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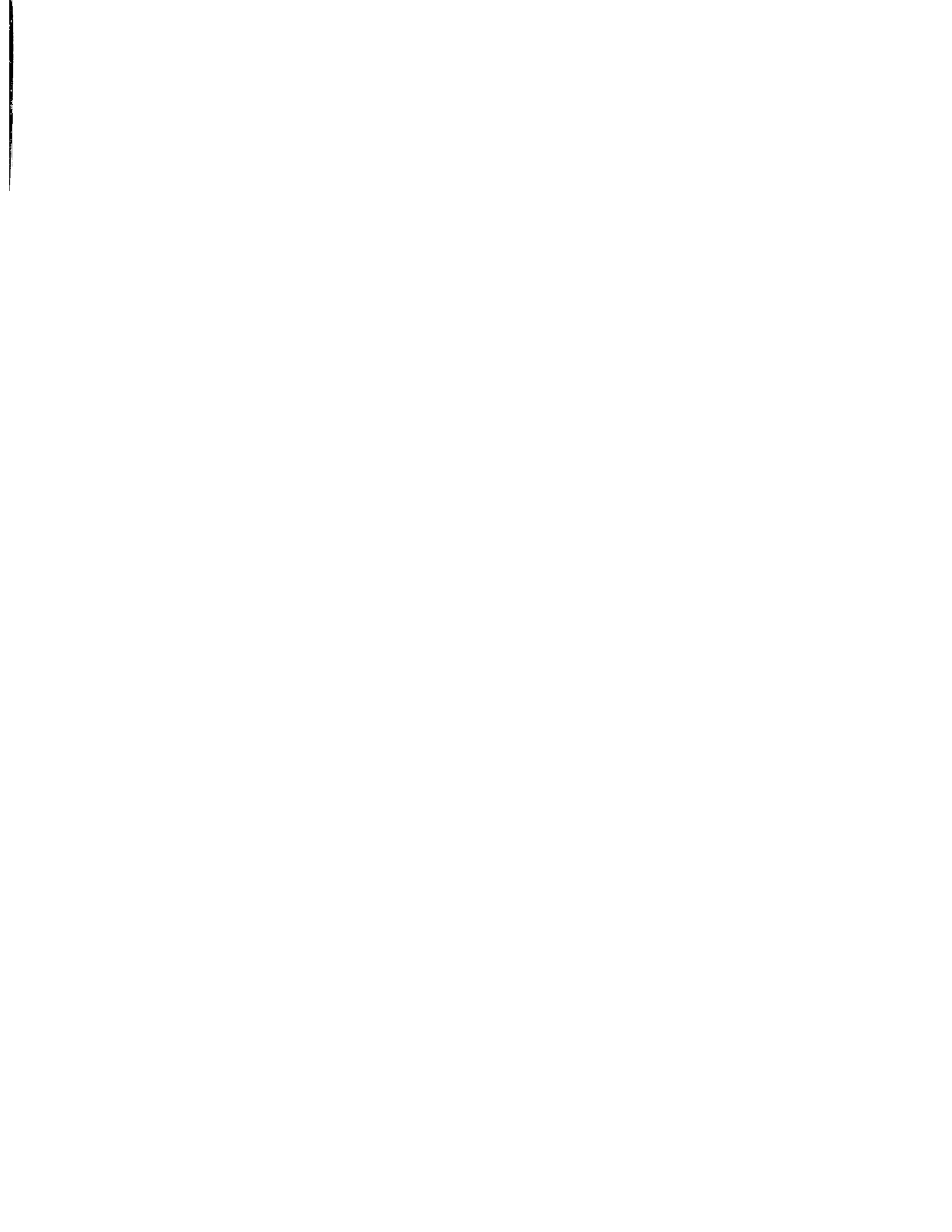
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**The Role of Verbal Prefixes in Slavic:
Evidence from Slovenian Locative Denominal Verbs**

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The Faculty of Graduate and Postdoctoral Studies
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Abstract

The role of Slavic verbal prefixes is discussed in the context of Slovenian Location/Locatum denominal verbs and against the distinction between semantic aspect (situation type, a-/telicity) and morphological aspect (viewpoint, im-/perfectivity). Some recent literature serves as the basis for adopting the claim that Slavic prefixes do not directly code perfectivity but rather a resultative change of state; minimal-pair evidence is provided, based on locative denominal verbs. The standard claim that prefixes on directed-motion verbs contribute directional semantics is challenged; minimal-pair evidence is provided to show that they contribute a state/location. Resultativity and directed motion of prefixed verbs are derived compositionally. Prefixes introduce a state, and are thus eventualities rather than eventuality type modifiers; again, minimal-pair evidence from locative denominals is provided. Finally, it is argued that in directed-motion constructions, prefixes are different from Goal/Source-PPs; the prefix introduces the State/Location, the PP introduces the Path.

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– *Šusskoti* (trdojedniki, Amanda Jaka Lanko Pina Tatjana Vina) → Blabla. Šuss. Lingvistični četrtki. Družabni četrtki. Razvratna četrtkova ponočevanja. Utrujena petkova jutra, a je boljš Olimpija burek, Miklošičeva al Štacjon? Mesni, pica al sirov? Al sirov sploh ni burek ampak navadna sirovača? Pa nazaj v šolo na Orešnikov petkov seminar. suss@yahogroups.com.

– *Severno-ameriška naveza* → Alenka Lanko Tatjana. Berkeley Boston Stony Brook. X-ijada. Enajst ur na busu, pet ur na avijonu, *n* ur na telefonu.

– *Z vseh vetrov* → Captain, dečki in gospe s Kopališke; mamini prevajalci in literati; fotrovi fiziki in hribolazci; Tadejevi srednjesošolci in arhitekti; Čopiči. Dobrodošlica zabave. Kvaj zdej mejli. A si še živ mejli. A mate še zmer sneg mejli. Kdaj prideš pa kej nazaj mejli. A za zmeri mejli.

– *Krvniki* → Kraigher, Žaucer (duplo), Kalar.

– *Po mamini strani rodovnika* → slovenščina – jezikoslovje, angleščina – jezikoslovje, x-ščina – jezikoslovje...

Outline of the thesis

This thesis investigates the role of verbal prefixes in Slavic, grounding the discussion in the context of locative denominal verbs in Slovenian. In Section 1, I introduce the topic of locative denominal verbs, briefly review traditional claims about Slovenian prefixation, show why the issue of semantic aspect (situation type) has in Slavic linguistics long been neglected, and finally summarize four major recent articles on Slavic prefixation. In Section 2, I provide minimal-pair examples which prove that the net role of prefixes is the introduction of a resultative change of state; they come from locative denominal verbs. In Section 3, I argue that prefixes on directed-motion verbs do not contribute directionality but rather a state/location. I provide minimal-pair evidence from the complementary distribution of the prefix *pri-* 'at' and the preposition *k* 'to'. In Section 4, I propose to derive the resultativity of prefixed verbs compositionally, employing Pustejovsky's (1992) event composition. In Section 5, I support Strigin & Demijanow (2001) by showing that prefixes only introduce a state and are thus eventualities, rather than eventuality type modifiers, as proposed by Filip (2000, to appear). Again, minimal-pair evidence comes from locative denominal verbs. In Section 6, I account for some data from Filip (to appear) that—on her interpretation—seems to constitute counterexamples to my claims. I further propose that in directed-motion constructions, Slavic prefixes are not to be treated on a par with Goal/Source-PPs. I propose that the prefix introduces the State (Location), while the PP introduces the Path. Section 7 gives some implications of the analysis and a conclusion.

Abbreviations

ACC = accusative case
DAT = dative case
GEN = genitive case
IMP = imperative
IMPF = imperfective aspect
INF = infinitive
INSTR = instrumental
INTER = interrogative
LOC = locative case
NOM = nominative case
P = process
PF = perfective aspect
R = resultative
S = stative (when in company of R); state (when in company of T and P)
SML = semelfactive
T = transition

Notational conventions

When a verb is given in isolation, the infinitive form will be used (the infinitival morpheme is, simplifying a bit, *-ti* or *-či*). When a morpheme or a root is given, as opposed to a full word, this will be indicated with hyphens. In the case of a verbal suffix, the morpheme will be both preceded and followed by a hyphen, since in a fully inflected word the morphemes that will be under discussion are always followed by some inflectional material. *-va-* thus represents the imperfective suffix. A prefix will be indicated in the same spirit, e.g. *v-* or *na-*. In the glosses, prefixes will be given in capital letters, so a *v*-prefixed *teči* 'run', i.e. *v-teči*, will be glossed as 'IN-run' (when its lexical-semantic contribution is less obvious, it may be given in the original Slovenian form, e.g. NA-). In the examples, prefixes will be separated from the verb by a hyphen, although in Slovenian spelling practice the two are spelled solid. Perfectivity will be marked with a subscript PF on the verb, imperfectivity ('primary' or 'secondary', see below) with a subscript IMPF. Subscripts will occur in the English gloss line unless the example is given without glosses; in these cases, the subscripts will be indicated in the examples itself. Cases will be marked in subscript, NOM standing for nominative, ACC for accusative, GEN for genitive, DAT for dative. Whether a prepositional phrase is directional and so in the accusative case or locational and so in the locative case will in principle be indicated only through the use of the English preposition in the glosses. Similarly, an instrumental prepositional phrase, standing in the instrumental case, will be recognizable through the gloss with a preposition *with* (to keep examples single-lined as often as possible). Other cases may sometimes also not be indicated, and will as a rule only be indicated on the head noun. Categories such as past/present/future will not be specifically indicated but will be recognizable through the (simplifying) glosses. The past and future tense are analytic, composed of an auxiliary of the verb *to be* and a past participle; in the glosses, the participle of the past tense will be represented with the English past tense, the auxiliary with a subscript AUX, in the future tense, the future auxiliary will be glossed as *will* and the participle as the English present tense. Grammatical person will sometimes be marked on the auxiliary or the verb when the subject is covert, e.g. as AUX_{WE}. Grammatical number will be obvious through glosses. In general, examples will have the following format:

Tinček je v-tekkel v trgovino
Tinček_{NOM} AUX IN-ran_{PF} into store
'Tinček ran into the store'

Note also that translations of examples may sometimes in fact be ungrammatical in English, but will nevertheless be used for reasons of maximal clarity (possibly with a grammatical paraphrase added in parentheses). In translations of examples of individual verbs in the text, a prefixed verb such as *v-stopiti* may also be given as 'in-step (enter)'. The same convention is used (among others) in Michaelis & Ruppenhofer in discussing German *be*-prefixation data, e.g. in "[...] plants that directly *be-grow* walls [...]" (2001: 21).

1. INTRODUCTION

Section 1 is the introduction of various issues that will be relevant to the discussion in the subsequent sections. Section 1.1 presents some basics of the Slovenian verbal system with the aim of introducing some of the categories and related terminology that will be used in the discussion to follow. Section 1.2 introduces the notion of denominal locative verbs and the two subtypes, Location and Locatum denominals, by briefly outlining two approaches, a preposition incorporation model and an event-structure model. The lexical conceptual structure representation is introduced, as well as the concept of phonologically empty verbal predicates. In Section 1.3, I sketch very briefly the standard position taken with regard to the role of Slavic prefixes in traditional linguistics, specifically Slovenian linguistics. Section 1.4 offers some explanation as to why the notion of semantic aspect (situation type), unlike morphological aspect (viewpoint), has long been neglected in Slovenian linguistics while it has a considerably longer tradition in Germanic linguistics. In Section 1.5, I summarize the main points made in Filip (2000, to appear), Spencer & Zaretskaya (1998a), and Strigin & Demjjanow (2001), all of which converge on the idea that prefixes are not perfectivity markers. The section also introduces some terminology (quantization / homogeneity distinction, resultativity, etc.).

1.1 Some Basics about Verbs in Slovenian (Slavic)

According to Herrity (2000: 150-2), the basic grammatical categories of the Slovenian verb are aspect, person, number, gender, tense, mood and voice.

The category of aspect marks the distinction between the imperfective, marking non-completion, and the perfective, marking completion (ibid.; this is a preliminary generalization that will be modified further on). Imperfective verbs can more precisely encode duration or repetition/frequency, perfective verbs result/completion or just completion (ibid.). With the exception of the so-called biaspectual verbs, often foreign in origin and often forming a class in terms of their form, which code either the perfective or the imperfective in a single form (*telefonirati*_{PF IMPF} 'to phone'), Slovenian verbs are always aspectually classified. Aspectual pairs can correlate with difference in (non-)prefixation (*čistiti*_{IMPF} 'to clean', *po-čistiti*_{PF} 'to clean (up)'), in (de)palatalization of a consonant (*počiti*_{PF}, *pokati*_{IMPF} 'burst'), in umlaut (*za-preti*_{PF}, *zapiрати*_{IMPF} 'to close'), in the thematic vowel (*pič-ī-ti*_{PF} and *pik-a-ti*_{IMPF} 'to sting') (Toporišič 2000: 348-50). Some pairs are coded with distinct roots (*vreči*_{PF}, *metati*_{IMPF} 'to throw') (ibid.). An aspectual-pair relationship can furthermore be coded with the imperfectivizing suffix *-va-* (*neh-a-ti*_{PF}, *neh-a-va-ti*_{IMPF} 'to give a bath') (ibid.). For more on some of these concepts see e.g. Lencek (1966), Marvin (2001).

Simplex verbs are claimed to be in principle imperfective, with an enumerable list of exceptions (Toporišič 2000: 348). The unprefixated simplex verb *rezati*_{IMPF} 'to cut' is thus

imperfective. The prefixed verb *v-reza-ti_{PF}* 'to cut (sth) into (sth)' is perfective. Prefixed simplex verbs are all considered perfective (ibid.). The two forms have a third related form, made up with an imperfectivizing suffix *-va-*: as in *v-rezo-va-ti_{IMPF}*. This form is traditionally called the secondary imperfective. This view has been theoretically challenged (e.g. Filip 2000), as will be seen later on, but the term secondary imperfective will nevertheless be used in this work for reasons of clarity. A secondary imperfective will thus designate a prefixed imperfective verb as a means of crucially distinguishing it from the unprefixed imperfective form (or primary, simplex imperfective).

There are a number of prefixes in Slovenian, Herrity (2000) lists 18 (leaving out foreign prefixes such as *re-* in *re-organizirati_{PF}* 'to reorganize'), Toporišič (2000) as many as 35. Most of the Slavic ones carry some kind of spatial semantics, such as *na-* in *na-takniti_{PF}* 'to stick (sth) onto (sth)', which is not surprising given that they developed out of prepositions and adverbs (Bajec 1959, Filip 2000); *na-* is cognate with the preposition *na* 'on, onto'. They typically carry several uses, so besides its spatial use, *na-* also has a quantifier use, as in *na-kupiti_{PF}* 'buy a large amount'. Prefixes can stack: *pre-na-ložiti_{PF}* '(over-on-load) to overload, to re-load (sth) somewhere else', *pre-raz-po-staviti_{PF}* 'to rearrange'. As already mentioned, prefixed verbs have as a class traditionally been considered perfective unless they have undergone secondary imperfectivization.

Besides the imperfective-perfective aspectual distinction, prefixation-related traditional literature typically includes the broad category of Aktionsart, or mode of verbal action, covering semantic oppositions such as durativity versus iterativity, determinacy/specificity versus undeterminacy/genericity, eventiveness versus stativity, inchoativity versus causativity, and the categories of attenuativity, modality, phasicness/proceduralness (Toporišič 2000: 351-1), resultativeness, terminativity, accumulativity, distributivity, delimitativeness (Merše 1995, Žele 2001). It is sometimes claimed that imperfectives can—with certain restrictions—in principle be interpreted iteratively. This is the view that will be adopted here since it is sufficient for the purposes of this work. An imperfective verb will thus be marked as imperfective, the morpheme *-va-* will be called the imperfective morpheme. Lencek, for example, claims that there is no morphologically marked iterativeness but that the imperfective aspect, imposed on lexically iterative verbs such as *skakati* 'to jump_{IMPF}', produces a general "multiphasic" imperfective reading (1966: 100-1). Toporišič (2000: 351) similarly has a class of verbs that are inherently

iterative and can due to the imperfective also have a durative reading, and another class that describes an "indeterminate" action and is at the same time iterative. Filip (2000: 83) claims that the Slavic imperfectivizing suffix *-va-* developed from the marker of iterativity, frequency, or genericity and is synchronically homonymous with the genericity-marker *-va-*; in effect, then, she posits two separate homonymous morphemes¹. Categories such as attenuativity, accumulativity, delimitativeness and phasicness have in formal approaches received quantificational analyses (e.g. Spencer & Zaretskaya 1998b, Piñón 1994, Filip 1994, 1997, 2000). Slovenian has a semelfactive suffix *-ni-*, as in *pih-ni-ti_{PF}* 'to blow (once)'. For further discussion of Aktionsart, see Schuyt (1990), Merše (1995), Žele (2001).

In order to avoid repetition, certain aspects of prefixation (semantic aspect, resultativity, telicity, etc.) will only be introduced in subsequent sections.

1.2 Denominal Locative Verbs

Locative verbs are verbs that typically involve (abstract) transfer of an entity (substance, object, set of objects) into/onto or from a container, surface, etc. The entity moved is often referred to as the Theme/Figure/Locatum, the entity with respect to which the movement is described as the Goal. Ground. Location. Denominal locatives are a subclass of locative verbs. Sometimes, denominal locatives are also analyzed as belonging to the more general class of causative change of state verbs (e.g. Mateu 2001a, cf. also Labelle 1992). The events described by these verbs are thus seen as bringing about a change of state, a resulting state, realized as the presence of a quality with respect to another entity. The quality can then be an entity's being located somewhere, an entity's providing the location for a displaced entity, or the rise of a qualitative state.

Denominal locative verbs fall into two classes, according to whether the noun on which the verb is based, i.e. the incorporated noun, represents the entity that is (pragmatically conceived of as) moved in the event (*to saddle*) or the entity that provides the location with respect to which something is moved (*to bottle*). The former are called by Clark & Clark (1979)

¹ It should be noted that Filip (to appear) adds that the generic/habitual morpheme is productive in Czech but very restricted in Russian and Polish. Similarly, it seems to be very restricted in Slovenian, but cf. the coexistence of the generic form *del-o-va-ti* 'to work' with the simplex imperfective *del-a-ti* 'to work/be working'.

Locatum verbs, the latter Location verbs. These are the terms that will be adopted here, while the term locative denominal will be used as the cover term to comprise both of these subclasses.²

Denominal verbs are analyzed as including a phonologically empty verbal predicate. The incorporated noun can be either in an argument relation to the empty verbal predicate or in a non-argument relation. In *to waitress*, the verbal predicate would be for example ACT, while *waitress* represents some kind of an adjunct modification to it. Locative denominals form a subclass of denominal verbs, in that the incorporated noun represents an argument of the verb. In accordance with the terms introduced above, the semantic argument denoting the displaced entity will be called the Locatum argument, the entity with respect to which the Locatum argument is moved will be the Location argument. *To saddle* incorporates the Locatum argument, *to bottle* the Location argument.

Locative denominals are based on the three-argument semantic concept PUT³, which in a sense makes them transitive by default.⁴ On the other hand, one of the predicate's semantic internal arguments is incorporated in the verb and thus will not surface as either the direct internal argument or oblique internal argument. A further specification in a PP (or in the case of animacy sometimes in a dative object) is of course possible, as in *u-stekleničiti_{PF} vino_{ACC} v zelene steklenice* 'to bottle wine in green bottles'.⁵ If the incorporated argument is the Locatum argument, the internal direct argument will be the Location argument, and vice versa.

Locatum verbs such as *o-sedl-a-ti* 'to saddle', whose prefix is cognate with the preposition *o(b)* 'at', can be given an abstract semantic representation such as⁶: X PUT Y<sedl-> Z<o x>

² Note that this is unlike in Mateu (2001a), where *saddle*-type verbs are called locatum denominals and *bottle*-type ones as locative denominals, but in line with the majority (e.g. Levin 1993, Kiparsky 1997, Hale & Keyser 1997, Harley 1999, Moreno & Romero 2000).

³ For expository reasons, PUT is used here, as in Wunderlich (1987). Later on, this will be substituted by the more basic CAUSE(COME(BE(AT))). The verbs are standardly assumed to be semantically derived (e.g. Pinker 1989; Rappaport Hovav & Levin 1998; Wunderlich 1997; Hale & Keyser 1997; Labelle 1992/2000; Mateu; 2001b).

⁴ Clark & Clark (1979: 772) note that some English ones are ordinarily intransitive, such as *to surface*. In Slovenian, a comparable example may be *skupiniti se* 'to group' (verb not listed in Bajec *et al.* 1994 but found in actual use in Orešnik 1994).

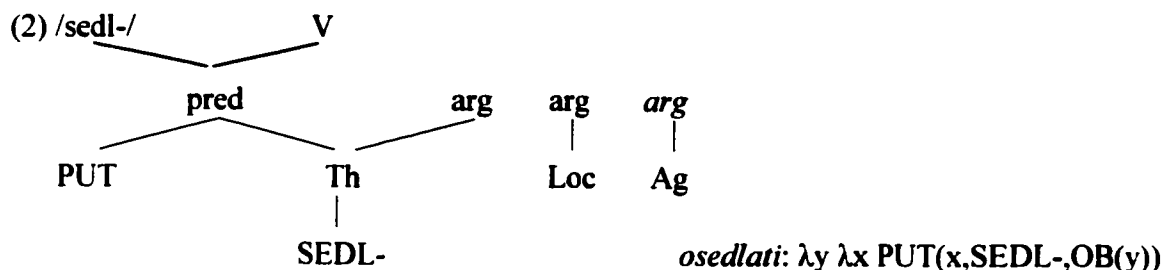
⁵ 'Further specification' means that the place (Location verbs) or thing-put (Locatum verbs) must be in the extension of the related noun, i.e. it must be an instance of the related noun or consist of it (Kiparsky 1997: 485-6). The notion should be seen as allowing minimal semantic extension of the corresponding noun, which captures cases of semantic bleaching such as *to shelve x on a window-sill*; a window-sill is a 'shelf-like-thing' (op.cit. 486-88).

⁶ *Ob* (and later on *v*) is represented as the preposition governing argument *x* to relate it to the prefix *o-* (*v-*). Note, however, that this is only done at this point for expository reasons. For *ob*, a more general abstract locative-relation predicate should be assumed, e.g. AT, since the correspondences between prepositions and prefixes are not always very straightforward. For *v*, see below.

Their (surface) syntactic patterning is exemplified in (1):

- (1) *Tinček je osedlal konja (s čisto novim sedlom)*
 Tinček_{NOM} AUX O-saddled horse_{ACC} (with brand new saddle)
 'Tinček saddled the horse (with a brand new saddle)'

In (2) below is a more schematic representation of the mapping between the predicate-argument structure and the syntactic realization in Wunderlich's (1987) format (developed for German). The first level, going from top to bottom, shows the empty verbal head and the verb's phonetic realization, the second level the syntactic realization, where the arg in italics stands for the external argument, and the third level shows the thematic structure (Theme, Location, Agent). At the bottom on the right follows the semantic form.

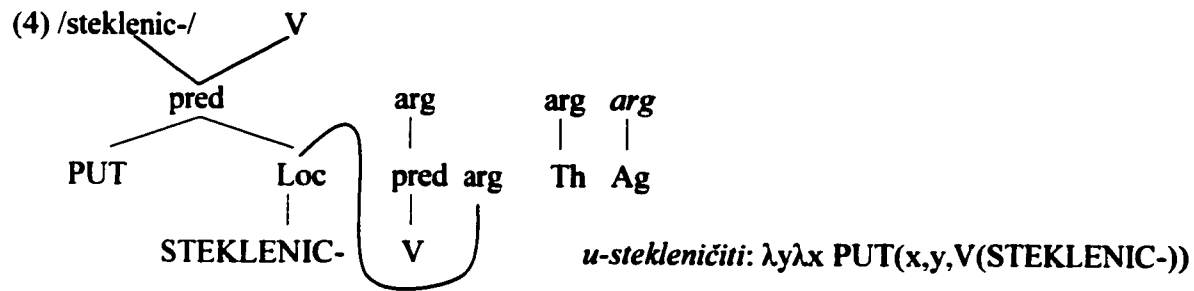


Since the semantically closest internal argument is incorporated in the verb rather than realized as the surface direct internal argument, this position is available and so the Location argument surfaces there. The *with*-PP can only further specify the incorporated noun, while a mere repetition is infelicitous (cf. Wunderlich 1987: 319-20, Rappaport Hovav & Levin 1998: 123).

- (3) #*Tonček je osedlal konja s sedlom*
 Tonček_{NOM} AUX O-saddled horse_{ACC} with saddle_{INSTR}
 'Tonček saddled a/the horse with a saddle'

On the other hand, Location verbs such as *u-steklenič-i-ti* 'to bottle', whose prefix is cognate with the preposition *v* 'in'⁷, receive the representation in (4) (Wunderlich 1987).

⁷ *U-* and *v-* are synchronically (at least in the context under consideration) spelling variants (cf. Bajec 1959), both of them used with locative denominals with the same meaning. The preposition 'in(to)' only has the spelling form *v*.



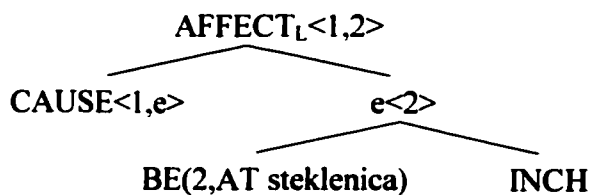
The (surface) syntactic patterning of Location verbs is exemplified in (5) below.

- (5) *Tinček je u-stekleničil sok (v zelene steklenice)*
 Tinček_{NOM} AUX U-bottled juice_{ACC} (into green bottles_{ACC})
 'Tinček bottled the juice in green bottles'

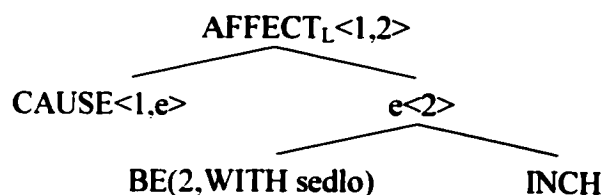
This approach sees prefixes as somehow incorporated prepositions. However, with Locatum verbs this does not seem plausible due to the difference between the two types of verbs, whereby in one of them the prefix represents the preposition that governs what surfaces as the incorporated noun and in the other what surfaces as the direct internal object. No linking principles are offered to motivate this distinction.

If one gives up the idea of regarding the prefixes (or at least one from the the above pair) as prepositions, the difference between Location and Locatum verbs can be represented in an event-structure approach such as Labelle's (1992). She accounts for the difference in terms of semantically different result states that the incorporated nouns identify, while the rest in their structures is the same. Labelle's proposal crucially rests on the observation that movement is with Locatum verbs in fact not necessary, the important part is the inception of a resulting state, which is a state of being located with respect to another entity. In a lexical conceptual structure (LCS) format, she thus assigns Locatum verbs the resulting state [x HAVE y], which can be translated to [x BE WITH y]. She is then able to postulate the following LCSs for Location (6) and Locatum (7) verbs (the numbers indicate (sub)event participants, *e* stands for event):

- (6) *u-stekleničiti* 'to bottle':



(7) *o-sedlati* 'to saddle':



The conceptual primitive $AFFECT_L$ introduces lexical affectedness, that is, a lexically obligatory modification of the status of an entity acted upon (op.cit.). Since prefixes are not considered incorporated prepositions, their syntactic behavior (Locatum verbs taking Location arguments as direct internal arguments and Location verbs taking Locatum arguments as direct internal arguments) is predictable from the general principle according to which in canonical transitive events, if an entity affects another entity by acting on it, the syntax will project a VP where the affected entity is the direct object (Labelle 1992).⁸

Note that the *change-of-state* predicate that Labelle represents with INCH will here be represented as COME (which is in no way meant to argue against her observation that this predicate does not entail actual physical displacement). When giving Spencer & Zaretskaya's LCSs, BECOME will be used as this is what they use themselves. CAUSE and BE(WITH)/BE(AT) will be used as such.

1.3 Prefixes in traditional (and some theoretical) linguistics

Slovenian (and Slavic) verbal prefixes are in traditional descriptions considered to be morphemes carrying both inflectional and derivational semantics, to be markers of perfectivity and carriers of 'denotational' semantics. A single morpheme is thus considered as a carrier of both derivational and inflectional categories, a crosslinguistically unusual phenomenon (Spencer 1991).

Specifically in the context of locative verbs, the denotational semantics is spatial. *Pre-* and *v-* on *skočiti*_{PF} 'to jump', i.e. *pre-skočiti* 'jump over' and *v-skočiti* 'jump into', are thus said to contribute the spatial meanings 'over' and 'into' (related to the spatial prepositions *prek* 'over' and *v* 'in(to)').

Since in this case the simplex verb was already perfective, the perfectivizing role applied vacuously (Lencek 1966). *Pre-* on the imperfective simplex *plezati*_{MPF} 'to climb', as in *pre-*

⁸ Note that essentially the same distinction between two conceptual relations such as WITH versus AT is adopted for the two classes of denominal locatives in Wunderlich (1997), Kiparsky (1997), Rappaport Hovav & Levin (1998), Hale & Keyser (1997), but is argued against in Mateu (2001a, 2001b).

plezati 'to climb over', would on the other hand contribute both the spatial semantics and perfectivity. Since—unlike *skočiti*_{PF} 'to jump' and *plezati*_{IMPF} 'to climb'—*pre-skočiti* 'over-jump' and *pre-plezati* 'over-climb' seem to be obligatorily transitive, questions would be raised about a transitivizing role of prefixes. However, answers would typically not go beyond pointing out that prefixes often bring about transitivity (e.g. Townsend 1985, Schuyt 1990). Especially in the Eastern Slavic linguistic tradition, this 'spatial + perfective (derivational + inflectional)' function view still seems to prevail; specifically for Slovenian, e.g. Vidovič Muha (1993), Merše (1995), Toporišič (2000), Herry (2000), Žele (2001). Herry (2000: 203) calls prefixation "aspectual derivation". Resultativity (causing a resultative change of state) is often not attributed to 'pure' spatial prefixes such as *u-/v-* 'into'. Merše (1995: 191), for example, considers *v-* in cases such as *v-saditi* 'in-plant', which is comparable to denominals like *u-stekleničiti* 'into-bottle', as only coding perfectivity, suggesting that the prefix is not 'needed' for its 'spatial' semantics. At the same time, *v-* does not appear among her Aktionsarten/'mode of action' prefixes, which include the value 'terminative' (op.cit.: 286-313) (leading to a change of state). Although other authors (as well as at other points Merše (1995) herself) do speak of Aktionsarten with the value terminative also with prefixes such as *v-*, they do not draw a clear line between perfectivity and terminativity; a point illustrating this is the fact that the so-called secondary imperfectives are never attributed terminativity (e.g. Vidovič Muha 1985, 1993, Žele 2001). The notion of telicity (having a natural end point) is in these works not used.

Some Western literature mistakenly collapsed telicity and perfectivity in Slavic into one and the same thing, and thus considered prefixes as perfectivizers/telicity-markers (Slabakova 1997) or as perfectivizers and the perfective aspect as resulting in telicity and (non-stative) imperfective verbs as atelic predicates (e.g. Piñón 1994: 501, Kipka 1990, Krifka 1992). Slabakova (1997) and Babko – Malaya (1998) analyze (subsets of) prefixes as telicity/perfectivity markers and as such as causative morphemes triggering transitivity. Slabakova (2002) also claims that prefixes carry both an inflectional (i.e. perfectivity) and various derivational/syntactic functions.

1.4. Why has the topic of semantic aspect (Vendlerian verb classes, Smith's 1997 situation type) long been disregarded in Slovenian (Slavic) linguistics?

Verbs in Slovenian are obligatorily marked for grammatical aspect (Smith's 1997 viewpoint). Roughly, the perfective aspect presents an event together with one or both of its limits. The

imperfective makes no reference to its limits, i.e. making no claims about the boundaries of the event (cf. Orešnik 1994, van Hout 2000, Filip 2000). Aspectual pairs can correlate with difference in (non-)prefixation (*čistiti*_{IMPF} 'to clean', *o-čistiti*_{PF} 'to clean (up)'). As the effects of the prefix—beyond that of perfectivity and additional spatial semantics—is intuitively unclear, a prefixed verb with the imperfective suffix *-va-* (*o-čiščevati*_{IMPF} 'to clean/be cleaning (up)') has often been seen as in a way expressing canceled perfectivity. The only systematic work on semantic (in combination with grammatical) aspect in Slovenian is Orešnik (1994), adopting Smith's (1991) model.

Slovenian, as any language, also exhibits semantic aspect (Smith's 1997 situation type), a notion related to Vendlerian verb-class typology (accomplishment, achievement, state, activity, semelfactive), which has been grouped under two denominators: atelic (durative/stative/bounded/delimited/quantized) predicates and telic (terminative/eventive/unbounded/undelimited/homogeneous) predicates. Semantic aspect is a property of the whole predicate, not just the verb (Verkuyl 1972).

Orešnik (1994: 81) states that the Slovenian pair of examples *Janez zidati hišo* 'John build_{IMPF} a/the house' and *Janez se-zidati hišo* 'John build_{PF} a/the house'—although differing in grammatical aspect—are the same in terms of situation type, i.e. they both represent telic accomplishments. The term telic is said to denote an event with some kind of 'goal' that forms a natural boundary to or delimitation of the event, which—once reached—results in some sort of change of state (Orešnik 1994: 21, but also Krifka 1992, etc.). At the same time, the perfective aspect in Slovenian is claimed to always bring in either resultativity or terminativity (Schuyt 1990: 294), or some kind of—no matter how short-lived—change of state (Orešnik 1994: 91). Intuitively it is thus hard to see when that (short-lived) change of state stems from telicity of the situation type, when a very similar thing is also contributed by the perfective aspect.

Claims about telicity (as distinct from grammatical aspect) have mostly been based on two kinds of data. First, on predicates with a Goal-PP that delimits the event, as in Tenny's (1992) *He pushed the cart for five minutes / *in five minutes* versus *He pushed the cart to New York in five minutes / *for five minutes*. In Slovenian, however, the verb is necessarily marked for grammatical aspect, and the distinction between the compatibility with a durative or time-span adverbial observed in English is blurred, (8-9).

(8) *Janez je rinil voz (do New Yorka) pol ure / *v pol ure*
 J_{NOM} AUX pushed_{IMPF} cart_{ACC} (to NY) half hour / in half hour
 'Janez pushed the cart (to NY) for half an hour'

(9) *Janez je po-rinil voz (do New Yorka) *pol ure / v pol ure*
 J_{NOM} AUX PO-pushed_{PF} cart_{ACC} (to NY) half hour / in half hour
 'Janez pushed the cart (to NY) in half an hour'

The second basis for observing telicity effects has been the interaction of telicity and nominal reference, in sentences such as *John smoked cigarettes for half an hour / *in half an hour* and *John smoked a cigarette *for half an hour / in half an hour*. Transposing the examples to Slovenian, this interaction gets blurred.

(10) *Janez je kadil cigarete pol ure / *v pol ure*
 Janez_{NOM} AUX smoked_{IMPF} cigarettes_{ACC} half hour / in half hour
 'Janez smoked strong cigarettes for half an hour'

(11) *Janez je kadil cigareto pol ure / *v pol ure*
 Janez_{NOM} AUX smoked_{IMPF} cigarette_{ACC} half hour / in half hour
 'Janez smoked a/the strong cigarette for half an hour'

(12) *Janez je po-kadil cigarete *pol ure / v pol ure*
 Janez_{NOM} AUX PO-smoked_{PF} cigarettes_{ACC} half hour / in half hour
 'Janez smoked up strong cigarettes in half an hour'

(13) *Janez je po-kadil cigareto *pol ure / v pol ure*
 Janez_{NOM} AUX PO-smoked_{PF} cigarette_{ACC} half hour / in half hour
 'Janez smoked a/the strong cigarette'

Example (12), with the perfective aspect and an unbounded direct internal argument, would be expected to be ruled out. And indeed, on an attempted unbounded reading, the sentence is bad. However, since Slovenian lacks an overt determiner system, the sentence is grammatical, because a bounded interpretation is always enforced. Thus, although the distinction does exist, it is intuitively hard to grasp.

Even when prefixes are argued to contribute resultativity or telicity, the absence of minimal-pair examples makes the arguments intuitively hard to grasp; especially in view of the fact that prefixes always occur on perfective verbs, except when cooccurring with the imperfective suffix *-va-* on secondary imperfectives. With simplex and secondary imperfective pairs, such as (14) and (15), Strigin & Demjjanow (2001) argue that the difference lies in resultativity, where the event of beating is in (14) presented as having no change of state in view

(being carried out with no intention of completion) and in (15) as having a change of state in view (being carried out with intention of completion).

(14) *Janez je tepel Toneta pol ure / *v pol ure*
 Janez_{NOM} AUX beat_{IMPF} Tone_{ACC} half hour / in half hour
 'Janez beat/was beating Tone for half an hour'

(15) *Janez je pre-tepal Toneta pol ure / *v pol ure*
 Janez_{NOM} AUX PRE-beat_{IMPF} Tone_{ACC} half hour / in half hour
 'Janez beat/was beating Tone for half an hour'

The imperfective aspect 'imposes' itself on the semantic aspect of the predicate, and resultative effects are thus lost, or rather, as argued by Strigin & Demijanow demoted to implicatures. Further unclarity rises from the fact that prefixes almost as a rule carry some lexical semantics, so with unprefixated imperfectives and their prefixed imperfective forms, there are typically lexical semantic differences, which again blur the intuition on the change-of-state implicatures of the prefixed imperfective form and on the role of prefixes.

Similar unclarity applies to directed-motion examples of Spencer & Zaretskaya (1998a), such as *v-teči_{PF} / v-tekati_{IMPF} v trgovino* 'into-run into store' and *teči_{IMPF} v trgovino* 'run into store'. The first one is argued to imply an end point (telicity), the second one not; the Goal-PP is in the former example said to be merely an adjunct, while the telicity is brought about by the prefix. However, since the Goal-PP is obligatory, either overtly or by getting existentially bound, it is hard to see that it is merely an adjunct, and then, again, it is intuitively unclear whether the end-point implication stems from the prefix or from the Goal-PP. The implications can be because of the imperfective not be entailments, and so the intuitions are blurred.

Therefore, minimal-pair examples need to be found, comparable to those from the English pair *He pushed the cart for five minutes / *in five minutes* versus *He pushed the cart to New York in five minutes / *for five minutes*, where the grammatical aspect would be somehow neutralized. One should be most likely to find these in a pair of primary (unprefixated) and secondary (prefixed) imperfectives. A kind of minimal-pair evidence has come from the in/compatibility with unselected objects (Spencer & Zaretskaya 1998a), such as **piti_{PF} se* (be) 'to drink oneself', *na-piti_{PF} se* 'to get drunk', *na-pijati_{IMPF} se* 'to get/be getting drunk' (see Section 1.5.3.2 below).

1.5 Filip (2000, to appear), Spencer & Zaretskaya (1998a,b), Strigin & Demijanow (2001)

1.5.1 Quantization / Homogeneity (Filip 2000, to appear)⁹

A predicate is **quantized** iff whenever it applies to x and y , y cannot be a proper part of it. ("proper part" standing for the '<' relation, "part" standing for ' \leq ') (Filip, to appear)

The denotations of *oranges* and *flour* are non-atomic, they do not necessarily contain smallest discrete elements or atoms, they are not quantized. *An orange* or *five oranges*, on the other hand, pick out individuated objects, separated from each other by clear boundaries, they are quantized. Quantizing modifiers (*a pound*) impose a delimitation onto a predicate that describes an entity with no delimitation (bare plurals, e.g. *oranges*; mass nouns, e.g. *flour*). One of the principles governing the formation of complex predicates is the **Quantizing Constraint**, which says that quantizing modifiers map homogeneous predicates onto quantized predicates, thereby excluding **a pound of an orange* and allowing *a pound of oranges*. The combination of this definition and the quantizing constraint suggest that quantizing modifiers cannot be applied to quantized predicates (**hundred grams of five hundred meters of wool*).

What mass and bare plural predicates have in common is cumulative and divisive reference, which together define **homogeneity**. **Cumulativity** means that any sum of parts which are *flour/oranges* is *flour/oranges*, so adding *flour/oranges* to *flour/oranges* yields *flour/oranges*. **Divisivity** captures the fact that a quantity of *flour/oranges* in the denotation of *flour/oranges* has proper parts that also fall under the denotation of *flour/oranges*.

Verbal predicates are classified into **eventuality types**, which comprise **states** (*to love Mary*), **processes** (*to run*), and **events** (*to kill a bear*). (The eventuality type terms equal Pustejovsky's (1992) States, Processes, and Transitions, which in turn equal Dowty's (1979) states, activities, and accomplishments + achievements). Like singular count terms (*an orange*), events are inherently quantized, their delimitation constituted of their final (*jump across the street*) or initial boundary (*burst out laughing*). Processes and states, on the other hand, are like mass or bare plural nouns. The quantized versus homogeneous distinction is coterminous with the count / mass distinction in nouns and the **telic / atelic** and **delimited / undelimited** distinctions in predicates. It is further coterminous with the **bounded / unbounded** distinction

⁹ The article Filip (to appear) is cited often, and so I sometimes specify the pages although the article has not been published yet. The page numbers refer to the manuscript as downloadable from <http://semanticsarchive.net/> at the time of the submission of this thesis.

which has been used for both predicates and nouns. Events are quantized (telic) while processes and states are homogeneous (atelic). The atoms at the level of events are the particular events denoted by verbal predicates. At the level of events, the quantizing constraint from above is coterminous with Tenny's (1994) **Single Delimiting Constraint**, which mandates that there be only one delimitation per event.

John ran is thus a process, i.e. homogeneous (atelic), and can therefore be modified by the durative adverbial *for an hour*, a quantizing modifier, after which it behaves like an event. The modifier singles out a bounded portion of the homogeneous process predicate. Similarly, the homogeneous predicate *John ran* can combine with a Goal-PP, and yield a quantized (telic) predicate, specifically event, *John ran into the store*. This predicate, already being quantized, can no longer combine with the quantizing modifier *for an hour* (**John ran into the store for an hour*). Similarly, since *an orange* is quantized, *to eat an orange* can not be further quantized (**to eat an orange for half an hour*). The extent of *an orange* is intrinsically tied to the temporal extent of the eating event. Unlike any subpart of an event of *running*, which also constitutes *running*, no subpart of the event of *eating an orange* constitutes the event of *eating an orange*. The temporal extent of the event of *eating an orange* is tied to the changes of the orange on its path of being consumed, with the boundary being denoted by the final state, i.e. the (whole) orange being consumed. In the same way, the temporal extent of *John ran into the store* is being measured in the positional changes of *John*, with the boundary being denoted by the final position *in the store*. Both these events are thus quantized (delimited) in that they cannot continue beyond the limit of one of the verbs arguments reaching the final boundary. The *orange* and *John* in such sentences are called by Dowty (1991) Incremental (Path) Theme, measurer-out by Tenny (1992), gradual Patient by Krifka (1992). However, when these arguments are homogeneous (mass/bare plural nouns) rather than quantized (singular or definite plural nouns), they do not yield a quantized predicate but a homogeneous one.

1.5.2

Prefixes are distinguished by the following properties (Filip 2000, to appear):

- they are recursively applicable;
- their presence is neither a sufficient nor a necessary indicator of the verb's perfectivity;
- homonymy and polysemy;
- frequent lexicalizations (non-compositionality);
- they have effects on the argument structure of verbs.

Filip argues that these properties are puzzling only if one assumes that prefixes are grammatical/inflectional markers of perfective aspect, but expected if they are assumed to be derivational morphemes.

1.5.3 Prefixes, Quantization, Resultatives, 'State'

1.5.3.1 Filip (to appear) sets out to refute four standard assumptions about Slavic prefixes: (i) that prefixes are formally perfectivizing morphemes; (ii) that prefixes are semantically quantizing modifiers, i.e. they map homogeneous predicates onto quantized predicates; (iii) that all and only perfective predicates are quantized; (iv) that prefixes can only be applied to imperfective verbs.¹⁰

Assumption (iv) is clearly incorrect, since there are unprefixated perfective verbs that can be prefixated, as in *stopiti_{PF}* 'to step' – *v-stopiti_{PF}* 'to step into', as well as prefixated verbs that can be prefixated again, i.e. recursively, as in *raz-deliti_{PF}* 'to deal out' – *po-raz-deliti_{PF}* 'to deal out in (equal) portions'. As to assumption (i), the recursive applicability of prefixes is revealing. Recursivity is clearly a characteristic different from the behavior of overt grammatical expressions of aspect, such as the English progressive or the French passé simple/imparfait, with which recursive application is ruled out (**John was being running*; **Jean mour-ait-ait* 'Jean die_{IMPF-IMPF}') (Filip 2000). This constraint is an instantiation of a more general constraint against recursive application of formal markers of the same member or different members of a given grammatical category on the same lexical item. Since Slavic verbal aspect is a grammatical category (standard assumption), prefixes should be formal, inflectional markers of aspect, but they clearly do not behave as such. Also, they should not be able to cooccur on a verb with the inflectional aspect marker *-va-*, which they do. If prefixes are derivational morphemes, however, then the possibility of applying them recursively and to perfective roots is not surprising. In turn, there is nothing unusual, then, in the fact that the inflectional imperfective marker *-va-* can cooccur with multiply prefixated perfective verbs, but cannot be duplicated. Further, prefixes have effects on the verb's argument structure, a characteristic typical of derivational morphemes but

¹⁰ Note that assumption (iv) was a product of (western-tradition) theory-ridden accounts, such as Kipka (1990), Piñón (1994), Slabakova (1997) that clearly ignored previous (eastern-tradition) descriptive work; in turn, however, the wrong assumption (i), arising from traditional descriptive work, ignoring cross-linguistic comparisons, was what led these theoretical accounts to assumption (iv). For the full range of the interconnectedness of the four assumptions, see Filip (to appear).

not inflectional aspectual morphemes such as the English progressive or the French verbal suffixes. For example, *skočiti*_{IMPF} is intransitive, *pre-skočiti*_{PF} needs either a DO or a PP complement. In addition, prefixes are characterized by homonymy and polysemy, frequent lexicalizations (where the meaning of the prefix and the verb root is not transparently compositional), polysemy according to the semantic class of the verb a prefix modifies, the fact that various prefixes can occur with one and the same verb, etc. Such idiosyncrasies are typical of derivational, but not inflectional morphemes. In fact, Filip states, Slavic prefixes thus behave very much like prefixes in other Indo-European languages, such as German, as well as in typologically unrelated languages, such as Hungarian. Claiming that prefixes act as perfective markers when applied to imperfective bases and not when applied to perfective bases is clearly undesirable, since one and the same prefix can with unchanging derivational semantics (e.g. attenuativity) be attached to an imperfective or perfective verb, so that this would amount to claiming that its status as a marker of perfective aspect depends on the aspect of the base; such behavior is not exhibited by any inflectional morphemes. Clearly, prefixes are not formal markers of perfectivity but are rather derivational morphemes proper. (Filip 2000)¹¹

In relation to assumption (ii) and the quantizing constraint, Filip (to appear) raises verbs such as *sesti*_{PF} 'to sit down' and *pri-sesti*_{PF} 'to sit down next to'. The unprefixated verb is quantized, and the lexical contribution of the prefix *pri-* is a path delimitation, i.e. a quantizing modification. Double quantization should according to the quantizing constraint be ruled out. The status of this is not completely clear. Nevertheless, Filip suggests some solutions herself, and I will further argue that the notion of further specification seems to solve this problem.

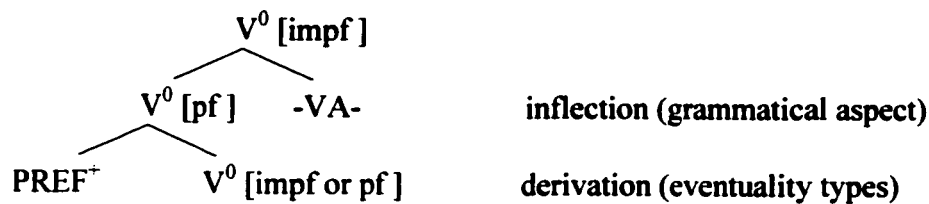
As to assumption (iii), i.e. that all and only perfective predicates are quantized, Filip (2000: 77) puts forth the case of the Russian perfective verb *do-pisat'*_{PF} 'to finish writing', formed with the terminative prefix *do-* from the imperfective *pisat'*_{IMPF} 'to write/be writing'. From *do-pisat'*_{PF} 'to finish writing', one can build with the imperfective suffix *-va-* the imperfective form *do-pisyvat'*_{IMPF} 'to finish/be finishing writing'. The terminative prefix *do-* has the same quantizing function in both the perfective *do-pisat'*_{PF} and the imperfective *do-pisyvat'*_{IMPF}, both are quantized. Therefore, quantization cannot be used to semantically distinguish perfective verbs

¹¹ A further argument can be seen in the fact that inflectional morphemes in Slavic never occur to the left of the root but always to the right; if prefixes were inflectional morphemes, that would make them a lone exception to this generalization. This type of argument is used by Wunderlich (1987) in claiming that prefixes on German verbs are not heads.

from imperfective ones and quantization expressed by prefixes does not exhaust the semantics of perfectivity.

On the assumption that inflectional and syntactic processes apply after all derivational ones, Filip (2000, to appear) proposes that Slavic prefixed verbs have the general hierarchical structure in (16) (the subscript + on PREF signals recursivity, i.e. that one or more prefixes can occur on a single verb root):

(16) *Schematic hierarchical structure of Slavic verbs* (Filip 2000: 78; to appear: 17)



As a whole class, prefixes can be semantically treated as contributing quantization to the meaning of a verb. (Note that this claim of Filip (2000) is abandoned in Filip (to appear); I will argue further on that this step was—on the basis of her arguments—unwarranted.) Prefixes are claimed to be eventuality type modifiers: they map sets of eventualities of any type (states, processes, events) onto sets of events (Filip 2000: 78). As eventuality type modifiers, prefixes can be recursive, just as other eventuality type modifiers are, as in *[[[[[John walked] to campus] in twenty minutes] every day] last year]*. (Note that it will be proposed in this thesis that prefixes are eventualities, rather than eventuality type modifiers; the hierarchical structure, however, is fully adopted.)

Filip (2000: 80-83) then goes on to determine the semantics of perfective and imperfective aspect. Aspectual operators are interpreted in terms of conditions that operate on eventuality types. The perfective operator restricts the denotation of eventuality descriptions to total (complete) events, which is expressed by the totality condition TOT, as in (17).

(17) $\lambda P \lambda e [P(e) \wedge \text{TOT}(P)]$

"TOT combines with predicates of type P denoting (sets of) processes, events or state and yields predicates of total (complete) events TOT(P)." (op.cit: 80) The imperfective operator introduces the partitivity condition PART, as in (18).

(18) $\lambda P\lambda e[P(e) \wedge \text{PART}(P)]$

The partitivity condition is defined as part, i.e. the ' \leq ' relation, rather than proper part, i.e. the '<' relation, because the imperfective can sometimes also denote complete events. The imperfective operator combines with predicates of states, processes or events and yields the corresponding predicates of partial states, processes, events. Note that the same definitions of the perfective and imperfective, although given somewhat more intuitively, are proposed by Smith (1991/1997).

The semantics of perfectivity, but not that of imperfectivity, is directly related to quantization. "If a given state of affairs is represented by a verbal predicate in its totality, there must be some limits imposed on its (temporal or spatial) extent, and consequently, it must be quantized." (ibid.)

This approach, however, fails to explain why prefixed verbs are—in the absence of the imperfective morpheme (-*va-*)—always perfective. Aspect has to be completely relegated to lexical (inherent) marking.

1.5.3.2 *Spencer & Zaretskaya* (1998a: 3) claim that prefixation almost always changes aspectual properties, frequently by adding an end point, and that as a result prefixed verbs are almost always perfective in grammatical aspect. Perfectivity, in general exhibited by prefixed verbs, is thus a consequence of the presence of an end point, a change of state. If the part relation of the imperfective aspect imposes itself on such a predicate, however, the change of state is only envisaged, it is implied but not entailed, i.e. not reached. An event can be carried out with the intention of completing it, but without our knowing if the completion was actually realized. The end point (change of state) is outside of the part of the eventuality that we see. Thus there is no change of state, although it is implied, and consequently the predicate does not become perfective. This allows us to abandon Filip's (2000) claim that the perfectivity of prefixed verbs is a result of inherent lexical specification and retain Filip's (2000, to appear) convincing argumentation that prefixes are not formal markers of perfectivity, but that they result in perfectivity, if the imperfective aspect does not impose its partial viewpoint on the event. At the same time, we do not have to claim that the fact that prefixed verbs are always perfective is coincidental, stemming from lexical specification of verbs.

Spencer & Zaretskaya (1998a) argue that part of Russian prefixation is reducible to resultativity, so that the difference between the Russian *teret'*_{IMPF} 'to wipe' (*vy-teret'*_{PF} 'to wipe

down') and the secondary imperfective *vy-tirat'*_{IMPF} 'to wipe/be wiping down' would be in the implication of a resultative change of state, although the imperfective aspect makes what is in the English 'to wipe down' an entailment into an implicature. In this respect, *vy-tirat'* 'to wipe/be wiping down' is comparable to the English resultative construction in the progressive, as in *John was wiping down the table*. Note that *John wiped down the table in ten minutes / *for ten minutes* is resultative/telic, but as the simple tense in English does not exhibit grammatical aspect in the sense Slavic languages do, the change of state can induce no shift in aspect to the perfective; it only determines the compatibility with adverbials.

Spencer & Zaretskaya (1998a) support their claim that part of Slavic prefixation is reducible to resultativity, i.e. the coding of a resultative state, by showing that while unprefixated verbs do not allow unselected objects, prefixed verbs do, in both the perfective form and the secondary imperfective form. For example, Slovenian **piti*_{PF} *se*(be) 'to drink oneself', *na-piti*_{PF} *se* 'to get drunk', *na-pijati*_{IMPF} *se* 'to get/be getting drunk'. In allowing unselected objects, prefixed verbs match the behavior of English resultatives, as in **to sing oneself* versus *to sing oneself hoarse*. Unselected objects are also what leads Spencer & Zaretskaya (1998b: 128) to reject the traditional view of telicity as involving a 'natural' end point; if the change of state had to be a 'natural' end point, unselected objects should not be allowed (e.g. in the case of *za-gledati se* in the meaning 'to get oneself into a state of oblivion by watching something', being in a state of oblivion is clearly not a 'natural' end point of watching). Therefore, the end point should be seen as a very general resultative state; the grammar must only provide for the possibility that an end state could be determined pragmatically (ibid.).

1.5.3.3 *Strigin & Demijanow* (2001: 63)—citing *Demijanow* (1998)—claim that prefixes contribute a state (which is initiated by the event, terminated by the event, or both) as their underspecified meaning, or sometimes as a presupposed characteristics, together with some other aspects which constitute the lexical meaning of the prefix. This is a position that will be shown in this thesis to be correct. The connection to telicity arises because the inclusion of a terminated or initiated state produces a telic predicate (ibid.). *Strigin & Demijanow* (2001: 59) further propose to separate resultativity and quantization/telicity, claiming that quantization has been used as referring only to complete events, which means that only events described as perfective, i.e. with the TOT operator, will qualify. 'Building a house' qualifies as quantized if the culmination point is reached. They propose to separate resultativity and quantization, so that building a house will

be resultative, i.e. implying the intention of culmination, even when the culmination is canceled, i.e. even when it is not quantized. That amounts to the claim Spencer & Zaretskaya (1998a) make, i.e. saying that it is the intention that counts for an event to qualify as being inherently delimited, although the end point might be an implication rather than an entailment, due to the semantics of the imperfective. Strigin & Demjjanow argue that Slavic languages do not in general have resultative secondary predication precisely because of competition with prefixation.¹² This, again, is clearly a point made, even if implicitly, in Spencer & Zaretskaya (1998a). Strigin & Demjjanow collapse the meanings of terminative, inceptive, and resultative into one, calling it resultativity, since they are all subtypes of a state that results from an event. This position will be adopted, though the terms will sometimes continue to be used for clarity sake.

1.5.3.4 I will assume with Filip (2000) that—through bringing in a state and consequently resultativity—prefixes do quantize predicates, and so they are subject to the quantizing constraint, even when the verb is in the imperfective aspect and therefore the quantization is only implied, not entailed. This enables us to explain why certain combinations of prefixes are ruled out and at the same time allows us to make predictions about the possible combinations of prefixes (see Filip, to appear). This is also in line with Rothstein's (2000) claims about English resultative secondary predication, which is argued to always yield quantized predicates. Strigin & Demjjanow (2001) offer no explanation for these issues, they simply say that resultativity is not quantization, that quantization should only be used to refer to complete events, and therefore not to events described with the imperfective aspect. The quantization constraint would thus on the view adopted here also be applicable to English resultative constructions in the progressive (or rather to sentences in the progressive in general), while on Strigin & Demjjanow's view, it is not clear how to motivate the similar restrictions that hold in the progressive and the simple

¹² Note, however, that adjectival secondary prefixation does seem to be less restricted when the adjective can denote a further specification of the result state of the prefix, i.e. in the case of unaccusative verbs (resultatives with no distinct subevents, Rappaport Hovav & Levin 2000): *Z-rasla_{SHE-PF} je velika_{SHE}* 'She grew up tall' or *Z-grudil_{HE-PF} se je mrtev_{HE}* 'He collapsed dead'. Another example is probably *Za-spal je kot ubit* (ZA-slept_{HE-PF} AUX as killed) 'He fell-asleep as if having been killed' – note that this is not a case of depictive secondary predication (for which see Marušič, Marvin & Žaucer 2002), which is shown by the unacceptability of **Za-spal je kot pijan/utrujen* 'He fell-asleep as if drunk/tired'. The starred example is acceptable only in combination with a conditional verb, as in *Za-spal je kot da bi bil pijan/utrujen* 'He fell-asleep as if he were drunk/tired'. The difference stems from the fact that while *pijan/utrujen* 'drunk/tired' are stative adjectives (although they are s-level adjectives, they do not entail a change of state), *ubit* is a participle of a prefixed quantized verb *u-bit* 'to kill'.

tenses. Resultativity (the introduction of a change of state) will in this thesis therefore be assumed to mean the same as quantization.

2. RESULTATIVITY

In Section 2.1, I present minimal pairs of prefixed and unprefixed imperfective Location denominal verbs which provide intuitively clear evidence that the effect of prefixes on this type of verb is one of resultativity. Unprefixed Location verbs are shown to be ambiguous between a stative and resultative causation reading, while the former is unavailable with prefixed Location verbs. The effect is claimed to be systematic, although Section 2.2 presents some idiosyncrasies. Sections 2.3 and 2.4 sketch the relation between the role of spatial semantics of an individual prefix and its resultativity role.

2.1 Minimal pairs with location denominal verbs

Consider denominal Location verbs *u-skladiščiti* 'to warehouse' or *u-hleviti* 'to stable (e.g. cattle)', based on Location nouns *skladišče* 'warehouse/storage' and *hlev* 'stable/barn', respectively. When prefixed, these verbs can only have one meaning, and that is the resultative (change-of-state) meaning, regardless of whether the verb is in the perfective, (19), or the secondary imperfective, (20)¹³.

(19) *Tonček je u-skladiščil vino*
Tonček_{NOM} AUX IN-warehoused_{PF} wine_{ACC}
'Tonček warehoused the wine'

(20) *Tonček je ves dan u-skladiščeval vino*
Tonček_{NOM} AUX all day IN-warehoused_{IMPF} wine_{ACC}
'Tonček warehoused/was warehousing wine all day long'

In the perfective, the event is presented as completed, in the secondary imperfective form *u-skladiščevati*, the verb is presented as an event of warehousing carried out with the *intention* of completing the event (Strigin & Demjjanow 2001: 61, Spencer & Zaretskaya 1998b: 128). Again, since the Slavic imperfective aspect prevents us from seeing the end of the event, the verb does not really entail the change of state, i.e. the completion of the event, which is thus defeasible, (21).

¹³ Recall from Section 1.1 that 'secondary imperfective' is the term that will in accordance with tradition be used for reference to imperfectives made from perfective prefixed verbs with the imperfectivizing morpheme *-va-* or with a change in a root vowel (the 'thematic' vowel). Note that given Filip's (2000, to appear) or Strigin & Demjjanow's (2001) analysis, these should in principle not be called secondary imperfectives, since they argue that prefixes are not perfectivizers; Filip calls them prefixed imperfectives. The morphemic break-up will not be indicated, except for prefixation. Accordingly, if a prefixed verb is marked as imperfective—with a subscript IMPF—this should be understood as equally to secondary imperfective. A subscript PF marks a perfective verb. Note also that resultative is used coterminously with eventive, telic, quantized, etc.

(21) *Janez je ves dan u-skladiščeval vino, a ga ni uspel u-skladiščiti niti en*
 Janez_{NOM} AUX all day IN-warehoused_{IMPF} wine_{ACC} but it_{GEN} NEG managed warehouse_{INF} NEG one
 'Janez warehoused/was warehousing wine all day long but he didn't manage to get a single...'

liter, ker se mu je na poti v klet vsaka steklenica razbila
 liter, as REFL him_{DAT} AUX on way to cellar every bottle_{NOM} broke_{PF}
 ...liter warehoused since every bottle broke on him on his way to the cellar'

Note now that the verb *u-skladiščiti* 'to warehouse' also has an unprefixated imperfective form: *skladiščiti*_{IMPF} 'to warehouse'. If secondary imperfectivization were merely a way of canceling the effect of the perfectivizing prefix (as often assumed in traditional literature, e.g. Schuyt 1990, Merše 1995; more precisely, these sources typically claim that there is either an idiosyncratic lexicalization difference between the primary and secondary imperfective or that the two are merely competing forms), then the unprefixated imperfective and the secondary prefixated imperfective should be expected to mean the same and behave the same. This is not the case, though. While the difference may not be as clear with most verbs, it seems clear and systematic across the class of denominal Location *v*-verbs. Unlike the prefixated secondary imperfective forms, the unprefixated imperfective forms of these verbs have two readings, a resultative causation reading and a stative causation reading, (22).¹⁴

(22) *Tonček je skladiščil vino v suhem in hladnem prostoru*¹⁵
 Tonček_{NOM} AUX warehoused/was-warehousing_{IMPF} wine_{ACC} in dry and cool place
 'Tonček warehouses/is warehousing the wine in a dry and cool place'

(22) can in principle be interpreted either resultatively as 'Tonček is in the process of warehousing the wine and this event is taking place in a dry and cool place', i.e. with *in a dry and cool place* being a frame adverbial, or it can be interpreted as 'Tonček keeps his wine stored in a dry and cool place', i.e. with *in a dry and cool place* being a further specification of the incorporated Location noun *warehouse*. The resultative causation can be given the LCS

¹⁴ Mateu (2001a) calls this 'static causation', Dowty (1979: 124) 'agentive stative causative'. Resultative should be understood as implying (in the imperfective) or entailing (in the perfective) a change of state, i.e. a resultative state. In English simple tenses, i.e. not in the progressive, the stative / resultative distinction equals stative / eventive, atelic / telic, homogeneous / quantized, unbounded / bounded.

¹⁵ It may not be immediately obvious that on the stative causation reading, the PP is not rather an argument and the *bottle* a manner specification of the verb, since the PP seems obligatory. Things are clearer in a sentence such as the following:

Tonček je vino stekleničil, namesto da bi ga hranil v sodih
 Tonček_{NOM} AUX wine_{ACC} bottled_{IMPF} instead that would it_{ACC} store_{IMF} in barrels
 'Tonček stored wine in bottles instead of storing it in barrels'

CAUSE(COME(BE(AT))), the stative causation CAUSE(BE(AT))¹⁶. The difference is minimal, i.e. the presence/absence of the change-of-state predicate COME. Example (23) with the prefixed secondary imperfective, however, can only have the resultative reading but not the stative one.

(23) *Tinček u-skladiščuje vino v temnem in hladnem prostoru*
 Tinček_{NOM} IN-warehouses/is IN-warehousing_{IMPF} wine_{ACC} in dry and cool place
 'Tinček warehouses/is warehousing the wine in a dry and cool place'

Since both verbal forms are imperfective, this distinct behavior suggests that the role of the prefix on the secondary imperfective form cannot only be spatial semantics 'into' (with perfectivity getting canceled by the imperfective morpheme) but is rather resultativity, i.e. the introduction of the change-of-state predicate COME. That is, the action being carried out is coded as having a resultative change of state, as being carried out with a change of state in view. Because of the imperfective aspect, though, the sentence does not entail the end point being reached but rather implies it. Since it is resultativity, not canceled perfectivity, it is not canceled by the imperfective aspectual morpheme. Because resultativity (change of state) is incompatible with states (in the sense of aspectual classes/eventuality types, e.g. Smith 1997), a stative reading is not available for the prefixed secondary imperfective.¹⁷ Note that such a stative reading is available to all Location denominal verbs, provided that it makes sense pragmatically (the unprefixes *stekleničiti* 'to bottle' is probably a verb that is pragmatically questionable¹⁸).

¹⁶ Note that marking CAUSE and COME on the same level, i.e. the LCS level, does not mean that I claim that all these predicates should be interpreted in the same way, as was done in early generative semantics. As claimed in Levin (2000), who draws on Dowty (1979), the CAUSE predicate is a notion independent of lexical aspect, while the change-of-state predicate is an aspectual notion; this is clearly seen in the two available readings of the unprefixes imperfective *stekleničiti* 'to bottle' and its minimal pair counterpart, the single-reading prefixed imperfective *u-stekleničiti* 'to bottle'. The two predicates are also marked on the same level, among others, in Rappaport Hovav & Levin (1998).

¹⁷ The same opposition of just a resultative reading versus a resultative (R) or stative (S) reading is preserved, as expected, after passivization. Prefixed imperfective: (i) = R, (ii) = *S; unprefixes imperfective: (iii) = R, (iv) = S.
 (i) *Vino je ta hip u-skladiščevano v temnem prostoru* (ii) **Vino je vse leto u-skladiščevano v temnem prostoru*
 'The wine is righ now being warehoused in a dark place' 'Wine is stored in a dark place all year round'
 VS

(iii) *Če je bilo vino skladiščeno v pripeki, se je prav lahko skisalo*
 'If wine was (being) warehoused in hot weather, it may well have gone sour'

(iv) *Naše vino se ne more skisati, ker je skladiščeno v temnem prostoru*
 'Our wine cannot go sour, as it is warehoused in a dark place'

¹⁸ *Merlot morate stekleničiti pri 15 stopinjah*
 Merlot_{ACC} must_{YOU} store-bottled at 15 degrees
 'You should store merlot at 15 degrees'

It is probably pragmatically odd that one would mandate for merlot to be stored at 15 degrees and in bottles. That is, a requirement for merlot to be stored at 15 degrees is fine, but to be stored at 15 degrees in bottles sets up an opposition of storage in bottles versus storage in something else, and the opposition may not be conceptually strong

Although not all of these verbs actually have these forms, they can be formed and tested against native-speaker intuition: *u-hleviti* 'to stable (cattle)' does not have, to the best of my knowledge and judging on the basis of the Academy Dictionary (Bajec *et al.* 1994), the unprefixated imperfective form *hleviti*. However, while the resultative reading is indisputably fine, a sentence with a stative reading such as (24) seems acceptable as well, either in a normal transitive frame or with the impersonal *se*-structure.

- (24) *V Alpah ovce hlevijo / se ovce hlevi v skupinskih stajah*
 in Alps sheep_{NOM} stable_{THEY} / REFL sheep_{ACC} stable_{ONE} in common stables
 'In the Alps, sheep are kept in stables all together (no individual pens)'

This evidence is corroborated by the fact that the two imperfective forms behave differently also with regard to Goal prepositional phrases when these represent further specifications of the incorporated nouns. While prefixed secondary imperfectives, being necessarily resultative and thus incompatible with a stative reading, are only compatible with a Goal-PP, (25-26), unprefixated stative imperfectives are compatible with a Goal-PP on a resultative reading and with a Location-PP on a stative reading.¹⁹

- (25) *Govedo v-hlevljajte v nove štale*
 cattle_{ACC} IN-stable_{IMPF-IMP-YOU} into new stables
 '(When cattle is (being) stabled,) cattle should be put into new stables'

- (26) **/#Govedo v-hlevljajte v novi štali*
 cattle_{ACC} IN-stable_{IMPF-IMP-YOU} in new stable
 'Cattle should be stabled in new stables'²⁰

An unprefixated imperfective is acceptable with both kinds of PPs, a Location-PP on a stative reading, (27), and a Goal-PP on a resultative reading, (28).

('conscious') enough. Perhaps, the verb must be somehow more general in meaning, as 'to warehouse' versus 'to bottle'; while we can warehouse a million things, we typically conceive bottles as restricted to (potable) liquids.

¹⁹ Note again that Goal-PPs are in the accusative and Location-PPs in the locative, and that the indication is the preposition in the gloss-line, i.e. *in* vs *into*.

²⁰ Note that this sentence may seem fine at first glance, since the secondary imperfective is interpreted as progressive resultative ('putting cattle into stable') and the Location-PP will quite automatically be interpreted as framing the whole event of 'putting cattle into stable'. However, it is then pragmatically infelicitous since the PP is a further specification of the incorporated noun, and then it makes no sense to speak of putting cattle into a stable when the cattle is already in a stable (unless we see the event of putting cattle into a stable as taking place within a larger stable...). A sentence with a Location-PP such as *vino u-stekleničuje v kleti* 'You should bottle the wine in the cellar' is perfect, of course, but it is not the kind of sentence we are considering, since again, the Location-PP is not a further specification of the incorporated noun and is thus easily interpreted as framing the whole event of wine-bottling.

- (27) *Vino se nam ne more skisati, ker ga celo leto skladiščimo v suhem prostoru*
 wine_{NOM} REFL us_{DAT} NEG can go-sour, as it_{ACC} all year warehouse_{WE} in dry place
 'This wine cannot turn sour (on us) since we store it in a dry place all year round'
- (28) *Če ste vino skladiščili v klet v pripeki, se bo gotovo skisalo*
 if AUX_{YOU} wine_{ACC} warehoused into cellar in heat, REFL AUX_{IT} certainly go-sour
 'If you warehoused/were warehousing the wine into the cellar in hot weather, it will surely go bad'

This different behavior of denominal Location verbs in terms of Goal- and Location-PPs confirms that one group can get both a stative reading or a resultative reading while the other one can only get the resultative reading. Since the two groups differ in being prefixed or not, while both being imperfective, this proves that prefixes bring in a resultative change of state and thus rule out stative readings.

2.2 A caveat

With an unprefixed locative denominal, either the stative or the resultative reading can probably get lexicalized to such an extent that the other reading is blocked and not available. With *šolati (se)* 'to school, to educate someone (oneself)', the widespread stative meaning 'to keep at school for education' is probably blocking the resultative reading 'to put to school' with the unprefixed form. In turn, this resultative meaning does exist with the prefixed form, lexicalized as a technical term in *v-šolati* 'to enroll someone into school'. Nevertheless, the stative/resultative distinction in principle characterizes the whole class of secondary imperfective Location denominals.

Furthermore, it seems understandable that especially with metaphorical locative denominals there would be greater restrictions and idiosyncrasies. Consider for example the verb *u-besediti* 'to put into words'. The verb is based on the nominal root *besed-* 'word', which is unambiguously conceptualized (metaphoricized) as a Container in *u-besediti* 'to put into words', since *v-/u-*denominals can only incorporate Containers²¹. Nevertheless, an unprefixed form of this denominal seems unacceptable in either a resultative (Goal Container) or stative (Location Container) meaning: **besediti* 'to put to words, to keep in words (speak)'. There is, on the other hand, the (perhaps partly lexicalized) verb *besedičiti* 'to speak verbosely about things of little

²¹ *U-koreniniti se* 'to strike roots somewhere', based on the nominal root *korenin-* 'root', may seem to be a counterexample, but it is probably unrelated to the locative denominal verbalization process. Note that *u-* also has a non-spatial meaning (compare *v-sekati napis v les* 'to cut an inscription in wood' and *u-sekati Petra (*skozi vrata)* 'to punch Peter; *to send Peter flying through the door by punching him').

importance', based on *besedic-* 'little word (diminutive of *besed-* 'word')' whose in principle underdetermined verbal meaning has been fixed on a particular value (cf. Ruhl 1989: 83). Things like these may well interfere with a fully principled use of the locative denominal *u-besediti* 'to put to words'. If nothing else, non-spatial uses of locative (denominal) verbs are clearly metaphorical extensions and thus constitute the non-prototypical, marked periphery of the generally productive locative denominal verbalization process.

With some verbs, a stative use ('keep/store y in z') is simply unconceivable, as with *u-pliniti* 'to gasify' or *u-pepeliti* 'to incinerate'; these verbs only have the prefixed forms (**pliniti*, **pepeliti*)²². With denominal locatives such as *u-jeziti* 'to irritate' or *u-žalostiti* 'to sadden', which also have an unprefixed form, *jeziti* 'to irritate' and *žalostiti* 'to sadden', it seems hard to determine whether the unprefixed form has a stative or an iterative resultative meaning; the interpretation may even in a specific context be unclear.

Furthermore, unlike *u-stekleničiti* 'to bottle' and similar concrete verbs, a verb such as *u-žalostiti* 'to sadden' does seem not admit a further specification PP, as in **u-žalostiti Petra v izjemno globoko žalost* 'to sadden Peter into especially deep sadness'. These verbs are clearly not deadjectival verbs, and are derived with the prefix that is clearly related to the preposition *v* 'in'. Nevertheless, the pragmatic interpretation of the causative template CAUSE(COME(BE(AT))) with these verbs may be slightly different from that of concrete verbs such as *u-stekleničiti* 'to bottle'. That is, they may be related to deadjectival causatives such as (*po-*)*rumeniti* 'to make yellow', and as such get a pragmatic interpretation with a verbal predicate that is closer to MAKE than to PUT, as in Wunderlich (1987), although these are clearly non-primitives reducible to CAUSE(COME(BE(AT))), where AT can be a quality or a location, as in Wunderlich (1997).²³

²² Note that in Clark & Clark (1979) *u-pepeliti* would be classified as a Goal verb (as *to powder the aspirin*), not a Location verb. We are thus collapsing the two categories.

²³ A provisional list of denominal Location verbs with the prefix *u-/v-*, mostly from Bajec *et al.* (1994): *u-besediti* 'put to words', *u-človečiti* 'make human', *u-dejaniti* 'realize (put into action)', *u-dejstviti* 'realize (put into fact)', *u-deležiti se* 'take part in (put oneself into part)', *u-dobrovoljiti* 'make happy (put into good mood)', *u-glasbiti* 'make into music', *u-glasiti* 'harmonize (put into harmony)', *u-gledališčiti* 'make into a theater play', *u-gnezdit se* 'nest (put oneself into nest)', *u-hleviti* 'stable', *u-istosmeriti* 'direct into the same way', *u-jarmiti* 'harness', *u-jeziti* 'make angry', *u-kalupiti* 'mold', *u-kleščiti* 'put (as if) between pliers', *u-kletiti* 'put to cellar', *v-kontekstualizirati* 'put into context', *u-ležajiti* 'put to bearing', *u-lončiti* 'put to (flower) pot', (*u-nejevoljiti*) 'make annoyed (put into bad mood)', *u-okviriti* 'frame', *u-pariti* 'couple', *u-pepeliti* 'incinerate', *u-pliniti* 'gasify', *u-prizoriti* 'stage (put to scene)', *u-resničiti* 'realize (put into truth)', *u-skladiščiti* 'warehouse', *u-smrtiti* 'put to death', *u-stekleničiti* 'bottle', *u-taboriti se* 'set camp', *u-temeljiti* 'found', *u-tiriti* 'direct (put onto rails)', *u-vrstiti* 'classify', *u-zakoniti* 'legitimize (put into law)', *u-zavestiti* 'make smb aware of (put into conscience)', *u-žalostiti* 'make sad', *v-članiti (se)* 'enrol (put among members)', *v-knjižiti* 'take down (in a book)', *v-ročiti* 'submit (put into hands)', *v-šolati* 'enrol (put to school)', *v-zemljiti* 'put into earth'.

2.3 Spatial semantics of prefixes

A remark on the importance of the spatial semantics of prefixes is in order here. From the reasoning above one could be led to believe that I am trying to reduce the role of the prefix *v-* to pure resultativity marking and denying the role of the spatial semantics of the prefix altogether. Such a position can be shown to be misplaced in several ways; one, however, seems especially fitting in the light of the above discussion, namely a case with a doubly prefixed Location denominal such as a newly coined verb *pre-u-stekleničiti* 'to bottle in another bottle, (to rebottle)'. The prefix *pre-* has several meanings, but the most prominent one in terms of spatial semantics is probably 'over, to the other side', as in *pre-skočiti_{PF} cesto_{ACC}* 'over-jump the road', and by metaphorical extension the related non-spatial meaning 'over the limit, i.e. to an excessive degree', as in *pre-greti* 'overheat' (cf. Bajec 1959: 61-65).

First, notice that the same restrictions on the stative reading and a Goal-PP hold for the secondary imperfective of *pre-u-stekleničiti_{PF}* 'to rebottle', i.e. *pre-u-stekleničevati_{IMPF}*, as have been shown for the secondary imperfective *v-hlevljati_{IMPF}* 'to stable' (25-26), comparable to *u-stekleničevati_{IMPF}* 'to bottle'.

(29) *Celo popoldne so vino pre-u-stekleničevali v nove steklenice*
all afternoon AUX_{THEY} wine_{ACC} OVER-IN-bottled/were OVER-IN-bottling_{IMPF} into new bottles
'All afternoon they rebottled/were rebottling the wine into new bottles'

(30) **/#Vino se ne more pokvariti, ker ga pre-u-stekleničujemo v novih steklenicah*
wine_{NOM} REFL NEG can go-bad as it_{ACC} OVER-IN-bottle_{IMPF-WE} in new bottles
'The wine cannot go bad as we store it in new bottles'

Again, on an attempted stative reading, (30), the sentence is bad; a resultative Goal interpretation of (30), on the other hand, is pragmatically infelicitous since the Location-PP 'in bottles' cannot sensibly frame the progressive bottling event. Now compare the behavior of the doubly prefixed Location verb *pre-u-stekleničiti_{PF}* 'over-into-bottle' with that of the same denominal verb but with the *u-* prefix left out, i.e. *pre-stekleničiti_{PF}/pre-stekleničevati_{IMPF}* 'over-bottle'. Because of the presence of *pre-*, the verb's secondary imperfective *pre-stekleničevati_{IMPF}* still remains resultative, as shown by the impossibility of the stative reading in (31).

(31) **/#Vino so pre-stekleničili v novih steklenicah*
wine_{ACC} AUX_{THEY} OVER-bottled_{PF} in new bottles
'They stored the wine in new/other bottles'

A directed-motion resultative meaning, however, is acceptable in both the perfective, (33), and secondary-imperfective form, (32), regardless of the absence of the prefix *u-* 'into'.

(32) ?*Vino so ves dan pre-stekleničevali v nove steklenice*
 wine_{ACC} AUX_{THEY} all day OVER-bottled/were OVER-bottling_{IMPF} into new bottles
 'They rebottled/were rebottling wine into new bottles all day'

(33) ?*Vino so v soboto pre-stekleničili v nove steklenice*
 wine_{ACC} AUX_{THEY} on saturday OVER-bottled_{PF} into new bottles
 'They rebottled wine into new bottles on Saturday'

This could again lead one to conclude that *u-* does not add any spatial semantics, and since resultativity is in *pre-stekleničiti* 'over-bottle' marked by *pre-*, *u-* is redundant. However, while the sentence above is acceptable, the same sentence with the doubly prefixed verb *pre-u-stekleničiti* 'over-into-bottle' sounds better than the one with *pre-stekleničiti* 'over-bottle', hence the questionmarks on (32-33). The only spatial semantics *pre-* carries is 'over, on(to) the other side', and it is pragmatically not immediately clear what to do with this meaning in the context of bottles. Since the verb is a new coinage, some more clarity seems to be desirable (although not grammatically required).

The role of the spatial semantics of the prefix on denominal Location verbs is thus clearly not to be dismissed. In a case where the grammatical meaning of the prefix (resultativity) is already coded (as with another prefix), the spatial semantics may serve at least as a disambiguation clue, as with new coinages such as *pre-u-stekleničiti* 'over-into-bottle, rebottle', just discussed. In general, especially with directed-motion verbs, the prefix, grammatically needed to code resultativity, at least has to be semantically compatible with the type of directed-motion meaning of the verb, i.e. of the incorporated noun. If the latter is a Container Location, *v-* 'into' qualifies, if it is a Surface, *po-* 'over', *na-* 'on' may qualify, if it is a Surface Point, *o(b)-* 'by the side of' and *na-* 'on' may qualify (in a case where the motion is into/onto, not from a Container, Surface, etc.). In short, the semantics of prefixes provides additional information about the results.

2.4

Given that the spatial semantics of prefixes (with locative denominals) has just been shown to be important, could it not be that the spatial semantics is all that prefixes are about?

After all, one could claim that the prefixed form is—with locative denominals—the basic form. First, it may seem reasonable that the spatial semantics of the prefix is needed when the word is new for reasons of clarity or disambiguation, but then it becomes redundant and may gradually get dropped. Second, quite a few common locative denominal verbs simply do not seem to have the unprefix form (e.g. *u-besediti* 'to word, put into words' VS **besediti*; *o-pasati* 'to girdle' VS **pasati*; *u-stoličiti* 'to enthrone' VS **stoličiti*; *na-oljiti* 'to oil' VS **oljiti*; *raz-kosati* 'to chunk' VS **kosati*); in fact, some of them might at some point have had one but they no longer do (e.g. **pasati* 'to girdle'). The case is similar with many deadjectival verbs (e.g. *po-bebaviti* 'to make stupid' VS **bebaviti*). Third, the prefix in directed-motion verbs, such as *v-* (cognate to the preposition *v* 'in, into', is claimed to be directional, i.e. meaning 'into' (e.g. Filip, to appear; Spencer & Zaretskaya 1998a; Žele 2001; Vidovič Muha 1993).

I believe this is incorrect. First, such a claim would go against the principle that a structurally simpler form is unmarked in relation to a more complex form (Kiefer 1992). Second, the prefixed form is semantically narrower than the unprefix form, with only a resultative as opposed to a resultative and stative reading, so the unprefix one—being less restricted—would be expected to be the basic. Third, the spatial semantics of *v-* 'into' is apparently not necessary for the meaning template CAUSE(COME(BE(AT))) (cf. Merše 1995: 191), as the unprefix verbs also occur in this directed-motion meaning (e.g. *stekleničiti vino v zelene steklenice* 'to bottle wine in green bottles').

The prefix must therefore carry another meaning. And since its spatial semantics is not necessary for the directed-motion meaning and in terms of grammatical aspect they are both imperfective, this difference between the unprefix imperfective and prefixed secondary imperfective can only stem from a grammaticalized function of the prefix, i.e. from resultativity.

3. SLAVIC PREFIXES ARE NOT DIRECTIONAL

Section 3 argues that the view that prefixes on directed-motion verbs are directional, held in the existent literature, is incorrect. Section 3.1 introduces some previous claims, Section 3.2 shows that all prepositions with cognate prefixes have (mostly in addition to a directional use) a stative/locational use. In Section 3.3, the absence of a prefix **k-* 'to' and its complementary distribution with the preposition/prefix *pri-* 'at' is claimed not to be coincidental but rather to result from the preposition *k*'s lacking a stative use; the issue corroborates the claim from 3.2. Section 3.4 discusses some apparent problems, specifically the issue of complex prefixes.

3.1 Introduction

Žele (2001: 138) notes that in *v-delati diamant_{ACC} v prstan* 'to work a diamond into a ring' the primary, the differentiating feature of *v-* is its spatial semantics. She regards its spatial semantics as only directional. The same stance as to the prefix's directionality is taken in Merše (1995: 191) and Vidovič Muha (1993). However, if the prefix preserves its spatial semantics as its primary characteristic, as claimed by Žele (ibid.), then it is hard to see why in comparison to the preposition *v*, which carries both a Locational and a Goal meaning ('in, into'), only one of the spatial meanings would be preserved, and the marked one at that²⁴. In fact, there is no reason to entertain such a view. If the prefix is considered as semantically the same as the preposition, and if prefixes are assumed to be telicity markers (as assumed e.g. in Slabakova 1997) or resultativity markers as assumed here so far, then because of its force of changing the predicate from atelic to telic or unbounded to resultative, a Locational meaning will in combination with a change-of-state (COME) predicate necessarily be interpreted as an end point of the change, i.e. as the location of the new state. On the one hand, *v-* contributes the so-called 'idiosyncratic' component of the meaning of the verb (in the sense of Rappaport Hovav & Levin 1998), which is the spatial meaning of the preposition *v* 'in, into'. On the other hand, the directedness/Goal interpretation results from the so-called 'structural' meaning (op. cit.) of the prefix, i.e. causing a change of state. Its spatial semantics does thus not have to be subject to a random restriction in the process of prefixation, that is, it does not have to be restricted to only half of the meaning the cognate preposition carries. The incorporated nominal base *steklenic-* 'bottle', for example, likewise only contributes to the idiosyncratic meaning of the verb.

²⁴ I assume the locational meaning of a preposition to be unmarked rather than the directional since directional prepositions are crosslinguistically often complex and locational simplex (e.g. English *into* vs *in*). Furthermore, directional prepositions are Transitions in Pustejovsky's (1992) three basic event-type framework (State, Process, Transition), so they have a complex event structure, e.g. [State, State], while spatial prepositions are simple States.

Nevertheless, Filip (to appear) explicitly designates such prefixes as directional. Filip (2000: 70) states that many prefixes historically developed from prepositions and adverbials used for the expression of location and direction in space and time and that these meaning components are still clearly detectable in their semantic make-up. Spencer & Zaretskaya (1998a: 12) attribute to the prefix *v-* both the structural and idiosyncratic components of derived *v-*verbs, but consider the prefix's semantics as directional. "[...] the prefix is the obligatory marker of directionality and telicity, while the adjunct is that, and adjunct", fulfilling "a kind of doubling function, adding further specification to the meaning already imparted by the prefix" (op.cit: 29).

However, judging from Spencer & Zaretskaya's LCS representation for *v-teči* 'to run into', considering prefixes as directional is redundant: [BECOME(x, [LOC(y)]), BY [RUN(x)]]²⁵. As part of the result clause [BECOME(x, [LOC(y)])], the LOC predicate should be a stative location, while the motion comes from the change-of-state (BECOME) predicate, which can with a locational result state only be interpreted as spatial motion. In Spencer & Zaretskaya (1998b: 131), this is made even more explicit: *on v-teče v trgovino* 'he runs into a shop' gets the following LCS representation: [CAUSE[ACT(he), BECOME[[IN(store)](he)]]], [BY RUN(he)]. After all, it is the final location, the end point of the movement that measures out the motion event (van Hout 2000b: 244).²⁶

Note that a further specifying PP in directed-motion constructions is obligatorily directional (as opposed to locational), which can be seen from the case the preposition *v* assigns to its object: the accusative, as in *v trgovino* 'into the store', not the locative, as in *v trgovini* 'in the store'.

3.2 Cognate prefixes and prepositions

If one claims that the directionality of *v*-prefixed verbs such as *v-stopiti* 'to step into' arises compositionally, rather than the prefix being randomly lexically specified as directional, i.e. as having only half of the meaning of its cognate preposition, then one can wonder how such an approach deals with prefixes that are cognate with what seem to be directional-only prepositions,

²⁵ LOC(x, y) is a general local relation 'be located in', just like AT(x, y) (Wunderlich 1987: 318).

²⁶ This seems in line with Smith (1991: 181-3). For categories figuring in the computation of situation type (her five verb classes), she states that nouns are lexically listed as count or non-count, particles/prepositions as telic or atelic, prepositional phrases as locative or directional, etc. Prefixes would presumably group with PPs in being specified as directional/locational (specifically Slavic prefixes, however, will be argued to be inherently locational/stative).

such as *iz* 'out of'. Below I will argue that there are in fact no directional-only prepositions with cognate prefixes. I start with a table listing the spatial semantic prepositions that have cognate verbal prefixes and indicating their meaning as given in Bajec *et al.* (1994).

Preposition	Locational/Stative	Directional
<i>iz</i>	+	+
<i>na</i>	+	+
<i>ob (o)</i>	+	+
<i>od</i>	+	+
<i>po</i>	+	+
<i>pod</i>	+	+
<i>pred</i>	+	+
<i>prek(o)</i>	+	+
<i>pri</i>	+	-
<i>raz</i>	-	+
<i>s/z</i>	-	+
<i>v</i>	+	+
<i>za</i>	+	+

Table 1: Meaning of prefix-cognate prepositions

In the above list of prepositions that also occur as prefixes, the prepositions in general all seem to exhibit a locational/stative use (besides a directional one). With two of them, however, the generalization may seem problematic: *raz* and *s/z*. Below, we will have a look first at *raz* and then at *s/z*. For the rest, see Bajec *et al.* (1994).

While the prefix *raz-* is alive and productive, the preposition no longer exists in the modern language. In Bajec *et al.* (1994), the preposition is only assigned a directional meaning. However, there is another entry in the dictionary with *raz-* (besides the entry with the preposition and the entry with the prefix), described as nominal prefix occurring in derivatives with the meaning 'former, ex-', as in *raz-kralj* 'former/ex king'. Relating this temporal meaning to the spatial (directional) meaning assigned to the preposition *raz* 'from top of', the meaning of the prefix matches the spatial meaning of the preposition perfectly, except for its directionality. In fact, in Bajec (1959: 121) the preposition is said to have besides the directional also the locational meaning of distantness.

Although the preposition *s/z* is listed in Bajec *et al.* (1994) as having only the directional meaning 'from (top of/surface)', it is not clear to what extent the preposition is not just a variant of the preposition *iz* (despite prescriptivist attempts to keep them separated in the standard

(written) language). In the spoken language, *iz* is certainly used both in the meaning 'out of' and 'from top of', as in *Iz vrha bloka je pritekkel v petih minutah* 'He ran down from the top of the apartment building in five minutes', *iz Dunaja do Ljubljane* 'from Vienna to Ljubljana' (the use acknowledged in Bajec 1959: 101, 111). Furthermore, Bajec (1959) states that the Slovenian preposition *iz* occurs in Western Slavic languages as *z/s*; these languages are also said to possess a few verbs with the prefix *s-/z-* (generally, it has been supplemented by *vy-*) corresponding to the Slovenian *iz-*. Also, already in Proto-Slavic there have been variant verbal forms with *iz-* and *s-* (op.cit: 112). The modern Slovenian vowel reduction has added a great deal of confusion between *iz* and *s/z* (op.cit: 111). On top of that, analogy from verbs such as *iz-boljšati/z-boljšati* 'to better', where the presence or absence of the vowel in the spoken language is a matter of phonology/prosody, might have added to *s/z* being related to *iz*. (In some cases, a difference between an *iz*-form a *z*-form may have been lexicalized.)

Like most Slavic languages, Slovenian used to exhibit a stative locational use of the preposition *s/z* (derived from its basic associative meaning 'with') (op.cit: 110, 107). The associative meaning of the preposition is in fact still used for the temporal domain, statively, as in *s četrtkom stopi v veljavo novi zakon* 'the new law becomes effective with Thursday (i.e. on Thursday)' or *Peter je prišel z večerom* 'Peter arrived with the evening (i.e. in the evening)'. The associative use proper (i.e. non-temporal) is of course also clearly stative, as in *Prišla je s torbico pod roko* 'She arrived with her purse under her arm' or *na vrtu je sedel s Petrom* 'he sat in the garden with Peter'. In this use, the preposition *s/z* can be paraphrased as *skupaj* 'together'. Obviously, it is this meaning that a verb such as *z-vezati* has, as in *z-vezati_{PF} rdečo špago_{ACC} z zeleno_{INSTR}* 'to tie the red rope with the green one'. So even synchronically and even if one rejects the interplay of *iz* and *s/z*, the associative preposition *s/z* 'with' can clearly be said to exhibit a stative locational use.

Although some prepositions, such as *iz* ('out of, outside of') are typically/predominantly used in their directional sense, they do also have a locational sense, e.g. *biti iz forme* 'to be out of shape'. So the summary of the discussion so far is that even synchronically all prepositions that have cognate prefixes have (also) a locational/stative meaning.²⁷

²⁷ For complex prefixes (e.g. *iz-pod-*, cognate to the complex preposition *izpod* 'from under'), see below.

3.3 Preposition *pri* 'at', prefix *pri-* 'at', preposition *k* 'to', prefix **k-* 'to'

Consider now the preposition *pri* 'at/next to'. As seen in Table 1 above, *pri* is the only preposition (with a cognate prefix) which only has a locational meaning and no directional meaning, (34-35).

- (34) *Peter sedi pri drevesu* VS (35) **Peter je šel pri drevesu*
Peter_{NOM} sits_{IMPF} at tree Peter_{NOM} AUX went_{PF} at tree
'Peter sits/is sitting at the tree' 'Peter went at the tree'

Pri-prefixed verbs, however, always seem to have only a directional interpretation, despite the location-only meaning of the cognate preposition *pri*, (36-37).

- (36) *Peter je pri-skočil k drevesu / *pri drevesu*
Peter_{NOM} AUX AT-jumped_{PF} to tree at tree
'Peter jumped to the tree / *at the tree'
- (37) *Peter je pri-vezal psa k drevesu / *pri drevesu*
Peter_{NOM} AUX AT-tied_{PF} dog_{ACC} to tree at tree
'Peter tied the dog to the tree / *at the tree'²⁸

If one claims that prefixes such as *v-* are inherently directional, the same has to be done for *pri-*, in view of the above data. While in the case of *v-*, such a step may not seem as surprising since we are after all *reducing* the meaning of the preposition from directional and locational to just directional, it is all the more surprising with *pri-*, since we are not only enhancing the preposition's meaning but actually deleting the preposition's meaning and assigning the prefix with a different meaning. In essence, this amounts to obliterating the connection between the preposition and the prefix. Now, as can also be seen from the above examples, the locational preposition *pri* has a directional counterpart, *k/h* 'to' (the forms are allomorphs; from here on, only *k* will be used). Complementary to *pri*, this preposition only has a directional and no locational meaning. This fits perfectly into the analysis outlined above.

The complementary patterning of *pri* and *k* and the patterning of *pri-* with a *k*-PP is on the present analysis a consequence of (the composition of the motion meaning of the base verb and) the resultativity of the prefix, which is compatible with a Goal-meaning but not with a

²⁸ The sentence with the Locational *pri drevesu* is acceptable if the *pri*-PP is interpreted as framing the whole event, i.e. 'Peter tied the dog (to something) and the event took place next to a tree', where 'to something' is existentially bound.

Location-meaning, rather than an idiosyncratic spatial-semantic relationship between the cognate prefix *pri-* and the preposition *pri*. The above analysis of *v-* is thus given further support.²⁹

In fact, an analysis that motivates directionality compositionally actually predicts that a directional-only prepositional prefix will not be able to delimit an event of motion. If Slovenian prefixes bring in resultativity, then such prepositions will not be able to function as prefixes. Interestingly enough, the directional preposition *k* 'to' does not have a cognate prefix, thus being the only monosyllabic preposition without a cognate prefix. Instead, the prefix *pri-* is used, as seen in the examples above. Note that the absence cannot be due to a blocking effect of there existing the competing form *pri-*, as such a *k*-prefix would of course be more appropriate than *pri-*, if such prefixes indeed had to have a directional meaning (given that the preposition *pri* only has locational semantics).

Note that the issue of *pri/pri-* versus *k* provides further evidence for considering prefixes as bringing in resultativity rather than perfectivity. If a prefix contributed perfectivity, then directionality of a prefix should not preclude a directional-only preposition from becoming a prefix, as the delimitation of the movement would come from perfectivity. Considering prefixes as perfectivizers therefore cannot predict that a directional preposition such as *k* will not occur as a prefix. On the other hand, considering prefixes as bringing in resultativity does precisely that.³⁰

²⁹ Note that although *v* 'in(to)' is clearly the default value, the preposition following a *v*-verb does not have to be homophonous (opposite from the claim in Vidovič Muha 1993: 181 or Lencek 1966: 100); it can also be some other spatial preposition, e.g. *na* 'on(to)', *pod* 'under', etc.

Potem so nepovabljeni v-padli/u-leteli še na eno sicer zaprto zabavo / še k sosedu
 then AUX_{THEY} uninvited IN-fell_{PF}/IN-flew_{PF} also on one otherwise closed party / also to neighbor
 'Afterwards, they stopped over at a party that was in principle private / at the neighbor's'

A further example is *v-dreti v klet / na balkon / k sosedu* 'break in into the basement / onto the balcony / to the neighbor's place'. Similarly, the preposition in *Peter je pri-vezal psa k drevesu* can be substituted by directional *na* or *za* (*drevo*), or *na* or *ob ograjo* ('to the fence'). If the head noun of the PP is lexically prelinked to a specific preposition, then the choice of the preposition seems to depend on that, rather than the prefix. The head noun's case, of course, will be the directional one, not the locational one (*v-dreti na balkon / *na balkonu* 'onto/*on the balcony'). Furthermore, the further specification can presumably also be realized by an animate dative NP instead of a Goal-PP, as in *Tinček_{NOM} je_{AUX} Tončku_{DAT} v-silil darilo_{ACC} (*v roke)* 'Tinček forced the present on Tonček (*into his hands)' (cf. Baker 1995 for a syntactic treatment that unites Goal-PPs and such dative NPs, benefactives, under the heading Path arguments). Note that most dative NPs in these constructions are ethical datives, but this one is not, as shown by the incompatibility with the Goal-PP (which, not being a further specification of the dative NP, violates the quantizing constraint) as well as by the fact that the sentence allows an ethical dative on top of the beneficiary.

³⁰ In Note 29 above it was argued that homonymy between the prefix and the Goal-PP preposition cannot really be a strict requirement but that the requirement is rather for the preposition to be compatible with the prefix in that the preposition has to be directional. *Pri*-prefixed verbs just discussed are of course the most blatant example against such a requirement, as a homonymous preposition is simply not possible.

Note, finally, that the 'stative' use of a preposition essentially reduces to whether the preposition can express a delimiting *limit* for an event. This may be clearest with the preposition *do* 'to', which does have a cognate prefix *do-*, as in *vode je do kolen* 'lit. water was to the knees, water reached to the knees'. Compare this to the English *He ran to John in half an hour* / **for half an hour* (cf. *The water was up to my knees*) versus *He ran towards John* **in half an hour* / *for half an hour* (cf. **The water was towards my knees*). And note that a seemingly stative use may in reality well be dependent on the verb/participle, as in *John was turned towards me* (or Slovenian *Janezek je bil obrnjen k meni* 'Janezek was turned towards me' versus **vsi so k meni* 'everybody is towards me').^{31,32}

³¹ Also note that the preposition *zoper* 'against' could perhaps be added to the above list, as it occurs as a prefix in the verb *zoper-staviti* 'to set against'. The preposition *zoper*, cognate with the prefix, does not seem to have a spatial meaning at all, but it does have a stative use, as in *vsi so zoper njega* 'everyone is against him'. Nevertheless, as this prefix only occurs with this one formal verb, it is no surprising that it is not to be found in any list of prefixes (Toporišič 2000, Herrity 2000, Vidovič Muha 1993, Bajec 1959, Bajec *et al.* 1994). Furthermore, the preposition *proti* 'towards' perhaps seems to present problems, as it appears to have the same meaning as *k* 'to(wards)' and at the same time it appears to be a possible prefix, although non-existent; a verb such as *proti-staviti* 'to set against', coined on the basis of the noun *proti-stava* 'juxtaposition' seems fine. However, the prefix would in this verb contribute the cognate preposition's other meaning, 'against', not 'towards', i.e. a stative use. Compare also *vsi so proti meni* 'everybody is against me' versus **vsi so k meni* 'everybody is towards me'. Therefore, the reason for the absence of attested verbs with *proti-* (lexical gap) is not the same as the reason for the absence of verbs with *k-*. This is corroborated by the existence of complex nominals with the prefix *proti-* and non-existence of complex nominals with *k-*. Furthermore, the preposition *čez* 'across, over', which does have a stative use, does not have a cognate prefix, either purely as a lexical gap or possibly because it is blocked (in the sense of Aronoff 1976) from the prefix *pre-*, with which it would be synonymous. Also, from among monosyllabic prepositions, *med* 'between' also does not have a cognate prefix when it does have a stative use; again, this could either be a lexical gap or a blocking (from *v-*). Note that both *čez-* and *med-* do occur as prefixes on nouns and/or adjectives (although not complex event nominals), while *k-* does not. Further note that the prefix *mimo-* 'by' occurs in a few words, as in the nominals *mimohod* 'march-past', *mimo-idoči* 'passer-by (lit. the by-going one)', or in the adverbial *mimogrede* 'on the way (lit. going by)'; however, it revealingly does not occur on any verbs, such as **mimo-iti* 'to march-past, to pass by', despite the fact that it occurs on the participle of the same verb in *mimogrede*.

³² Note in this respect the erroneous step taken in Vidovič Muha (1993), where it is claimed that the verb *pri-stopiti_{PF}* 'to step next to' expresses the 'spatial location of the event' (p. 178), while the verb *v-stopiti_{PF}* 'to step into' expresses the 'spatial direction of the event' (p. 181). Both verbs, derived from *stopiti_{PF}* 'to step', express directionality in that they are directed-motion verbs, and both verbs' prefixes contribute the final location of the motion, i.e. 'at x' versus 'in x'. The same goes for other verbs in the two Vidovič Muha's lists, such as *pri-kleniti čoln* 'to lock a boat to x' and *v-kovati x v verige* 'to forge (i.e. put) x into shackles'. A similar step is taken by Žele (2001: 138), who claims that the prefix in *pri-delati* 'to cause y to be at z, i.e. to earn, obtain by working' contributes resultativity, while the prefix in *v-delati* 'to cause y to be in z by working, i.e. to work a diamond into a ring' primarily contributes 'spatial semantics' and secondarily 'property'. Again, the two verbs are structurally the same, i.e. resultatives, as indicated by the glosses in the quotation marks.

3.4 Complex prepositions

A compositional analysis may seem to run into problems with prefixes that are cognate with complex prepositions, such as *iz-pod* 'from under', which only have a directional meaning.³³

First note that Vidovič Muha (1993), Bajec (1959) and Merše (1995) do not include complex prefixes such as *izpod-* in their treatments, which are in this respect supposed to be exhaustive; similarly Žele (2001). In the same vein, Lencek (1966) calls such prefixes combinations or double prefixes. Herrity (2000: 216) calls *izpod-* a compound prefix but at the same time states that it is derived by adding a prefix to an already prefixed verb.³⁴ Toporišič (2000: 216, 219), however, lists *izpod-* and its variant *spod-* as separate prefixes. I believe the former (majority) position is the correct one. Consider first example (38) with the cognate preposition.

- (38) *Kadi se iz-nad streh*
smokes_{IT} REFL from-above roofs
'Smoke rises above the roofs (lit. it smokes from-above the roofs)'

The meaning can clearly only be one: 'smoke is above the roofs, and it is coming from the direction of the roofs'. This same meaning is encoded in the preposition *iz-pod* 'from-under', as well as in its cognate prefix *izpod-/s-pod-*, as in (39).

- (39) *Tonček je s-pod-maknil stol*
Tonček_{NOM} AUX FROM-UNDER-moved_{PF} chair_{ACC}
'Tone jerked the chair away'

The following paraphrase can be used: 'Tonček acted ('moved') under (the chair) & this caused the chair to become away from its previous position'. The right-most prefix—in such combinations—thus has the status of an adjunct, i.e. it does not enter into event composition, while the left one does. The complex prefix works the same way with Theme-subjects, (40).

- (40) *Načrt je s-pod-letel*
plan_{NOM} AUX FROM-UNDER-flew_{PF}
'The plan misfired'

³³ In contemporary language, the prepositions *izpod* 'from under' and *iznad* 'from above' are only used directionally, while in Serbo-Croatian they have stative meanings 'below' and 'above'. For a variety of formal language, Bajec *et al.* (1994) records a stative use for *izpod* 'under' even for contemporary Slovenian.

³⁴ This is dubious, as there is no verb **pod-makniti* to form as a derivational base for *iz-pod-makniti*.

A provisional LCS can be written as follows: [x ACT/BE *pod/under* & x's ACT CAUSE *načrt/plan* BECOME *iz*]. The difference from the transitive sentence above is of course that the entity that 'is/acts under' is—together with the Agent—left unexpressed.

This explanation is corroborated by the fact that the further specification does not contain the complex preposition *izpod* 'from-under' but rather the simplex preposition *iz* 'from', (41-42).

(41) *iz-pod-riniti*_{PF} *Petra iz mesta predsednika*
FROM-UNDER-push Peter_{ACC} from place president_{GEN}
'to drive out Peter from the place of the president (by taking over his position)'

(42) **iz-pod-riniti* *Petra iz-pod mesta predsednika*
FROM-UNDER-push Peter_{ACC} from-under place president_{GEN}

4. EVENT COMPOSITION (Pustejovsky 1992)

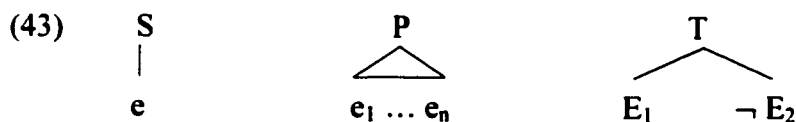
Having established that prefixation on directed-motion verbs is resultativity marking, i.e. an introduction of a state, Section 4 pursues a Pustejovsky (1992)-style event composition to derive prefixed verbs. Section 4.1 introduces the basics of Pustejovsky's model, Section 4.2 applies it to directed-motion prefixes, Section 4.3 extends it to phasal verbs and 4.4 to semelfactives.

4.1 Preliminaries

Having established that prefixation on directed-motion verbs is resultativity marking, i.e. an introduction of a state, I will pursue a Pustejovsky (1992) style event composition to derive the prefixed verbs.

Pustejovsky (1992) develops a system with which he seeks to give more explanatory value to the Vendler-Dowty aspectual classes. By recasting them in terms of an event structure level of grammar, he replaces a fixed number of semantic primitives of generative semantics with a fixed number of generative devices and is thus able to handle lexical semantics and argument expression in a more compositional way. His compositional system of event structure works with the basic event type of a lexical item, the rules of event composition, and the mapping rules to lexical structure. For the present discussion, only the first two parts will be relevant.

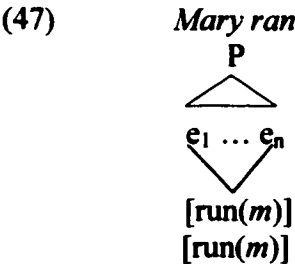
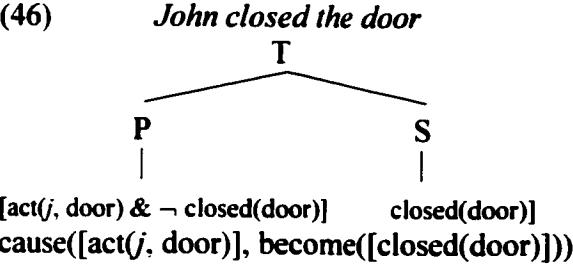
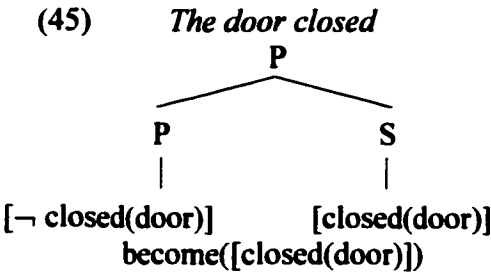
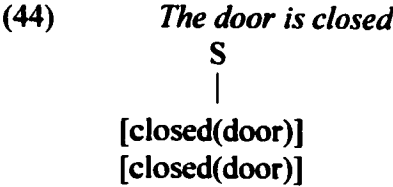
A verb belongs to one of the three basic event types, i.e. a state (S), a process (P), or a transition (T). A state is "a single event, which is evaluated relative to no other event", a process is "a sequence of events identifying the same semantic expression", and a transition is "an event identifying a semantic expression, which is evaluated relative to its opposition" (Pustejovsky 1992: 56).³⁵ Pustejovsky gives the structural representations in (43) for the event types, where an event e can have subeventual structure (as in the case of P's $e_1 \dots e_n$), and where E is a variable for any of the three event types.



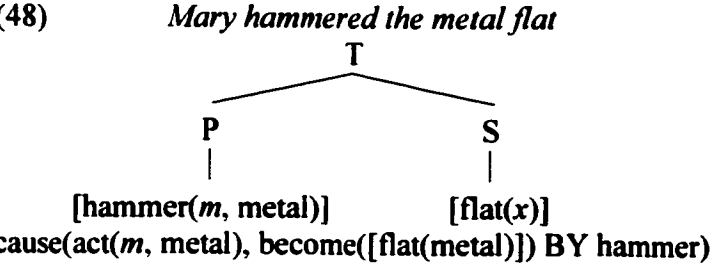
Pustejovsky's (op.cit: 57-8) gives the following representations for his sample sentences *The door is closed*, (44), *The door closed*, (45), *John closed the door*, (46), and *Mary ran*, (47). The

³⁵ Dowty's (1979) states are thus Pustejovsky's (1992) States, activities Processes, while both achievements and accomplishments are subsumed under Pustejovsky's Transitions. Achievements and accomplishments are argued to differ only in terms of agentivity, which Pustejovsky derives from his system.

bracket representations show the level of lexical conceptual structure, what is above shows the level of event structure. At the level of LCS, i.e. a lexical semantic representation in the form of a predicate decomposition, the lower of the two bracket representations shows the logical relatedness of the verbs' senses (Pustejovsky 1992).



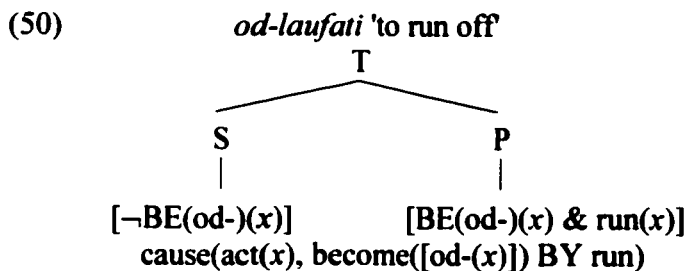
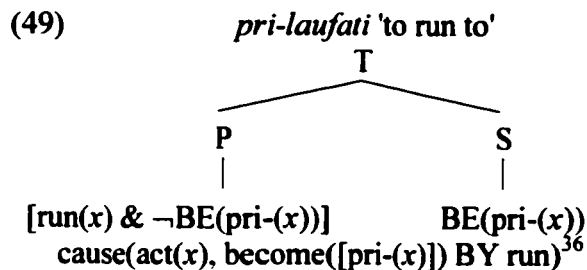
Cause and *become* are derived interpretatively. Now, these basic event structures of verbs interact with other syntactic constituents in the process of event composition. Dowty's (1979) activity or Pustejovsky's Process *Mary hammered the metal* can be augmented with the adjective *flat* predicated of *metal*, and the derived resultative structure *Mary hammered the metal flat* is an accomplishment or a Transition. Pustejovsky's (op.cit: 65) representation for this event composition, slightly simplified, is (48).



When the basic Process predicate is augmented syntactically with a phrase, in this case a state denoted by an adjective, the process of event composition takes place.

4.2 Prefixes

Prefixes on locative denominals have been said to code resultativity. However, there is in fact no need for postulating a resultativity role for them; rather the resultativity (and telicity) with which prefixed denominals are associated arises compositionally. The prefix brings in a state, i.e. essentially its (or rather the cognate preposition's) spatial semantics, and then this state enters into composition with the verb. The event structure of a verb such as *pri-laufati* 'to run to' or *od-laufati* 'to run away', where the prefixes are cognate with the prepositions *pri* 'at' and *od* 'off', can thus in a model such as Pustejovsky's (1992) be represented as (49-50). Note that the left-to-right ordering is taken by Pustejovsky to reflect the temporal precedence of events, and this is followed in the representations of Slovenian prefixed verbs as well, despite the surface morphological ordering.



Thus, the claim that prefixes mark resultativity should be understood in the sense that prefixes contribute exactly what their cognate prepositions do, i.e. a state, and this is interpreted in the process of event composition as a result state, i.e. as a change of state. With such a system, one can easily support the claim, reached on the basis of prefixed locative denominal verbs, that there is no need for postulating a random reduction in the meaning of prefixes from locational and

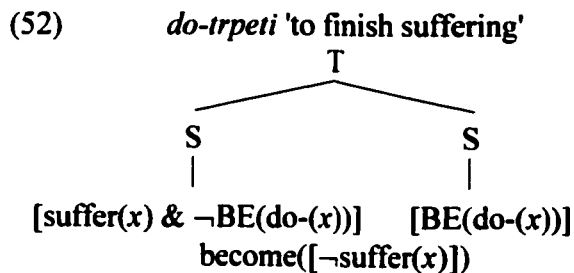
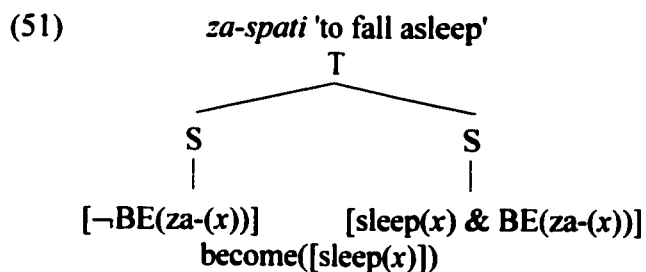
³⁶ Note that Filip (to appear: 31) suggests that the event containing the prefixed semelfactive *pri-sesti* 'to sit (down)', whose root already entails a downward direction, involves two subevents: a directed motion event followed by the sitting down event. That would mean something like a Process, involving $[\text{act}(x) \ \& \ \neg\text{BE}(\text{pri}-(x)) \ \& \ \neg\text{BE}(\text{down}(x))]$ plus a Process, containing $[\text{BE}(\text{pri}-(x)) \ \& \ \text{sit}(x)]$.

directional of their cognate prepositions to just directional, and in some cases, as with the prefix *pri-*, even postulating the directional meaning which the cognate preposition does not have at all. The prefixes whose cognate prepositions have both a locational and directional meaning can thus be seen as contributing either their underspecified meaning, i.e. locational/directional, or their basic/unmarked meaning, i.e. locational. If the cognate preposition of a prefix only has the locational meaning, the prefix will contribute precisely that. (Nevertheless, as already suggested above and as will be more extensively argued below, Slavic verbal prefixes only contribute a state, never directionality.)

If one restricts oneself to just locative denominals, one could alternatively claim that the directionality arises from the composition of the motion (CAUSE[COME]) and the stative location BE(AT). When motion is delimited with respect to a location, there inevitably arises resultativity.

4.3 Extension to phasal verbs

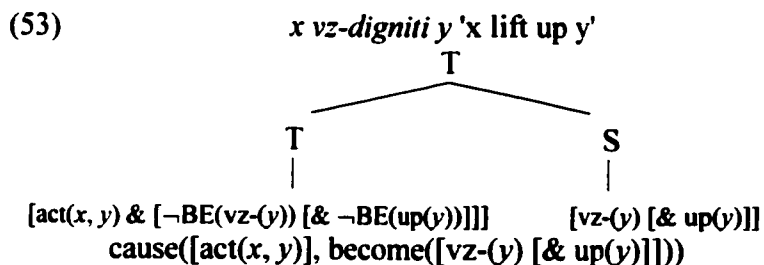
In Slavic languages, verbal prefixes can have the role of turning a verb into an inceptive or a terminative verb. For example, if prefixed with *za-*, the verb *spati*_{IMPF} 'to sleep' yields the inceptive verb *za-spati*_{PF} 'to fall asleep'. If prefixed with *do-*, the verb *trpeti*_{IMPF} 'to suffer' yields the terminative verb *do-trpeti*_{PF} 'to finish suffering'. Such verbs are easily incorporated into the event-composition model as outlined above. The verbs receive the representations in (51-52).



The only difference between the two types of verbs is in what subevent the event denoted by the verb root is associated. This is accordingly indicated for each verb in the event-structure tree. With *za-spati* 'to fall asleep', (51), the event of the verb is associated with the later subevent, therefore we get an inceptive reading. With *do-trpeti* 'to finish suffering', (52), the event of the verb is associated with the former subevent, therefore we get a terminative reading. Comparing the representations of the phasal verbs with the Goal and Source motion verbs above, one can observe that the two types get identical representation, which captures the intuition that running to a house marks the transition between the state of not being at the house to that of being at the house, and running away from the house marks the transition from the state of being at the house to that of not being at the house.

How the spatial semantics of prefixes contributes to a meaning of inceptiveness is synchronically often unclear. *Za-spati*_{PF} 'to fall asleep' is clearly such a case, since the spatial semantics of *za-* is 'behind', and one needs quite a fair amount of imagination to relate somebody's becoming 'behind (something)' with entering into the state of sleeping. In such cases, the prefix synchronically presumably only adds a state, which after composition with the state *spati* 'to sleep' yields a transition and so a change of state. However, in a diachronic perspective, the motivation can in some verbs still be traced. For example, the spatial meaning of *vz-* is 'up', and when combined with *leteti*_{MPF} 'to fly', it is easy to see how 'coming to be up' can be related with 'starting to fly'. *Do-* 'to' can be related to the terminative meaning via its relation to the cognate preposition's spatial meaning, i.e. as denoting a limit on a Path, as in *teči*_{MPF} *do hiše* 'to run to the house'.

4.4 Semelfactives



Note that unlike in the representation of the causative example *John closed the door* above, the stative part of the left conjunct is more complex, as it reads $[\neg \text{up}(y) \ \& \ \neg \text{vz-}(y)]$, while in the case of *close the door* the relevant part reads $[\neg \text{closed}(\text{door})]$. The complex structure in this

subpart captures the double delimitation, where the one coded by the prefix *vz-* 'up' is nested within the one coded lexically by the verb *to lift*. The nested bracketing shows that the quantizing constraint is not violated, as *vz-* is only a further specification of the delimitation contributed lexically by the verb.

5. PREFIXES AND LOCATIVE DENOMINALS

In Section 5.1, I show that the stative causation meaning, exhibited by Location denominals, is unavailable with Locatum denominals; the difference is claimed to result from conceptual factors. Section 5.2 discusses Locatum denominals based on mass nouns, which may seem to be a problem for the claim that locative denominals are inherently resultative/telic. Section 5.3 argues that prefixes on locative denominals can be seen as a further specification of the end state and thus not a violation of the quantizing constraint. Section 5.4 introduces a set of data that seems to be problematic for the claim that stative causation is with Locatum denominals unavailable. Section 5.5 shows that these cases are not to be treated as separate manner verbs but rather, as argued in Sections 5.6 and 5.7, as syntactic but not semantic causatives. Capitalizing on this data, Section 5.8 shows that prefixes cannot be eventuality type modifiers but are rather introducers of a state. Section 5.9 extends the discussion to deadjectival causatives, Section 5.10 makes some cross-linguistic speculations, and Section 5.11 draws some preliminary conclusions.

5.1 Stative causation and the Locatum vs Location opposition

It has been shown above that unprefixed (primary) imperfective Location denominals such as *skladiščiti*_{IMPF} 'to warehouse' but not prefixed (secondary) imperfective Location denominals such as *u-skladiščevati*_{IMPF} 'to warehouse' exhibit an alternation between a resultative (change-of-state) causative meaning (a 'putting' meaning) and a stative causation meaning (a 'keeping/storing' meaning). The former verb form was assigned the representation CAUSE(COME(BE(AT))) and the latter CAUSE(BE(AT))). Since prefixes have been claimed to be resultativity markers and since the difference between the two readings is minimal—it comprises only and precisely the change-of-state component—it was argued that the unavailability of the stative meaning should be attributed to the presence of the prefix.

Let us now turn to Locatum denominal verbs, such as *o-sedlati*_{PF} / *sedlati*_{IMPF} 'to saddle' or *po-soliti*_{IMPF} / *soliti*_{IMPF} 'to salt', where the incorporated nominal represents the displaced entity (Locatum). Interestingly, this verb class does not exhibit the availability of both a resultative and a stative causation meaning in the unprefixed form, (54), (nor, obviously, the prefixed one, (55)).

(54) *Peter sedla konje / soli pice* → R, *S
Peter_{NOM} saddles_{IMPF} horses_{ACC} / salts pizzas_{ACC}
'Peter saddles (the) horses / salts (the) pizzas'

(55) *Peter o-sedlava konje / po-soljuje pice* → R, *S
Peter_{NOM} O-saddles_{IMPF} horses_{ACC} / PO-salts pizzas_{ACC}
'Peter saddles (the) horses / salts (the) pizzas'

Such behavior is also exhibited by English, and judging by Mateu (2001a: 230) also by Catalan. Mateu (2001a, 2001b) modifies Hale & Keyser's syntactic model (e.g. 1998, but elaborated through a series of papers throughout the 1990s) by reducing it even further. He argues that their distinction between 'terminal coincidence relation' (what is in Labelle 1992 the AT relation and in Wunderlich 1997 the BE-AT relation) and 'central coincidence relation' (Labelle's WITH relation and Wunderlich's HAVE relation) should in denominal locatives be abandoned. Both Locatum and Location denominals are said to contain the terminal relation AT, with a semantic representation such as [x [CAUSE [y [AT z]]]], and the presence of the terminal relation is what causes the telicity of both of these verb classes.

Hale & Keyser's lexico-syntactic model has been extensively criticized by Kiparsky (1997), who advocates a semantic account that capitalizes on an interaction of a semantic form level of grammar and a conceptual form level of grammar, as formulated, for example, in Wunderlich (1997).

Let us return to Locatum verbs and the absence of a stative causation reading in their interpretation. On an analysis such as Mateu's (but not Hale & Keyser's original version), such distinct behavior is clearly not to be expected, since the two classes are derived with syntactic mechanisms that are completely the same. The explanation lies in conceptual differences of canonical uses for the two classes.

Kiparsky (1997: 482) argues that if an action is named after a thing, it involves a canonical (conventional, generic, Clark & Clark's (1979) typical) use of the thing. Based on this claim, he proposes the interpretive principle (56) for accounting for differences between Location and Locatum verbs:

(56) *Location verbs: putting x in y is a canonical use of y*
Locatum verbs: putting x in y is a canonical use of x (ibid.)

If we paraphrase the stative causation meaning as 'store/keep' and now replace it for 'put' in Kiparsky's interpretive principle, we get (57):

(57) *Location verbs: storing/keeping x in y is a canonical use of y*
Locatum verbs: storing/keeping x in y is a canonical use of x

Now, it is clear that besides canonically being a Container for putting wine into, *bottles* are also canonically a Cotainer for storing wine, i.e. a canonical storage place for wine. The availability

of a stative causation reading with *stekleničiti* 'to bottle' is therefore not surprising. On the other hand, *saddles* can be stored in a barn, on a shelf, on the porch, but typically not on a horse. This is even clearer with salt and pizzas, or sugar and cakes; pizzas can be a canonical destination for salt, but they are not a canonical storage place for salt, and neither are cakes for sugar, noses for powder, etc.

Of course, this explanation seems to rely randomly on the fact that CAUSE(BE(AT)) is being paraphrased as 'storing/keeping' (more so, perhaps, than Kiparsky's original version seems to rely on CAUSE(COME(BE(AT)))) being paraphrased as something close to 'put', as evident from Labelle 1992). If the semantic relation is taken simply as a more abstract CAUSE(BE(AT)), it is not as clear that pizzas are not canonical CAUSE(BE(AT))-Locations for salt. However, these abstractions (combinations of primitives) certainly receive some kind of interpretation that is subject to the boundaries of our conceptual horizons. Compare in this respect Section 2.2 above, where it is argued that although *u-žalostiti* 'to sadden' and *u-jeziti* 'to irritate' are Location denominals proper, the CAUSE(COME(BE(AT))) template may in their case be interpreted more as a MAKE predicate than as a PUT predicate, i.e. more like a typical deadjectival verb than a typical locative denominal. Note also that direct causation as in denominal causative verbs is associated with intentionality (Kiparsky 1997: 476), and intentionally and statively (continuously) causing salt to be in a state of being located on a pizza (for an indefinitely long period of time) is clearly not a canonical use of salt.³⁷

In a sense, it is a matter of perspectives. It is typical for a horse/pizza to have a saddle/salt on or to make a horse/pizza to have a saddle/salt on, and it is typical for a saddle/salt to be (or be put) on a horse/pizza, but it is not typical for a saddle to be intentionally made to be (i.e. be kept) on a horse permanently or indefinitely, and the stative causation meaning would imply just that.

Note that this argumentation seems to run parallel with the differentiation between the two semantic relations, namely BE(AT) on the one hand and BE(WITH) on the other. Intentionally and statively/permanently causing the BE(AT) relation, but not the BE(WITH) relation, is easily interpreted as 'storing'. If the two classes of verbs both involved the same relation, [x [CAUSE [y [AT z]]]], as advocated in Mateu (2001a, 2001b), the distinct behavior would not be expected.

³⁷ In the passive, the unavailability of the stative reading is preserved (while with *stekleničiti* 'to bottle' the availability of the stative reading is preserved, cf. above). *Naši konji*_{NOM} *so*_{AUX} *sedlani*_{IMP-F-PAST-PTCP} (*z odličnimi sedli*) 'Our horses are (being) saddled with exquisite saddles' can only have a resultative reading, not a stative one.

Also, note that Mateu's (2001a, 2001b) claim that the telicity of Location and Locatum denominals, both of which have the LCS [x [CAUSE [y [AT z]]]], derives structurally from their (lexico-)syntactic structures, which include the terminal relation AT, requires assigning the stative causation reading of Location denominals either an independent structure or an independent relation, i.e. not AT. However, this is undesirable given that the two meanings differ minimally in resultativity (telicity) and clearly both involve the same locative relation, i.e. AT. If one derives resultativity (telicity) interpretatively, as claimed by Pustejovsky (1992), then the two meanings are naturally related and can have identical syntactic structures and identical locative relations.^{38,39}

5.2 Locatum and Location nouns inherently resultative (telic/quantized) or not?

Harley (1999: Note 8) claims that "for fairly transparent interpretive reasons, Locations are always bounded", so that Location denominals are always inherently telic.⁴⁰ On the other hand, she claims that the telicity of Locatum verbs depends on the un/boundedness of the incorporated nominal. Mass nouns are inherently unbounded, while count nouns are inherently bounded.⁴¹ Does this constitute a problem for an LCS such as CAUSE(COME(BE(WITH))), which has been used for Locatum denominals above?

³⁸ Note also that it is not clear how Mateu (2001a, 2001b) accounts for the difference in the syntactic realization of the further specification PP (*with vs in(to)*), if both Location and Locatum denominals contain the same, i.e. AT relation.

³⁹ Appealing to conceptual factors is inevitable for other syntactic accounts as well, such as Moreno & Romero's (2000) or Uriagereka's (2000), regardless of the fact that these models propose distinct structures for the two classes and different from those of Mateu. They all rule out a conceptual level altogether, but the presence or absence of stative causation cannot be associated with just the incorporated nominal, which at least Uriagereka's account would allow through "idiosyncratic" uninterpretable features associated with the lexical entries of each individual noun (2000: 413, 433-6). The presence or absence of stative causation arises from the relation holding between the two internal arguments of the empty verbal predicate, and that holds over both classes as a whole, most prominently shown when a single verb can be considered either as a Location or Locatum (such as *to index, to shelve, to string*, Kiparsky 1997: 483), so relegating this to idiosyncratic features of individual lexical entries is far from reductionist. A conceptual level of interpretation, however, can operate on classes of verbs.

⁴⁰ Harley's "fairly transparent interpretive reasons" presumably relate to the Goal/Source asymmetry. Even in the case of an unbounded incorporated nominal, such as *floor* (cf. *John swept the floor in an hour / for an hour*), Location denominals are telic. *The floor* in *to floor the opponent* is bounded only by the boundedness of (the space) the direct object (will take once on it). The telicity (**he floored the opponent for five minutes*), however, presumably arises from the characteristics of Goals (cf. Goal/Source asymmetry below).

⁴¹ Levin (2000) even disputes Harley's claim that Locatum verbs with an incorporated mass noun are necessarily atelic, claiming that their a/telicity depends on contextual factors. She relates these verbs to 'degree achievements', "a set of change of state verbs, mostly based on gradable adjectives, which display ambiguous telicity" (e.g. *cool, lengthen*). She also expresses reservation about Harley's generalization of the role of boundedness of the incorporated nominal from Locatum denominals to Location denominals, but does not discuss the issue any further.

The mass versus count distinction on the incorporated noun results in differences when Locatum verbs take quantized internal arguments. In *Mary watered the garden for five minutes / in five minutes*, both adverbials are fine. The incorporated noun is a mass noun. In *Mary saddled the horse in five minutes / *for five minutes*, with a verb incorporating a count noun, only the time-span adverbial is allowed. In this way, she reconfirms the correlation between the boundedness (quantization) of things and boundedness of events, given in Table 2 (cf. above).

	Thing	Event
+ bounded	<i>saddle</i>	<i>flash</i>
- bounded	<i>water</i>	<i>sleep</i>

Table 2: Thing/event boundedness correlation

This distinction between denominals with bounded and unbounded nominals cannot be tested on Locatum verbs in Slovenian, since the effects of morphological aspect override telicity effects. As has been shown above, adverbial tests cannot be used, while in terms of the bare plural, Locatum verbs with incorporated mass nouns and count nouns behave the same. In the perfective *o-sedlal_{PF} je konje_{ACC}* 'he saddled horses', the bare plural direct object is necessarily interpreted as quantized (e.g. *all horses*). In the imperfective *sedlal_{IMPF} je konje_{ACC}* 'he saddled horses', the bare plural can be interpreted either as quantized (*all horses*) or homogeneous (*horses*). In Locatum verbs based on mass nouns, the result is the same. In the perfective *na-pudral_{PF} je igralce_{ACC}* 'he powdered the actors (put make-up on them)', the bare plural direct object is necessarily interpreted as quantized (e.g. *all the actors of the group*). In the imperfective *pudral_{IMPF} je igralce_{ACC}* 'he powdered actors', the bare plural can be either quantized or homogeneous.

There are some data that at first sight seem to cast doubt on Harley's (1999) generalization. As to Location denominals, a sentence such as Harley's *John boxed the computer in an hour / *for an hour* confirms her claim of inherent telicity. The sentence is on a durative reading ruled out (not, as pointed out by Harley, on a reading where the computer is put into boxes and then kept there for an hour, but this meaning is irrelevant here⁴²). Harley admits that one could argue that the telicity derives merely from the boundedness of the direct object (*the computer*), but she adds that the intuition of inherent telicity is clear and that she is going to

⁴² Dowty (1979: 58) states that such sentences can besides an result reading also get an iterative reading, his example being *The sheriff of Nottingham jailed Robin Hood for four years*.

restrict herself to Locatum verbs since, again, for obvious interpretive reasons, Locations are always bounded. She thus proceeds without offering an example with an unbounded direct object. Now, consider the following sentence.

(57) *They started the day at 6 a.m., picked grapes from 6 to 8, then pressed grapes from 8 to 9, then bottled wine for three hours / from 9 to 11, and then they decided to call it a day*

The sentence is fine, i.e. *to bottle wine for three hours* is fine. Nevertheless, this judgement does not disprove the claim that Location verbs are inherently telic and that atelicity may with an unbounded direct object (such as *wine*) in principle be available. Note that the sentence can besides an iterative reading, where a repeated bottling event is composed of several bottling subevents and these are still telic, also get a durative reading. The example is similar to nominalizations such as *cigarette smoking*, which are only possible if the modifier gets an unbounded reading, and the nominalization is atelic, but it can also get an iterative reading. Similarly, *wine bottling* can be a durative or iterative event.

Judging on the basis of Labelle's (1992) LCSs for locative denominals (Section 1.2), i.e. CAUSE(COME(BE(AT))) and CAUSE(COME(BE(WITH))), one would expect that both Location and Locatum denominals would be inherently telic. The same is expected on Wunderlich's (1997) and Kiparsky's (1997) account, whose LCSs are basically the same, except for BE(WITH) being replaced with HAVE(ON). This is explicitly argued for in Mateu (2001a), where both types of locative denominals are [x [CAUSE [y [AT z]]]]. The template is said to structurally result in telicity. As a matter of fact, if one claims that Location denominals are inherently telic, then it seems implausible to claim that this is not the case with Locatum denominals. After all, both classes conflate an event with an entity changing place (or more generally state, cf. Labelle 1992) with respect to another entity. Clearly, the motion/change-of-state of the affected/displaced entity should be delimited by the Location argument, and the fact that the latter is in one case realized as the direct object and in the other as the incorporated noun should not make a difference. In the same vein, Agentive verbs of manner of motion in the directed motion sense are telic (e.g. Levin & Rappaport Hovav 1996).

Mateu (2001a: 231) further claims that examples such as *Harley's to water the garden for five minutes* depend on a property similar to that which allows an atelic reading of locative-alternation verbs such as in *John sprayed the wall with paint for five minutes*. The seemingly atelic reading is said to be available because the verb is a so-called 'mass verb'. These verbs

typically describe the motion of substances, and given the relevant encyclopedic knowledge, we know that "the process of 'putting paint onto the wall in a spraying manner' could be extended ad infinitum since we can put paint onto the wall as many times as we want" (ibid). In his Catalan example *enfarinar les mandonguilles ?durant / en deu segons* 'to (in)flour the meatballs ?for / in ten seconds'⁴³, where an atelic reading is available, the displaced object is not a bounded object but rather the mass noun *farina* 'flour', which can be put onto the cake "as many times as we wish" (Mateu 2001a: 231). Note that his wording, i.e. "as many times as we want", may suggest that he argues that only an iterative interpretation of the 'putting' event is available. This is probably more of an incomplete wording than an intended claim. While with *flour*, the encyclopedic knowledge indeed implies iterativity, this is not always so, and with liquids probably even not typically so. The typical interpretation depends on the way we see the physical properties of the entity in the displaced entity. *Flour* or *paint* typically do not move in a stream and their movement is typically seen as comprising only the very last part of the path, while with liquids changing location, the concept of determined path of motion (Goldberg 1995: 172-4) may typically at least *allow* the whole path to be described by the entity as if changing location by itself, and so a durative interpretation is easily available. With the former, the movement is typically seen as externally controlled all the way, while with the latter, the movement only needs to be initiated and can continue to the end on its own (cf. Kiparsky 1997).

Now, basic accomplishment verbs can regularly be coerced into activity predicates, if the direct object is unbounded, i.e. an indefinite plural or a mass noun, as in *He ate apples for an hour* (Verkuyl 1972, Dowty 1979). Similarly, an unbounded nominal in a *with*-phrase influences the interpretation of a verb, as in *John bestrewed cookies with pepper *in an hour / for an hour* and *John bestrewed cookies with the pepper in an hour / *for an hour*. That a sentence such as **He boxed the computers for ten hours* is unacceptable on a durative as well as on an attempted iterative reading is due to the language-specific fact that English only allows an iterative reading with an unbounded nominal as the direct object (unlike Dutch, where the equivalent of *Greetje walked a kilometre for hours* is on an iterative reading fine (Verkuyl 1972: 4)). The fact that a durative reading is unacceptable, while an iterative is in principle fine, proves that these verbs are inherently telic.

⁴³ Note that this example may at first sight seem just as possibly a Location verb as a Locatum verb, but a further specifying PP will be a *with*-PP, not an *in*-PP.

Therefore, the effects we have seen with the Location verb *to bottle* and Harley's Locatum verbs *to saddle* versus *to water*, the effects of telicity / atelicity are no different from the usual effects arguments have on the interpretation of accomplishment predicates, regardless of the fact that the incorporated nominal with Locatum verbs is the displaced entity and in our LCSs represented as containing the WITH relation. The possible atelicity of *to water the garden* is thus not problematic for representing Locatum denominals as inherently telic, i.e. as CAUSE(COME(BE(AT))).

Note that the stative causation reading is not discussed by Harley. Indeed, it does not seem to be available with *to bottle*, *to box*, etc., but it is clearly available with *to warehouse*. Her claim that Location denominals are inherently telic, however, remains, it just has to be interpreted in the sense that they are accomplishments rather than activities, while they can also express stative causation. In fact, it is supported by the fact that even when unprefixes, *stekleničiti*_{IMPF} 'to bottle' can be resultative/telic.

5.3 Prefixes on denominals as further specification

Now, it has been argued above that prefixes on Slovenian Locatum and Location denominals contribute resultativity (telicity/quantization). If Locatum and Location denominals are inherently telic, as just argued, then this may cast doubt on the claim that prefixes on these verbs bring about resultativity/telicity. If a verb such as *stekleničiti*_{IMPF} 'to bottle' is inherently telic, then how can the prefix on *u-stekleničiti*_{IMPF} 'into-bottle (to bottle)' be a resultativity morpheme?

Observe that the English verb *to bottle*, just argued to be inherently telic, can co-occur with a telic (resultative) particle, as in (58).

(58) *We are going to press the grapes, make some wine and bottle it up*

This may seem to violate the the quantization constraint (Filip, to appear), which mandates that an event described by a verb may only be quantized if its input is homogeneous, i.e. it can only be delimited once. This is not the case, though, since the telic particle does not contribute a second delimitation but rather acts as an (abstract) 'further specification' of the inherent telicity. The same applies to *u-stekleničiti*, with the prefix *u-* 'in(to)' in its spatial meaning acting as a 'further specification' of the Container even more clearly than the particle *up* in *bottle up*. Nesting of same-type delimiters is recursive (cf. Filip, to appear). In fact, Filip argues that a prefix can be

applied as long as it refers to the same dimension as the verb's inherent delimitation, i.e. with any type of a verb describing motion in the spatial dimension, a spatial prefix can act as a further specification, even if it redirects the motion (cf. below)⁴⁴. Therefore, while in the unprefixated form of Location denominals with the LCS CAUSE(COME(BE(AT))), such as *stekleničiti*_{IMPF} 'to bottle', the change-of-state predicate COME may or may not be present since it is not coded morphologically; the result is the stative versus resultative causation reading. In the prefixed form *u-stekleničiti*_{IMPF}, with the same LCS, the change-of-state predicate cannot be absent since it is coded morphologically; consequently, the stative causation meaning is not available.

Further questions may be raised as to why a morphologically more complex form (*u-stekleničiti*_{IMPF}) would be used at all if the same (telic) meaning can be coded in a morphologically less complex form such as *stekleničiti*_{IMPF} 'to bottle'? I can see four reasons. (Note also that the claim that the unprefixated form is morphologically less complex relies on the assumption that inherent telicity does not involve zero-morphemes.) First, a prefixed form is not ambiguous between a stative and resultative causation meaning. Second, through its spatial semantics, the prefix dispenses with any ambiguity as to the thematic role that the incorporated noun performs (*bottle* in *u-stekleničiti* can then only have the thematic role location and not, for instance, instrument, i.e. 'to hit with a bottle' as in *The criminal was bottled to death*). Third, to a certain extent, prefixes may well function as focalizers⁴⁵ of verbalization. Quite a few denominal verbs, and probably most of newly coined denominal locatives and denominal inchoatives (e.g. *po-peniti*_{PF} 'to become furious') occur as innovations in the prefixed form (although this is solely a personal impression, supported by no corpus-based or systematic observation), and frequently enough locative denominals do not have an unprefixated form at all. Fourth, with most verbs, prefixes actually introduce resultativity, not just further specify it, and then analogy may be at work.

We have concentrated on Location denominals, but the same observations apply to Locatum denominals. Note that Locatum denominals also being inherently telic, this may be a

⁴⁴ This presumably captures cases such as the prefixation of a simplex perfective verb such as *stopiti*_{PF} 'to step', which can be prefixed with several prefixes, e.g. *pri-stopiti*_{PF} 'to step to', *v-stopiti*_{PF} 'to step into', *iz-stopiti*_{PF} 'to step out of', *se-stopiti*_{PF} 'to step (down) from', *pre-stopiti*_{PF} 'to step over', *ob-stopiti*_{PF} 'to step around, to surround', *od-stopiti*_{PF} 'to step away'. The base verb encodes motion in the spatial dimension, and so all those prefixes can be taken to be further specifications of an underspecified/general meaning of motion in the spatial dimension.

⁴⁵ I am borrowing Schrotten's (1997) and Melka & Schrotten's (1997) term, but applied to a different concept.

reason why in Slovenian they typically do not have secondary imperfectives⁴⁶, as opposed to Location denominals, which form secondary imperfectives with markedly high regularity⁴⁷. That is, this corresponds with the fact that Locatum verbs exhibit no ambiguity between the stative causation and resultative causation meanings, as the stative causation is with Locatum verbs for conceptual reasons ruled out (Section 5.1), while Location verbs do.

With regard to the observation just made, i.e. that Locatum verbs typically do not form secondary imperfectives, note that this does not mean that secondary imperfectives *cannot* be formed. In fact, for some readings, they *have to* be formed, as will be seen shortly.

5.4 Apparent stative causation with Locatum denominals

At first sight, the issue of the unavailability of the stative causation with Locatum nouns may appear to be more complex. French has Locatum denominals such as *fleurir* 'to flower'.

(59) *Jean a fleurit la tombe (de bégonias)* → RESULTATIVE, *STATIVE
'Jean flowered the grave (with begonias)'

Example (59) shows typical Locatum denominal behavior, with an optional further specification PP and with the stative causation reading ruled out. However, this verb can also convey a stative meaning, as in (60).⁴⁸

(60) *Les bégonias fleurissent la tombe de ma mère* → STATIVE
'The begonias (be)flower the grave of my mother'

⁴⁶ *Barvati*_{IMPF} 'to paint', *maziliti*_{IMPF} 'to apply ointment', *puđrati*_{IMPF} 'to powder', *na-oljiti*_{PF} 'to oil', *na-mastiti*_{PF} 'to grease', *šminkati*_{IMPF} 'to apply lipstick', *flekati*_{IMPF} 'to stain', *smetiti*_{IMPF} 'to litter', *po-šodratiti*_{PF} 'to gravel', *žajfati*_{IMPF} 'to soap', *militi*_{IMPF} 'to soap', *šamponirati*_{IMPF} 'to shampoo', *cinkati*_{IMPF} 'to zinc', *štempljati*_{IMPF PF} 'to stamp', *kronati*_{IMPF} 'to crown', *soliti*_{IMPF} 'to salt', *poprati*_{IMPF} 'to pepper', *cukrati*_{IMPF} 'to sugar', *luknjati*_{IMPF} 'to hole'. Note that all of the above given verbs do have a perfective prefixed form, while some *only* have a perfective prefixed form. In principle, however, the secondary imperfective forms *are* possible (for which see also below), i.e. there is no morphological etc. reason preventing them.

Note also that although the vast majority of the verbs given here are based on mass nouns, the ones based on count nouns do not seem to exhibit more regularity in secondary imperfectivization (*??za-flekavati* 'to stain', *??o-kronavati* 'to crown'), so the reason for the absence of the secondary imperfective forms should not in general be taken to reflect for example a reduced availability of an iterative reading because of the unboundedness of the noun, as compared to the availability of an iterative reading with the verbs bases on count (bounded) nouns.

⁴⁷ At least as far as undisputed (concrete) Location denominals are concerned. E.g. *u-kalupiti*_{PF} / *u-kalupljati*_{IMPF} 'to mold', *u-besediti*_{PF} / *u-besedovati*_{IMPF} 'to word', *u-hleviti*_{PF} / *u-hlevljati*_{IMPF} 'to stable', *u-okviriti*_{PF} / *u-okvirjati*_{IMPF} 'to frame', *u-pepeliti*_{PF} / *u-pepeljevati*_{IMPF} 'to incinerate', *u-pliniti*_{PF} / *u-plinjati*_{IMPF} 'to gasify', *u-skladiščiti*_{PF} / *u-skladiščevati*_{IMPF} 'to warehouse', *u-stekleničiti*_{PF} / *u-stekleničevati*_{IMPF} 'to bottle', *na-količiti*_{PF} / *na-količevati*_{IMPF} 'to impale', etc.

⁴⁸ I owe this observation and example, which turned out to provide important evidence for Slavic prefixation, to Paul Hirschbühler.

Comparable sentences can be formed in Slovenian, with either an incorporated count (bounded) noun, (61), or mass (unbounded) noun, (62-63).⁴⁹

(61) *V naši čredi usnjena sedla vedno o-sedlavajo / *sedlajo le najodličnejše konje*
 in our stable leather saddles_{NOM} always O-saddle_{IMPF} / saddle_{IMPF} only most-exquisite horses_{ACC}
 'In our herd, leather saddles only saddle (are only used with) the best horses [e.g. while for ordinary ones, plastic saddles are used]'

(62) *V Ontariu kanadska sol vedno ?po-soljuje / *soli le najpomembnejše ceste*
 in Ontario Canadian salt_{NOM} always PO-salts_{IMPF} / salts_{IMPF} only most-important roads_{ACC}
 'In Ontario, Canadian salt only salts (is only used for salting) the most important roads [e.g. while for minor roads, imported salt is used]'

(63) *Na obrazih naših igralk Qventy Forty vedno ?na-pudrava / *pudra le nos*
 on faces our actresses_{GEN} Q F_{NOM} always NA-powders_{IMPF} / powders_{IMPF} only nose_{ACC}
 'On the faces of our actresses, Qventy Forty always powders (is used for powdering) only the nose [e.g. but not the cheeks, for which we use cheaper stuff]'⁵⁰

I believe that these cases, which will be henceforth occasionally referred to as the "begonias sentences", are somewhat different from stative causation proper (as in *Tinček_{NOM} skladišči_{IMPF} vino_{ACC} v kleti_{LOC}* 'Tinček warehouses the wine in the cellar') and do not disprove the above claims about the unavailability of stative causation with Locatum verbs. In addition, the Slovenian examples of type the (61-63) will be shown to provide corroborating evidence for the claims about the role of prefixes.

5.5 The apparent stative causation as manner verbs?

First note that unlike in Slovenian Location-denominal examples (*skladiščiti_{IMPF}* 'to warehouse', (22)), where both a stative causative reading and a resultative reading are available, these sentences *only* have a stative reading, while the resultative reading is ruled out, (64).

(64) *Les bégonias ont fleuri la tombe de ma mère pendant dix ans / *en deux ans*
 the begonias AUX flowered the grave of my mother for ten years / in two years
 'Begonias (be)flowered my mother's grave for ten years / *in two years'

Now, the French example (64) can seemingly be related to (65), with the same judgements on resultativity and stativity.

⁴⁹ Note that in Slovenian and Slavic in general the imperfective can express states while the perfective cannot.

⁵⁰ The question marks on the prefixed forms of the latter two examples do not signal grammatical violations; simply, the secondary imperfective is with these verbs normally not used (see below).

(65) *Les bégonias fleurissent sur la tombe* → S, *R
'Begonias flower on my mother's grave'

This example clearly involves a manner verb, not a Locatum denominal. The incorporated nominal *fleur* 'flower' serves as a manner modification to a phonologically empty verbal concept such as ACT, while *sur la tombe* 'on the grave' is an adjunct that frames the event.⁵¹ Since acknowledging the existence of two synchronically independent verbs with the same incorporated nominal (which is what makes them related through their shared root, but not derivationally (Kiparsky 1997)) is necessary in any case, it may seem plausible to claim that the *begonias* example in (60) above does in fact not involve the Locatum verb *fleurir* 'to flower' but rather the manner verb *fleurir* 'to flower'. However, the above Slovenian Locatum verbs, (66), do not exhibit *fleurir*'s manner-verb behavior.

(66) **Usnjenci* *o-sedlavajo*_{IMPF} / *sedlajo*_{IMPF} *na konju*
leather-saddles_{NOM} O-saddle_{IMPF} / saddle_{IMPF} on horse
'Leather saddles saddle on the horse'

These verbs are obligatorily transitive, indicating the obligatory presence of the predicate CAUSE (in recent syntactic parlance, a light verb projection). Given that the Slovenian verbs are used in what may seem to be a manner use only in this (rather marginal) construction, equal to the *begonias* sentence in (60), and that they can never be used intransitively, the reason for the acceptability may not lie in the existence of two synchronically independent verbs with the same root but rather in the syntactic construction itself.⁵²

Fleurir in this construction is thus a causative verb, not a manner verb. Accordingly, we still need to show the difference between this use and the stative causation observed with the Locatum verbs when paraphrased as 'to store'.

5.6 Begonias sentences as syntactic but not semantic causatives

I believe that the construction *Les bégonias fleurissent la tombe de ma mère*, (60), is essentially a case of the same syntactic locative denominal frame, i.e. a causative frame, and that the

⁵¹ See Kiparsky's (1997) discussion of the behavior of the English verb *to ditch* which leads him to conclude that *to ditch* is a pseudo Location-denominal, synchronically in fact an underived manner verb.

⁵² There certainly exist denominals in Slovenian that behave the same way as the French *fleurir* (e.g. *cveteti* 'to blossom'), but there also certainly exist denominals in French that behave in this respect as (*o-*)*sedlati*. The point is, the availability of the construction *Les bégonias fleurissent la tombe de ma mère* 'The begonias (be)flower the grave of my mother' does not depend on the existence of a synchronically unrelated manner verb (with the same root)—where its existence/non-existence depends primarily on conceptual factors.

difference in the availability of the readings stems from coindexation of two arguments. Note that the external argument (*les bégonias*) is in the extension of the incorporated Theme argument (*fleur*). The relevant LCS is something like CAUSE(*begonias/bégonias*, BE(*grave/tombe*, WITH(*flowers/fleurs*))). While all the examples of this construction so far have been with Locatum denominals, the use is also available with Location denominals, (67).

(67) *Zelene flaše ponavadi u-stekleničujejo / *stekleničijo bolj slabo vino* → STATIVE
 green bottles_{NOM} usually U-bottle_{IMPF} / bottle_{IMPF} rather poor wine_{ACC}
 'Green bottles usually bottle poor-quality wine'

The argument coindexation is the same as with Locatum denominals, the relevant LCS is CAUSE(*green bottles*, BE(*wine*, AT(*bottle*))), and the external argument (*green bottles/zelene flaše*) is in the extension of the incorporated Location argument (*bottle/steklenica*).

Now, locative denominals are generally associated with intentionality (Kiparsky 1997), their external argument is always an Agent or—although considerably less typically—a Causer (in the sense of Arad 1998⁵³). Causers are said to merely 'happen' to trigger the event, while Agents are associated with animacy, volition and agentivity, and they 'try/intend' to bring about the change of state which the affected entity undergoes. Causers are only responsible for their own action, but not for the change of state they bring about, while Agents are responsible for both (Arad 1998: 105-7). An example of an Agentive verb is *paint*, while the verbs that are not lexically specified as such, e.g. *break*, allow either a Causer or an Agent reading—the distinction correlates with verbs that do participate in the causative-inchoative alternation (*break*) and those that do not (*paint*) (Herranz 2001). Kiparsky (1997: 495-6) words the distinction somewhat differently but makes essentially the same claim. Locative denominals are typically distinguished from inchoatives in that they "require direct initiation and continuous participation of a causing Agent", while inchoatives can only denote an Agent's initiation of an event, which can then continue on its own.

Locative denominals may seem to obligatorily involve an Agent rather than a Causer, as suggested by the incompatibility with adverbials such as *po nesreči* 'accidentally' with a Locatum denominal, as in (68) and (69) (the same judgements hold for Location denominals such as *u-*

⁵³ Arad's Agent-Causer distinction is conveniently summarized in Herranz (2001). An only partly overlapping distinction is advocated in Levin & Rappaport Hovav (1996) and some of their previous and subsequent work.

stekleničiti 'to bottle'). This adverbial is among Arad's (1998) tests for establishing the type of verb.

(68) *Tinček je o-sedlal konja*
 Tinček_{NOM} AUX O-saddled_{PF} horse_{ACC}
 'Tinček saddled the horse'

(69) #*Tonček je po nesreči o-sedlal konja*
 Tonček_{NOM} AUX by accident O-saddled_{PF} horse_{ACC}
 'Tonček accidentally saddled the horse'

An obligatory Agent reading also seems to hold in the stative causation examples with unprefixated Location denominals discussed above, as shown by (70-72) below, so it cannot be that an agentive reading is simply incompatible with stativity (cf. also Dowty 1991: 573, Levin 2000 for different instances of atelic causation).

(70) *Tinček skladišči vino na podstrehi*
 Tinček_{NOM} warehouses_{IMPF} wine_{ACC} on garret
 'Tinček stores the wine in the garret (keeps the wine warehoused...)'

(71) #*Sopara skladišči vino na podstrehi*
 humidity_{NOM} warehouses_{IMPF} wine_{ACC} on garret
 'The humidity stores the wine in the garret (e.g. the heat forces Tinček to store the wine in the garret)'

(72) #*Tonček po nesreči skladišči vino na podstrehi*
 Tonček_{NOM} by accident warehouses_{IMPF} wine_{ACC} on garret
 'Tonček accidentally stores the wine in the garret'

However, Kiparsky (1997) further shows that the impossibility of locative denominals in the inchoative frame, as postulated by Hale & Keyser (1997) on the case of examples such as **the wine bottled*, is in fact a conceptual matter; he gives examples such as *to gasify, to reel, to spool, to stack, to pile (up), to dock, to bed*, etc., proving that locative denominals do participate in the causative-inchoative alternation if they denote events which can proceed on their own (Kiparsky 1997: 497). Clearly, Slovenian Location denominals such as *skupiniti se* 'to group' and *vzorčiti se* 'to pattern' are verbs of this type. Corroborating examples can be found among deadjectival causatives, (73).

(73) *Lani je konstantno slabo vreme že konec avgusta iz-praznilo letovišča*
 last-year AUX persisting bad weather_{NOM} already at-end August OUT-OF-emptied_{PF} resorts
 'Last year, the persisting bad weather emptied the summer resorts as early as late August'
 → *weather* = Causer, not Agent

Nevertheless, locative denominals are causative verbs proper in that they require either a Causer or an Agent; in other words, they require some kind of causation. If the external argument is Thematic, just as with inchoatives such as *to break*, the reflexive pronoun *se* obligatorily fills the slot of the direct object, (74). Haspelmath (1993) calls such verbs anti-causatives, distinguishing them from inchoatives that do not have to take the reflexive pronoun (e.g. *rumeneti* 'to turn yellow').

(74) *Pripravili smo mašinerijo, potem pa se je vino samo u-stekleničilo čez noč*
 prepared AUX_{WE} machinery_{ACC} then MODAL REFL AUX wine_{NOM} itself IN-bottled_{PF} over night
 'We set up the machinery, and then the wine bottled (by) itself over night'

As pointed out by Kiparsky (1997: 495-6), this option depends on conceptual factors. In this case, one can call them the physical properties of the entity. Liquids only require external initiation of an event which can then continue on its own. Nevertheless, the syntactic frame of locative denominals is one of causatives proper, necessarily involving three arguments. If the Causer/Agent is omitted, the Theme may be in the external argument position and a reflexive pronoun in the internal argument position. External initiation (causation), however, is still obligatory, regardless of the fact that the participant can syntactically be omitted, as an adverb such as *po nesreči* 'by accident' is incompatible with the reflexive use of the locative denominal in (74).

5.7

Recall the French Locatum-denominal example *Les bégonias fleurissent la tombe de ma mère* 'Begonias (be)flower the grave of my mother', (60), and the Slovenian Location-denominal example *Zelene flaše ponavadi u-stekleničujejo bolj slabo vino* 'Green bottles usually bottle poor-quality wine', (67). Contrary to the locative-denominal examples, which are incompatible with *accidentally* both on a reflexive and transitive use, (74), example (75) below shows that the *begonias* sentences *can* combine with *accidentally*.

(75) *V naši čredi so usnjena sedla včeraj po nesreči o-sedlavala najodličnejše konje*
 in our stable AUX leather saddles_{NOM} yesterday by accident O-saddled_{IMPF} most-exquisite horses_{ACC}
 'In our herd yesterday, leather saddles accidentally saddled the best horses'

It is further obvious that the external argument in such constructions cannot be an Agent/Causer from the fact that it is coindexed with the direct internal argument—which has the interpretation

of a Theme (*saddle*) / Location (*bottle*)—and Agents are never realized as direct internal arguments (Dowty 1991). If a Thematic direct internal argument of a locative denominal is coindexed with the external argument, it can only be a reflexive pronoun.

The frame of locative denominals is necessarily transitive, detransitivization without the reflexive is impossible. Because the verb inevitably projects the CAUSE predicate, three positions must be filled, one of which is in the verb itself. As the external argument position is filled by a further specification of the incorporated argument, no causation is possible. An entity acting on itself cannot result in movement, the Location argument can thus not act as a Goal and delimitor, and the only possible interpretation is a stative one. The external argument is thus an Experiencer or Undergoer rather than an Agent/Causer, which shows that this use is different from the 'usual' causative locative denominal use—including the stative causation reading of the Location denominals—despite the fact that it exploits the same syntactic frame. The event lacks causation altogether; there is no causing event, there is only a state, which may or may not be seen as a result state. Clearly, the causation in question is a fake causation. Since there is no causing event and the external and the incorporated arguments are coindexed, an eventive reading is ruled out. This use is thus in a way a canceled causative use, where the cancelation comes from the coindexation of the external argument and one of the internal arguments. In other words, locative denominals are accomplishments (Pustejovsky's (1992) Transitions), and the change-of-state is blocked by the coindexation.

5.8 Prefixes cannot be eventuality type modifiers: begonias sentences

Recall that it has been argued above on the basis of examples such as (76) and (77), both imperfective, that prefixes on locative denominals encode resultativity.

(76) *Tonček je vino stekleničil v kleti* → R, S
 Tonček_{NOM} AUX wine_{ACC} bottled_{IMPF} in cellar
 'Tonček bottled (the) wine in the cellar (the bottling event took place in the cellar) OR Tonček stored (the) wine in bottles in the cellar'

(77) *Tinček je vino u-stekleničeval v kleti* → R, *S
 Tinček_{NOM} AUX wine_{ACC} IN-bottled_{IMPF} in cellar
 'Tinček bottled (the) wine in the cellar (the bottling event took place in the cellar)'

In both examples, the verb has three arguments, both on the eventive and the stative reading: the external argument *Tonček* and two internal arguments, the Theme *wine* and the Location *bottle* (while *cellar* is an adjunct, framing the event). The relevant LCS is CAUSE(*Tonček*,

COME(BE(*wine*, AT(*bottle*))), with the change-of-state COME predicate present on the resultative reading and absent on the stative one. Each of the three arguments is distinct.

Now, compare the French example *Les bégonias fleurissent la tombe de ma mère* 'The begonias (be)flower the grave of my mother' with the Slovenian ones in (78-79), repeated from above, one with a Locatum and one with a Location denominal, paying attention to prefixation. Note that both the prefixed and unprefixed variant forms in both examples are imperfective.

(78) *V Ontariu kanadska sol vedno ?po-soljuje / *soli le najpomembnejše ceste* → S, *R
in Ontario Canadian salt_{NOM} always PO-salts_{IMPF} / salts_{IMPF} only most-important roads_{ACC}
'In Ontario, Canadian salt only salts (is only used for salting) the most important roads (e.g. while for minor roads, imported salt is used)'

(79) *Zelene flaše ponavadi u-stekleničujejo / *stekleničijo bolj slabo vino* → S, *R
green bottles_{NOM} usually U-bottle_{IMPF} / bottle_{IMPF} rather poor wine_{ACC}
'Green bottles usually bottle poor-quality wine'

In both French and Slovenian, a resultative reading is unavailable (due to argument coindexation); in Slovenian (78-79), the unprefixed imperfective verb forms are ruled out. In view of the claim that prefixes are resultativity markers, it may at first sight seem unexpected that the prefixed forms cannot have a resultative reading. As argued above, these are not true causative sentences, although they are coded in a causative syntactic frame.

Now, Filip claims that prefixes "map sets of eventualities of any type (states, processes or events) onto sets of events" (2000: 78) and that as eventuality type modifiers they operate on eventuality descriptions (to appear: 39). If this is so, then these fake causation examples cannot be explained. That is, if the prefixed examples are acceptable, and the prefix on them modifies the eventuality of the predicate, then the counterparts with the same verbs without the prefix should be fine as well. But this is not the case. If prefixes are eventuality modifiers, they should not pattern with predicates without an eventuality, which the unprefixed *begonias* examples in (78-79) seem to be.

On the other hand, if prefixes introduce a state, as claimed above and in Strigin & Demijanow (2001), the examples *can* be explained. Strigin & Demijanow claim that prefixes are marked as introducing either a terminative state, inceptive state, or—more rarely—both. Now, this should be understood in a way such that prefixes introduce a state and the particular prefix's specification will in the process of event composition result in a terminative state, inceptive state,

or both. If there is no event composition, the prefix simply contributes its state. Since Agentivity is canceled by the coindexation of the Theme/Location and the external argument, the accomplishment (Transition) predicate may become in a sense uninterpretable, it has no eventuality description. The prefix is then in a sense the only aspectually interpretable part of the predicate, and it brings in its state. Since the denominal verb is aspectually uninterpretable, no Pustejovsky-style composition takes place. The predicate is a State. The semantics of the nominal root of the verb is then relegated to a manner-like function. *Stekleničiti* in *u-stekleničevati* 'to bottle' and *sedlati* in *o-sedlavati* 'to saddle'—in the *begonias* sentences—specify that the state is not just one of *containing* and *decorating* but rather *containing in a bottle* and *decorating with a saddle/saddles*, respectively.

Furthermore, these examples thus indisputably prove that prefixes are not as a class quantizers but may only act as quantizers as a result of event composition. If there is no event composition, they simply contribute their state and the predicate will not be quantized.

Finally, recall that I argued above against Vidovič Muha's (1993) and Žele's (2001) claims that the prefix *v-* 'in(to)' is always directional. The *v-* (*u-*) on *u-stekleničevati* 'to bottle' in the *begonias* sentences should on these analyses be considered as distinct from the *v-* (*u-*) prefix on the same verb *u-stekleničevati* 'to bottle' in the causative use proper.

5.9 Deadjectival causatives: *polniti* 'to fill'

With locative denominals being causative verbs, it should be interesting to see if the claim that the prefix brings in a state, through which it then participates in the composition of the complex event, can be supported with other derived causative verbs. An extensive investigation is beyond the scope of this work, but I will present the behavior of one such verb, namely the deadjectival causative verb *polniti* 'to fill' (*poln* 'full'). The verb is in principle a pure change-of-state verb (but see Note 56 below) and—just as locative denominals—also an apparently inherently resultative verb, whose end-state is encoded through the incorporated adjective's meaning 'full' (but note that the result of 'filling' can also be a state of being 'partially full', which, of course, is a further specification of 'full'). Consider (80).

(80) (*Kaj dela Tonček?*) *Polni / ??na-polnjuje tank z bencinom*⁵⁴
 what_{ACC} does_{IMPF} Tonček_{NOM}? fills_{IMPF} / NA-fills_{IMPF} tank_{ACC} with gas
 '(What is Tonček doing?) He is filling the tank with gas'

Again, both variants of the verb are imperfective, so the only difference between the slash-separated variants is the presence/absence of the prefix. Note that pairs such as *polniti*_{IMPF} – *na-polniti*_{PF} are often given as exemplifying a purely aspectual use of prefixation (the preposition, cognate with the prefix, is *na* 'on(to)', so its lexical semantic contribution can indeed be dubious at best). Now, the second variant, i.e. *na-polnjuje*_{IMPF}, is in principle possible (the form does exist, cf. Bajec *et al.* 1994), but since the intended meaning is clearly resultative (as mandated by the context-sentence in brackets), the prefix is redundant and the sentence is odd. Since the aimed-at result state of the Location direct internal argument is already coded in the incorporated adjective. Now compare this to (81).

(81) *Svetloba na-polnjuje sobo*⁵⁵
 light_{NOM} NA-fills_{IMPF} room_{ACC}
 'Light fills (is filling) the room'

Unlike in the previous example, the prefixed variant is perfectly fine. The reason behind the availability of the prefixed secondary imperfective form is clearly the same as with locative denominals in the argument-coindexation frame. While *Tonček* in the previous example is the Agent in the *filling* event, *Svetloba* 'light' is not the Agent but rather the Theme (cf. the unavailability of a further specification: **Light fills the room with very bright light*). The prefixed imperfective form is completely natural (unlike the same form in (80)) because this is again a case of 'fake' stative causation, and so the prefix's contribution of a state licenses the stative use of the causative change-of-state verb.

Now, note that the stative meaning is not available in (80) (with an Agent, *Tonček*). This may seem to go against the above claim that the stative causation proper is in the unprefixed form in principle available, which was based on the behavior of locative denominals such as *skladiščiti*_{IMPF} 'to warehouse'. I believe, however, that just as with Locatum denominals the restriction again arises from conceptual spheres (see above); statively causing a tank to be full

⁵⁴ The same behavior is exhibited by the deadjectival *prazniti*_{IMPF} / *iz-praznjevati*_{IMPF} 'to empty'.

⁵⁵ *Prazniti* 'to empty' cannot be used statively, which is presumably due solely to conceptual factors. The same is true of English *to fill* versus *to empty*.

(or empty) simply makes no sense. The only reason for statively causing the tank to be full is if one keeps something stored in it, but then the verb used would be a Location denominal.

There seems to be another problem. While the availability of the prefixed form with the stative meaning in (81) is expected, the availability of the **unprefixed** form with the stative meaning in the same sentence, *Svetloba_{NOM} polni_{IMPF} sobo_{ACC}* 'The light fills the room', is unexpected. Since the external argument is not an Agent but a Theme, the example would be expected to be ruled out, just like the unprefixed coindexed **Zelene flaše_{NOM} stekleničijo_{IMPF} bolj slabo vino_{ACC}* 'Green bottles bottle rather poor wine', (67), is out. Nevertheless, the example is acceptable and it intuitively reads very much like stative. To show that this is in fact not a stative use, it helps to switch to past tense.

(82) *Svetloba je polnila sobo*
 light_{NOM} AUX filled_{IMPF} room_{ACC}
 'Light filled (was filling) the room' → 'feels' STATIVE (or RESULTATIVE)

(83) *Voda je polnila vse pogreznjene dele stanovanja*
 light_{NOM} AUX filled_{IMPF} all sunken parts_{ACC} apartment_{GEN}
 'Water filled (was filling) all sunken parts of the apartment' → sounds odd on an attempted STATIVE reading (fine on RESULTATIVE)

(84) ??*Kupci so vsako nedeljo polnili supermarket*
 shoppers_{NOM} AUX every Sunday filled_{IMPF} supermarket_{ACC}
 'Every Sunday, shoppers filled the supermarket' → sentence is bad (unless shoppers are taken as Agents and the Theme is seen as omitted, e.g. *shoppers filled the supermarket with money*)

(85) *Kupci so vsako nedeljo na-polnjevali supermarket*
 shoppers_{NOM} AUX every Sunday NA-filled_{IMPF} supermarket_{ACC}
 'Every Sunday, shoppers filled the supermarket (were there in large quantities)' → sentence fine on STATIVE (and RESULTATIVE) reading

Although conceptual factors clearly interfere and blur the picture, the additional examples indicate that the unprefixed form with *light* as the Theme subject, which intuitively feels as stative, is really resultative.⁵⁶ Note also that while it has just been said that conceptual factors interfere, this does not grant the conclusion that the difference itself between the *shoppers* examples (84-85) and the *light* examples (81-82) arises *only* from conceptual factors, in the sense

⁵⁶ Note further that another interfering factor may be the fact that at least for some speakers, the verb *polniti* 'to fill' may not only be used as a change-of-state verb but—in restricted contexts—also as a manner verb (Žaucer 2002), and thus the inherent resultativity/eventivity of the unprefixed form can presumably be overridden. Compare *Polnil_{IMPF} je čutaro_{ACC} z vodo* 'He filled the bottle with water' – *Polnil_{IMPF} je vodo_{ACC} v čutaro* 'He filled water into the bottle' VS *Polnil_{IMPF} je skedenj_{ACC} s senom* 'He filled the barn with hay' – **Polnil_{IMPF} je seno_{ACC} v skedenj* 'He filled hay into the barn'.

that *shoppers* and *light* (or *water*) simply fill whatever they fill in conceptually different ways (shoppers do not just hang around in a supermarket). Such a conclusion cannot be made because the stative reading is clearly available in the *shoppers* examples with the prefixed form.

The conclusion is thus the same as with the argument-coindexed cases with locative denominals. There is no Agent, and so the stative use is only available with the prefix.

Furthermore, another issue seems to need clarification. The availability of the resultative reading with both the prefixed and unprefixed form with the Theme/non-Agent *light* as the subject (*Svetloba*_{NOM} *polni*_{IMPF} / *na-polnjuje*_{IMPF} *sobo*_{ACC} 'The light fills the room') may seem unexpected, if we consider the unavailability of a resultative reading with either the prefixed or unprefixed form in the non-Agentive argument-coindexation cases of Location and Locatum denominals. This difference (matched in English, see Note 60 below) stems from the fact that despite the 'deletion' of the Agent, the argument-coindexation with deadjectivals such as *to fill* is different from the one with locative denominals.

With locative denominals, two of the arguments are identical (although one is a further specification of another one, which is a pragmatic requirement, not grammatical). Their LCS structures are as follows: *CAUSE*(*green bottles*, *BE*(*wine*, *AT*(*bottle*))) and *CAUSE*(*leather saddles*, *BE*(*horses*, *WITH*(*saddle*))). In the case of *to fill*, the property *full* (taken as an argument) is coindexed with the direct internal argument, but they are not identical. The relevant LCS is: *CAUSE*(*water*, *COME*(*BE*(*room*, *WITH*(*full*))). With both the locative denominal causatives and the deadjectival causative, the incorporated part is the argument of the change-of-state predicate *AT*/*WITH*. The difference between the two types of verbs is that with locative denominals, the external argument is coindexed with one of the internal ones, while with the deadjectival causative the external argument is not coindexed with any internal argument.

Now, with locative denominals the coindexation of the external argument with an internal argument results in blocking of any causation and consequently in non-complexity of the event. As in the case of the deadjectival causative the external argument, the Theme, is not coindexed with an internal argument (either *room*, Location, or *full*, 'Locatum'), the Theme argument can at the same time presumably also have properties of a Causer. A similar phenomenon of mixed thematic properties has been argued for in cases when agentive verbs of motion are used in the directed-motion meaning. Such arguments are said to qualify both as causer and as theme by

Levin & Rappaport Hovav (1996: 502)⁵⁷ and as Agent and as Theme by Spencer & Zaretskaya (1998: 30). Therefore, the event is actually complex, composed of a causing and a caused subevent. This may look as a rather ad hoc explanation, but it is corroborated by the fact that the sentence can actually take an adverbial that can only modify an eventive predicate, not a stative one, such as *počasi* 'slowly' or *postopoma* 'gradually', (86).

(86) *Voda je počasi polnila sobo*^{58,59}
 water_{NOM} AUX slowly filled_{IMPF} room_{ACC}
 'Water slowly filled (was filling) the room'

Such adverbs are impossible with the argument-coindexed locative denominals with or without the prefix. Furthermore, such examples exhibit the possibility of an anti-causative (inchoative) construction, (87), which requires a Causer to decausativize it.

(87) *Voda se je počasi polnila v sobo*
 water_{NOM} REFL_{ACC} AUX slowly filled_{IMPF} into room_{ACC}
 'Water slowly filled (was filling) itself into the room'

With locative denominals, such a construction is impossible (**Zelene flaše*_{NOM} *so*_{AUX} *se*_{REFL-ACC} *stekleničile*_{IMPF} 'green bottles bottled themselves'; **Usnjena sedla*_{NOM} *so*_{AUX} *se*_{REFL-ACC} *sedlala*_{IMPF} 'leather saddles saddled themselves'). A further test is passive formation. With *polniti* 'to fill', the passive is possible, although its Theme characteristics win out over the Causer ones and the active subject is realized in a *with*-phrase, not a *by*-phrase, (88).

(88) *Soba je bila polnjena *od vode / z vodo*
 room_{NOM} AUX was filled_{IMPF} by water / with water
 'The room was (being) filled with water'

With argument-coindexed locative denominals, the passive is impossible with the active subject in either the *with*- or the *by*-phrase, (89-90).

(89) **Slabo vino je bilo stekleničeno / u-stekleničevano od zelenih flaš / z zelenimi flašami*
 bad wine_{NOM} AUX was bottled_{IMPF} / IN-bottled_{IMPF} by green bottles / with green bottles

⁵⁷ Their causer does not match e.g. Arad's (1998) distinction between Agent and Causer but subsumes both; I leave it without a capital initial to avoid a mix-up.

⁵⁸ *Water* is used as the Theme instead of *light*, as light moves instantly and an event describing its motion may thus not tolerate grade adverbs, but this is a pragmatic requirement and does not change the argument.

⁵⁹ Clearly, these structures must be in some way akin to the intransitive (unaccusative) use of e.g. *break*, with d-structure object being promoted to the subject position.

(90) **Usnjena sedla so bila sedlana / o-sedlavana*_{IMPF} *od imenitnih konjev / z imenitnimi konji*
 leather saddles_{NOM AUX} were saddled_{IMPF} / AT-saddled_{IMPF} by exquisite horses / with exquisite horses⁶⁰

⁶⁰ A remark on Levin (1993)

Formally, the argument-coindexation patterns of locative denominals correspond to Levin's (1993: 81-2) "Locatum Subject Alternation", "Location Subject Alternation" and "Container Subject Alternation".

In terms of meaning, the **Locatum Subject Alternation** seems to be the same in Slovenian and English. However, the verbs *to fill* and *to carpet*, for example, are listed in this class, but the positionally corresponding arguments of these verbs have different thematic roles, and consequently the whole constructions have different meanings (see above for discussion based on Slovenian verbs). The classification thus needs to be revised.

(i) *I filled the pail with water* (eventive)

(ii) *Water filled (was filling) the pail* (stative, eventive) <Levin's examples>

(iii) *I carpeted the floor with linoleum* (eventive)

(iv) *Linoleum carpets the floor of our new house* (stative) <verb from Levin's list>

Note that the distinction in the Locatum Subject Alternation verbs (but not in the Location/Container Subject Alternation) between the deadjectival *polniti*_{IMPF} / *na-polnjevati*_{IMPF} 'to fill' and the denominal *o-sedlavati*_{IMPF} 'to saddle', where the former expresses an eventive and a stative reading, and the latter only the stative one, is repeated in English. The distinction is not mentioned by Levin.

The **Location Subject structure** in English encodes two meanings: according to Levin, it describes the capacity of the location with respect to the action named by the verb. For this modal meaning, Slovenian needs a modal verb such as *lahko* 'can'. Although not mentioned by Levin, the English structure can probably also encode, like Slovenian, a non-modal stative meaning.

(i) *We sleep five people in each room*

(ii) *Each room sleeps five people* <Levin's examples>

(iii) *We (will) house fifty families in the new building*

(iv) *The new building (will) house(s) fifty families* → denominal, 1-to-1 relation <verb from Levin's list>

(v) *The new building at present houses five families* (stative, non-modal) <verb from Levin's list>

(vi) *We seat five hundred people in the auditorium*

(vii) *The auditorium seats five hundred people* → denominal, part-whole relation <verb from Levin's list>

Based on Levin, the **Container Subject Alternation** would again seem to be different in the two languages, but this is probably not true. First, no denominal verbs seem to figure in the list of the alternating verbs, so argument-coindexation is impossible to start with. However, this may not be true, as *to house*, listed in the Location Subject Alternation section, could just as easily be listed in the Container Subject Alternation. Second, Levin's observation that the verbs participating in this alternation describe a part-whole relation between the subject or PP (whole) and the DO (part), depends crucially on the fact that she lists no denominal verbs and so there can be no argument-coindexation. Assuming that this is incorrect, the Container Subject Alternation can be said to exhibit the same characteristics in Slovenian and English. The part-whole relation necessarily holds for deverbal verbs, but not necessarily for denominals. Examples (i-ii) are for English and (iii-iv) for Slovenian.

(i) *I incorporated the new results into the paper* (eventive)

(ii) *The paper incorporates the new results* (stative) <Levin's example>

(iii) *V članek sem v-ključil nove rezultate* (eventive)

(iv) *Članek v-ključuje nove rezultate* (stative)

5.10 Begonias sentences in French, English, etc.

Finally, let me speculate a bit. Recall that in French, the sentence *Begonias (be)flower my mother's grave* involves an unprefix verb *fleurir* 'to flower'. This may be related to the fact that in Spanish (Romance?) locative denominals, prefixes are claimed not to be obligatory and are consequently called "focalizers" of eventualities in Schroten (1997) and Melka & Schroten (1997). Therefore, the state needed for the interpretation of the *begonias* sentences can be introduced interpretatively and need not be coded morphologically. That is why there is an unprefix *Les bégonias fleurissent la tombe de ma mère* 'Begonias flower my mother's grave', (60), and a prefixed *Des bouteilles vertes toujours em-bouteillent du vin mauvais* 'Green bottles always in-bottle bad wine'. Consider further similar examples from English.

(91) *The daisies ?flower/blossom on my mother's grave*

(92) **The daisies flower/blossom my mother's grave*

(93) ?*The daisies be-flower my mother's grave*

(94) **These flasks bottle only the best wine*

(95) *Right now, these apartment buildings house 2000 people* (where *right now* is intended to signal that this is not a case with the deontic modal meaning ('can'), which this construction can otherwise get)⁶¹

Similarly as in French, this function may in English have become more or less interpretatively guided and/or lexicalized. Nevertheless, if a verb has a prefixed variant, only the prefixed variant may be possible (although marginal) in this construction, as in *be-flower*, (92-93). With some verbs, the construction is impossible, as with *to bottle*, while with others it seems to be acceptable without a prefix, as with *to house* (both Container denominals). The prefixes can thus perhaps similarly be taken as some sort of optional focalizers. According to Maylor (1997), *be-* in German can add a (syntactic) feature [+ Location]. Location, of course, is a type of state. The following data, taken from Maylor (1997: 201), are supposed to display the same phenomenon: *he bottled_{LOCATION} the wine_{LOCATUM} in/*into new bottles*, *he housed_{LOCATION} the orphans_{LOCATUM} in/*into a hostel_{LOCATION}* VS *he poured the wine_{LOCATUM} into/*in new bottles_{LOCATION}*.⁶² The factor governing the choice of preposition is supposed to be [+/- Path], which is related to [+/- State].

⁶¹ Dowty (1979: 124) gives the example *He is housing his antique car collection in an old barn* and calls it "agentive stative causative".

⁶² Note, however, that *He bottled the wine into new bottles*, starred in Maylor (1997), was not unanimously unacceptable for my (Canadian) informants.

In German, the distribution of such prefixes on denominals and deadjectivals is claimed to be more or less random as well (Wunderlich 1997).

As a speculation to point into a direction for future research, let me say that perhaps the state contributed by the prefix has in Germanic languages been narrowed down to apply only to a subtype, i.e. the state of location. In Romance, if Schroten (1997) and Melka & Schroten (1997) are right, one of the prefixes may have become specialized for focalizing the denominal verb's eventuality of state, while the other one has taken its opposite value, i.e. focalizing the denominal verb's eventuality of process. In Slavic, a more general state-contributing role has developed, in line with the fact that prefixation in Slavic is a lot more wide-spread and systematic than in Germanic and Romance.

Of course, while Slavic prefixes always delimit motion through their expression of a state, interpreted as the resultant state, they may in other languages convey direction, and as such they will not delimit motion, as claimed for German by Kratzer (1994, cited in Filip, to appear: 23).

5.11 Preliminary Conclusions and Implications

If Slavic prefixes are states, then they can, but need not, take part in event composition. Such an analysis is forced on us by the event-composition model itself. The *begonias* examples, in turn, prove the correctness of such an approach. That is, if we claim that—in event composition—the prefix contributes a state, which then combines with another State, Process or Transition of the verb (predicate), this is essentially still the same as saying that the prefix modifies the event, as claimed by Filip (2000, to appear). However, in the case of the *begonias* examples, the two claims are different, as the prefix cannot modify the event but rather constitutes the event. This then means that the prefix is in a way the primary predicator, in the spirit of Spencer & Zaretskaya (1998a), but being an enclitic, it needs a phonological host (e.g. *stekleničiti* 'to bottle').

Spencer & Zaretskaya (1998a) suggest that the locative alternation in Russian could also yield to their lexical subordination analysis. Combining this with a more explicit claim that prefixes code states, as argued here, this clearly hints at the possibility of dealing with Germanic prefixes guiding the locative alternation (German *be-*, and to a far more restricted extent also English, as

in **Begonias flower the grave of my mother versus ?Begonias be-flower the grave of my mother*) as closely related to the way Slavic prefixation works.

For the locative alternation in Slavic, however, the state analysis of prefixes indicates that the main factor in the alternation will be the lexical semantics of verbs, since prefixes always introduce a resultative state. Now, certain verbs are idiosyncratically prelinked (i.e. lexicalized) with a specific prefix (or set of prefixes), and if this happens to be a prefix with a relatively more bleached spatial semantics (e.g. *na-*, *o-*, *po-*), the verb will presumably be more likely to alternate, since it more clearly only introduces an underspecified resultative state. In the case of a complete bleaching or of a generalization, a prefix may presumably become a construction marker, along the lines suggested for the German *be-* in the context of the locative alternation in Michaelis & Ruppenhofer (2001).

In view of the inexistence of the secondary imperfectives with some verbs, such as *pisati*_{IMPF} 'to write', *na-pisati*_{PF} 'to write up', **na-piso-va-ti*_{IMPF} 'to write/be writing up', Filip (to appear: Note 15) is forced into resorting to the claim that the imperfective suffix *-va-* is not fully productive. In view of examples such as *po-solje-va-ti*_{IMPF} 'to salt' or *na-pudra-va-ti*_{IMPF} 'to powder' (cf. (78-79)), which do not seem to exist but for the *begonias* sentences nevertheless have to be formed, Filip's claim can perhaps be abandoned and the imperfective suffix *-va-* can be restored to full productivity, as would be expected from an inflectional morpheme. These verbs show that the absence is not due to a restricted productivity of *-va-* but rather to the fact that there is apparently no need for the secondary imperfective to be formed. If it arises, though, they can and have to be formed. If such a need is frequent enough, the secondary imperfective will not be felt as unusual. The reasons for the absence of secondary imperfectives on certain verbs may therefore be purely pragmatic. The intention of reaching a result in writing something is apparently seen as clear enough without grammatical encoding of the result, and so the secondary imperfective form is not needed. The pragmatic reasons may also include the extent to which a verb is associated with having an Incremental Theme object. *Jesti*_{IMPF} 'to eat' and *po-jesti*_{PF} 'to eat (up)', for example, also do not seem to have a secondary imperfective.

6. APPARENT COUNTEREXAMPLES FROM FILIP (TO APPEAR)

Section 6 sets out to deal with two sets of apparent counterexamples (from Filip, to appear).

In 6.1, I argue that the claim that Czech has modal and manner prefixes stems from data misinterpretation. The putative manner meaning is merely a consequence of the semantics of the verb and the pragmatically determined state, introduced by the prefix. For the putative modal meaning, a verb can equally get it without the prefix, so it cannot be that the prefix introduces the modality.

In Section 6.2, I argue that the claim that Goal-prefixes are quantizers while Source-prefixes need not be is again a result of data misinterpretation. I also show that the claim that Slavic prefixes and PPs of directed-motion verbs can be treated on a par is misplaced. More specifically, Section 6.2.1 argues that Source states may be sequenceable, where the value of the state, say, 'away' can be reset and the new setting can be considered as a further specification of the original underspecified state.

In Section 6.2.2, I show that Source-prefixed verbs exhibit the phenomenon of unselected objects, which is taken to be proof of a resultative status of the prefix, which, in turn, shows that these prefixes must be stative, not directional. In Section 6.2.3, I suggest that some lexicalizations and regular verb behavior with respect to a progressive interpretation can be given motivation if Source-prefixes are stative/locational rather than directional. In Section 6.2.4, I argue that Filip's (to appear) criterion of the omissibility of the further specification PP is misplaced; the relative omissibility indeed reflects the Goal/Source asymmetry, but not in the way suggested by Filip (to appear). Section 6.2.5 further shows that while English PPs may license unselected objects, Slovenian PPs do not (but prefixes do).

Section 6.3 further corroborates the claim that Slavic prefixes and PPs of directed-motion verbs can be treated on a par is misplaced, and proposes instead that Slavic prefixes introduce the element of State, while the PP contribute the element of Path. Section 6.3.1 discusses manner-of-motion verbs, comparing Slovenian, English, and French, and Section 6.3.2 discusses verbs of sound emission in directed-motion meaning.

The bottom line of Section 6 is that Filip's data does not disprove the claim that prefixes introduce a state and that it does not force one to reject the generalization that the prefixes in question, by being introducers of a state, contribute to predicate quantization; further data is provided to show that prefixes in fact only contribute a state and not the Path, which, in turn, is contributed by the PP.

6.1 Apparent manner and modal prefixes in Czech (Filip, to appear)

As already noted, Filip's rejection of an analysis of the whole class of prefixes as being quantizers is based on two sets of data. First, on Czech prefixed verbs with a manner meaning and prefixed verbs with a deontic/root modality meaning 'to be able to V', where this meaning is argued to stem from the prefix (to appear: 22). If this is so, then prefixes cannot be claimed to contribute states. The second set of data involves a Goal/Source asymmetry, where Goal-prefixes are claimed to quantize the predicate while Source-prefixes are claimed not to quantize the predicate. I believe that both of these conclusions are based on data misinterpretations.

First consider the putative manner and deontic modality uses of prefixes. Filip's claims rest on the following Czech pairs of verbs (to appear: 22).

- | | |
|--|--|
| <p>(96) <i>řeknout</i>_{PF}
say_{SML-INF}
'to say (once)'</p> | <p><i>u-řeknout</i>_{PF} <i>se</i>
U-say_{SML-INF} REFL
'to say unintentionally, inadvertently, by mistake'</p> |
| <p>(97) <i>zvednout</i>_{PF}
lift_{SML-INF}
'to lift (once)'</p> | <p><i>u-zvednout</i>_{PF}
U-lift_{SML-INF}
'to be able to lift (once)'</p> |
| <p>(98) <i>nést</i>_{IMPF}
carry_{INF}
'to (be) carrying'</p> | <p><i>u-nést</i>_{PF}
U-carry_{INF}
'to be able to carry'</p> |
| <p>(99) <i>péci</i>_{IMPF}
bake-INF
'to bake, to be baking'</p> | <p><i>u-péci</i>_{PF}
U-bake-INF
(i) 'to bake' [i.e. to finish baking (all) the x('s)]
(ii) 'to be able to bake'</p> |

Note that the pairs in (96-97) include the semelfactive suffix *-nou-* (Czech counterpart of the Slovenian *-ni-*), so they restrict the denotation to a singular event and thus quantize it. If the prefix had its 'ordinary' role, then the prefixed examples would violate the quantizing constraint and should be bad (Filip, to appear). Therefore, she concludes, their role must in these examples be different.

As to (96), Filip claims that the prefix adds an Agent-oriented manner component 'unintentionally, inadvertently, by mistake'. I believe this is a misinterpretation, and I borrow the explanation from Spencer & Zaretskaya (1998a), who contrast English adjectival resultatives and Russian prefixation, with an emphasis on unselected objects. The obligatory reflexivity after prefixation is the key to the answer. In the Czech *u-řeknout se* (and Slovenian *za-reči se* with the same meaning), the prefix contributes a result state (as argued for comparable examples in Spencer & Zaretskaya 1998a: 22-3), and this is why the verb is obligatorily reflexive, as the resulting state is predicated of the Theme, just as the English *John ran* versus *John ran himself exhausted*. Note that *se*_{REFL} in *za-reči se* and *himself* in *run himself exhausted* are unselected objects, impossible with the unprefixed verb in the Slovenian/Czech example and without the resultative adjective in the English example. Now, it is hard to synchronically relate the state contributed by the prefix *za-* to its spatial meaning 'behind'. Nevertheless, Spencer & Zaretskaya (1998a) list plenty of similar examples. The prefix thus adds a state, say, something like 'be in

trouble', and the prefixed verb would thus mean something like 'get oneself in trouble by saying something', and since we do not get ourselves in trouble on purpose, there arises the meaning 'unintentionally, inadvertently, by mistake'. (See Spencer & Zaretskaya (1998a) for an abundance of similar examples from Russian.)⁶³ The quantizing constraint is not violated since the state introduced by the prefix delimits the caused event ('becoming in trouble'), while the semelfactivity quantizes the causing event (saying, i.e. saying once).⁶⁴

⁶³ A comparable case is a derivative of *piti*_{IMPF} 'to drink' with the reflexive pronoun as the unselected object: *za-piti*_{PF} *se*, meaning to get oneself in a state by drinking. This example is instructive to appreciate the role of pragmatics in the definition of the state contributed by the prefix, since it can have both the meaning 'to get oneself into the state of drunkenness for one night', as in *Včeraj se je za-pil s prijatelji* 'Yesterday he got drunk with his friends' as well as 'to get oneself into the state of drunkenness for good', as in *Za-pil se je* 'He started drinking'. Furthermore: *Navijači so za-pili Olimpijino zmago* (lit. fans ZA-drunk Olimpia's victory) 'The fans caused Olimpia's victory to be celebrated by drinking/getting drunk'.

⁶⁴ Note that considering semelfactives as quantized/telic goes against Smith (1997: 29), who claims that semelfactives are atelic (i.e. homogeneous) and entail no result or outcome. However, I go with Filip in assuming that semelfactives are quantized, due to the fact that they denote singular events (Filip, to appear), or that they are single-stage, dynamic and instantaneous eventualities (Smith: 1997: 30). If semelfactives denote singular events, a change of state clearly has to be entailed, the event is individuated by both its beginning and end. If the semantics of perfectivity indeed reduces to quantization—as proposed by Filip (2000)—then semelfactives would be expected to be perfective, and indeed, Slavic semelfactives are always perfective. This is actually also what Smith says: "[semelfactives] do not appear as such in sentences with the imperfective viewpoint, with durative adverbials, or other expressions of duration. This is what we would expect, considering the temporal schema of the Semelfactive" (op.cit: 30). Also, Orešnik (1994: 91) claims for Slovenian that the verbs in the perfective always suggest some kind of result state, where he does not exclude semelfactives (however, he follows Smith in regarding semelfactives as atelic). Furthermore, the Czech verb *sed-nou-ti*_{PF} *si* 'to sit (down)' contains the semelfactive suffix *-nou-* (and is accordingly perfective). It is thus clearly a semelfactive, and at the same time it inherently entails going from a non-sitting state to a sitting state, i.e. a delimited directed-motion event, so it obviously entails a resultative change of state. (To capture the fact that Russian semelfactives with the suffix *-nu-* are always perfective, Smith & Rappaport (1997: 229) have to assume that the suffix marks both situation type and perfectivity—an undesirable step in view of the summary of Filip (2000, to appear) in 1.5.3.1 above as well as in view of the fact that while the Czech *sed-nou-ti*_{PF} 'to sit down' contains the semelfactive suffix, the Slovenian *sesti*_{PF} 'to sit down' does not, but both are perfective. Similarly the outdated Slovenian *pok-ni-ti*_{PF} 'to burst' and the modern *počiti*_{PF} 'to burst'.)

Note in this respect that prefixed-unprefixed pairs such as the Slovenian semelfactives *d(v)ig-ni-ti*_{PF} 'to lift (once)' and *vz-dig-ni-ti*_{PF} 'to lift (once)', which do not seem to differ in meaning at all, do not represent violations of the quantizing constraint. The lexical semantics of *vz-* is in this case 'up(wards)', while the meaning of the root also contains movement in the upward direction. Therefore, the resulting state (limit) contributed by the prefix is a further specification of the lexical meaning of the verb, just as the particle *up* in the English *to lift up*. Similar, though less clear examples would presumably be the prefixed semelfactives *po-cuk-ni-ti* 'to give a pull' where *po-* (the prefix that in Slovenian carries the meaning of distributivity) presumably either further specifies, which can of course also be seen as simply adding an emphasis, the instantaneousness/shortness and singularity inherent in the semelfactive. (Note, finally, that if semelfactives are nevertheless homogeneous/atelic (as claimed in Smith 1997), this would not affect my analysis of prefixes but only the side-claim that the semantics of perfectivity is reducible to quantization. For cases such as *na-do-kupiti*_{PF} 'to buy in addition [to some contextually specified entity] in large amounts', where two quantizing prefixes cooccur on the same verb, both my proposal and Filip's proposal have to resort to type coercion of the input before the second prefix can be applied (for an implementation, see Filip, to appear). This is so simply because "prefixes are functors that impose a requirement on their input and output arguments" (op.cit: 40). Such type coercion is a wide-spread mechanism in languages and as such does not present a problem.)

As to the modal meaning in (97-99), I believe that for some reason or other, the Czech prefixed verbs *to carry* and *to lift* have become lexicalized, but the modal meaning is not contributed by the prefix. Consider the following Slovenian data.⁶⁵

- | | |
|--|--|
| <p>(100i) <i>A</i> <i>dvigneš 200 kil?</i>
 INTER lift_{YOU-SML-PF} 200 kg
 'Can you lift 200 kilograms?'</p> | <p>(ii) <i>A</i> <i>vz-digneš 200 kil?</i>
 INTER UP-lift_{YOU-SML-PF} 200 kilograms
 'Can you lift 200 kilograms?'</p> |
| <p>(101i) <i>A</i> <i>s-pečeš 10 piškotov v eni uri?</i>
 INTER S-bake_{YOU-PF} 10 cookies_{GEN} in one hour
 'Can you bake 10 cookies in one hour?'</p> | <p>(ii) *<i>A</i> <i>pečeš 10 piškotov eno uro?</i>
 INTER bake_{YOU-IMPF} 10 cookies_{GEN} one hour
 'Can you bake/be baking 10 cookies for one hour?'</p> |
| <p>(102) <i>A</i> <i>lahko pečeš 10 piškotov eno uro?</i>
 INTER MODAL bake_{YOU-IMPF} 10 cookies_{GEN} one hour
 'Can one / is it possible to bake/be baking 10 cookies for one hour?'</p> | |

Observe first that the modal meaning is available in Slovenian semelfactive perfective verb *to lift*, (100i-ii), regardless of the presence or absence of the prefix. Clearly, then, the modal reading cannot be attributed to the prefix. The modal meaning has, unlike in Czech, not been lexicalized in the Slovenian prefixed verb. The prefix *vz-* 'up' merely further specifies the Goal meaning which is inherent in the verb *to lift*, i.e. 'up'. Similarly, a sentence with the unprefix perfective semelfactive *skočiti_{PF}* 'jump', as in *A skočiš tako visoko?* 'Can you jump that high?', is fine on the modal interpretation.

Second, consider (101-102). The definite modal meaning ('I/you/etc. can V') is available with the prefixed perfective verb, but not with the unprefix imperfective verb. The generic modal meaning ('one can, it is possible'), coded with the modal *lahko*, is available with the imperfective. This is how the majority of verbs behave.

Combining the observations concerning the *lift* pair, (100i-ii), and the *bake* pair, (101i-ii), it becomes clear that the effect Filip (to appear) attributes to the prefix is somehow connected with completiveness, and in turn with aspect. The definite modal meaning (but not the generic one) is apparently incompatible with the imperfective aspect. Note that the same holds with the English progressive. *Can you be baking 10 cookies for an hour* can receive a generic modal interpretation but not a definite one. A definite modal meaning such as 'I/you/etc. can V' clearly requires a bounded event, otherwise there can be no answer, as the event can continue indefinitely. 'Are you able to' can only be interpreted felicitously if it refers to a bounded event.

⁶⁵ All of these examples require stress on the verb for the modal reading.

Accordingly, only a bounded direct object is possible with this meaning, as in *Are you able to lift the books?* versus **Are you able to lift books?* (the latter example might be acceptable if forced into an 'are you allowed to' meaning). A generic modal eventuality can, on the other hand, continue for as long as one wishes.⁶⁶

Consider some more examples. (Again, place stress on the verb.)

(103) A *laufaš 2 ure 20 na 28 kilometrov?*
 INTER run_{IMPF-YOU} 2 hours 20 on 28 kilometers
 'Can you run 28 kilometers in 20 hours and 20 minutes?'

Example (103) shows that the imperfective can sometimes also be used for this modal meaning. However, this is only possible in contexts where the imperfective can also denote a bounded, completed event. Without the measure expression that delimits the activity of running (28 km), the sentence is bad. Similarly, the direct object *Ljubljana marathon* delimits the activity of running in (104) and enables *laufati*_{IMPF} 'to run' to denote a completed event even in the imperfective.

(104) A *si že laufal Ljubljanski maraton?*
 INTER AUX_{YOU} already ran_{IMPF} Ljubljana marathon_{ACC}
 'Have you (ever) ran the Ljubljana marathon race?'

This example corresponds to the Russian one given by Strigin & Demijanow (2001: 61) with *to read* in the imperfective denoting a completed event (*Ty_{NOM} čtal_{IMPF} etu knigu_{ACC}?* 'Have you read this book?'). Such examples, in fact, are precisely what motivates the claim that the semantics of the imperfective is captured by the part-of relation ('≤') rather than proper-part-of relation ('<'), as in Filip (2000).

Further note that even when the modal particle *lahko*⁶⁷ (ca. 'can') is used, which is ambiguous between a 'be able to' reading and a 'be allowed to' reading, only the 'be allowed to' reading is possible with the imperfective, (106), while both the 'be able to' and 'be allowed to' readings are available in the perfective, (105).

⁶⁶ Note that in English, for example, the denominal *to house* can have this same deontic modal meaning or not, as in *This apartment building houses 20 families* (i.e. **can** provide housing to 20 families) versus *This apartment building at present houses 20 families* (**does** provide/is providing...), with no formal distinction.

⁶⁷ In Slovenian linguistic studies called 'modal predicative' (e.g. Herrity 2000). (In Bajec *et al.* 1994 misleadingly listed as a subentry for the adjective *lahek* 'light'.)

(105) *A lahko dvigneš to knjigo?*
 INTER MODAL lift_{PF-SML-YOU} this book_{ACC}
 (i) 'Can you lift this book?'
 (ii) 'Are you allowed to lift this book?'

(106) *A lahko dviguješ to knjigo?*
 INTER MODAL lift_{IMPF-YOU} this book_{ACC}
 'Are you allowed to lift this book?'

Going back to Filip's (to appear) original Czech examples, note that the claim that the Czech *to lift*, (97), involves lexicalization is supported by the fact that this verb, when unprefixated, is perfective, while *to bake* in (99) is not. The prefixated verb *to bake* can have both the modal and the non-modal meaning. If this was not the case, there would be no way to perfectly say *to bake*. In the case of *to lift*, this is not the case. The unprefixated verb, being semelfactive, is already perfective. Therefore, the prefixated verb, where the prefix *u-* 'up' in Czech used to be (*vz-* 'up' in Slovenian still is) just a further specification of the Goal meaning which is inherent in the verb *to lift*, is readily available for lexicalization.

As far as *nést*_{IMPF} 'to carry' in (98) is concerned, a similar explanation can be upheld. While *u-nést*_{PF} may seem to usurp the only possible way of expressing perfectivity, this is probably not the case, at least in Slovenian the most common prefix with *nesti*_{IMPF} 'to carry' is *pri-* 'at', which is understandable, given that carrying is an activity associated with horizontal movement on a surface, so the Czech prefix *u-* 'up' is clearly available for lexicalization.

It has been shown, then, that prefixes do not contribute modality. Since the prefixated verbs are clearly perfective, although perfectivity in a strict sense may not really be compatible with verbs of disposition and so the examples in the modal meaning may not pass the standard tests of perfectivity, as argued by Filip (to appear), there is no doubt that these verbs have a quantized meaning, which has been shown to be precisely what licenses them on the modal interpretation. Therefore, they can still be said to contribute a (result) state, which (by quantizing the event) in turn triggers perfectivity.

6.2 Goal-prefixes are quantizers. Source-prefixes need not be (Filip, to appear); Slavic prefixes and PPs of directed-motion verbs can be treated on a par (Filip, to appear)

For an analysis which claims that all Slavic prefixation can be reduced to the contribution of a state, Filip (to appear) provides another problematic set of data. She claims that only Goal but not Source modifiers—including prefixes—necessarily yield quantized predicates. In

combination with the putative modal and manner uses of prefixes, these seem to be the main reasons that make her abandon her (2000) conclusion that all prefixation is reducible to quantization. If this is so, then my claim that Slavic prefixes are always stative/locational cannot be maintained, since Source prefixes should in that case be ambiguous between a locational and directional meaning. I will argue that Filip's (to appear) rejection of her (2000) generalization is in the light of *the data under consideration* unwarranted. The effects Filip discusses are there, but I claim that the explanation she offers is incorrect.

6.2.1 Goal vs Source prefixes

Filip's claim is based on examples such as the (107) and (108) triplets from Czech, which exhibit differing behavior in terms of accepting the attenuative prefix *po-*.

(107) <i>sednout_{PF}</i> 'to sit (down)'	<i>od-sednout_{PF}</i> 'sit down away from (the place where one has just sat)'	<i>po-od-sednout_{PF} si</i> 'to sit down somewhat away from'
(108) <i>sednout_{PF}</i> 'to sit (down)'	<i>pri-sednout_{PF}</i> 'sit down next to (some location)'	<i>*po-pri-sednout_{PF} si</i> 'to sit down somewhat next to'

Filip (2000) shows that the prefixes of vague measure are quantizing modifiers, just as locative prefixes such as *pri-* 'at' and *od-* 'off, from' are. Therefore, Filip (to appear) argues that the cooccurrence of the two on the same must be a violation of the quantizing constraint, if locative prefixes indeed are quantizers. She argues that the explanation for the contrast in the possibility of the application of the attenuative prefix to the prefixed verbs lies in the Goal/Source asymmetry. Goal modifiers necessarily quantize predicates, while Source modifiers may but need not do so. The outbound Path can be divisive and cumulative, and so Source-prefixes need not quantize their predicates. She further supports this with data such as the Slovenian (109-110), noting that the same holds in English, as seen from the matching judgements in the translations.

(109) <i>Pri-skočil</i>	<i>je</i>	<i>(*za kak meter)</i>	<i>k hiši</i>
AT-jumped _{PF,HE}	AUX	for some meter	to house
'He jumped (*for about a meter) to the house' ⁶⁸			

⁶⁸ (i) *Pri-bližal* *se je za kak meter k hiši*
AT-approached_{PF,HE} REFL AUX for some meter to house
'He came for about a meter closer to the house'

(110) *Od-skočil je (za kak meter) od hiše*
 AWAY-jumped_{PF-HE} AUX for some meter from house
 'He jumped (for about a meter) away from the house'

The Goal prefix *pri-* 'to' in (109) is incompatible with the measure expression 'for about a meter', which is a quantizing modifier. The Source prefix *od-* 'from' in (110), on the other hand, is compatible with the same quantizing modifier. Again, Filip (to appear) argues that this is due to the fact that Goals are necessarily quantizers while Sources may⁶⁹ but need not be, which is claimed to be corroborated by the more widely observed asymmetry between Goals and Sources. Therefore, the generalization that prefixes as a class are quantizers is to be abandoned (Filip, to appear).⁷⁰

I believe that the measure expression such as *for about a meter* is a further specification of the point of inception of the state denoted by the prefix. The prefix in (110) thus specifies a state such as 'away', and the measure expression further specifies it, i.e. the meaning of 'away' is set at the value '10 meters away'. In fact, it is re-set, so the further specification amounts to shifting, since in the absence of the measure expression the value is minimal (although the meaning of 'minimal' is contextually defined). As a further specification, the new (shifted) point of inception of the state does not represent a violation of the quantizing constraint. The same goes for the Czech attenuative prefix *po-* in (107), where the value of the locational prefix *od-* 'away' is then further specified to 'a little bit away'. The distinction between Goals and Sources is essentially a distinction between inbound and outbound motion.

The states of being at a Location / in a Container / on a Surface and the states of being away from a Location / out of a Container / off of a Surface, are all binary (+/-) oppositions. Now, having moved away from x, an entity can keep moving in the same direction indefinitely without annulling the state of being away from x, and if the boundary of away is shifted to a later point in

Note that (i) is fine. This is due to the fact that *pri-bližati* 'to come-closer' is a deadverbial verb, based on *blizu* 'close to', and so the state denoted by the prefix *pri-* 'at' is attained when the moving entity is 'at close (i.e. in proximity of the house)', rather than only when it is 'at the house'.

⁶⁹ 'May' is presumably there to account for Container or Surface Sources.

Iz-stopil je (??za kak meter) iz hiše
 OUT-OF-stepped_{PF-HE} AUX for about meter out-of house
 'He stepped (??for about a meter) out of the house'

⁷⁰ Note that Filip's observed asymmetry can be found also with PPs on their own, as in *(biti) 10 metrov od hiše* '(to be) 10 meters away from the house' versus **(biti) 10 metrov pri hiši* '* (to be) 10 meters at the house'. The asymmetry seems to be coded in the prepositions themselves, so the tests where the examples with the quantizing measure expressions are said to be ruled out because of quantized events being doubly quantized are of dubious value. In fact, this will be argued to be what rules these sentences out.

the line of the movement, this is a further specification of this boundary. That this can in fact be a further specification is clear from the fact that being *10 meters away from the house* entails also being *away from the house*. Being *away from the house*, on the other hand, does not entail being *10 kilometers away from the house*. Adding the measure expression such as *for about a meter* or *for 10 meters* is thus merely a further specification of the state of being away from, i.e. the state denoted by the prefix.

Although the measure expression seems to delimit the subsequent continuation of this outbound motion, i.e. before the point denoted by the measure expression, this is in fact not an entailment but rather an implicature, and thus cancelable, as in (111) by *and more*.

(111) *Tinček je od-laufal od hiše za 10 metrov in več*
 Tinček_{NOM} AUX AWAY-ran_{PF} from house for 10 meters and more
 'Tinček ran away from the house for 10 meters and more'

Movement away from a Location can be further specified, i.e. shifted as far away as possible. We can agree in a given situation that for us, a distance of *1 meter* will mean *away from the house*, or we can agree that only a distance of *10 meters* will mean *away from the house*, or we can agree that a distance of no less than *100 meters* will mean *away from the house*, and so on into infinity. In other words, we can shift the inception point of the state of *away from the house* as far as possible. The value we agree on will be the further specification of the state of *away from the house*.

The inception of the state of being out of a Container Location, on the other hand, can in principle not be shifted upon agreement; if we wanted to shift the boundary of the Container with us as we move along, we would just be in the container longer, but the transition would still be binary. The state of being 'away from' can be split into sequences, the state of being 'out of' is inherently point-like, cf. (112).

(112) *Iz-stopil je (*za 10 metrov) iz hiše*
 OUT-OF-stepped_{PF-HE} AUX for 10 meters out-of house
 'He stepped (*for 10 meters) out of the house'

This is presumably what makes Filip (to appear) claim that Source prefixes *may but need not be* quantizers. Of course, there can be context-dependent and Container-dependent fuzzy boundaries, and so ??*Iz-stopil je za kak meter iz hiše* '??He stepped for about a meter out of the house' may be slightly better than the above sentence with *for 10 meters*. Also, there can be

fuzzy boundaries (or speaker-dependent evaluation) in terms of the integrity of the entity being evaluated relative to a Container, so that a playful child, sticking her head out of the car window may respond to her mum's request to get out of the car with 'But I *am* out of the car'.

In the case of Goal/Location prepositions, delimiting the inbound movement in addition to the state denoted by the prefix can only mean delimiting the movement before the state denoted by the prefix (e.g. 'being inside of / at / on) has been reached. And then since prefixes quantize the event, i.e. entail the result state of the movement, canceling the inception of this state is ruled out. The additional delimitation brought about with a measure expression such as *for about a meter* can thus not be a further specification of the result denoted by the prefix (i.e. being inside of / at) and hence the combination is impossible. Therefore, the incompatibility of quantizing measure expressions such as *for about a meter* with Goal prefixes stems from the fact that such an expression precludes the attainment of the state denoted by the prefix. It is comparable to saying *He stepped into the house but he did not end up in the house*. To delimit an event, a change of state has to have taken place. Therefore, Goal prefixes are in this respect no different from Source prefixes. Just as Goal prefixes, Source prefixes are thus necessarily quantizers.

A Goal prefix such as *pri-* 'at' is different from *od-* 'away' in the sense that the Path that leads an entity to the attainment of such a resulting state necessarily ends at the point of reaching that state and it cannot continue. The Path that brings an entity to the attainment of the state of being away from a Location, on the other hand, can be followed indefinitely even after the attainment of the new state, within the extension of this new state, and so the point of inception of the state can be shifted. With inbound movements, the state comes into effect at the Goal, so delimiting the motion before the Goal precludes the effectiveness of the state expressed by the prefix, and extending the motion beyond the point of Goal would indeed require two delimitations where one would be 'at' and the other 'away from', so and this could not be a case of further delimitation but would rather be double quantization.

Subjectivity, or shifting upon agreement can in fact also be forced with Goal-PPs, in the same way as Person A can say *I moved to the house*, Person B reply *But I thought you had been at the house to start with*, and Person A answering *Well yes, but then I moved even closer*. In this way, we can also shift the meaning of the state denoted by the prefixes *pri-* 'at', e.g. with *bolj* 'more', and then even such a Goal construction can be modified by measure expressions. The

measure expression would then upon agreement between Person A and Person B denote a further specification of the state contributed by the prefix. The case is similar in (113).

- (113) *V zadnjih 100 letih je ledenik pri-lezel *(še) za kakih 100 metrov *(bolj) v dolino*
in last 100 years AUX glacier_{NOM} AT-slid_{PF} even for about 100 meters more into valley
'In the last 100 years, the glacier has slid for *(another) 100 meters into the valley'

Note that Spencer & Zaretskaya (1998b) analyze the Russian attenuative prefix *pri-*, as in *pri-bolet* 'to become slightly sick', as quantification over end states (128)⁷¹, and further claim that this partial change of state is *not* presented as occurring in gradual, incremental stages, but that the verb rather behaves as an instantaneous, achievement verb (119-20).⁷² This seems to be a similar case of subjectivity upon agreement, i.e. a person cannot be said to be ill 'half-way', as Spencer & Zaretskaya note (121). Rather, in the present terms, it could be said that the person has become ill, where for ill in this situation we agree to a more reduced level of 'ill' than ordinarily agreed.

Consider further the following English examples.

- (114) *John pushed the cart for an hour*
(115) *John pushed the cart for an hour, but the cart has not moved*
(116) *John pushed the cart to the wall *for an hour / in an hour*

Sentence (114) entails the truth of (115). With a Goal-PP, however, the behavior of the predicate changes, and (116) entails that the cart must have moved and reached the wall. Let us turn to Source-PPs.

- (117) *John pushed the cart away from the wall in an hour / for an hour*
(118) *#John pushed the cart away from the wall, but the cart has not moved*

Although (117) is fine with both adverbials, (118) is infelicitous. This means that there are two subevents, the caused event of the cart coming in the state of 'away from the wall' and the

⁷¹ Note that they support the claim that the Russian *pri-* quantizes over states rather than direct objects with the fact that verbs prefixed by the attenuative *pri-* admit unselected objects (*pri-sypat' jamu* 'to partly fill the pit'), which would be unexpected if they quantized over their objects but not if they quantize over resulting states. This matches the behavior of the Russian prefixed resultatives and English resultatives discussed in Spencer & Zaretskaya (1998a).

⁷² In Slovenian, the attenuative *pri-* does not seem to be productive, although there are a few verbs, such as *pri-preti* 'to partly close'. The same meaning is productively coded for example with *o-*, as in *o-žgati* 'to burn slightly', *o-boleti* 'to become slightly ill', *o-mrziniti* 'to freeze partially (i.e. to get frost-bitten)', etc.

causing event of John's pushing the cart. Now, the caused event is clearly delimited, since the addition in (118) is infelicitous. It is delimited by the cart's reaching 'away from the wall'.

(119) *John pushed the cart 10 meters away from the wall*

(120) *#John pushed the cart 10 meters away from the wall, but the cart has not moved 10 meters away from the wall*

(121) *John pushed the cart away from the wall, but the cart has not moved 10 meters away from the wall*

Observe the entailments after the addition of the measure expression *for 10 meters*. (120) behaves the same way as (118), except that the resulting state is now further specified to be *10 meters away from the wall*. That this is indeed a further specification becomes even clearer with (121), since there is no contradiction and the sentence is fine.

Similarly, inceptive verbs such as *za-spati_{PF}* 'to fall asleep'—if used with a measure expression such as *za 10 minut* 'for 10 minutes'—are not violations of the quantizing constraint but rather mean that the inception of the state necessarily took place, but then the state was terminated since it was delimited by the measure expression *for 10 minutes*. An event can be delimited as to its beginning point, end point, or both.

Note that the Goal/Source asymmetry may have been somewhat awkwardly worded. With a Goal-PP (inbound movement), the Goal must be reached. With a Source-PP (outbound movement), the Source must be left (cf. *#John ran away from the house for an hour, but he has not moved away from the house.*). Comparing Goal-prefixes and English Goal-PPs with Goals and Source-prefixes and English Source-PPs with Sources, there is no asymmetry beyond the fact that the former entail *reaching* the Goal and the latter entail *leaving* the Source. And that stems right from the concepts of Goal and Source.

The asymmetry is in comparing a Goal-PP with its Source, and a Source-PP with its Goal. Movements involving Goal-PPs (inbound) have to have a Source, while movements involving Source-PPs (outbound) need not have Goals. With a Goal-PP, the Source must have been left; with a Source-PP, the Goal need not be reached because, in fact, an outbound movement may have no Goal at all, an outbound Path is infinite. Goals are obstacles to motion continuing in the same direction.

Note in this respect that while Slovenian Goal/Location prepositions assign different case depending on the use (Goal/directional = accusative, Location = locative), Source/Location

prepositions always assign the same case (genitive), regardless of whether they are used statively or directionally. (*Janez je 10 metrov od hiše_{LOC}* 'Janez is 10 meters away from the house', *Janez je šel od hiše_{LOC}* 'Janez went 10 meters away from the house'; *Janez je iz forme_{LOC}* 'Janez is out of shape', *Janez je šel iz hiše_{LOC}* 'Janez is out of the house').

Judging on the basis of *Od-skočil je kak meter od hiše* 'He jumped for about a meter away from the house', where the basic meaning is claimed to be CAUSE(COME(BE(*od-*))), with a paraphrase such as [he became [*kak meter [od- [od hiše]]]*] 'he became [about a meter [away [from the house]]]', one could conclude that **Pri-skočil je kak meter k hiši* 'He jumped for about a meter to the house' should have the paraphrase [he became [*kak meter [pri- [pri hiši]]]*] 'he became [about a meter [at [at the house]]]'. This simply makes no sense. Delimiting the motion before the state *pri-* 'at' has been reached prevents the state from being realized, delimiting the motion after the state *pri-* 'at' has been realized seems to be what the Goal/Source asymmetry is all about, i.e. that outbound motion is unless otherwise specified infinite while the inbound motion may not be.

The same holds for terminative phasal verbs such as *do-trpeti_{PF}* 'to finish suffering, i.e. to die', with the prefix *do-* 'to'. In **Tinček je do-trpel za deset minut* 'Tinček finished suffering for ten minutes', *for ten minutes* delimits the event which was supposed to be finished, so the sentence is out. However, since phasal verbs do not involve spatial motion, as opposed to directed-motion verbs such as *to run to* or *to run away from*, i.e. they are not activities but states, one would expect that the state can in fact be delimited as to its end point as well. In the case of *do-trpeti* 'to finish suffering', this is precluded by metaphorical extension from the spatial dimension, so that *do-* 'to' is taken in its 'proper' spatial meaning, and in the spatial meaning *do-* 'to' may not allow the continuation of the activity. In this way, the meaning of *do-trpeti* gets interpreted as 'to finish suffering' rather than 'to stop suffering'. Just as 'to finish suffering' does not allow for the continuation of the same state later on, *do-trpeti* does not.

With Source verbs (and inceptive verbs), the point of the inception of the state of the prefix is where the event starts or is seen as starting (although it may seem with 'running away' that there first has to be running before the state of 'away' can become effective, the inception points of the running and the state of 'away' in fact coincide). Therefore, a measure expression can add the

other delimiting point in the event, i.e. the end point. With Goal verbs (and terminative verbs), the point of inception of the state of 'at' follows the running, i.e. the event must have been in effect when the Goal state became effective. That means that the Goal delimits the end point of the event, and if a measure expression were to impose the continuation of the running activity, a new event would have to be coded, i.e. a new clause will be needed.⁷³

6.2.2 Unselected objects

Spencer & Zaretskaya (1998a) argue that Russian prefixation is comparable to English resultative secondary predication. On their lexical-subordination analysis, the resultative adjective in English and the prefix in Russian are primary predicates and the verb is relegated to a kind of manner modifier in a BY clause. Simplifying a bit, their general LCS can be given as CAUSE[ACT(x)], H(x, y)] BY [W(y)], where W is a variable for the meaning of the main verb, i.e. the verb followed by the direct object and resultative adjective in English or the verb following the prefix in Russian. H is a variable that subsumes primitive predicates such as HAVE or BECOME; in the latter case, H will have a specifying predicate (e.g. the property GREEN, as in *He painted his nails green*) and will only have one argument.

Although Spencer & Zaretskaya do not really explain what it is in the resultative English construction that licenses unselected objects (cf. op.cit: 7)⁷⁴, they provide ample evidence that while unselected objects are typically not possible in a 'normal' configuration of a verb, an unselected object is licensed in the resultative construction. Unselected objects include also reflexive pronouns. For example, **to drink the pub* is out, *to drink the pub dry* is fine ('get the

⁷³ However, as 'to stop suffering' does allow for the continuation of the state after, as in *He only stopped suffering for a year*, it may in fact be that the non-continuation requirement is pragmatic rather than linguistic, so that *running to school* may not entail that the running did not continue in the same direction (along the same line) away from school, as in running in through one door and out at the other end of the school and further on. (That the running activity, as detached from motion, need not stop is clear, because running on the spot at school can certainly follow an event of *running to school* without invalidating the truth of the event, as in *He ran to school and in fact he never stopped running and is still running there on the spot*. Even more clearly, in a sentence with a verb of sound used in the directed-motion sense such as *pri-žvižgati* 'to come whistling', where the activity can go on after the position/state has been reached, as in *Ob petih je pri-žvižgal v šolo in potem žvižgal vse do večera* 'He came whistling to school at five and then whistled until night'.) That would in fact bring these events in line with inceptive verbs such as *to turn red* (*za-rdeti* in Slovenian), which have as their Goal the state/property *red*, whose effectiveness certainly can be delimited, as in *He turned red only for a few minutes*, or *to fall asleep* (*za-spati*) as in *He fell asleep for a few minutes*. The status of these verbs as to whether they correspond to Goal-verbs or Source-verbs is not very clear, and it may be that the distinction is conceptual in the sense that it is not part of universal grammar, although it may get grammatically coded (as in *finish suffering* versus *stop suffering*, or *do-* versus *za-*).

⁷⁴ Rappaport Hovav & Levin (1998, 2000) claim that the reason is in the requirement that each subevent be identified (Argument-Per-Subevent Condition).

pub dry by drinking'). *Piti se*_{ACC} 'to drink oneself' is out, *na-piti se* 'to get drunk' is fine ('get oneself in a state (of drunkenness) by drinking'). Even more drastically, while a verb is normally intransitive, it may be able to take an object in the resultative construction. **To run one's shoes* is out, *to run one's shoes threadbare* is fine. **Laufati mašino*_{ACC} 'to run an engine' is out, *u-laufati mašino*_{ACC} 'to break in an engine' is fine. The prefixes used in the examples just given, *na-* 'on(to)' and *u-* 'in(to)', were Goal prefixes.

Source-prefixes in Slovenian, such as *od-* 'away from' and *raz-* 'apart', allow unselected objects just as Goal-prefixes do. **Dahni se*(*be*)_{ACC} 'to breath oneself (once)' is out, *Od-dahni se*_{ACC} 'to get one's breath back' is fine. **Kašljati se*_{ACC} is out, *Od-kašljati se*_{ACC} is fine 'to clear one's throat' if fine. **Fukati*_{IMPF} *televizor*_{ACC} 'to fuck (one's) TV' is out, *raz-fukati*_{PF} *televizor*_{ACC} 'to demolish (one's) TV (lit. fuck apart)' and *raz-fuka-va-ti*_{IMPF} *televizor*_{ACC} 'to demolish/be demolishing (one's) TV (lit. fuck apart)' are fine. **Žreti*_{IMPF} *mu*_{DAT} *zaslužek*_{ACC} 'to eat his earnings' is out, *Od-žreti*_{PF} / *od-žirati*_{IMPF} *mu*_{DAT} *zaslužek*_{ACC} 'to eat his earnings away' is fine. Note that the last two examples show that the prefix licenses the unselected object regardless of the morphological aspect, as *od-žreti* 'to eat away' and *raz-fukati* 'to demolish' are perfective and *od-žirati* 'to eat/be eating away' and *raz-fukavati* 'to demolish/be demolishing' are imperfective.

The resultative construction in English introduces a state, which is predicated of the unselected object. Clearly, the Source-prefix *od-* 'away from', argued by Filip (to appear) to be directional and not quantizing, introduces a state as well.

6.2.3 The progressive

Remember that it was said that a prefixed (secondary) imperfective in *Tinček je od-laufaval od hiše* 'Tinček was running away from the house' can normally only get an iterative or pre-event reading, as an instantaneous event. If prefixes introduce binary states (+/-), not directions, this is expected.

Note now that Slovenian has two verbs with the meaning 'to run', the Slavic-origin *teči*_{IMPF} and the German-origin *laufati*_{IMPF}. Both can be used synonymously with a Goal-PP when unprefixes, as in (122).

(122) *Pikica je tekla v šolo*
*Pikica*_{NOM} AUX *ran*_{IMPF} to school
 'Pikica ran/was running to school'

Pikica je laufala v šolo
*Pikica*_{NOM} AUX *ran*_{IMPF} to school
 'Pikica ran/was running to school'

*Laufati*_{IMPF} is restricted in its application to animate entities, though, so with *voda* 'water' as the external object, only *teči*_{IMPF} and not *laufati*_{IMPF} can be used, as in (123).

- (123) *Voda je tekla / *laufala v sobo*
*Pikica*_{NOM} AUX *ran*_{IMPF} / *ran*_{IMPF} to room
 'Water was running into the room'

Now, unlike the unprefix *teči*_{IMPF}, which can be used both for animate entities and water, the combination of the prefix *od-* 'away, from' and *teči*_{IMPF} 'run' has been lexicalized. It can only be used with mass nouns, such as *water*, while with people, only *od-laufati*_{PF} can be used, (124).

- (124) *Pikica je *od-tekla / od-laufala (od hiše)*
*Pikica*_{NOM} AUX AWAY-*ran*_{PF} / AWAY-*ran*_{PF} (from house)
 'Pikica ran away (from the house)'

Mass nouns (*water*) are unbounded, so their motion and their reaching of the state *od-* 'away' can both be described progressively, and the motivation for this lexicalization is clear.

- (125) *Voda*_{NOM} *je od-tekala*_{IMPF} → progressive
*water*_{NOM} AUX AWAY-*ran*_{IMPF}
 'The water was running away'

- (126) *Pikica je od-laufavala* → iterative, pre-event, *progressive
*Pikica*_{NOM} AUX AWAY-*ran*_{IMPF}
 'Pikica was running away'

Accordingly, with the mass noun *water*, 'to run away' can be used in the imperfective with a progressive reading, (125). With *Pikica*, a bounded entity, 'to run away' is normally not acceptable on a progressive reading, (126). It can only receive an iterative or—especially if we add an adverbial to it, such as *prav počasi* 'very slowly'—a pre-event reading (pragmatically interpreted as 'she was getting ready to run away'). The state introduced by the prefix is normally not gradable, precisely because prefixes are stative, not directional, and the entity is either 'away' or not 'away'. Homogeneous *water* can move and at the same time not be away yet, because a part of it is still in contact with the Source. Realization of motion and the reaching of the state 'away' are separable. Quantized *Pikica* cannot at the same time move and not be 'away' from the Source, therefore only a pre-event or an iterative reading is possible. Consequently, the prefixed verb was lexicalized to only apply to mass nouns even in the prefixed perfective form, in contrast to its unprefix imperfective counterpart, is not surprising, especially in view of the fact that

prefixation is derivation and so the unprefixated on the one hand and the two prefixed forms on the other are separate lexemes (Filip 2000, to appear).⁷⁵

Further, consider directed-motion verbs such as *pri-žvižgati*_{PF} 'to come whistling' and *od-žvižgati*_{PF} 'to leave whistling'. In the secondary imperfective forms, only the former can be forced into a progressive meaning. In the perfective, both are fine.

(127) *Pikica je pri-žvižgavala / pri-žvižgala po hribu navzdol*
*Pikica*_{NOM} AUX TO-whistled_{IMPF} / TO-whistled_{IMPF} along hill downwards
 'Pikica was coming down the hill whistling [to some contextually specified location]'

(128) *Pikica je *od-žvižgavala / od-žvižgala po hribu navzdol*⁷⁶
*Pikica*_{NOM} AUX AWAY-whistled_{IMPF} / AWAY-whistled_{IMPF} along hill downwards
 'Pikica was leaving down the hill whistling [from the hill]'

With *pri-žvižgavati*_{IMPF} 'to be coming whistling' in (127), the state introduced by the prefix is the terminating point of the motion. With *od-žvižgavati*_{IMPF} 'to be leaving whistling' in (128), the state introduced by the prefix is the starting point of the motion. Therefore, a progressive reading with the Goal-prefix is possible, since the progressive view of motion can also mean a progressive view of the reaching of the state. With the Source-prefix, the reaching of the state introduced by the prefix coincides with the starting point of the motion. The progressive view of the reaching of the state and a progressive view of the motion thus cannot be temporally coextensive, and so the sentence is out. If prefixes were directional, a progressive reading should be available with Source-prefixes as well. (See below for more on directed-motion verbs.)

Consider now *pri-sesti*_{PF} / *pri-sedati*_{IMPF} 'to sit (down) next to' in (129) and *od-sesti*_{PF} *se* / *od-sedati*_{IMPF} *se* 'to sit (down) away from' in (130).⁷⁷

⁷⁵ The same progressive vs. pre-event reading obtains with a *od-padati*_{IMPF} 'to fall/be falling off/away' with the progressive reading with an indefinite plural, as in *Listje*_{NOM} *od-pada*_{IMPF} 'Leaves are falling off', and the pre-event reading with a definite (e.g. singular) noun, as in *List*_{NOM} *od-pada*_{IMPF} 'The leaf is falling off'. (Compare with *Listje*_{NOM} / *list*_{NOM} *pada*_{IMPF} 'Leaves are / the leaf is falling'.)

⁷⁶ *Pikica je od-žvižgavala* on its own would be possible in the meaning 'Pikica was finishing whistling', that is why the sentence may at first sight seem okay, but the modifier *down the hill* prevents this reading.

⁷⁷ Note that *pri-sesti* and *pri-sedati* are in Bajec *et al.* (1994) only listed without the reflexive, while *od-sesti* and *od-sedati* are not listed at all. However, *pri-sesti se* and *pri-sedati se* certainly exist in the spoken language. As to *od-sesti se*, the verb certainly sounds perfectly possible if not existent to me, and the secondary imperfective form then follows. *Pre-sesti*_{PF} *se* / *pre-sedati*_{IMPF} *se* 'to sit (down) to another location' are further existent verb forms.

(129) *Ko je prišel Tonček, smo mi ravno pri-sedali k Pikičini mizi*
 when AUX came Tonček_{NOM} AUX we_{NOM} just AT-sat_{IMPF} to Pikica's table
 'When Tonček came, we were just sitting down at Pikica's table'

(130) *Ko je prišel Tonček, smo se mi ravno od-sedali od Pikičine mize*
 when AUX came Tonček_{NOM} AUX REFL we_{NOM} just AWAY-sat_{IMPF} from Pikica's table
 'When Tonček came, we were just sitting (down) away from Pikica's table'

These verbs are inherent semelfactives. The secondary imperfectives with both the Goal- and Source-prefixes can get a progressive reading. How can that be, if it was just claimed that the Source-prefixed *od-žvižgavati*_{IMPF} 'to leave whistling' cannot get the progressive reading?

With the Goal-prefix, the sitting down is apparently seen as an event with some internal stages, despite its singularity. For example, when someone is standing at a table, pulling the chair away, getting between the chair and the table—all of this constitutes the event of sitting down at a table. Consequently, all of this also constitutes stages in one's reaching the state of being *pri*- 'at', and so both the reaching of the state and the motion can be viewed progressively. The same applies to the event of the Source-prefixed verb, with the difference that even the stage of getting up can—ironically—constitute a stage in the event of 'sitting (down) away from'.⁷⁸

6.2.4 Omissibility of further specification PP in Slavic; complex vs simplex PPs in English

Filip (to appear: 33-4) suggests that the difference in the omissibility of the further specification PP between (131) and (132), as in her Czech data below, supports her claim that Goal-prefixes are necessarily quantizing while some Source-prefixes, such as *od*- 'away from', are not.

(131) *Ivan si pri-sedl_{PF} ??(k oknu)*⁷⁹
 Ivan_{NOM} REFL AT-sat_{PF} to window
 'Ivan sat down next to the window'

(132i) *Ivan si od-sedl_{PF}*
 Ivan_{NOM} REFL AWAY-sat_{PF}
 'Ivan sat down' [away from some contextually specified point]

(ii) *Ivan si od-sedl_{PF} od okna*
 Ivan_{NOM} REFL AWAY-sat_{PF} from window
 'Ivan sat down away from the window'

⁷⁸ This is in a sense similar to Spencer & Zaretskaya's (1998a) unselected objects; while a prefixed verb may take an unselected object, the simplex verb cannot. While *od-sesti se* 'to sit (down) away from' can involve getting up, *sesti* 'to sit (down)' cannot.

⁷⁹ Filip notes that *pri-sedl_{PF}* on its own is possible but with an idiomatic meaning, as in *Na dalši zastávce přisedl muž s aktovkou* 'A man with a briefcase got in at the next stop'. In Slovenian, if a person in a bar walks over to a table where some friends of his are sitting, the friends may invite him to join them, and the verb used will be *pri-sesti* 'to sit (down) next to'. Now, of course this is somewhat of a special use, but rather than in being idiomatic, it is special in that the circumstances (pragmatics) make the Goal completely unambiguous, and so it need not be expressed. I suspect the same would apply to Czech.

Filip claims that with the Goal-prefix *pri-*, (131), the Goal-PP is obligatory. With the Source prefix, however, the Source-PP can be left out, (132i-ii). I believe that her claim is misplaced.

Furthermore, she supports her claim by observing the same effect with Goal/Source-PPs in English, as in *John ran 10 meters away from the house* versus **John ran 10 meters to the house*, or *John ran away from the house for an hour* versus **John ran to the house for an hour*.

Finally, in view of the analogous behavior with English Goal/Source-PPs, Filip (to appear) concludes that Slavic prefixes can be treated on a par with Goal/Source-PPs.

First, note that while Filip claims that the Goal-PP is not omissible but the Source-PP is, she adds that for the Source-PP to be omissible it must be recoverable from the context (cf. the square brackets in the translation line of (132)). Second, what Filip does not do is compare the prefixed Slavic examples with *unprefixed* ones.

(133) **Tonček je pri-skočil 1 meter k hiši*
Tonček_{NOM} AUX AT-jumped_{PF} 1 meter to house
'Tonček jumped for a meter to the house'

(134) **Tonček je skočil 1 meter k hiši*
Tonček_{NOM} AUX jumped_{PF} 1 meter to house
'Tonček jumped for a meter to the house'

(133) and (134) reveal that the prefixed example as well as the unprefixed example with a Goal-PP is bad, which suggests that it is not the prefix that is responsible for this. The preposition *k* implies (and because of the perfective aspect entails) the reaching of the Goal (its object), while the measure expression contradicts this.

Third, observe that a (directional/stative) Goal-PP that does not entail the reaching of the destination is not acceptable when it cooccurs with a prefixed perfective verb and it is acceptable when it cooccurs with an unprefixed perfective verb.

(135) *Tonček je pri-skočil *proti hiši (/ k hiši)*
Tonček_{NOM} AUX AT-jumped_{PF} towards house (/ to house)
'Tonček jumped towards the house'

- (136) *Tonček je skočil proti hiši (/ k hiši)*⁸⁰
 Tonček_{NOM} AUX jumped_{PF} towards house (/ to house)
 'Tonček jumped towards the house'

On the basis of the non-omissibility of PP and of examples such as (133-136), I suggest that Slavic prefixes are not completely comparable to Goal/Source-PPs.⁸¹ In fact, the explanation for why the further specification PP is with prefixed directed-motion verbs obligatory (either overtly expressed or existentially bound) lies precisely in the fact that spatial prefixes, both Goal- and Source-prefixes, introduce a (resultative) state; since the prefix thus cannot denote the Path but only the final state/location, the PP is obligatory to contribute the Path.⁸² Spencer & Zaretskaya's

⁸⁰ An intricate pattern of prepositions can be observed. *Proti* has both a stative use ('against') and a directional use ('towards') but it does not entail the reaching of the Goal (contrary to the stative-only preposition *pri* and prefix *pri-*'at'). In effect, combining *pri-* and *proti* is the same as combining *pri-* and the measure expression *for about a meter*. Although there is no prefix *proti-*, it should in principle be possible (with its stative use 'against'), and there is the noun *proti-stava* 'juxtaposition', from which *proti-staviti* 'to juxtapose' can clearly be coined. *K* 'to', on the other hand, entails the reaching of the Goal, so it is compatible with the prefix *pri-*, but it does not have a stative use, so there is no prefix **k-*. That *k* entails the reaching of the Goal is shown also by an example with an unprefixed verb but with a measure expression *Tekel je za par metrov *k oknu / proti oknu* 'He ran for a few meters *to / towards the window'.

⁸¹ Note that in all these examples both the prefixed and unprefixed verbs were perfective (*skočiti*_{PF} 'to jump' and *pri-skočiti*_{PF} 'to jump to') in order to preclude aspectual effects. Nevertheless, the judgements remain the same with *laufati*_{IMPF} 'to run' and *pri-laufati*_{PF} 'to run to'.

⁸² A PP cooccurring with a Source Container prefix is perhaps relatively more readily omissible than a PP cooccurring with a Goal Container prefix. This can be due to the fact that the motion can in the former case in principle continue even after the state of being out of the Container has been reached. Running out of a house, one can continue running in the same outbound direction indefinitely. With Goal Containers, the motion cannot continue in the same inbound indefinitely after the state of being inside of a Container has been reached. Furthermore, Containers are probably conceptualized as less vague in terms of being in them or out of them than Locations. The boundary dividing the state of being 'in a house' and 'out of a house' is less subjective and context-dependent than the boundary dividing the states of being 'at a house' and 'away from a house'. Thus we can be 'further away from a house' but usually not 'further out of a house'. The Path to the state of being 'away from' is thus usually more sequenceable than the Path to the state of being 'out of'. Consequently, in an example such as *Tonček je v-stopil v hišo* 'Tonček stepped into the house', where the final Location is a Container and the prefix refers to positioning in a Container, the PP feels even less omissible than with *pri-*. In fact, Vidovič Muha (1993: 181) claims that the PP with *v*-prefixed directed-motion verbs is practically always obligatory, while she makes no such claim with *pri*-prefixed directed-motion verbs. In effect, then, my explanation also tentatively suggests a scale of the relative omissibility of Goal/Source-PPs. Source-PPs may as a class be more omissible than Goal-PPs, and within the two classes, the scale should go from less omissible Containers *v* 'in' / *iz* 'out of' to more omissible Locations *k* 'to' / *od* 'away' / *ob* 'at' and Surfaces *s/z* 'from' / *na* 'onto' / *po* 'over'.

(To an extent, of course, the obligatoriness or non-obligatoriness of the Goal-PP is surely idiosyncratic (one prefix/preposition versus another prefix/preposition). The relative ordering of Location-PPs and Surface-PPs is unclear. In Slovenian, Surface-PPs perhaps seem to be the most omissible, but this could be related to the fact that the prefixes *na-*, *s/-z-*, *po-* (and *o(b)-*) are the ones which most often have the most bleached spatial semantics (Bajec 1959) and denote pure change of state. With lexicalizations, the omissibility can of course be completely idiosyncratic. And in part it is also governed pragmatically, so that *A si v-nesel podatke?* 'Have you entered the data?' can easily be used without a PP, and the same goes for *A si pri-nesel kruh pa mleko?* 'Have you brought bread and milk?' and *A si od-nesel smeti?* 'Have you taken the garbage out?') – all these three prefixed verbs are based on the same root.

Also, the PP following a *pri*-prefixed verb is typically hardly omissible while the PP following a *do*-prefixed verb is typically easily omissible, although both are Goal-prefixes. This is due to the fact that *do-* has been

(1998a) claim that the PP is an adjunct is incorrect. Its semantic function is not the same as that of the prefix. Of course, that does not mean that the semantics of the *object* of the preposition in the PP is not a further specification of the prefix. But the semantics of the *PP* (as a syntactic constituent) is more than that, it is the contributor of the Path.

So far, all examples have contained Source-prefixes/PPs. Further observe a difference between Goal-prefixes and Goal-PPs.

(137) *Stopil je za kak meter bolj v hišo*
 stepped_{PF-HE} AUX for about meter more into house
 'He stepped for about a meter further into the house'

(138) **V-stopil je za kak meter bolj v hišo*
 IN-stepped_{PF-HE} AUX for about meter more into house
 'He stepped for about a meter further into the house'

Without the prefix, (137), the positioning in a Container can be viewed as constituting a Path.

With the prefix, (138), since the prefix contributes a state and since *v-* 'in' refers to Containers, a Path reading cannot be forced.⁸³ Again, prefixes and PPs are not directly comparable.

In the light of the argumentation against Filip's (to appear) claim that Goal-PPs are necessarily quantized while Source-PPs are not, note that if Goals were necessarily quantized, then a predicate with a directional-only preposition should either be impossible or coerced into a quantized, delimited interpretation. This is clearly not the case, for example in *John ran towards the store for an hour* / **in an hour* (as opposed to *John ran to the store *for an hour* / *in an hour*).

to an extent lexicalized (based on its implication of 'all the way to', as opposed to *pri*'s bare 'to', as in *tekla je do šole* 'he ran (all the way) to school' versus *tekla je k šoli* 'he ran to school') and is typically used in the meaning of *do konca* 'to the end'. In terminative phasal verbs, such as *do-trpeti* 'to finish suffering', only *do-* is generally used and not *pri-*. Consequently, even in directed-motion verbs, as in *do-jadrati* 'to finish sailing (by reaching the end, i.e. the shore)', *do-* has more of a terminative meaning than a 'proper' productive Goal (directed-motion) meaning, such as *pri-*. Note, for example, that in addition to *do-jadrati*, the verb *pri-jadrati* 'to arrive by sailing' exists. In Bajec *et al.* (1994), *do-jadrati* is given a spatial Goal (directed-motion) meaning *and* the terminative meaning, while *pri-jadrati* is only given the directed-motion meaning. Nevertheless, *do-* in some verbs still preserves a spatial meaning, as in *do-grebsti se* 'to get sth by scraping/using excessive force', although it coexists with *pri-grebsti se* 'to get sth by scraping/using excessive force'; however, this verb is partly lexicalized in involving some figurative extension of the basic meaning of scraping. Similarly, *do-kopati se* 'to get to something with a lot of effort (lit. by digging)', coexisting with *pri-kopati se*.

Furthermore, when the Container is identical with the Causer/Agent, as in *Komunikacijski sistemi nas v-srkavajo* 'Communication systems into-suck us', even the (existentially bound) Goal-PP *vase* 'into ourselves', adjunct to the Container prefix *v-*, is easily omissible.

⁸³ In fact, translating this pair of examples into English neatly illustrates the point. The unprefixed verb can be translated with *to step*, hence *He stepped for a meter further into the house*, while the prefixed verb can be translated with *to enter*, hence **He entered for a meter further into the house*.

The distinction lies in the directional-only meaning of *towards* versus a directional + stative/locational meaning of *to*. Consider some more examples from English.

(139) ??*John ran from the house for an hour*

(140) *John ran away from the house for an hour*

(139) is odd because only the Path but not a state has been introduced, but running from the house for an hour and not being away from the house is (pragmatically) impossible. (140), on the other hand, is perfectly fine. The same holds with semelfactives, although they inherently denote a change of state/location. (This could perhaps be taken as support to Smith's (1991/1997) classification of semelfactives as atelic.)

(141) ??*John stepped from the car*

(142) *John stepped away from the car*

The first sentence is odd, the second fine. Slavic prefixes, in combination with the expressed or existentially bound PPs, function like the *away from*-PP. The prefix functions as *away* (contributes the state), the PP as *from* (contributes the Path).

Of course, the pragmatically most salient meaning can in Slavic also be expressed with only a PP, just as *John stepped from the car* may be fine on the reading 'John stepped out of the car' but not on the reading 'John stepped away from the car'.

(143) *Tinček je stopil iz avta*
Tinček_{NOM} AUX stepped_{PF} from-within car
'Tinček stepped from(-within) the car'

(144) ??*Tinček je stopil od avta*
Tinček_{NOM} AUX stepped_{PF} from-next-to car
'Tinček stepped from(-next-to) the car'

(143) is fine, as 'getting from-within the car' has a pragmatically clear final location (also, the final location is in principle not a sequenceable state). (144), however, does not have a pragmatically clear final location. That is why the sentence will normally require some kind of modification, as in (145-146).

(145) *Tinček je stopil stran od avta*
Tinček_{NOM} AUX stepped_{PF} away from-next-to car
'Tinček stepped away from-next-to the car'

(146) *Tinček je stopil par korakov od avta*
 Tinček_{NOM} AUX stepped_{PF} a-few steps from-next-to car
 'Tinček stepped a few steps (away) from-next-to the car'

In this respect, Goal-PPs typically always have a pragmatically clear final location because they imply both the direction and the final location. That is why *John stepped to the car* is not only perfectly fine but even the only way to say this (??*John stepped next to the car*). This is the asymmetry between Goals and Sources. In Slovenian, that is why Goal-PPs in prefixed-verb predicates seem more readily omissible than Source-PPs.

Note that English is not entirely comparable to Slovenian, since for example *from* seems to somehow straddle the fence between a directional-only and a directional+stative preposition.⁸⁴ So *He is 10 meters from me* is at least in a pragmatically clear context acceptable, although *He is 10 meters away from me* is better. In Slovenian, such straddling behavior is harder; with Goal-PPs, it is in fact impossible, since locational and directional uses involve a case distinction. With Source-PPs, it should in principle be possible, but presumably the Goal-PP distinction affects also Source-PPs in a way as to make the distinction more salient.

That *a few meters*, a measure expression such as Filip's (to appear) Czech *asi metr* 'for about a meter' further specifies the state/final location, is suggested also by the fact that *John stepped a few meters from the car* will normally be *John stepped a few meters away from the car*, as well as by the fact that *John stepped away from the crowd for a few meters* is fine, while ??*John stepped from the crowd for a few meters* is odd.

Note finally that just as with conceptual issues in general, it might not be unexpected to find some fuzzy-boundary behavior with location states introduced by prefixes, just as in a situation where a police officer tells a suspect to step away from the car, the impertinent suspect responds with 'I *am* away from the car', and the officer rephrases to '6 feet away from the car'. Some behavior of this type might perhaps be found with prefixes, so that a prefix could seem as

⁸⁴ Note the following English data. *John ran out (*of) the door*; *John ran out *(of) the house*. *Door* is an unselected object of the preposition *out*, as it is not a Container. With an unselected object, the preposition *out* can apparently denote a Path. With a Container object to preposition, this is not possible: *John ran out *(of) the house*. Note in this respect also the effects of measure expressions: **John ran 10 yards out (of) the house* is bad, *John ran 10 yards out that door and then turned left* is fine. In fact, it seems that *out* on its own can only be used as a preposition with unselected objects, so that it does not involve the unsequenceable *in/out* Container opposition. (Note that *window*, also an unselected object of *out* (*John stuck his head out the window*), can apparently also be seen somehow as a Container, as in *John stuck his head out of the window*. Cf. also *John stuck his head ten inches out (of) the window*.)

denoting a direction when it was in fact getting differently sequenced interpretations of a location.

I have argued, in summary, that Filip's (to appear) data do not disprove the claim that prefixes are necessarily stative/locational and not directional. I have also argued that abandoning Filip's (2000) generalization that prefixes are quantizers, as done in Filip (to appear), is *on the basis of these two sets of examples* probably ill-founded.

6.2.5 Unselected objects: prefixed verbs – yes, 'unprefixed verb + PP' – no

In English, the resultative construction includes both PPs and adjectival resultatives. In Rapoport (1999), the two constructions would presumably be given the same syntactic representation, subsumed under the heading resultative secondary predicates. And indeed, unselected objects are in English possible both when a verb takes an adjectival resultative phrase and when it takes a PP. **He ran himself* is bad, *He ran himself exhausted* is fine. **He drank himself* is bad, **He drank into oblivion* is bad, but *He drank himself into oblivion* is fine.⁸⁵

In Slovenian, however, a PP does not license an unselected object, while a prefix does. While **Pil se_{ACC} je do mrtvega* 'He drank himself to death (lit. to dead)' is out, *Na-pil se_{ACC} je (do mrtvega)* 'He drank himself to death (lit. to dead)' is fine. **Laufal se_{ACC} je do onemoglosti* 'He ran himself to exhaustion' is out, *Na-laufal se je do onemoglosti* 'He ran himself to exhaustion' is fine. **Laufal je mašino v spodobno stanje* 'He ran the engine into a decent state' is out, *U-laufal je mašino v spodobno stanje* 'He ran the engine into a decent state' is fine. **Tepel mu_{DAT} je idejo_{ACC} v glavo* 'He beat an idea into his head' is out, *V-tepel mu_{DAT} je idejo_{ACC} v glavo* 'He beat an idea into his head' is fine. Similarly, with the putative directional/non-quantizing Source-prefix *od-* 'away from', **Pisati dolg_{ACC}* 'to write a debt' is out, *od-pisati dolg_{ACC}* 'write off a debt' is fine.

Again, Slavic PPs, including Goal-PPs and Source-PPs, are not on a par with prefixes.

⁸⁵ Note that in Rapoport (1999: 671-2), PP-resultatives are distinguished from 'fake' resultatives, such as *Smith cut the bread into thick slices*, where *Smith cut the bread (in an hour)* is already telic on its own, so the PP only adds a further specification. Further note that Rappaport Hovav & Levin (2000) distinguish resultatives with unselected reflexives, including both adjectival and goal-PP resultatives, from PP resultatives such as *He danced across the room* in terms of event structure. The former but not the latter are analyzed as including complex (causative) event structure.

6.3 Directed Motion (more evidence that Slavic Goal/Source-prefixes are not on a par with Goal/Source-PPs): State versus Path

6.3.1 Manner-of-motion verbs

Compare the following English (Germanic), French (Romance), and Slovenian (Slavic) examples.

(147) **English:** *The stick floated under the bridge*

The interpretation of (147) is ambiguous between a reading where the stick floated on the spot, so that *under the bridge* frames this event, and a reading where, while floating, the stick has moved so that it came to be under the bridge (Levin & Rapoport 1988). In other words, the PP can have a locational or a directional meaning.

(148) **French:** *Le bateau a flotté sous le pont* (Levin & Rapoport 1988, citing Talmy 1985)
'The boat floated under the bridge (it did not change location)'

The French example (148) is unambiguous, it can only denote the locational meaning, i.e. the PP can only frame the process of floating. To express the directional meaning, a paraphrase with two verbs has to be used, as in *Le bateau a traversé sous le pont en flottant* 'The boat came to be under the bridge while floating'.

(149) **Slovenian:** *Palica je plavala pod mostom*
stick_{NOM} AUX floated_{IMPF} under bridge_{LOC}
'The stick floated under the bridge (did not move from elsewhere under the bridge)'

(150) *Palica je plavala pod most*
stick_{NOM} AUX floated_{IMPF} under bridge_{ACC}
'The stick floated under the bridge (moved from somewhere else under the bridge)'

(151) *Palica je pri-plavala *pod mostom / pod most*
stick_{NOM} AUX PRI-floated_{PF} under bridge_{LOC} / under bridge_{ACC}
'The stick floated under the bridge (moved from somewhere else under the bridge)'

Note that the locative case denotes a locational PP and accusative a directional PP. With manner-of-motion verbs (150), then, both a directed-motion and a locational meaning are available in the imperfective, depending on the case of the PP. With the perfective prefixed form, only the directed-motion meaning is possible. This is not conclusive on its own, though, so consider now verbs of sound emission in the directed-motion meaning (Levin 1993).

6.3.2 Verbs of sound emission in directed-motion meaning (Levin 1993)

- (152) **English:** *The truck rumbled down the hill*
The elevator wheezed upward (Levin & Rappaport Hovav 1996: 495)

The directed-motion meaning is in (152) possible in the presence of a Goal/Source-PP or some other XP with a directional interpretation (Levin & Rappaport Hovav 1996: 495).

- (153) **French:** *Le camion a bruyé sous le pont*
'The truck rumbled under the bridge (it did not change location)'

Le camion a traversé sous le pont en bruyant
'The truck came to be under the bridge while rumbling'

Not surprisingly, French verbs of sound emission, (153), behave the same as manner-of-motion verbs, i.e. for the directed-motion meaning, a paraphrase must be used.

- (154) **Slo:** *??/*Kamion je ropotal pod most*⁸⁶
truck_{NOM} AUX rumbled_{IMPF} under bridge_{ACC}
'The truck rumbled under the bridge'

- (155) **Krave so mukale s hriba*⁸⁷
cows_{NOM} AUX mooed_{IMPF} from hill
'The cows mooed from (the top of) the hill'

- (156) **Tinček je žvižgal po hribu navzdol / izza vogala*⁸⁸
Tinček_{NOM} AUX whistled_{IMPF} along hill downward / from-around corner
'Tinček whistled down the hill / from around the corner'

⁸⁶ Marginally, some of these examples *can* be interpreted in the directed-motion meaning. This, however, seems to be a pragmatically driven class-shift, as there could not be any other meaning, given the directionality (accusative case) of the PP. In these cases, some modification seems obligatory, as in *Kamion je prav počasi ropotal pod most* 'The truck rumbled under the bridge really slowly'. However, not all verbs are possible in this forced interpretation, so **Tinček je blebetal v mesto* 'Tinček babbled to the city' is absolutely out, while the prefixed *Tinček je pri-blebetal v mesto* 'Tinček babbled to the city' is fine. Presumably, a verb's frequent use in the prefixed form in the directed-motion meaning, as with *pri-žvižgati* 'to come whistling', can eventually induce a class-shift. Note that *pri-žvižgati* 'to come whistling' is listed in Bajec *et al.* (1994), while *pri-blebetati* 'to come babbling' is not. *Pri-žvižgati* 'to come whistling' is an established verb while *pri-blebetati* 'to come babbling' is not, despite the fact that it is perfectly acceptable. Similarly, **Kričal je v mesto* 'He screamed into the city' is bad while *Pri-kričal je v mesto* 'He came to the city screaming' and *Od-kričal je v mesto* 'He left for the city screaming' are fine.

⁸⁷ That pragmatics is in question when such sentences seem marginally acceptable is shown by the fact that when combined with the durative adverbial, this sentence is clearly bad, as in **Krave so eno uro mukale s Triglav* 'The cows were coming mooing from Triglav for an hour', although this should be the prime context for this durative adverbial and the directed-motion meaning. Only the meaning where the sound (mooing) comes from Triglav is available.

⁸⁸ Note that this example is fine on the reading where Tinček was standing on top of the hill / just around the corner and whistled so that the whistling, i.e. the sound, moved down the hill / came round the corner. Tinček himself, however, cannot be moving.

(157) *Kamion je pri-ropotal pod most*
 truck_{NOM} AUX TO-rumbled_{PF} under bridge_{ACC}
 'The truck came under the bridge rumbling'

(158) *Krave so pri-mukale s hriba*^{89,90}
 cows_{NOM} AUX TO-mooed_{PF} from hill
 'The cows came from (the top of) the hill mooing [to some contextually specified location]'

(159) *Krave so od-mukale s hriba*
 cows_{NOM} AUX AWAY-mooed_{PF} from hill
 'The cows departed from (the top of) the hill mooing'

Clearly, if Goal/Source-prefixes were to be treated on a par with Goal/Source-PPs, there should be no such difference, since the PP is in all cases directional. Consider further the prefixed imperfective (secondary imperfective) in (160) and its prefixed perfective counterpart (161).

(160) *Tinček je pri-žvižgal izza vogala*
 Tinček_{NOM} AUX TO-whistled_{PF} from-around corner
 'Tinček came whistling around the corner [to some contextually specified location]'

(161) *Tinček je pri-žvižgaval izza vogala*
 Tinček_{NOM} AUX TO-whistled_{IMPF} from-around corner
 'Tinček came/was coming round the corner whistling [to some contextually specified location]'

The prefixed imperfective example in (161) is fine, so the distinction cannot be due to the perfective/imperfective distinction.⁹¹ On the other hand, if prefixes introduce a (resultative) state, in this case locational, the difference between prefixed and unprefixed sound verbs is expected. (cf. also Spencer & Zaretskaya 1998a: 28-33). A paraphrase of the prefixed examples would then

⁸⁹ Note that in such constructions with the Goal-prefix and the Source in the PP, the Goal-PP is syntactically just as easily omissible as the Source-PP matching a Source-prefix (although it is existentially bound). Just as in *Tonček je od-laufal*_{PF} 'Tonček ran away', the Source-PP is pragmatically necessarily clear, so the Goal-PP is in the case of mountain-descending necessarily clear, i.e. some location at the foot of the hill.

⁹⁰ Slovenian here differs from English where agentive verbs of sound cannot in general become verbs of directed motion, as in **The frogs croacked to the pond* or **He yelled/shouted down the street* (Levin & Rappoport Hovav 1996: 497).

⁹¹ In general, prefixed (secondary) imperfective forms of *pri*-prefixed directed-motion verbs are rather strange, as in *pri-žvižgavati*_{IMPF} 'to come/be coming to whistling' or *pri-ropotavati*_{IMPF} 'to come/be coming to rumbling'. Nevertheless, to make the progressive view of the directed-motion meaning possible, we can form it, *pri-ropotavati*_{IMPF} 'to rumble', while the unprefixed imperfective *ropotati*_{IMPF} 'to rumble' is in this meaning impossible. (An exception seems to be *pri-hajati*_{IMPF} 'to come/be coming to', based on *hoditi*_{IMPF} 'to walk', which is completely normal. In fact, this may explain why *pri-žvižgavati*_{IMPF} is acceptable and *pri-laufavati*_{IMPF} a lot less so, if *pri-žvižgavati* is taken to mean *pri-hajati žvižgajoč* 'to be coming whistling'.) Note, however, that this seems to depend on the class of the verb, too. Verbs such as *pri-vezovati*_{IMPF} 'to tie/be tying something to something', which involve no real motion, readily have secondary imperfective forms and progressive interpretations, where both the activity and the final state are seen as developing progressively. The same goes for the prefixed secondary imperfective *od-vezovati*_{IMPF} 'to be untying', *raz-vezovati*_{IMPF} 'to be untying', *za-vezovati*_{IMPF} 'to be tying up'. (See also above for *pri-laufavati*_{IMPF} 'to run/be running to'.)

go along the lines of 'Tinček came down the hill whistling', as indicated in the translations, or with Goldberg's (1995: 209) *way*-construction in its *manner* (not *means*) sense, e.g. *Tinček whistled his way down the hill*.⁹²

In English, the directed-motion meaning of sound verbs is licensed by the Goal/Source-PP (although not any kind of PP, as just shown by the *from – away from* distinction). In Slovenian, the directed-motion meaning of sound verbs is licensed by the prefix *and* the PP (although the latter may be existentially bound, as in (160-161)). The prefix is necessary to contribute the result state, the PP to contribute the Path. The English *away from the house* thus corresponds to the Slovenian combination *od- od hiše*, the English *to the house* to the Slovenian *pri- k hiši*.

In this respect it is worth pointing out again that that prepositions in Goal/Source-PPs always have to be in the directional case, not locational, and that the prefix *pri-* 'at' patterns with *k* 'to' in the Goal-PP, that the preposition *pri* is only locational, and that there is no prefix **k-*. Filip (to appear: 33, Note 24) notes that her observation that Slavic Goal-PPs (but not Source-PPs) are obligatory calls for a modification of Talmy's (1985) generalization that most Indo-European languages have Path systems which use a satellite and a preposition, with the PP usually omissible. The above discussion suggests that Talmy's generalization can in the light of Slavic languages, a non-negligible part of the Indo-European family, not be maintained at all. Comparing Romance, English and Slavic languages, a ternary distinction emerges, with the directed-motion with non-motion verbs requiring a PP in English, a prefix and a PP in Slovenian, and the meaning being unavailable with a monoverbal construction in French.

The Goal/Source asymmetry is presumably responsible for the fact that Goal-prepositions such as *to* can more easily come to be used as delimiters without a specifier of the final state/location, as this is coded by the object to the Goal-preposition. Source-prepositions such as

⁹² This behavior extends to other non-motion verbs, such as *kazati_{PF} se* 'to show oneself' and *pri-kazati_{PF} se / pri-kazovati_{IMPF} se* 'to appear'. The 'prefix-introduces-state' analysis provides motivation for the lexicalization of the prefixed counterpart. Compare: *Tonček_{NOM} se_{REFL} je_{AUX} kazal_{IMPF} izza vogala* (lit. Tonček showed himself from around the corner), which can only have the meaning 'Tonček stood at the corner at was showing (part of) himself [to some contextually specified entity]' versus *Tonček_{NOM} se_{REFL} je_{AUX} pri-kazoval_{IMPF} izza vogala*, which can only have the meaning that is metaphorically related to the directed-motion meaning, i.e. 'Tonček was appearing from around the corner'. Again, however, the directed-motion meaning seems to be marginally possible with the unprefixed imperfective with some modification (*slowly*), as in *Sonce_{NOM} se_{REFL} je_{AUX} počasi kazalo izza oblakov*, which forces an inchoative interpretation 'The sun was slowly appearing from behind the clouds, The sun began to show itself from behind the clouds'. When it is typically possible to view a state's coming into effect progressively is a conceptual matter that needs further investigation.

from, on the other hand, will more typically require the addition of a state specifier as well, such as *away*, since the object to the Source-preposition is the Source of the movement and thus does not act as the delimiter of the motion, and so the delimiter is typically pragmatically less clear. It is therefore presumably harder for directional-only Source-prepositions to change function and get to conflate both Path and State than it is for Goal-prepositions; in fact, with Goal-prepositions, this does not have to take place, while with Source-prepositions such as *from* to be regularly used on their own, it would have to. With the Goal-preposition *to*, the Path form is complex (*to-wards*), with the Source-preposition *from*, the Path form is simplex (*from*) while the State + Path form is complex (*away from*).

Note further the sound verb examples (162-163), where the verbs are derived from the onomatopoeic interjections *čof* 'splash' (i.e. the sound produced when an object hits the surface of a liquid) and *vuš* 'wheeze'. The directed-motion meaning is completely possible even without the prefix (in fact, these verbs do not seem to be used with prefixes), in striking difference from the above sound verbs.

(162) *Kamen je čofnil v vodo*
 stone_{NOM} AUX splashed_{SML-PF} into water
 'The stone splashed into the water'

(162) *Tinček je vušnil k mami pod kiklo*
 Tinček_{NOM} AUX wheezed_{SML-PF} to mum under skirt
 'Tinček wheezed under his mum's skirt (i.e. changed position with respect to the skirt)'

These verbs, however, contain the semelfactive suffix *-ni-*. This can perhaps be taken as supporting the claim that semelfactives do entail a change of state (cf. above), in accordance with Filip (to appear) and against Smith (1991/1997), and so the prefix is not required.

7.1 SOME CONSEQUENCES OF THE PROPOSAL

If prefixes are treated as eventuality type modifiers, as proposed by Filip (2000, to appear), then one should have to explain why they sometimes behave as quantizers and at other times not. If prefixes are rather eventualities, as argued here, then denominal verbs such as *v-sebovati*_{IMPF} 'to contain (lit. to in-self-V, i.e. to have in self)', *na-čelovati*_{IMPF} 'to head (lit. to on-forehead-V, i.e. to be at the forehead)' or *pri-skledovati*_{IMPF} 'to leech on (lit. to at-bowl-V, i.e. to be at somebody else's bowl)' can be treated as essentially the same as denominal locative verbs such as *u-skladiščiti*_{PF} 'to warehouse (lit. to in-warehouse-V, i.e. to cause to be in warehouse)'. The presence or absence of the LCS predicates CAUSE and COME depends on the interpretation (Pustejovsky 1992). These prefixes on denominal verbs are thus all essentially prepositional⁹³, and whether they will be interpreted as prepositions of an argument PP or as prepositions of an adjunct PP depends on the interpretation, i.e. on the presence or absence of CAUSE(COME). If CAUSE(COME) are included into the interpretation of a verb, then the verb will be quantized, and perfective if there is no *-va-* suffix and imperfective if the suffix is present. The prefix will in this case resemble an argument PP. If the COME predicate is not included in the interpretation, then the verb will not be quantized and it will occur with the imperfective suffix *-va-* (as in *v-sebo-va-ti* 'to contain', *pri-skledo-va-ti* 'to leech on smb', *na-čelo-va-ti* 'to head' above).

A non-compositional analysis would have to keep this type of prefixes and the more common type (e.g. *v-sekati* 'to cut y into z', *na-saditi* 'to impale y onto z') apart and claim that they are marked as locational or directional in the lexicon.

Note that this means that in principle *u-stekleničevati*_{IMPF} could also have the meaning 'to be in a bottle'. However, this meaning is—conveniently enough—for conceptual reasons unavailable, making it better possible to observe the difference between the presence of both the stative causation and eventive causation meaning with *stekleničiti*_{IMPF} and the absence of the stative causation meaning with *u-stekleničevati*_{IMPF}, which was the departure point for this thesis. That this is indeed possible and only out for conceptual reasons (being located in a bottle is not a typical thing from the human perspective) is shown by verbs such as *na-čelovati* (based on the noun *čelo* 'forehead' and the preposition *na* 'on') with the meaning 'to be at/on the forehead, i.e. to preside over', and *pri-skledovati* (based on the noun *skleda* 'bowl' and the preposition *pri* 'at') 'to be at [somebody else's] bowl, i.e. to leech (on somebody)'. Similarly, the verb *v-sebovati* (based

⁹³ Apart from the fact that they are necessarily stative.

on the reflexive pronoun *sebe* 'self' and the preposition *v* 'in') means 'to have at self, i.e. to contain'.

A distinction between prefixes related to a preposition in an argument position and prefixes related to a non-argument position, as drawn by Ackerman (1987, cited in Ackerman 1992) for Hungarian, may thus for Slavic not be necessary, since it depends solely on interpretive principles (which can of course be guided by conceptual factors).

Of course, a natural question arises from this. Why is it that non-composition (event composition) of the state contributed by the prefix and the eventuality of the predicate is only possible with imperfective verbs with the suffix *-va-*, and more specifically, only with denominals where the incorporated noun is the object of the preposition which is the prefix (i.e. those with the form [BE at/in/etc.]?) There seems to be no obvious reason why this would not be possible with a prefixed simplex imperfective. For example, why can *za-spati_{IMPF}* (*za* = 'behind', *spati_{IMPF}* = 'to sleep') not mean 'to be sleeping behind (a tree)'?

In treating Slavic prefixes as having only the stative meaning in comparison to their cognate preposition, i.e. as contributing a state, the analysis suggests that prefixation in its entirety is synchronically derivation proper and—despite appearances—not a case of Baker's (1988) preposition incorporation, not even in cases with one of the two alternants of the locative alternation verbs, such as *na-špricati_{PF} rože_{ACC} z vodo* 'to ON-spray (the) plants with water'. Such an applicative construction analysis is tentatively suggested, although not pursued, in Spencer & Zaretskaya (1998a: 17).

Further, the proposal that prefixes only have the stative meaning of their cognate prepositions invalidates the standard opinion in the so-called recent Slovenian language studies⁹⁴ (e.g. Dular 1982, 1983, Vidovič Muha 1985, 1993, Križaj - Ortar 1982, Žele 2001) that the Goal/Source-PP is an "(orphaned) free verbal morpheme". In the same vein, the term "pleonastic", often used in traditional Slavic literature to characterize the prepositions in such PPs, therefore does not really apply (cf. Spencer & Zaretskaya 1998a: 15). Although the prefix and preposition in the Goal/Source-PP may be *homophonous*, they have *distinct* functions and distinct characteristics.

⁹⁴ I am borrowing the term from Orešnik (1994: 123), where it basically refers to Slovenian linguistics (as) done in Slovenia.

Note, however, that this only refers to Goal/Source-PPs when cooccurring with prefixed verbs. Prepositional-object PPs with verbs such as *pozabiti na kaj* 'to forget something' are a different issue. Of course, the two types of PPs should accordingly be treated separately, not both under the same heading of "(orphaned) free verbal morphemes".

Note that it is claimed that in German not all prefixed verbs are quantized/telic (Kratzer 1994: 41-3, cited in Filip, to appear: 23). At the same time, German distinguishes between directional and locational case marking in PPs, so this is clearly an area for future research. Presumably, German prefixes have not developed the role Slavic prefixes have, i.e. the macrorole role of contributing a state. Therefore, it should be interesting to see if the prefixes that do not delimit motion events correspond to directional-only prepositions, or if prefixes that do delimit motion events correspond to locational-only or locational/directional prepositions.

7.2 A FINAL CAVEAT: *pred-pakirati* 'to prepack', *pred-greti* 'to preheat', etc.

Finally, note that the claim that prefixes contribute a state, maintained in this thesis, is held to be valid for all native Slavic prefixation. I have not taken into consideration the role and effects of foreign prefixes at all (e.g. *inter-* 'between'). Presumably, these prefixes will start behaving as Slavic prefixes once—if at all—they get (re)analyzed as prefixes.

One apparent Slavic counterexample deserves mentioning: *pred-pakirati* 'to prepack' and *pred-greti* 'to preheat', with the Slavic prefix *pred-* 'in front of, in advance'.

Verbs on which this prefix has a spatial meaning, such as *pred-kloniti se* 'to bow', *pred-ročiti* 'to stretch out one's hands', *pred-pasati* 'to tie/fix something at/in front of one's waist' are resultative. Unless in the (secondary) imperfective, they are consequently also perfective. Even on verbs that are lexicalizations in the sense that the prefix's spatial semantics seems to have been metaphoricized, as in *pred-ložiti_{PF}* 'to submit (lit. to put forth)', *pred-lagati_{PF}* 'to suggest (lit. to put forth)', *pred-postaviti_{PF}* 'to presuppose (lit. to set forth)', *pred-pisati_{PF}* 'to prescribe', the prefix contributes a state and resultativity. Imperfective bases are perfective after prefixation, as in *pisati_{IMPF}* 'to write' – *pred-pisati_{PF}* 'to prescribe'.

Now, the temporal meaning 'in advance' is no doubt closely related to the spatial meaning 'in front of'. Note that this use seems very restricted and more or less appears in a few lexicalizations. Well-established *pred-*verbs includes, for example, *pred-videti* 'to foresee'. Note that the base verb is perfective; the perfectivity does not result from the prefix. These verbs do no

feel foreign in any way. However, this prefix has relatively recently been increasingly used in verbs such as *pred-pakirati* 'to prepack', *pred-greti* 'to preheat', whose bases are imperfective. These verbs feel somewhat foreign (and were presumably made under the influence of foreign languages). I believe this is because they digress from the usual use of prefixation in Slovenian, i.e. resultativity.

In Herryty (2000: 211), these two verbs are marked as perfective. According to Bajec *et al.* (1994), they are either perfective or imperfective. I believe they are *only* imperfective. Consider one test for perfectivity. When used in the perfective present tense, Slavic verbs have a future reference (cf. Filip, to appear). *Pol grem_{PRES-PF} pa domov* 'And then I will go home'. The verb *pakirati_{PF IMPF}* 'to pack' is one of biaspectual verbs. When prefixed with *s-*, it is perfective and passes the test of perfectivity. *Pol pa s-pakiram_{PF} blago in grem domov.* 'And then I will pack and go home'. When prefixed with *pred-*, it does not pass the test of perfectivity. **Pol pa pred-pakiram blago in grem domov* 'And then I will prepack the goods and go home'. The same applies to *pred-greti* 'preheat'. Another test is the compatibility with time-span versus durative adverbials. *Pred-grel je avto pol ure / *v pol ure* 'He preheated the car for half an hour / *in half an hour'. These verbs are imperfective, the prefix does not contribute a state and consequently a result. As such, these verbs, although formally native, feel foreign, since they are digressions from the way Slovenian prefixes normally function. For a perfective use of 'to preheat', *pred-* has to be prefixed onto a perfective (prefixed) verb, such as *o-greti_{PF} – pred-o-greti_{PF}* 'to preheat'. Such behavior is not encountered with 'normal' Slavic prefixes.

Another clearly different characteristic of this use of *pred-* is stress. Prefixes are, just like prepositions, in Slovenian not stressed (except for contrastive emphasis, as in *Peter je v-stopil, ne iz-stopil* 'Peter entered (in-stepped), not exited (out-stepped)', *Peter je šel v hišo, ne iz nje* 'Peter went into the house, not out of it'). The prefix in *pred-pakirati* 'to prepack' and *pred-greti* 'to preheat', however, carries a secondary stress (marked in Bajec *et al.* 1994).

In a sense, these verbs are similar to a coinage such as *??mimo-hoditi_{IMPF}* 'to walk by/past' (from the existing nominal *mimo-hod* 'march-past'), where the prefix is not stative. Although interpretable, such coinages are odd, as they violate the grammaticalized use of prefixes in Slovenian. They would not admit of a further specifying PP, as in **Mimo-hodil je mimo Petra* 'lit. he past-walked past Peter', as the prefix and PP would have the same role, i.e. expressing Path. As such a prefix could not introduce a state, a transitive use such as **Mimo-šel*

je Petra 'lit. he past-went Peter' on the intended meaning 'He went past Peter' is out as well, in contrast to *Pre-šel je Petra* 'He went past Peter (lit. he past-went Peter)'. (Note that the English *past* is not comparable to 'mimo'.) *Mimo-hodil je Petra* 'lit. He past-walked Peter' could, on the stative use of 'mimo', i.e. 'away', only mean 'he caused Peter to be away by walking'.

8. CONCLUSION

I have provided intuitively clear minimal-pair evidence that the role of prefixes is one of adding a state. The evidence comes from the distinct behavior of prefixed (secondary) and unprefixed (primary) imperfectives, such as *u-skladišćevati*_{IMPF} vs *skladišćiti*_{IMPF} 'to warehouse', as regards the availability of just the resultative/eventive causation meaning with the former and the availability of both the resultative/eventive causation meaning and the stative causation meaning with the latter.

Since prefixes contribute a state, they cannot contribute directionality, contrary to previous claims. The analysis thus provides a natural explanation for the absence of a prefix **k-* 'to' and the complementary distribution of the prefix *pri-* (cognate to the preposition *pri* 'at') and the preposition *k* 'to'.

That the net result of prefixation is typically a *change of* state is argued to stem from event composition. However, it is on the other hand shown that this is just the net result, while the contribution of the prefix is merely that of a state. The role of prefixes is thus not a grammaticalized role of resultativity. Again, minimal-pair evidence is provided as the background for this claim, coming from prefixed (secondary) and unprefixed (primary) imperfective locative denominal verbs, such as *o-sedlavati*_{IMPF} vs *sedlati*_{IMPF} 'to saddle' and *u-stekleničevati*_{IMPF} vs *stekleničiti*_{IMPF} 'to bottle'; only the prefixed forms are shown to be able of occurring in what is claimed to be a syntactic but not semantic causative use. Prefixes are thus not eventuality description modifiers, as argued in Filip (2000, to appear), but rather introducers of state.

It is also argued that when event composition does take place, the effect of prefixes can be captured with quantization. The counterarguments provided by Filip (to appear) are shown to stem from data misinterpretation. Furthermore, in discussing these counterarguments on directed-motion constructions, it arises that Slavic prefixes are not to be treated on a par with Goal/Source-PPs. It is proposed that the prefix introduces the State (Location), while the PP introduces the Path. The prefix and preposition in the Goal/Source-PP may thus be homophonous, but they have distinct functions. Slavic languages are different in this point from both English (Germanic) and French (Romance); the former expresses both in the PP, the specific preposition allowing, while the latter can only express the Path with a paraphrase but not in a single-verb construction.

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