wrap', also requires idiomatic noun-by-noun listing for possible complements of the quantifier *dolgo*.

An important difference between the two accounts is that if the complement of the prefix (which cannot assign prepositional case) contains a null noun in a phrase such as 'A/THE PERIOD (OF/WHICH IS) from two to three', then the null noun presumably needs structural case (through the complement's promotion to the direct-object position). On the other hand, if the complement of the prefix, such as 'till the morning', is categorially an adverbial/PP, then it does not need structural accusative, similarly to CP complements to verbs. In line with the reasoning in the previous paragraph, I will adopt a Neeleman (1997)-style approach and assume that the adverbial-looking temporal expressions above are indeed PPs/AdvPs. This allows me to assume that the temporal expression in such *pre*-sentences does not rely on structural direct-object case. In turn, this means that the temporal expression of the *pre*-construction can be licensed even in the presence of a structurally case-marked notional object of the verb. In other words, both Slovenian measure expressions such as *ogromn* 'a great deal' and Russian temporal expressions such as *do utra* 'till morning' can then serve as PP-complements which do not need case. Consequently, structural/direct-object case is available for other nominals in need of it. This is what makes it possible for *pre-*/*pro*-verbs in (1)-(2) above to occur with the measure expression *in addition* to the verb's notional object.

3. Directed-motion with 'till morning' as a complement to Russian *pro-*

As was mentioned at several points in this chapter, Russian exhibits *pro*-sentences that contain both the verb's notional object and an obligatory temporal expression: (53a) gives an example from Schoorlemmer (1995) and (53b) repeats Fowler's (1997) example from (2) above.[24]

(53) a. *Vasja pro-valjal duraka do utra*. (Russian)
Vasja through-play fool_{ACC} to morning
'Vasja spent all night playing the fool.' (Schoorlemmer 1995: 101)

b. *Galja vse utro pro-poloskala bel'e*. (Russian)
Galja all $\text{morning}_{\text{ACC}}$ through-washed $\text{laundry}_{\text{ACC}}$
'Galja spent all morning washing the laundry.' (Fowler 1997: 160)

This section will briefly comment on such *pro-*/*pre*-verbs based on transitive predicates. I will extend the proposal from section 1 to Russian *pro*-verbs from (53) as well.

3.1 Fowler & Yadroff (1993), Fowler (1994, 1997), Schoorlemmer (1995) and Borik (2002/2006) claim that the temporal expression in cases like (53) is not a direct object, with which I can only agree. This is clear, as pointed out by these authors, from the fact that the sentences contain the verb's notional object in the accusative. In addition, the claim that the temporal expression in (53) is not a direct object is supported by the fact that in (53b), *vse utro* 'all morning' cannot be replaced by the unmodified unmodified *utro* 'morning'/*večer* 'evening' as the temporal expression, for which it was shown in section 1.2 of chapter 3 that

[24] The word-for-word gloss and the translation in (53a) are Schoorlemmer's (1995); Tronenko (2003) gives *valjat' duraka* the word-for-word gloss 'roll fool' and the translation "be idle".

it can function only as an object but not as an adjunct. So the temporal expressions in (53) indeed cannot be functioning as direct objects.

What I do not agree with, and what chapter 3 has already shown to be wrong, though, is Fowler's (1994, 1997) conclusion that because the temporal expression is not the direct object in (53), it follows that it also cannot be the direct object in cases like his (54).

(54) *Ivan pro-spal vse utro*. (Russian)
Ivan through-slept all morning
'Ivan slept the whole morning through.' (Fowler 1997: 160)

At the very least, cases such as (54) have to be optionally parsable with the temporal expression as the direct object. This is suggested by the passivization and relativization facts discussed in chapter 3 above and by the fact that the temporal expression can be substituted for by an unmodified 'morning'. In fact, the contrast whereby an unmodified 'morning' is acceptable as the measure expression in (54) but not in (53) strikes a deadly blow to Fowler's (1994, 1997) and Borik's (2002/2006) collapsing of the two types of *pro*-sentences and the claim that no temporal expression with *pro*-verbs is an argument.[25]

It is interesting to note, as we already saw in (1)-(2) above, that in addition to the transitive *pro*-sentences such as those in (53), Russian *pro-* also readily forms cases like (55) below, which is almost perfectly parallel to the Slovenian *pre*-sentence based on 'laugh' discussed in section 1, repeated here in (56).

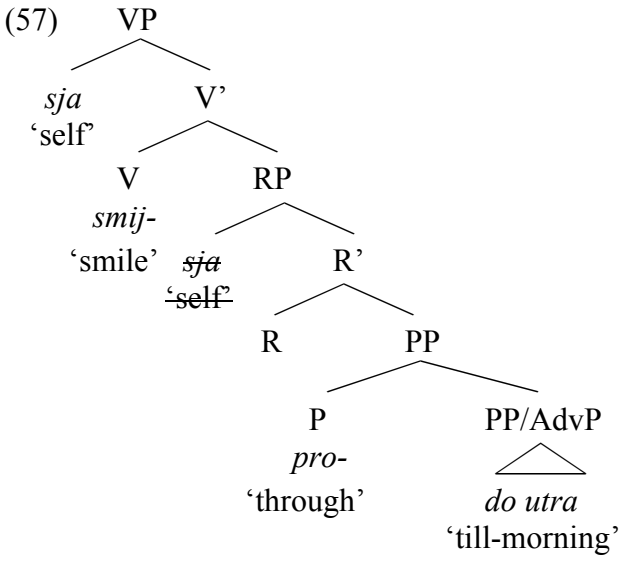
(55) *Ivan pro-smijal-s'a / pro-ulybal-s'a do utra*. (Russian)
Ivan through-smiled-self / through-laughed-self till morning
'Ivan smiled/laughed till the morning / spent till the morning smiling/laughing.'

(56) *Ivan se je takrat ogromno pre-smejal*.
Ivan self is then a-grat-deal through-laughed
'Back then, Ivan laughed a lot.'

The main features of these uses of *pre-* and *pro-* are the same. Both sentences have roughly the same meaning, i.e. 'spend a certain amount of time/a certain period of time V-ing'. Both sentences contain a prefix, specifically, *pre-* and *pro-*, which were already shown to share a 'temporal' use in chapter 3. Both sentences contain a reflexive clitic (and can more generally occur with certain types of notional objects of the verb). And both sentences occur with an obligatory measure expression. The only difference is that whereas the Slovenian *pre-*sentence in (56) occurs with an obligatory *nontemporal* measure expression ('a-lot/a-great-deal/etc'), the Russian *pre-* sentence in (55) occurs with an obligatory *temporal* measure expression ('long/till-morning/etc'). Therefore, I propose that the Russian (56) has exactly the same metaphorical directed-motion structure as was proposed for (55) in (19) above, repeated in (57) but filled out with the details of Russian (55).

[25] I say 'optionally parsable with the temporal expression as the direct object' because given that such expressions can also occur in cases like (53), where, I would claim, the expression functions as the complement to *pro-*, it is in principle possible that it could also function like that in (54) and that (54) would have the structure of an intransitive directed-motion similar to *pre-plezati čez ograjo* (lit. over-climb over fence) 'climb over the fence', with the sentential subject originating as the subject of the small clause and the prefix functioning as an intransitive P, quite similarly to *pass by the intersection* (compare with *pass the intersection*).

(57)



The only difference is that quite idiosyncratically, Slovenian *pre-* naturally only takes as its argument things such as 'a-lot/a-great-deal/etc', whereas the Russian *pro-* takes as its argument only things such as 'long/till-morning/etc' (innovatively/marginally, Slovenian *pre-* can also be pushed to take the Russian type of complements, as in some cases mentioned above).

And as was established in section 2, noncanonical/nonnominal arguments of temporally used verbs such as *spend* and temporal prepositions such as *till* are not uncommon, and at least for some of those cases, we need a Neeleman (1997)-style account whereby those complements are indeed nonnominal rather than covertly nominal (à la Kayne 2003/2005). Thus, it seems quite unproblematic to extend the proposal I offered for Slovenian *pre*-sentences to Russian *pro*-sentences, so that the prepositional prefix *pro-* is assumed to be able to select nonnominal complements (in addition to nominal complements, as we saw in in chapter 3). When they are overt PPs, such as *do utra* 'till morning', it is 'till' that provides case to its complement, whereas the PP itself does not need case. And when it is a bare DP adverbial, such as *vse utro* 'all morning', the adverbial is posited to have a null P that assigns case to the head noun, just as is assumed for bare DP adverbials by Larson (1985) (and Fici 1999 follows him in assuming this specifically for measure expressions with Russian *pro*-verbs), by McCawley (1988), and by Morzycky (2004).[26]

3.2 As for the structure of the Russian *pro*-examples in (53) above, i.e. 'Vasja through-played fool_{ACC} to morning' ('Vasja spent all night playing the fool') and 'Galja all

[26] Szucsich (2001, 2002) seeks to explain the accusative on such expressions by merging them as adjuncts to AspP, the projection he assumes to be responsible for structural accusative case on direct objects; the adjoined temporal expression gets case via "case transmission". However, accusative shows up in measure expressions also in other environments, including uses in isolation, which seem to lack sentential FPs (e.g. *eno kilo težji* 'one_{ACC} kilo_{ACC} heavier', *en korak čez črto* 'one_{ACC} step_{ACC} over the-line'), in subject uses, where the accusative NP cannot be dominated by an object-related AspP (e.g. *Eno uro* (*časa*) *je dolga doba* (lit. one_{ACC} hour_{ACC} time_{GEN} is long_{NOM} $\text{period}_{\text{NOM}}$) 'One hour (of time) is a long period'), and they can also occur twice in the same sentence (e.g. *Eno uro* (*časa*) *teče natančno eno uro* (lit. one_{ACC} hour_{ACC} time_{GEN} runs exactly one_{ACC} hour_{ACC}) 'One hour (of time) runs exactly one hour').

morning$_{ACC}$ through-washed laundry$_{ACC}$' ('Galja spent all morning washing the laundry'), one option is to see them along the lines of what I suggested in section 1 for Slovenian *pre-* cases such as *ogromno pre-sekirati šefa* (lit. a-lot through-pester boss) 'pester the boss a lot/spend a lot of time pestering the boss'. However, if we attempt their counterparts in Slovenian with *pre-* and with 'a lot' as the complement of *pre-*, the sentences are more or less completely out even for permissive linguist speakers, let alone naïve speakers.

(58) a. ?? *Tonček je takrat ogromn bebca pre-špilu.*
Tonček is then a-great-deal fool$_{ACC}$ through-played
'Back then, Tonček spent a lot of time playing the fool.'

b. * *Tončka je takrat ogromn pre-peglala žehto.*[27]
Tončka is then a-great-deal fool through-ironed laundry
'Back then, Tončka spent a lot of time ironing the laundry.'

At least if the comparison with Slovenian has any merit, then it seems likely that the *pro-* sentences in (53) are in fact in some way special.

On the one hand, it turns out that just as with Slovenian *pre-*sentences in section 1, Russian *pro-*sentences most productively/typically contain either intransitive unergative base verbs (Schoorlemmer 1995: 101, Fn. 24, Fici 1999: 94, Borik 2002: 54/2006: 77, and according to Flier 1985 also Isačenko 1960), or cases such as the inherently reflexive 'laugh' in (55) above. There is, it seems to me, no good reason for such a tendency if *pro-* is a VP-external functional element (as per Fowler 1994, 1997, Svenonius 2004, Romanova 2007, Gehrke 2008b, Ramchand 2004/2008b). Furthermore, Flier (1985) also notes the restriction that I mentioned in section 1 above as constraining Slovenian *pre-*verbs, namely, a restriction on atelic base verbs. And many cases similar to the degraded and unacceptable Slovenian *pre-*sentences from section 1.2.2.3 above are degraded or unacceptable also with the Russian *pro-*, e.g. (59)-(61) (where at least for (60), there is no option for invoking blocking, as the combination of the base verb and *pro-* does not have any established meaning).

(59) a. *?? *Ivan vsju noč' pro-jel jabloko* / *pro-jel jabloko vsju noč'.*
Ivan all night through-ate apple$_{SG}$ / through-ate apple$_{SG}$ all night
'Ivan spent all night eating the/an apple.'

b. ?? *Ivan vsju noč' pro-jel jabloki* / *pro-jel jabloki vsju noč'.*
Ivan all night through-ate apple$_{PL}$ / through-ate apple$_{PL}$ all night
'Ivan spent all night eating apples.'

(60) * *Ivan očen dolgo pro-strojil dom / doma.*
Ivan very long through-built house$_{SG}$ / house$_{PL}$
(intended: 'Ivan spent very long building a/the house / houses.')

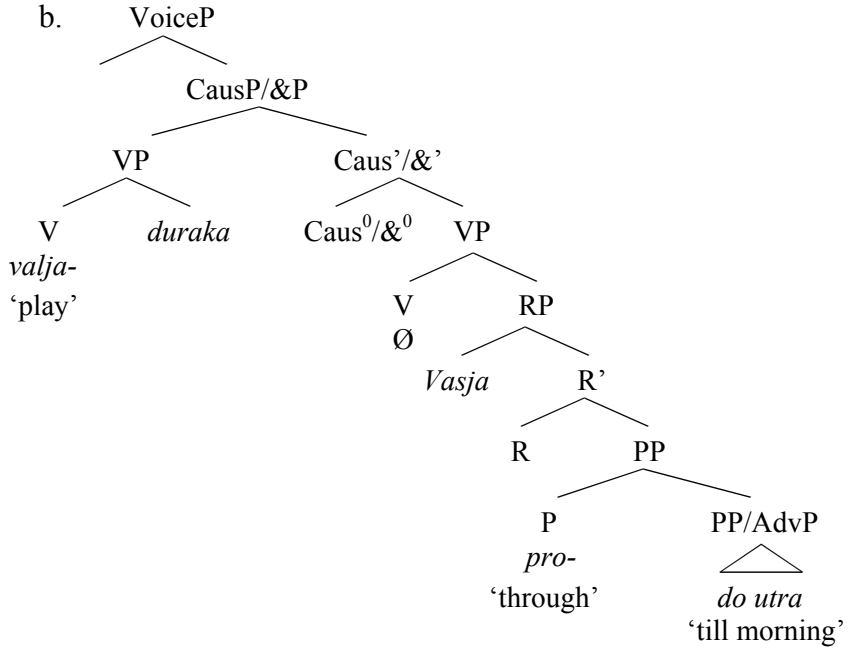
[27] To avoid potential confounding factors such as blocking, I am not using the literal counterpart of the Russian verb, i.e. *pre-prati* (lit. through-wash), which has an established meaning outside of this construction, i.e. 'rinse through'.

(61) ?? *Maša pro-čitala Annu Kareninu vsju noč'*. (Russian)
Maša through-read Ana Karenina all night
'Maša spent the whole night reading Anna Karenina.' (Fowler 1994: 183, Fn. 7)

So just like I suggested in section 1 for some Slovenian *pre*-cases, it seems that cases such as (53) may instantiate something along the lines of the well-known English motion predicates such as *The kids played leapfrog across the park* and *Martha danced mazurkas across the room* for which, as noted above, Goldberg & Jackendoff (2004: 556) and Young Shim & den Dikken (2007: fn. 5) suggest that it probably involves some sort of a complex predicate *dance mazurkas* within the resultative complex predicate. (53a), repeated in (62a), would then get a structure such as (62b).

(62) a. *Vasja pro-valjal duraka do utra*. (Russian)
Vasja through-play fool_{ACC} to morning
'Vasja spent all night playing the fool.' (Schoorlemmer 1995: 101)

b.



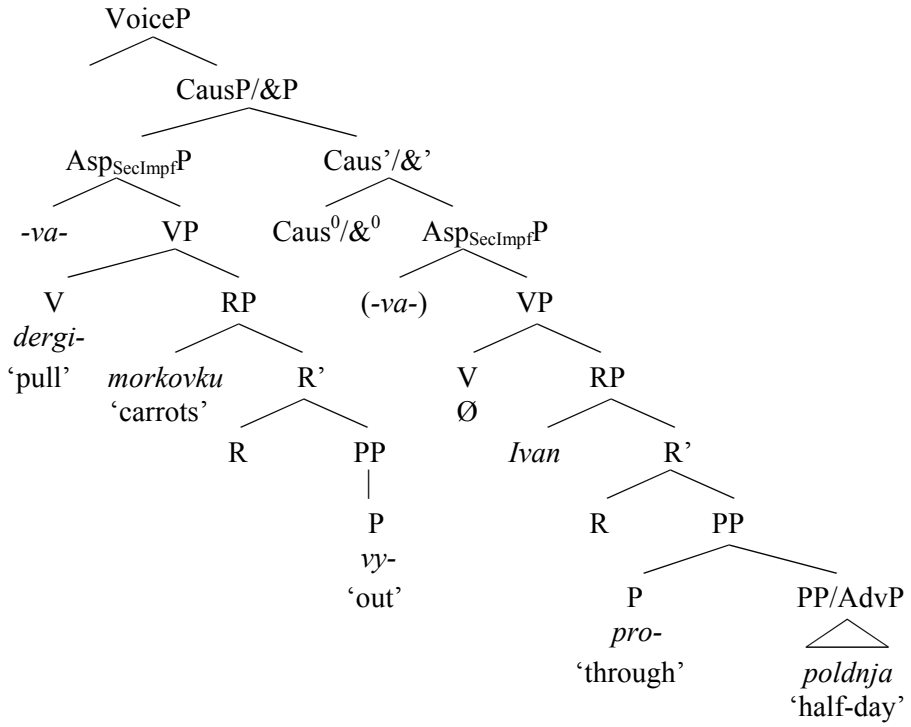
To the extent that it is clear that the Russian *pro*-construction allows such transitive cases more easily than the Slovenian *pre*-construction (and that Russian and Bulgarian prefixation is in general more flexible in this respect), I would assume that this often has to do with a more established process of forming such complex predicates within complex predicates, or perhaps also to a weaker degree of the effects of direct-objects to predicate boundedness in eastern Slavic as opposed to western Slavic more generally. Remember that I similarly pointed out that doubly-prefixed cases of the *na- se* construction from chapter 1 are considerably more natural in Slovenian that the doubly-prefixed cases of the *na*-construction from chapter 2, even though they plausibly instantiate the same structure.

As a final note, let me add that I also came across a case in which *pro-* is stacked over another prefix, namely, (62).

(63) *Pro-vy-dergival morkovku poldnja*. (Russian)
through-out-pulled carrot half-day
'He spent half a day puling out carrots.' (Tolskaya 2007: 346)

Just as I suggested for the stacked case of Slovenian *pre-* in section 1.2.2.4, I will only note that the behavior is predictable here as well (e.g. the prefixed input is a secondary imperfective, and the doubly-prefixed form is turned perfective by *pro-*), and that the same mechanisms and the two-VP structure independently proposed in chapters 1 and 2 will work here as well, straightforwardly deriving the attested meaning (i.e. with one VP contributing the manner in which half a day was spent, and with the resultative VP containing *pro-* contributing the meaning 'spend half a day'). The structure is in (64) (I use *Ivan* for what ends up as the sentential subject to avoid confusion with using a small *pro*).

(64)



3.3 To conclude, I proposed that just like in the case of Slovenian *pre-* in section 1, Russian *pro*-sentences in which the argument structure of the base verb is retained have the directed-motion structure in (57), in which the temporal expression originates as the complement of a resultative *pro-*. This prefix is thus seen as being able to select noncanonical/nonnominal arguments, just as happens with several verbs with metaphorical temporal uses and with several prepositions with temporal uses. The coexistence of the temporal expression and the direct object is possible due to the fact that the temporal expression is adverbial (overtly in cases like *do utra* 'till morning', covertly in cases like *vse utro* 'all morning') and as such does not need structural/direct-object case; the latter is thus available to another nominal. The difference between Slovenian *pre*-verbs with the measure expression 'a-lot/a-great-deal/etc' and Russian *pro*-verbs with the temporal expression 'till-morning/all-day/etc' thus reduces to an idiomatic aspect of the selection of its complement by the Slovenian *pre-* and the Russian *pro-*.

4. Conclusion

This chapter discussed two constructions, the Slovenian *pre*-construction in which the notional object of the base verb may cooccur with a measure expression such as *ogromno* 'a great deal' and the Russian *pro*-construction in which the notional object of the base verb may cooccur with a temporal expression such as *do utra* 'till morning' or *dolgo* 'long'. I proposed that these represent cases of metaphoric directed motion derived in a 'selected resultative' structure. The measure/temporal expression was proposed to originate as the complement of the resultative prefix *pre-*/*pro-*. I discussed many cases of noncanonical/nonnominal arguments of verbs and prepositions in both English and Slovenian. Extrapolating from that to the measure/temporal expression obligatorily coocurring with *pre-*/*pro*-verbs, I proposed that these measure/temporal expressions can coexist with a direct object due to the fact that they do not rely on structural case, since they are not nominal but adverbial.

Both the Slovenian *pre-* and the Russian *pro-* can also be found on a secondarily imperfectivized prefixed verb. I propopsed that these constructions instantiate the same template that had been used in chapters 1 and 2. That is, a structure with two VPs, combined with the conjunction-like CausP. The VP in the complement of Caus hosts the resultative prefix *pre-*/*pro-* and a null verb, and provides the meaning 'spend time'. The other VP is merged in the specifier of CausP, and provides the 'manner' in which the times is spent. Furthermore, some singly-prefixed data from the literature were also suggested to contain two VPs, in the same general structure, but with a simple, nonresultative VP in the manner part/Spec,CausP.

Just like in chapters 1 and 2, it was thus proposed that a verbal root can sometimes host two resultative prefixes. This was reconciled with the widely-held assumption that there can be only one independent secondary predicate per verb by positing a null V.

As one direction for future work on the constructions discussed in this chapter, let me note that Dutch appears to have a construction similar to the one discussed in section (1), which also seems to allow the cooccurrence of two resultative particles (M. den Dikken, p.c.). Therefore, a crosslinguistic view of such constructions may well be informative in confirming or disconfirming the correctness of the general approach I proposed here.

5. Appendix: passivization and relativization in sentences with nonnominal complements

In 1.5 of chapter 3, I discussed passivization and relativization of *pre*-examples and also some *pro*-examples with a nominal(-looking) temporal expression as the direct-object. I claimed that they are quite constrained, but that degradation or even unacceptability of passivization need not be enough for concluding that a temporal expression is not a direct object. At the same time, section 2 of this chapter established that some nonnominal(-looking) temporal expressions next to verbs such as *spend* and Slovenian 'use up' should also be seen as direct objects (categorially nonnominal) or as parts of direct objects (standing next to a null noun). This excursus brings up some data from passivization and relativization in the context of sentences with *spend* and its nonnominal(-looking) measure-expression argument. We will see that with such cases, passivization and relativization can also be problematic. Assuming one does not want to treat such obligatory measure expressions with

spend as completely unrelated to the direct object, and this use of *spend* as exceptionally intransitive, this provides further support for the claim that problems with passivization and relativization need not be a foolproof tests for determining the argument/adjunct status of the temporal expression. Even though indirect, this is relevant to the discussion of measure *pre*- and *pro*-verbs because it is often noted that Russian *pro*-sentences with temporal expressions such as *do utra* 'till morning', *dolgo* 'long', etc., fail to passivize and relativize even when the *pro*-construction contains no direct object, which is interpreted as showing that the temporal expression cannot function as an argument (cf. Schoorlemmer 1995, Borik 2002/2006).

5.1 Consider sentences with *spend* and a nonnominal(-looking) temporal expression, such as in (65)-(68). Judgments of such sentences seem to vary from case to case as well as from speaker to speaker, but there was general agreement with respect to the relative acceptability within sets of examples among all of my informants.

(65) a. *He spent forever on the phone with the customer-service representative*.
b. *??*Forever was spent on the phone with the customer-service representative*.
c. ??*Forever, which he spent on the phone with the customer-service representative, ...*
d. **Forever that he spent on the phone with the customer-service representative ...*

(66) a. *We spent till 10 a.m. bird-watching on the ridge, and then …*
b. *?? *Till 10 a.m. was spent bird-watching on the ridge, and then …*
c. ?? *Till 10 a.m., which we spent bird-watching on the ridge, …*
d. * *Till 10 a.m. that we spent bird-watching on the ridge, …*

(67) a. *We spent from two to three bird-watching on the ridge*.
b. ??*From two to three was spent bird-watching on the ridge*.
c. ?*From two to three, which we spent bird-watching on the ridge, …*
d. * *From two to three that we spent bird-watching on the ridge, …*

(68) a. *I didn't spend very long there*.
b. ??*Not very long was spent there*. / ??*Very long was spent there*.
c. **Not very long, which we spent there, …*
d. * *Not very long that we spent there …*

As these examples show, sentences with *spend* and a nonnominal(-looking) temporal expression are typically quite degraded in the passive, shun restrictive relativization completely, and are perhaps least problematic, though still degraded, with nonrestrictive relativization. So, if we still assume that one does not want to treat the temporal expression in the (a) sentences as completely unrelated to the direct object and these uses of *spend* as exceptionally intransitive (an assumption supported also by the word-order facts from (45)-(46) above), this shows that problems with relativization and passivization of the temporal expression cannot be taken as foolproof evidence that the temporal expression is not functioning as an argument in the (a)-sentences of (65)-(68). By analogy, problems with passivization and relativization, which have been noted for several cases when a *pre*-/*pro*-verb occurs with a temporal expression and nothing else, need not show that the temporal expression functions as an adjunct (cf. Borik 2002/2006, Schoorlemmer 1995, Fowler 1994).

Furthermore, in view of the fact that Fowler (1994) makes his claim not only on the basis of problems with passivization of *pro*-sentences with temporal measure expressions but also of those with spatial measure expressions, note that the relative judgments from (65)-(68) are similar when the measure expression next to *spend* is a spatial one, as shown by (69)-(71). (The active/(a) versions are from the internet.) And note that those passives from (65)-(71) that are marginally possible cannot be impersonal passives; English does not have this construction, and if it did, the examples would have to have an expletive, which is not possible, (72).[28]

(69) a. *It was great for my mind, as I spent all the way encouraging the leaders, then looking for my fellow Pain Train'ers to say: "Hey", "Keep it up" etc*.
b. ??*All the way was spent encouraging the leaders, then looking for my fellow Pain Train'ers …*

(70) a. *He spent all the way to Narita airport standing because of his stubbornness*.
b. ??*All the way to Narita airport was spent standing ...*

(71) a. *He then spent all the way to Omiya fussing with the damned bags …*
b. ?*All the way to Omiya was spent fussing with the damned bags*.

(72) **It/There was spent all the way to Omiya fussing with the damned bags*.

Switching to Slovenian, observe that the passive of a sentence such as (73a), with its 'use' and a nonnominal(-looking) temporal expression, is also degraded, and a relativization attempt simply fails (regardless of its nonrestrictiveness).

(73) a. *Za to nalogo sm pa ful dolg porabu.*
for this exercise am PTCL very long up-used
'This exercise took me a very long time.'

b. ??*Za to nalogo je blo pa ful dolg porabljen*.
for this exercise is been PTCL very long up-used
'This exercise took a very long time.'

c. **Ful dolg, kar sm porabu za to nalogo, ...*
very long which am up-used for this exercise
'Very long, which I spent on this exercise, …'

[28] Passivization idiosyncrasies in sentences of the type '*spend*+temporal expression' sometimes even depend on the specific verb that is used. While *a while* can be used with both *spend* and *pass*, (i), only the sentence with *spend* seems to allow passivization, (ii), which further supports the claim that passivization problems do not necessarily represent very reliable means of determining objecthood.

(i) a. *We passed a while star gazing and saw Jupiter showing four moons*. (www)
b. *We spent a while star gazing and saw Jupiter showing four moons*.

(ii) a. **A while was passed star gazing, and then …*
b. ?*A while was spent star gazing, and then…*

In short, passivization and relativization can be problematic with *spend*-type verbs in both English and Slovenian when they occur with a nonnominal(-looking) measure expression. Assuming one does not want to treat such obligatory measure expressions with *spend*-type verbs as completely unrelated to the direct object, and these uses of *spend*, 'use up', etc., as exceptionally intransitive, these passivization and relativization problems support the claim that problems with passivization and relativization do not always show that a measure expression is an adjunct. Of course, whenever a *pre-*/*pro*-sentence contains a direct object (the verb's notional object) *in addition* to the measure expression, it will not be even potentially possible for the measure expression to be parsed as the direct object, so one should not expect such measure expressions to passivize in the first place.

Concluding remarks

This thesis was cast against the background of the split that has been widely assumed to obtain in the syntax of Slavic verbal prefixes, namely, the split into the class of resultative/VP-internal prefixes and the class of VP-external prefixes. The former are seen as contributing spatial, idiosyncratic or resultative meanings, the latter as contributing meanings of outer-aspect modification, quantification, or measure. The membership in each of these two classes is typically claimed to come with a set of distinguishing characteristics which follow directly from the syntactic VP-internal/VP-external distinction. The two classes are thus assumed to split with respect to the capacity to affect the argument structure and event structure of the base verb, with respect to stacking, secondary imperfectivization, meaning systematicity, (root) nominalizations, etc.

The thesis presented four case studies of Slavic verbal prefixation, all dealing with a prefix use that appears to be problematic for the VP-internal ~ VP-external split since it combines some characteristics which are normally taken to suggest that the prefix is VP-external and some characteristics which are normally taken to suggest that the prefix is VP-internal/resultative. The prefix uses discussed are in (1)-(4), the prefix under consideration is always the left-most one.

(1) a. *na-gledati se filmov*
on-watch self movies$_{GEN}$
'come to have one's fill of watching movies'

b. *na-za-vezovati se gojzarjev* (Slo.)
on-behind-tie self boots$_{GEN}$
'come to have one's fill of tying up boots'

(2) a. *na-rvát' cvetóv*
on-pluck flowers$_{GEN}$
'pick a lot of/amass a quantity of flowers'

b. *na-ot-ryvat' biltikov* (Russ.)
on-off-tear tickets$_{GEN}$
'prepare a lot of/amass a quantity of tickets by tearing them off (the roll)'

(3) *pre-sedeti jutro* (Slo.)
pro-sidet' utro (Russ.)
through-sit morning
'spend the morning sitting'

(4) a. *veliko se pre-smejati*
a-lot self through-laugh
'spend a lot of time laughing'

b. *veliko se pre-za-jebavati* (Slo.)
a-lot self through-behind-screw
'spend a lot of time fiddling'

c. *pro-ulybat-s'a do utra*
through-laugh-self to morning
'spend till the morning laughing'

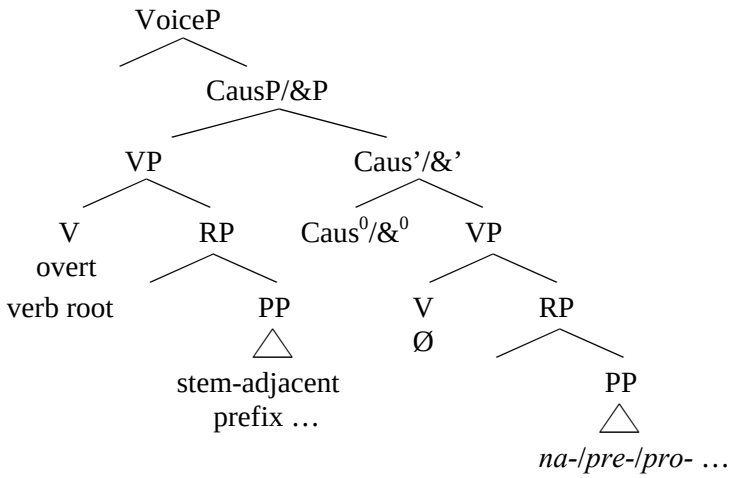
d. *pro-vy-dergivat' morkovku poldnja* (Russ.)
through-out-pull carrot half-day
'spend half the day pulling out carrots'

All four prefix uses were claimed to exhibit resultative prefixes. Starting with a discussion of the singly-prefixed variant, I showed that the prefix uses in (1), (2) and (3) all license 'unselected objects', which is a characteristic that served as the original motivation for a resultative/small-clausal account of any prefix/particle/resultative adjective (cf. Hoekstra 1988, Spencer & Zaretskaya 1998a). The singly-prefixed verbs from (4), on the other hand,

were shown to be able to retain their internal argument in some cases (similarly to prefixed verbs of spatial directed motion). However, they were nonetheless suggested to exhibit a resultative structure. Specifically, they were argued to have the structure of 'selected resultatives', in which this 'retained' internal argument instantiates both the internal argument of the VP level and the the external argument of the prefixal small clause, and the measure/temporal expression originates as the internal argument of the prefix. Several differences that the constructions from (1)-(4) exhibit were proposed to arise from differences in the internal make-up of the prefix-headed resultative secondary predicate, depending on whether the arguments are introduced as internal or external arguments of the result predicate, as well as on the syntactic category of the argument (NP ~ PP).

The resultative treatment of these prefixes raised another puzzle, related to the fact that the prefixes in (1), (2) and (4) can all occur on a verbal stem that already hosts a resultative prefix. This appears to go against the widely-assumed hypothesis that there can be only one independent resultative secondary predicate per verb. The thesis reconciled this hypothesis with the resultative account of such prefixes by proposing that despite appearances, those constructions contain two VPs, one of which contains a null V. Despite being null, this verb is easily recoverable due to the presence of the overt prefix which heads the resultative secondary predicate in its complement. Although there were some unclarities with respect to the structure of the construction in (1), I proposed that all of the doubly-prefixed cases in (1), (2) and (4) can be assigned the same double-VP structure. The common denominator was the configuration in (5), in which two resultative VPs are concatenated with the conjunction-like CausP, under a single Tense node.

(5)



The Spec,CausP-internal VP provides the manner, the VP in the complement of Caus provides the result. The structure was inspired by some work on serial verb constructions. I suggested that the reason why one of the V's apparently has to be null is the fact that Slavic verbs cannot occur bare or with only Aspect inflection; this is precisely the characteristic that is typically considered to explain why Slavic languages cannot have serial verb constructions of the type known in languages like Edo, Yoruba, Korean, etc. The discussion found a parallel between the doubly-prefixed constructions and serial verb constructions also in the obligatory argument sharing that holds between the two VPs in the construction in (2b). This explained not only the surfacing of a single internal argument, but also why the prefix in (2)

can license unselected objects when found on an unprefixed verbal base but not when found on a prefixed one.

Furthermore, we saw that in some cases, the Spec,VP-internal constituent can also be a simple, nonresultative VP. Such cases were found to be possible with all three constructions that allow their prefix to be stacked over another prefix, though in the case of (2), they may be largely undistinguishable from the single-VP structure. Therefore, we sometimes get a double-VP structure even when the prefix in (1) and (3) (and in principle (2)) occur stem-adjacent, i.e. as a single prefix. These uses are reminiscent of well-known though poorly understood cases such as *dance mazurkas across the room* and *play leapfrog across the park*, for which some have likewise suggested that they present cases of a complex predicate/verb within a resultative predicate.

The proposal whereby all of the prefixes in (1)-(4) are resultative was shown to have important consequences for several diagnostics that are standardly assumed to identify external/superlexical prefixes, such as the possibility of stacking over another prefix, (non-spatial) systematicity of the meaning contribution of a prefix, non-occurrence on root/zero nominalizations and resistance to secondary imperfectivization; all of these characteristics can come with internal/resultative prefixes (in both single- and double-VP structures, with both singly- and doubly-prefixed constructions). At the same time, of course, I mostly had nothing to say about what it is, then, that makes a prefixed form have these characteristics; some may be derivable from syntactic aspects of the construction, but some are most probably not (resistance to secondary imperfectivization most likely has to do with semantics/pragmatics, processing, sometimes phonology, etc.).

In passing, I have claimed that there also exist cases of stacked prefixes—such as *pri-vz-digniti* (lit. at-up-lift) ‘lift up a little’, *pre-u-strekleničiti* (lit. over-in-bottle) ‘rebottle’, etc.—which are modifiers of the result that is encoded with the stem-adjacent prefix. These prefixes differ from the stacked prefixes in (1), (2) and (4) in not introducing an independent resultative secondary predicate, which is why they also do not license additional arguments, why they do not trigger perfectivity if stacked on a secondary imperfective, why they do not license scopal ambiguities with adverbials, and why they do not introduce an independent result subevent. Such result-modifying prefixes originate in a PP embedded under the PP of the main resultative prefix, from where they incorporate into the main resultative prefix. The subject of the two PPs is necessarily the same.

There are, of course, several putatively VP-external uses of prefixes that this thesis did not touch upon at all, including the so-called inceptive prefixation (e.g. Russian *za-pet’ pesnju* [lit. behind-sing song] ‘start singing a/the song’), pofective prefixation (e.g. Russian *po-pet’ pesnju* [lit. along-sing song] ‘sing a/the song for a while’), terminative prefixation (e.g. Russian *ot-pet’ pesnju* [lit. off-sing song] ‘finish singing a song’), etc. Nevertheless, I believe that the results of this thesis offer a direction for an analysis of these, since they often seem to present similar puzzles that we have seen in the discussion of, say, *pre-*/*pro-*. For example, Slovenian clearly has a resultative use of *do-* ‘to’, as in *(*do-*)*misliti načrt* (lit. to-think plan) ‘finish a plan, think out a plan’. At the same time, it has a use of *do-* that seems to allow two interpretations, as in *do-kositi travo* (lit. to-mow grass) ‘finish the grass by mowing’, ‘finish mowing the grass’ (and according to Schoorlemmer 1995, Russian *ot-* ‘off’ is like that too). At least the second of these suggests that the verb’s internal argument is retained. However, this second interpretation may well be derivable from a double-VP structure with a simple, nonresultative manner VP in Spec,CausP and a resultative VP in the complement of CausP. And reflexive-retaining cases like *do-smejati se* (lit. to-laugh self)

'finish laughing' are clearly amenable to an analysis as a metaphorical directed motion (along the general lines suggested for the reflexive-retaining *pre*-verbs in chapter 4). Similarly, what Romanova (2007) analyzes as a VP-external 'pluractional' use of Russian *pere-*, as in *Ja pere-merila vse džinsy* (lit. I through-tried.on all pairs.of.jeans) 'I tried on all the pairs of jeans' (op.cit.: 230), may yield to an analysis as a metaphorical directed motion, with the subject 'going through all the pairs of jeans'. Moreover, intransitive *za*-verbs in Slovenian have an inceptive meaning but transitive *za*-verbs do not, which tentatively suggests a resultative nature of the prefix. At the same time, Russian transitive *za*-verbs presumably *can* have an inceptive meaning, in which case they may perhaps yield to a double-VP structure with a simple, nonresultative manner VP in Spec,CausP and a resultative VP in the complement of CausP. In short, I had to restrict the discussion in the thesis to just a few cases of putatively VP-external prefix uses, but the general approach arrived at seems well-equipped for approaching other kinds of putatively VP-external uses of prefixes, and thus opens plenty of possibilities for future research.

Finally, Slavic prefixes are known to exhibit great similarities with Germanic resultative constructions. And as shown in the conclusion to chapter 1, Dutch shows an unselected-reflexive adjectival resultative construction similar to the Slavic prefix construction in (1), which likewise allows the cooccurrence of a second resultative predicate (a particle) and a second unselected object. Similarly, Dutch appears to have a construction similar to the one in (4), which also seems to allow the cooccurrence of two resultative particles (M. den Dikken, p.c.). The results of this thesis would therefore clearly benefit from a study that will take into consideration this outside-Slavic crosslinguistic perspective.

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