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## Zusammenfassung

Die vorliegende Masterarbeit behandelt die Interaktion zweier grammatikalischer Phänomene im Tschechischen – Präfigierung und Reflexivierung. Manche Präfixe erzeugen reflexive Verben, wobei diese semantisch oder inhärent reflexiv sein können.

Um die zentralen Eigenschaften von präfigierten Reflexiva im Tschechischen zu untersuchen, betrachtete ich drei reflexivierende Präfixe (*roz-* (*se*), *u-* (*se*) und *na-* (*se*)) und führte eine Elizitationsstudie mit tschechischen MuttersprachlerInnen durch. Die Studie ergab, dass sich die Präfixe semantisch wie superlexikalische Präfixe verhalten, da ihre Bedeutung regelmäßig und produktiv ist. Ihre morpho-syntaktischen Eigenschaften deuten allerdings eher auf eine Einordnung in die lexikalische Kategorie hin, weil sie unter anderem die Argumentstruktur der Verben verändern. Die Präfixe öffnen eine neue Argumentstelle, welche entweder von einem vollwertigen Akkusativobjekt oder von einem Reflexivklitikon gefüllt werden muss. Ich bezeichne dieses Phänomen als die *Präfix-Argumentstruktur-Generalisierung*. Biskup (2019) schlägt vor, Präfixe als inkorporierte Präpositionen zu analysieren und macht keine bedeutende Unterscheidung zwischen lexikalischen und superlexikalischen Präfixen. Daher sind seine Annahmen nicht nur vorteilhaft für das kontroverse Verhalten der Präfixe bezüglich ihrer (super-)lexikalischen Kategorie, sondern auch von Nutzen, um die *Präfix-Argumentstruktur-Generalisierung* abzuleiten. Laut Biskup (2019) stammen Präfixe von Präpositionen ab und da Präpositionalphrasen Argumente fordern, verlangen Präfixe diese ebenfalls.

Die empirische Untersuchung ergab zudem, dass sich die drei Präfixe nicht uniform verhalten. Die Präfixe *roz-* (*se*) und *u-* (*se*) erzeugen semantisch reflexive Verben mit einer resultativen Bedeutung, wohingegen das Präfix *na-* (*se*) inhärent reflexive Verben mit einer kumulativen Semantik hervorruft.

Für die Analyse von reflexivierenden Präfixen stütze ich mich auf Biskups (2019) Idee, Präfixe als inkorporierte Präpositionen zu behandeln. Allerdings werden einige Abwandlungen vorgenommen, um zwischen semantischer und inhärenter Reflexivität und zwischen Konstruktionen mit resultativer und kumulativer Bedeutung zu unterscheiden. Präfixe, die semantisch reflexive Verben mit einer resultativen Semantik erzeugen, tragen ein *res*-Merkmal in sich, und verbinden sich mit dem (abstrakten) Zustand *S*, um die resultative Eigenschaft anzuzeigen. Das Reflexivklitikon wird in diesen Konstruktionen von einem Antezedens in *c*-Kommando gebunden. Im Gegenzug dazu trägt das Präfix *na-* (*se*) ein *cum*-Merkmal und verbindet sich mit einem abstrakten quantifizierenden Element *Q*, welches die quantifizierende Bedeutung spezifiziert. In inhärent reflexiven Verben muss das Reflexivklitikon nicht gebunden werden, da keine Koreferenz zum Antezedens erzeugt werden muss.



## Abstract

The present Master's thesis investigates the interaction of two grammatical phenomena in Czech – prefixation and reflexivization. In Czech, certain prefixes trigger reflexivity on the verb which can be either *true* semantic reflexivity or *fake* inherent reflexivity.

Taking into consideration three reflexivizing prefixes (*roz-* (*se*), *u-* (*se*) and *na-* (*se*)), I conducted an elicitation study with Czech native speakers to work out the central properties of *prefixed reflexives* in Czech. It turned out that the prefixes in the constructions at stake behave semantically like superlexical prefixes since they show regular and productive meanings, but morpho-syntactically they pattern like lexical prefixes since they, among other things, augment the argument structure of the verb. The prefixes open a new argument position which can be either occupied by a fully-fledged argument in ACC case, or alternatively, by a reflexive clitic in ACC case. I call this effect *the prefix-argument-structure generalization*. Biskup (2019) proposes an analysis of Slavic prefixes as incorporated prepositions, which does not differentiate between lexical and superlexical prefixes. His idea is not only advantageous to explain the prefixes' controversial behavior concerning their (super-)lexical category, but also to derive *the prefix-argument-structure generalization*. According to Biskup (2019), prefixes originate from their prepositional counterpart and as prepositional phrases select arguments, prefixes do the very same.

However, the empirical investigation showed that the prefixes do not behave identically. The prefixes *roz-* (*se*) and *u-* (*se*) produce semantically reflexive verbs with resultative semantics, whereas the prefix *na-* (*se*) triggers inherently reflexive verbs with cumulative meanings.

The proposed analysis of reflexivizing prefixes builds on Biskup's (2019) idea of prefixes as incorporated prepositions, but exhibits some central modifications to derive the different natures of reflexivity (semantic vs. inherent) and diverging semantics (resultative vs. cumulative). The prefixes that induce semantically reflexive verbs with a resultative meaning enter the derivation with a *res*-feature that merges with an (abstract) state *S* to indicate the resultative nature of the prefix. The reflexive clitic in semantically reflexive verbs is bound by an antecedent in c-command configuration which produces coreference between the patient and the agent of the verb. In contrast, the prefix *na-* (*se*) bears a *cum*-feature and combines with an abstract quantificational element *Q* that specifies the quantitative meaning. In inherently reflexive verbs, the reflexive clitic inheres lexically in the verb and does not need to be bound by an antecedent since there is no coreference.





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# 1. Introduction

In Czech, attaching a prefix to the verbal stem can result in reflexivity. Reflexivity is marked by the reflexive clitic *SE* occurring in the *Wackernagel* position of the sentence. *SE* derives a number of different constructions which all have in common that they affect the argument structure of the verb. Verbal prefixes can change the connotation and aspectual properties of the verb. Apparently, prefixes can influence the argument structure of the verb too.

This thesis provides a detailed investigation of one particular type of reflexive verbs in Czech – *prefixed reflexives*. The examples in (1) illustrate the construction. The sentence in (1a) contains the verb *mluvit* ‘talk’ which is grammatically correct without prefix and without reflexive clitic. In (1b), the prefix *roz-* attaches to the verb and the reflexive clitic *SE* is inserted. The combination of the two elements results in grammaticality whereas the introduction of the prefix alone (1c) or the reflexive clitic alone (1d) produces ungrammaticality<sup>1</sup>.

- (1) a. Anna mluvila.  
Anna talk.PTCP.IPFV  
‘Anna was talking.’
- b. Anna se roz-mluvila.  
Anna SE ROZ-talk.PTCP.PFV  
‘Anna started to talk.’
- c. \*Anna roz-mluvila.  
Anna ROZ-talk.PTCP.PFV
- d. \*Anna se mluvila.  
Anna SE talk.PTCP.IPFV

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<sup>1</sup> If not indicated otherwise, all the linguistic data in this thesis was gathered with the help of my Czech native informants. I thank Lucie Bílková, Veronika Kačerová and Anna Kárníková for all the elicited grammaticality judgements. Additionally, I want to say thank you to Lucie Medová, Radek Šimík and Andrea Hudousková for all their comments concerning the linguistic data and theoretical analysis.

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In Czech, prefixes can have idiosyncratic and regular meanings, but the prefixes which come together with the reflexive element are *always* compositional and productive. Furthermore, the prefix-clitic combination turns the predicate into a construction with resultative or cumulative meaning.

In addition to different impersonal and passive constructions, *SE* derives *semantically reflexive verbs* and *inherently reflexive verbs*. In semantically reflexive verbs, the agent corresponds to the patient of the predicate and it is the reflexive element that expresses this special relation. Inherently reflexive verbs, also called *fake reflexives* or *reflexivum tantum*, are somehow odd, in the sense that *SE* is automatically inserted with the verb without obvious function or meaning contribution. As its designation tells us, the reflexive element inheres in the verb. Interestingly, reflexivizing prefixes can produce semantic and inherent reflexivity.

So far, *prefixed reflexive verbs* have received very little attention in the literature despite their obvious productivity and their numerous occurrences. One reason could be that the construction combines two grammatical properties that on their own have led to extensive discussions and controversies. In this thesis, I approach the prefixed reflexives from different angles, considering various analyses of reflexive constructions in Czech and other languages, discussing the distinction between lexical and superlexical prefixes in Slavic and leaning on its resultative and cumulative semantics. In addition to the theoretical considerations, I conducted an empirical study with the three prefixes *roz-* (*se*), *u-* (*se*) and *na-* (*se*) to answer the following research questions.

- (I) What is the connection between the prefix and the reflexive clitic?**
- (II) Are the prefixes in prefixed reflexives lexical or superlexical?**
- (III) Can the prefixes be treated in a uniform way or do they behave differently?**
- (IV) Is this a subtype of inherently reflexives as it is claimed in the literature?**
- (V) How can this pattern be modelled syntactically?**

The research questions (I)-(V) represent the main guidelines of my empirical and theoretical investigation and in the course of this thesis I provide a direction for how to answer them.

For the formal derivation of the prefixed reflexive verbs, I make use of Biskup's (2019) analysis of prefixes as incorporated prepositions. Biskup (2019) argues against the standard assumption of differentiating between lexical and superlexical prefixes in Slavic. Instead, he assumes a common underlying structure for both prefixal types and proposes that prefixes are incorporated prepositions. This approach fits well to answer the research questions (I) and (II). Regarding the first research question, one of the main outcomes of the empirical investigation was the *prefix-argument-structure generalization* in (2).

**(2) The prefix-argument-structure generalization:**

*The attached prefix opens a new argument position on the verb. This argument position corresponds to the internal argument and can be filled either with a direct object in ACC case or a reflexive clitic bearing ACC case.*

The prepositional structure of prefixes offers an explanation to the connection between the prefix and the reflexive clitic. Prefixes with a prepositional nature can affect the argument structure of the verb since prepositional phrases introduce new arguments. These arguments can be fully-fledged direct objects in ACC case or reflexive clitics in ACC case. Concerning the second research question, the empirical investigation revealed that the prefixes at stake behave semantically like superlexical prefixes, but morpho-syntactically like lexical prefixes. Biskup (2019) does not clearly differentiate between lexical and superlexical prefixes which is congruent with the empirical results of this thesis. As a consequence, Biskup's (2019) derivation of prefixes as incorporated prepositions serves as the basis for my own proposal and helps to approach research question (V). Regarding the questions (III) and (IV), the linguistic data illustrates that the prefixes do not behave uniformly since they create different types of reflexivity. While the prefixes *roz-* (*se*) and *u-* (*se*) depict a resultative meaning and produce semantically reflexive verbs, the prefix *na-* (*se*) implies a vague cumulative meaning and triggers inherent reflexivity.

The thesis is organized as follows. In section 2, I provide some methodical and theoretical background about the scientific method applied in this thesis. I will also discuss the empirical procedures currently used in the Generative framework. The prefixed reflexive verbs are introduced in the third part where I demonstrate the different prefixes that can form the construction at stake. Section 4 provides theoretical background knowledge about reflexive structures in Czech and other languages, focusing on semantically and inherently reflexive

verbs. Additionally, in this part, I discuss and compare different proposals about lexical and superlexical prefixes in Slavic. In section 5, I present my empirical findings about three selected reflexivizing prefixes in Czech. In section 6, I propose a derivation of the prefixes taking into consideration their common and diverging properties. A conclusion is drawn in section 7.

## **2. Methodical and theoretical considerations**

In this section, I want to outline the empirical procedure of my investigation and its theoretical background. To collect the relevant language data, I made use of two approved empirical methods in linguistic research – corpus analysis and language elicitation. After a short note on the Czech National Corpus and the elicited grammatical judgments, I want to defend the viewpoint that formal linguistics, despite its emphasis on theoretical issues, needs more methodological transparency and implicitness. In a last step, basic assumptions about the syntactic structure of Czech will be introduced.

### **2.1 Czech National Corpus**

The Czech National Corpus was founded in 1994 and is administered by two departments of the Charles University in Prague. With its more than three billion words, it is an immense collection of authentic Czech language data containing synchronic and diachronic, spoken and written, parallel and monolingual corpora. For my purposes, I employed the SYN2020 Corpus – a synchronous corpus with 100 million words of contemporary written Czech of different text types<sup>2</sup>.

As Czech is not my mother tongue the SYN2020 Corpus represented a very helpful tool throughout the entire research process. I used it mainly to check specific prefix verb combinations to get an overview and rough idea of the construction. However, for the following two reasons, corpus data does not allow to draw firm conclusions in theoretical linguistics. Firstly, the absence of a specific word or construction does not automatically imply that it is ungrammatical. It could simply be a very rare but unattested instance since a corpus is never a complete and exhaustive representation of a given language. Secondly, corpora provide grammatically and pragmatically correct utterances, hence positive evidence. Nevertheless, for the theory of grammar, negative evidence, meaning ungrammatical and unacceptable

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<sup>2</sup> (<https://wiki.korpus.cz/doku.php/cnk:syn2020>, 30.05.2022)

utterances, are as important as well-formed sentences. Systematic elicitation of grammaticality judgements is helpful here since it provides negative evidence.

## **2.2 Linguistic elicitation**

The necessity of grammaticality judgements and especially negative evidence goes back to the principle of falsifiability. Falsifiability is a meta principle of science and was introduced by Karl Popper. In his book *Logik der Forschung* (1935), Popper claims that a theory can never be proven, but it can (and has to) be empirically falsifiable. Therefore, a theory has to predict under which condition the theory is not valid. In the case of theoretical linguistics, this means that a theory has to predict under which condition the theory generates ungrammatical utterances. Since the very beginning of Generative linguistics, Chomsky uses grammaticality judgements to evoke positive as well as negative evidence for his theory.

To elicit grammaticality judgements for the present work, I interviewed three native speakers of Czech. I asked the consultants to judge given sentences in view of their grammaticality deciding between grammatical and ungrammatical without scalar differentiation. As the items of investigation were not very subtle but rather straightforward, a small number of informants and a binary decision task was adequate to get reliable and robust results.

## **2.3 A philosophical note on the empirical method in Generative linguistics**

As I just mentioned and justified, the method of my empirical investigation was not very sophisticated. However, I want to briefly discuss the importance of adequate data collection in Generative linguistics.

Since the beginning of the field, the most widespread method of gathering grammaticality judgements was, and partially still is, introspection, meaning that the researcher him/herself judges his/her own sentences without consulting independent informants. This procedure might in some cases be sufficient, but in many other situations it is not, since the method of introspection can be problematic in view of theory formation and empirical accuracy. Grammaticality judgements of a single person are technically to be classified as qualitative data.<sup>3</sup> Nevertheless, they are interpreted as quantitative information, as they are claimed to be generally valid for a group of speakers. This induction-based practice is justified by theoretical presuppositions of the Generative paradigm and its rationalistic and reductionistic

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<sup>3</sup> This is true for introspection, but also for the interrogation of a single consultant. However, the described problem is even more obvious with introspection, since the principle of independency is violated too.

argumentation style. For Chomsky, the object of investigation is indeed the speakers *internal*, *intensional* and *individual* language (I-language), but since the grammar of a given language is inherently a system of rules shared by a group of native speakers, inference via induction is a licit procedure. However, this method has been questioned by scholars of related fields as the *Jäger Bierwisch Grewendorf debate*, which appeared in 1993 in *Zeitschrift für Sprachwissenschaft*, illustrates. It is a philosophical issue whether this procedure should be allowed in theory building, and in the end, it remains a question of personal perception of the concept of language and the attitude towards science. Obviously, there is much more to say about this challenge and closing the debate at this point feels rather unsatisfying and superficial. However, I want to continue with some additional considerations about empirical transparency and new trends in the field.

Grammaticality judgements can be, as it is mostly the case for the present investigation, rather sturdy, and therefore considered to be valid for an entire group of native speakers representing the system of a given language. Depending on the complexity of utterances and the object of investigation, judgements can vary enormously, which is why introspection can be misleading and in the worst case even misinterpreted. Therefore, it is indispensable to rethink this method and favor more empirically solid procedures. This is of course not a new thought and many scholars have tried to point out the urgency of empirical data collection for many years. Bard, Robertson and Sorace (1996) published an influential article which outlines several difficulties of grammaticality judgements, for example the handling of non-clear-cut judgements. In a next step, the authors introduce an alternative measurement called *magnitude estimations* which allows for more fine-grained inferences. Without going into detail here and without preferring magnitude estimations over grammaticality judgements, I simply follow Fanselow (2009 and many more) and Weskott & Fanselow (2011) who argue for the general viewpoint that the Generative paradigm should question and sometimes adjust its methodical tools and favor valid empirical procedures.

Again, there remains much more to say about this issue and one could write an entire thesis about this problem. The point I want to make clear here, is that introspection or single grammaticality judgements are not disallowed per se, but the researcher has to be aware of the methodical difficulties and should always justify his/her method as in every other scientific discipline. Science and scientific practices are never perfect, which is why they should always be questioned and improved. This very last point is maybe the most important aspect since it underlies the powerful engine of science.



### 3. Prefixed reflexive verbs

Section 3 illustrates prefixed reflexive verbs in further detail. After a first general introduction to prefixes and their functions in Czech, I want to outline the various prefixes that can be found in the constructions at stake. For the purpose of my thesis, I chose three prefixal items to be investigated more closely.

#### 3.1 Introduction to grammatical aspect and prefixes

Slavic languages are known for their elaborated system of grammatical aspect which means that (almost) every verb has an imperfective and a perfective version. In most cases, the bare verbal stem is imperfective. Perfectivity can be induced by verbal prefixes. Another obvious function of prefixes is that they affect the semantics of the verb. More precisely, prefixes can turn the imperfective verb into its perfective counterpart without adding any further connotation or change the grammatical aspect contributing additional meaning at the same time. The contribution of meaning can be either compositional or idiosyncratic in nature.

In (3a), the prefix *na-* turns the imperfective verb *psát* ‘write’ into the perfective counterpart *napsat* ‘finish writing’ without adding any further semantics to the verb. In (3b) and (3c), the prefixes affect the grammatical aspect as well, but in addition, they also contribute some meaning to the predicate. (4) illustrates that the meaning contribution of one single prefix can be compositional or idiosyncratic. (4a) depicts the regular meaning of the prefix *na-* which can be paraphrased as ‘on’ or ‘auf-’ in German<sup>4</sup>. (4b) illustrates an idiosyncratic instance of the prefix. Additionally, *na-* can have an accumulative connotation which will be relevant in a moment. It is obvious that the prefixal system of Slavic is much more complex than illustrated here. In section 4, I will elaborate on this element in more detail.

(3)	a.	psát	(článek)	– na-psat	článek
		write.INF.IPFV	article.ACC	– NA-wirte.INF.PFV	article.ACC
		‘write (an article)’		– ‘finish writing an article’	
(Medová 2009: 45)					

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<sup>4</sup> The regular meaning of the prefix *na-* is very close to the semantics of the equivalent preposition *na* ‘on’. This information will be of importance later on.

- b. pře-psat                      článek  
 PŘE-write.INF.PFV        article.ACC  
 ‘rewrite an article’

(Medová 2009: 45)

- c. roze-psat                      článek  
 ROZ-write.INF.PFV        article.ACC  
 ‘starting to write an article’

(Medová 2009: 45)

- (4) a. na-mluvit                      desku  
 NA-speak.INF.PFV        disk.ACC  
 ‘record a disk’ (German: ‘auf-nehmen’)

- b. na-mluvit                      někomu                      něco  
 NA-speak.INF.PFV        somebody.DAT            something.ACC  
 ‘make somebody believe something’

### 3.2 Prefixes that form prefixed reflexives

Regarding prefixed reflexive verbs, Šlosar (1995) assumes that there are eight different prefixes in Czech that have to cooccur with the reflexive clitic: *do- se*, *na- se*, *pře- se*, *roz- se*, *s(e)- se*, *u- se*, *vy- se* and *za- se* (Šlosar 1995: 215). Oertle (2016) considers ten reflexivizing circumfixes, excluding the prefix *s(e)- se*, but adding the affixes *o(b)- -sja*, *při- -sja*, *pro- -sja* and *v- -sja*<sup>5</sup>. My investigation showed that *s(e)- se* cannot be considered as fully productive since it nearly always has to occur with a motion verb. Similarly, the prefixes *o(b)- se*, *při- se* and *v- se* do not occur in a very productive way in Czech. In the following, I illustrate six chosen prefixes in combination with the verb *pracovat* ‘work’ and *mluvit* ‘talk’ to exemplify the respective

<sup>5</sup> Oertle (2016) provides a very detailed description of all Slavic prefixes and their associated prepositions. In East Slavic languages, the reflexive morpheme *-sja* is added as a suffix to the verbal stem and corresponds to the reflexive clitic *se* in Czech.

semantics. All examples are taken from the Czech National Corpus (CNC) or different sources on the internet<sup>6</sup>.

- (5) Hodně se na-pracoval v Buchenwaldu.  
a lot SE NA-work.PTCP.PFV at Buchenwald.LOC  
'He worked his tail off at Buchenwald.'  
(CNC)

- (6) Profesor Válik se roz-mluvil, z toho zasmušilého a  
Professor Válik SE ROZ-talk.PTCP.PFV from this gloomy and  
soustředěného muže se stal ochotný vypravěč.  
concentrated man SE become.PTCP.PFV capable narrator  
'Professor Válik started talking, this gloomy and concentrated man became a capable narrator.'  
(CNC)

- (7) V 29 letech se skoro u-pracoval k smrti.  
in 29 year SE almost U-work.PTCP.PFV to death.DAT  
'At the age of 29, he almost worked himself to death.'  
(<https://forbes.cz/ve-29-letech-se-skoro-upracoval-k-smrti-po-mrtvici-radi-ostatnim-jak-zmenit-zivot/> 31.5.2022)

- (8) Rychle se v nové práci za-pracoval.  
fast SE in new work.LOC ZA-work.PTCP.PFV  
'He learned the ropes quickly in his new job.'  
(<https://slovníky.lingea.cz/nemecko-cesky/zapracovat%20se>, 31.5.2022)

- (9) Svého nynějšího postavení jsem se do-pracovala sama.  
one's current position.GEN be.1.SG SE DO-work.PTCP.PFV on one's own  
'I achieved my current position on my own.'  
(<https://slovníky.lingea.cz/nemecko-cesky/dopracovat>, 31.5.2022)

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<sup>6</sup> The German translation of some verbs grasps the connotation of the prefixes the best: (16) upracovat se – 'sich tot arbeiten', (17) zapracovat se – 'sich einarbeiten', (18) dopracovat se – sich etw. erarbeiten, (19) přepracovat se – 'sich überarbeiten'. Interestingly, the German translations of the verbs in (16)-(19) bear a reflexive pronoun too.

- (10) Pře-pracoval se, a proto zkolaboval.  
 PŘE-work.PTCP.PFV SE and therefore collapse.PTCP.PFV  
 ‘He overworked and therefore collapsed.’  
 (<https://www.nechybujte.cz/slovník-současné-čestiny/p%C5%99pracovan%C3%BD>,  
 31.5.2022)

An exhaustive analysis of all prefixes would provide far too much material for this thesis. Instead, I chose three prefixes that will be scrutinized in further detail: *na- se*, *roz- se* and *u- se*. The repeated and extended examples in (1)’ illustrate the pattern once more. From the sentences in (1b’), (1c’) and (1e’), it becomes obvious that the prefix has to be inserted with a reflexive clitic to be grammatical. The insertion of the reflexive clitic without the prefix is ungrammatical too (consider (1f’)). In comparison to the non-prefixed verbs in (1a, d), the prefixed versions in (1b, c, e) imply various resultative meanings induced by the prefixes.

- (1)’ a. Anna pracovala.  
 Anna work.PTCP.IPFV  
 ‘Anna was working.’
- b. Anna se hodně na-pracovala.  
 Anna SE a lot NA-work.PTCP.PFV  
 ‘Anna worked his tail off.’
- b.’ \*Anna hodně na-pracovala.  
 Anna a lot NA-work.PTCP.PFV
- c. Anna se u-pracovala.  
 Anna SE U-work.PTCP.PFV  
 ‘Anna worked herself to death.’
- c.’ \*Anna u-pracovala.  
 Anna U-work.PTCP.PFV

- d. Anna mluvíla.  
Anna talk.PTCP.IPFV  
'Anna was talking.'
- e. Anna se roz-mluvíla.  
Anna SE ROZ-talk.PTCP.PFV  
'Anna started talking.'
- e.' \*Anna roz-mluvíla.  
Anna ROZ-talk.PTCP.PFV
- f. \*Anna se pracovala/mluvila.  
Anna SE work.PTCP.IPFV /talk.PTCP.IPFV

## 4. Theoretical background about *SE*-constructions and prefixes

The aim of this section is manifold. In a first step, I introduce the different uses of the clitic *SE* in Czech. A rough overview of all *SE*-constructions in the given language is provided and two lesser-known instances of *SE*-verbs are added. Next, I will outline some theoretical background about reflexive constructions in general and sketch out some influential analyses that deal with these structures in different languages. Accounts dealing explicitly with the Czech reflexive clitic will be discussed too. Section 4.3 focuses on the prefix – the other element of prefixed reflexives. I provide theoretical background about prefixes in Slavic discussing the differentiation between lexical and superlexical prefixes.

### 4.1 The range of the reflexive clitic in Czech

The Czech reflexive clitic *SE*<sup>7</sup> occurs in a range of different constructions. The most common uses are semantically reflexive verbs (11), inherently reflexive verbs (12), reciprocals (13), anticausatives (14), mediopassives (15), impersonal constructions (16) and passive

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<sup>7</sup> In this work, I use the terminology *SE* to refer to all kinds of abstract clitics or affixes which occur in the relevant constructions and languages. In addition, I call this element *reflexive* even if it does not always induce *truly* reflexive semantics in all instances. The same holds for the term *reflexive constructions*.

constructions (17)<sup>8</sup>. In semantically reflexives (11b), inherently reflexives (12b) and reciprocals (13b), *SE* can bear dative case. (All examples are taken from Medová (2009: 7-30) if not indicated otherwise.)

- (11) a. Jan se myje.  
 Jan SE.ACC wash.3.SG  
 ‘Jan washes himself.’
- b. Jan si pomáhá.  
 Jan SE.DAT help.3.SG  
 ‘Jan helps himself.’
- (12) a. Jan se bojí tmy.  
 Jan SE.ACC fear.3.SG darkness.GEN  
 ‘Jan is scared of darkness.’
- b. Jan si toho všímá.  
 Jan SE.DAT this.GEN notice.3.SG  
 ‘Jan notices this.’
- (13) a. Jan a Marie se nenáviděj.  
 Jan and Marie SE.ACC hate.3.PL  
 ‘Jan and Marie hate each other.’
- b. Jan a Marie si to vysvětlují.  
 Jan and Marie SE.DAT it.ACC explain.3.PL  
 ‘Jan and Marie explain it to each other.’
- (14) Sklenice se rozbila.  
 glass SE break.PTCP.PFV  
 ‘The glass broke.’

---

<sup>8</sup> Regarding the classification and terminology of *SE*-verbs, I mostly follow Medová (2009) and Hudoušková (2016) since they provide the most elaborated analyses of this element focusing on Czech. The designation *inherently reflexive verbs* will be of importance and discussed later on.

- (15)      Tahle košile    se      (mi)              dobře    žehlí.  
              this shirt       SE      me.DAT       well    iron.3. SG  
              ‘It is easy (for me) to iron the shirt.’

- (16)      Zpívalo            se      až do rána.  
              sing.PTCP.PFV SE      till to morning.GEN  
              ‘People were singing till the morning.’

- (17)      Škola              se                      právě              staví.  
              school.NOM    SE.ACC              right now        build.3.SG  
              ‘The school is being built.’

(Fehrmann et al.2010: 206)

There are two lesser-known *SE*-constructions in Czech – the effort construction (18) and prefixed reflexives (19), the construction under investigation. Both constructions did not yet attract a lot of interest in the literature. The best way to illustrate these constructions is to compare them to their non-reflexive counterpart. In contrast to (18a), the structure in (18b) involves a reflexive clitic and the direct object bears instrumental case. As its designation already tells us, the presence of *SE* in (18b) seems to turn the predicate of the sentence into an effortful action. As it was illustrated in the previous section, prefixed reflexives (19) are prefixed verbs that require a reflexive clitic to be grammatical. (For more detail consider (1’).) In the literature, these verbs are mostly discussed in connection with inherently reflexive verbs.

- (18)    a.      Vařím              mu                      tady    knedlíky                      celý    odpoledne.  
              cook.1.SG      him.DAT              here    dumplings.ACC              all    afternoon  
              ‘I am making dumpling here for him the whole afternoon.’

(Medová 2009: 40)

- b.      Vařím              se      mu              tady    s knedlíkama              celý    odpoledne.  
              cook.1.SG      SE      him.DAT here    with dumplings.INS    all    afternoon  
              ‘I am working my tail off with the dumplings for him the whole afternoon.’

(Medová 2009: 40)

- (19) a. Karel pracoval.  
           Karel work.PTCP.PFV  
           ‘Karel was working.’
- b. Karel se       hodně na-pracoval.  
           Karel SE     a lot   NA-work.PTCP.PFV  
           ‘Karel worked his tail off.’

While the effort construction is restricted to certain verbs and occurs rather seldomly (Medová 2009: 420), prefixed reflexives are highly productive with various prefixes and well attested throughout the language. This fact piqued my interest and I wanted to take a closer look into this structure. But before scrutinizing the reflexive prefixed verbs, I want to introduce some background about reflexive constructions in different (Romance) languages and Czech.

#### **4.2 Generative analyses of *SE*-constructions (in Romance and Czech)**

Reinhart and Reuland (1993) were among the first to discuss the phenomenon of reflexivity refuting the standard assumptions of Chomsky’s (1981, 1986) Binding Theory. Condition A of the traditional binding theory says that an anaphor (reflexive) has to be bound by an antecedent via c-command. Reinhart and Reuland propose a new definition of the binding conditions assuming that reflexivity is rather a property of predicates and their interpretation than of anaphors. Since then, much work has been done to extend the theory to capture constructions which encompass the reflexive morphology but do not induce *true* reflexive interpretation.

Many languages, especially Romance, show a similarly broad distribution of *SE*-verbs as Czech and a multitude of analyses were proposed to derive these constructions. The different approaches vary in many aspects. Some scholars treat the reflexive morpheme as a syntactic NP/DP-like argument (Hudousková 2016, Alboiu et al. 2004) whereas others defend the analysis as a valency-reducing element (Reinhart & Siloni 2005). In the first case, the accounts divide further into approaches, treating *SE* as the internal argument (IA) (Hudousková 2016) and analyses which consider the clitic as the external argument (EA) (Kayne 1988; Pesetsky 1995). In the second case, the same distinction can be observed. There are unaccusative valency-reducing analyses claiming that *SE* affects the EA. Unergative approaches describe the clitic as an element suppressing the IA (Reinhart & Siloni 2005; Fehrmann et al. 2010). Furthermore, accounts differ in postulating one single lexical item for *SE* in all its uses (Hudousková 2016; Alboiu et al. 2004; Reinhart & Siloni 2005; Medová 2009) or assuming



more than one, but homonymous, instances of the clitic (Fehrmann et al. 2010). As a consequence, the scholars make use of varying theoretical assumptions and frameworks. Especially the role of the Lexicon and different options for syntactic insertion and semantic interpretation seem to play a crucial role.

In the following, I summarize several approaches which, on the one hand, exemplify the diversity of the different analyses and, on the other hand, provide interesting insights about the structure at stake. I try to be as brief as possible focusing on inherently and semantically reflexive verbs and, if mentioned, prefixed reflexives.

#### 4.2.1 Alboiu et al. (2004)

Alboiu et al. investigate the Romance *SE* clitic assuming one single lexical entry for all its occurrences. One of their main aims is to explain the paradoxical fact that semantically reflexive verbs<sup>9</sup> pattern with unaccusative and unergative verbs at the same time. Their theoretical framework is the Minimalist program (Chomsky 1995, 2000, 2001), and they derive all instances of *SE* in the syntax. Furthermore, they follow Halle and Marantz (1993) since late vocabulary insertion and underspecification are essential ingredients of their analysis. More precisely, they assume that the multitude of *SE* occurrences results from its underspecification: “*the only properties intrinsic to SE are its human argument semantics and a syntactic  $\pi$ -feature*” (Alboiu et al. 2004: 14).

The authors distinguish between two groups of *SE*-constructions: semantically reflexive verbs and all other types of *SE*-verbs. In the first group, they consider the verbs to be “*transitive predicates with a single argument DP satisfying two thematic roles*” (Alboiu et al. 2004: 8). Hence, reflexivity is not encoded in the lexical entry of the verb, but the epiphenomenon of a movement of a  $\phi$ -complete DP from the IA position to the EA position. In this case, the reflexive clitic is the reduced spell-out of the lower copy of the moved DP argument.

Because of its underspecification *SE* can be inserted in all positions where a  $\phi$ -reduced DP is needed. Regarding impersonals, passives and anticausatives, the clitic is interpreted as an indefinite and in inherently reflexives as a non-argumental element. More concretely, in inherently reflexive verbs, the clitic is assumed “*to be a lexically suppressed argument ‘expandable’ by a PP*” (Alboiu et al. 2004: 24). Hence, they consider these verbs as antipassive constructions, as the reflexive clitic suppresses the direct object which might optionally occur as a PP in the structure. The Brazilian Portuguese example in (20) illustrates this effect.

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<sup>9</sup> In the terminology of Alboiu et al. semantically reflexives are *derived reflexives*.

Although the sentences in (20a) and (20b) depict the same meaning, they differ in structure. The sentence in (20a) lacks the reflexive clitic and the (semantic) direct object merges in the syntactic direct object position. The presence of *SE* in (20b) prohibits the (semantic) direct object to occur in the syntactic direct object position, instead it is generated as a PP.

- (20) a. O João esqueceu os livros.  
           the João forgot the books
- b. O João se esqueceu dos livros.  
           the João SE forgot of.the books  
           ‘John forgot the books.’

(Alboiu et al. 2004: 26)

In sum, with the power of underspecification, Alboiu et al. provide a unifying approach to all instances of *SE*. The advantage of such an analysis is that one single lexical entry covers all its functions. However, it is not clear how Alboiu et al. account for different impersonal and passive constructions, for instance, how they differentiate between *SE*-constructions derived from transitive and intransitive verbs. Underspecification bears the risk of not being able to differentiate in cases where it would be necessary.

#### 4.2.2 Reinhart & Siloni (2005)

Based on a large array of languages (different Slavic, Germanic, Romance languages, Hebrew, and more), Reinhart & Siloni present an approach which considers the reflexive morphology as the result of *arity operations* – operations affecting the  $\theta$ -roles, hence the valency of a predicate. They postulate a *Lexicon-syntax parameter* which decides whether the arity operations happen in the Lexicon or in the syntax. Therefore, they presuppose “*that the lexicon must be an active component of the grammar*” (Reinhart & Siloni 2005: 389). As the clitic is not an argument, but the product of an operation, they do not consider the reflexive constructions to be transitive. More precisely, they disagree with Alboiu et al. (2004) concerning the unaccusativity of reflexives. They show that these verbs are taken to be unergatives since the arity operations affect the  $\theta$ -role of the IA and not the EA.

The fact that valency-changing operations can apply either in the Lexicon or in the syntax produces different outcomes of *SE*-constructions.  $\theta$ -properties of a verb can be modified altogether only in the Lexicon, but not in the syntax: “*The syntactic component cannot*

*manipulate  $\theta$ -grids: elimination, modification, and addition of a  $\theta$ -role are illicit in the syntax.”* (Reinhart & Siloni 2005: 403). This means that an arity operation applying in the Lexicon can fully eliminate a  $\theta$ -role, whereas a rule operating in the syntax can only disable an argument syntactically while it is still available semantically.

According to the authors, the variation of the reflexive clitic is due to the Lexicon-syntax parameter not only within a single language, but also cross-linguistically. *Reflexivization* is the rule that derives semantically reflexive verbs: two  $\theta$ -roles are bundled to one complex  $\theta$ -role and assigned to the EA, the accusative case feature of the verb is deleted. In English and Hebrew this valency-changing operation applies in the Lexicon, but German and Czech allow this rule to happen in narrow syntax (Reinhart & Siloni 2005: 392ff). Furthermore, *decausativization*, the operation involved in anticausatives and *subject-Experiencer verbs*<sup>10</sup>, operates in the Lexicon in all languages since it eliminates altogether the EA – a cause (Reinhart & Siloni 2005: 417f). Speaking very generally, passives, middles and impersonals result from *saturation*, a rule which saturates the external  $\theta$ -role by existential or universal closure (Reinhart & Siloni 2005: 420f).

In Reinhart & Siloni’s analysis, *SE* is the outcome of different arity operations without bearing any properties on its own. At this point, I find it difficult to agree with the authors since I will show that the reflexive clitic does, at least in some cases, behave very similar to arguments. I assume that the reflexive element might be more complex than the mere spell-out of various operations. In addition, it is not clear to me whether the authors take all instances of inherently reflexive verbs as subject-Experiencer verbs or not. I assume that the special type of inherently reflexive verbs which will be dealt with in this thesis can be understood as subject-Experiencer verbs.

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<sup>10</sup> The examples that they call *subject-Experiencer verbs* can be classified as inherently reflexive verbs in my terminology. The Italian example illustrates this.

I)      Giovanni si      preoccupa      di questo.  
           Giovanni SI      worries      of this  
           ‘Giovanni worries about this.’  
           (Reinhart & Siloni 2005: 391)

### 4.2.3 Medová (2009)

In her dissertation, Medová compares Slavic and Romance reflexive clitics focusing on Czech and Italian. She derives all uses of *SE* in the syntax and considers the clitic as “a kind of inverse morphology” indicating that the internal but not the external argument moves up the tree to the subject position (Medová 2009: 408). She operates within the *Nano-syntax Peeling Theory of Case* developed by Starke (2005) and Caha (2006) which says that “a particular Case can be understood to be a structural subset of another Case”<sup>11</sup> (Medová 2009: 296). In this framework, every DP is inserted with several case layers and by stepwise movement up the tree (=peeling) the DP gets its required case. Her proposal was inspired by Alboiu et al.’s (2004) antipassive approach of inherently reflexives, and she assumes that the reflexive morphology has the same inverse function as the antipassive morphology in ergative-absolutive languages.

Medová claims that the reflexive clitic spells out the ACC case layer of the DP forcing the object to bear oblique case or to move up to get NOM case. According to her, the effort construction in (18), repeated here as (18)’, best exemplifies the antipassive inversion the best.

- (18)’ a.      Vařím            mu            tady   knedlíky           celý   odpoledne.  
              cook.1.SG   him.DAT   here   dumpling.ACC all   afternoon  
              ‘I am making dumpling here for him the whole afternoon.’

(Medová 2009: 40)

- b.      Vařím            se        mu            tady   s knedlíkama           celý   odpoledne.  
              cook.1.SG   SE        him.DAT here   with dumplings.INS all   afternoon  
              ‘I am working my tail off with the dumplings for him the whole afternoon.’

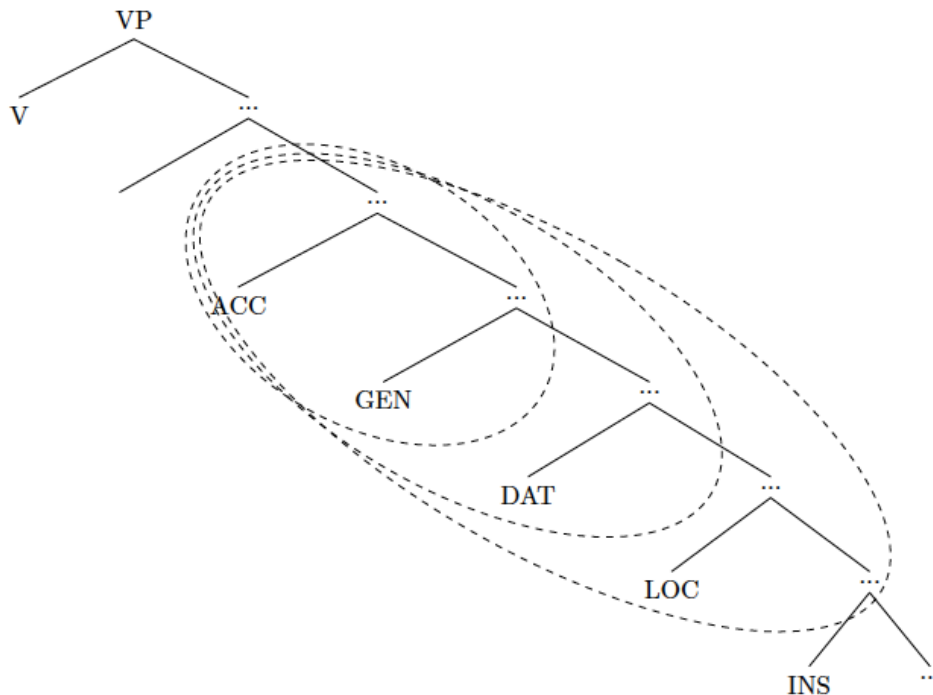
(Medová 2009: 40)

The sentence without the clitic (18a)’ is oriented towards the result of the action whereas in (18b)’, *SE* expresses the intensity of the action. In (18b)’, *SE* spells out the ACC case layer and the direct argument has to bear oblique case. Arguably, inherently reflexive verbs are derived the same way since *SE* occupies ACC case and other objects have to occur as PPs or in oblique case. The syntactic tree in (21) exemplifies the structure with *SE* occupying the relevant case layers. The dashed ellipses represent the area effected by *SE* triggering the direct object to bear DAT, LOC or INS case.

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<sup>11</sup> (nominative: [DP], accusative: [ACC [DP]], genitive: [GEN [ACC [DP]]] ...)

(21) Syntactic structure of *SE* within the Nano-syntax Peeling Theory of Case



I will not go through all derivations of *SE* at this point since I am mainly focusing on one particular construction. I simply summarize very generally that in semantically reflexives and anticausatives, only the IA is inserted in the structure and *SE* makes it move to the EA position to bundle two  $\theta$ -roles. Additionally, in impersonals and middles the clitic affects the EA position and triggers the IA to move up the tree. For the same reason as in Alboiu et al (2004), Medová's analysis does not extend to middles and impersonal constructions with only one argument.

However, she shortly mentions prefixed reflexive verbs and assumes a similar derivation for them as she proposes for inherently reflexives. Without going into detail, the author observes that the prefix seems to affect the argument structure of the verb without specifying this mechanism: *“the role of the prefix remains to be shown. For the purposes of this work, it is enough to assume that the relevant prefixes must have one property in common: they have to introduce the internal argument into the sentence”* (Medová 2009: 424). One aim of this thesis is to close the gap of knowledge specifying the role of the prefix in prefixed reflexives.

#### 4.2.4 Fehrmann et al. (2010)

Fehrmann et al. (2010) present a cross-Slavic overview of *SE* and point out very broadly that *“its presence coincides with the exclusion of the canonical syntactic realization of one argument*

of the original verbal lexeme” (Fehrmann et al. 2010: 204). To derive all uses of *SE* in Slavic, they make use of two reflexive elements (refl) – an argument blocking refl I and an argument binding refl II. They apply a framework of a two-level semantics introduced by Bierwisch (1986, 2007) and Wunderlich (1997) which differentiates between Semantic Form (SF) and Conceptual Structure (CS). The authors assume that the blocking refl I prevents one argument (EA or IA) of a two-place predicate from syntactic realization and semantic specification at SF. The affected argument gets its interpretation later at CS. The binding refl II affects the highest argument in the syntactic structure and promotes it to the nominative subject or contributes an arbitrary human interpretation at SF.

Again, going through all derivations of *SE* would lead us too far. Instead, I summarize their implementation with the focus on Czech and the relevant constructions: Semantically reflexives and inherently reflexives<sup>12</sup> are derived with refl I and the internal argument gets affected. They agree with Reinhart & Siloni (2005) assuming that *SE* is not an argument-like element, but in contrast to Reinhart & Siloni, they claim the clitic to be an operating element itself and not a product of the derivation.

In semantically reflexives, the IA is blocked in the syntax and at SF, but it is later identified with the agent at CS. Regarding inherently reflexives, something similar happens. The IA is blocked in the syntax and at SF. At CS, however, existential quantification applies per default resulting in an arbitrary interpretation. The authors mention the special type of reflexives in a footnote without deriving the construction in their system. They simply agree with Medová (2009) on the fact that the prefix has the power to manipulate the valency of the verb: “*Due to a prefix operation on the meaning representation of the verb, even one-place predicates may be analysed as having an internal argument slot affected by refl*” (Fehrmann et al. 2010: 207). Fehrmann et al. suppose a transitivity function of the prefix, but they do not elaborate on its underlying structure, which I will attempt to.

#### 4.2.5 Hudousková (2016)

Hudousková’s (2016) detailed analysis of the Czech reflexive clitic postulates a single lexical entry for all its occurrences. She adopts Emonds’ (2000) framework of multiple-level insertion of lexical items which differentiates between the Dictionary and the Syntacticon. Furthermore, she assumes that *SE* “*is a deficient syntactic element with no case, no inherent semantic features*

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<sup>12</sup> In the terminology of Fehrmann et al. (2010), inherently reflexive verbs are called *antipassives*. The authors do not justify their terminology at this point, but it is in line with Medová’s (2009) antipassive analysis of inherently reflexives.

*and unvalued phi-features. In other words, [...] a bare NP projection*” (Hudousková 2016: XI). Being an NP in nature, the clitic can occur in any argument position and check  $\theta$ -roles of the verb.

The typological differences result from the fact that *SE* can be inserted at different stages of the derivation. The clitic in semantically reflexives, passives, impersonals and middles is derived in the syntax via Late Insertion, whereas in inherently reflexives and anticausatives *SE* has its origin in the Dictionary being subject to Deep Insertion. Hudousková argues that inherently reflexives show the same structure as semantically reflexives, namely *SE* occupying the DO position of the verb. In the latter case, however, the verbs are formed pre-syntactically and enter the derivation already containing the reflexive clitic. According to her, “*inherently reflexive verbs enter the syntactic derivation as single syntactic units with syntactic properties pre-defined in the Lexicon*” (Hudousková 2016: 142).

Similar to Medová (2009) and Fehrman et al. (2010), Hudousková shortly mentions prefixed reflexives. She introduces the construction at stake as a subtype of inherently reflexives too. She does not propose a distinct derivation for the prefixed reflexives, the reader has to be content with the analysis proposed for inherently reflexives. This implies that the reflexive clitic in prefixed reflexives is inserted pre-syntactically in the IA position. While this derivation could be a possible option for inherently reflexives without a prefix, I disagree with Hudousková in regard of prefixed reflexives. The productivity and compositionality of the prefix-clitic combination point to the syntax rather than the Lexicon. As I will propose in part 6, it is the syntactic structure of the prefix which requires the presence of the reflexive clitic. However, I will follow Hudousková’s proposal in that the reflexive clitic is an NP-like element which can occur in the DO position of the verb.

#### **4.2.6 Interim summary about reflexive constructions**

After a first introduction to the *SE*-constructions and their analyses it becomes very obvious that the reflexive clitic is somehow connected to the argument structure of the verb. The implementations of this effect vary from the assumption that *SE* is an argument-like element itself (Hudousková 2016) to the claim that the reflexive morphology is just a byproduct of the derivation (Reinhart & Siloni 2005). In addition, the various approaches make very different claims about the constitution of UG.

Concerning prefixed reflexives, Medová (2009) and Fehrman et al. (2010) admit that the prefix influences the argument structure of the verb as well. However, none of the analyses attempt to explain the exact connection and interaction of these elements. The literature

classifies prefixed reflexives as inherently reflexives and inherently reflexives, in turn, are often analyzed as antipassive constructions. Alboiu et al. (2004) and Medová (2009) defend this viewpoint and Fehrmann et al. (2010) simply adopt the terminology. As a consequence, prefixed reflexives would be classified as antipassives too. In the course of this thesis, I will discuss whether this classification is tenable or not, and if not, which alternative is more appropriate.

For now, all the research questions and the question about the nature of *SE* remain open. Unfortunately, I will not be able to give exhaustive derivations of all reflexive constructions in Czech since this would be far beyond the scope of this thesis. However, analyzing one special subtype of reflexives allows us to argue in favor of one or the other analysis, as I am making use of theoretical assumptions that are only compatible with some of the accounts. In the next section, I want to approach the construction from another angle and take a closer look at its second – or actually first – ingredient, the prefix.

### **4.3 Theoretical background about prefixes in Slavic**

It is widely assumed that Slavic prefixes divide into lexical and superlexical prefixes (Svenonius 2004; Gehrke 2008; Ramchand 2004). Arguably, lexical prefixes attach within the VP/vP whereas superlexical prefixes merge above the VP/vP. As a consequence, the two prefixal types show different behaviors in meaning and morphosyntax. Biskup (2019) challenges this claim by demonstrating that superlexical and lexical prefixes pattern similarly. He proposes a derivation that does not differentiate between lexical and superlexical prefixes. In the following subsection, I introduce three analyses of Slavic prefixes and compare their different predictions.

#### **4.3.1 Svenonius (2004)**

Svenonius investigates Slavic prefixes and compares them to Germanic particles. According to him, (German and Slavic) prefixes originate from the inventory of prepositions. He proposes an analysis with a clear-cut distinction between lexical and superlexical prefixes in Slavic.

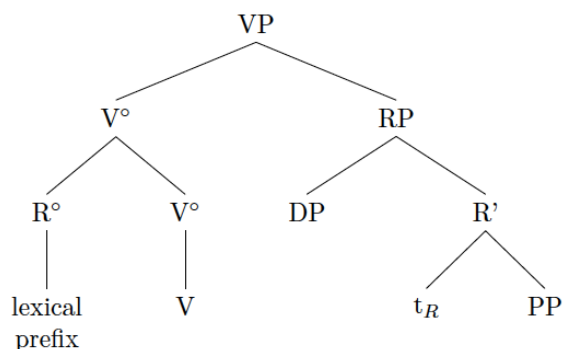
Svenonius argues that lexical and superlexical prefixes do not only differ in meaning, but also in structure. While lexical prefixes show “*resultative meanings, often spatial, but often idiosyncratic*”, superlexical prefixes function as “*adverbs or auxiliary verbs, having [] quantificational meanings*” (Svenonius 2004: 205). Additionally, the prefixes get attached to two different positions. Lexical prefixes merge VP-internally as the head of a R[esult]P and



incorporate into the verb via head movement<sup>13</sup>. In contrast, superlexical prefixes are generated external to VP in the SpecAsp[ect]P. The structure in (22a) illustrates the lexical and (22b) the superlexical prefix.

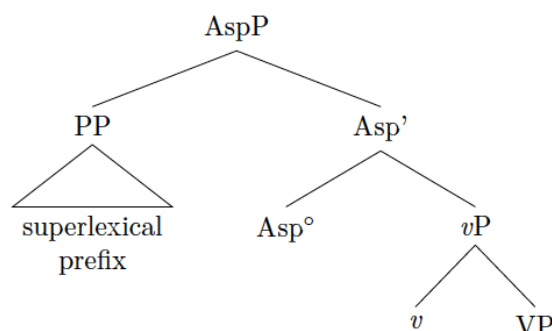
(22) a. lexical prefix

(simplified Svenonius 2004: 212)



b. superlexical prefix

(simplified Svenonius 2004: 231)



Svenonius mentions several differentiating properties that can be directly traced back to the varying structures of the affixes. I want to mention a selection of relevant properties. Arguably, only lexical prefixes can affect the valency of the verb since the RP introduces a new argument position within the VP. The superlexical prefixes attached above VP do not have such power. Furthermore, secondary imperfectives can be derived from verbs with lexical prefixes whereas superlexical prefixes disallow secondary imperfectivization (SI)<sup>14</sup>. Again, this fact follows straightforwardly from the structural difference of both prefixes. The superlexical prefix attaches in SpecAspP, hence above the affix of SI which merges in the head of AspP. This affix order results in ungrammaticality, since the imperfectivizing affix would directly merge to the imperfective verb stem although it has to merge to perfective verbs. For this very reason, SI with lexical prefixes is completely fine, since the lexical prefix merges below the secondary imperfective morphology turning the predicate into a perfective verb first. However, Svenonius admits that some superlexical prefixes do allow SI which he justifies with the possibility to attach the superlexical prefix external to VP but below the AspP head.

<sup>13</sup> Svenonius proposes a second, alternative derivation where the prefix merges as a PP inside the VP and then moves via phrasal movement into SpecAspP to the left of the verb. The differences of the two possibilities will be neglected in this work.

<sup>14</sup> Secondary imperfectivization (SI) describes an operation that turns a prefixed perfective verb into its imperfective version again. The affix inducing SI is merged in the head of AspP above VP.

Next, only lexical but not superlexical prefixes show idiomatic meanings since the lexical prefixes merge within and superlexical outside the scope of idiom formation. Marantz (1997) demonstrates that idioms are limited in their structural size and cannot span across phase boundaries. Superlexical prefixes merge above VP and external to the verb phase, hence they do not form idiosyncratic meanings. Lexical prefixes are generated inside the verb phase, which is why they allow idiosyncratic and idiomatic semantics. Nevertheless, Svenonius adds that superlexical prefixes can indeed yield idiomatic meanings in rare cases.

Despite his clear-cut distinction between lexical and superlexical prefixes, Svenonius admits that superlexical prefixes sometimes pattern with lexical prefixes. He mentions that “[*in some cases, it may be desirable to make a finer distinction than the coarse two-way split between lexical and superlexical.*” (Svenonius 2004: 240). This conclusion can be found in other works about Slavic prefixes too.

#### **4.3.2 Gehrke (2008)**

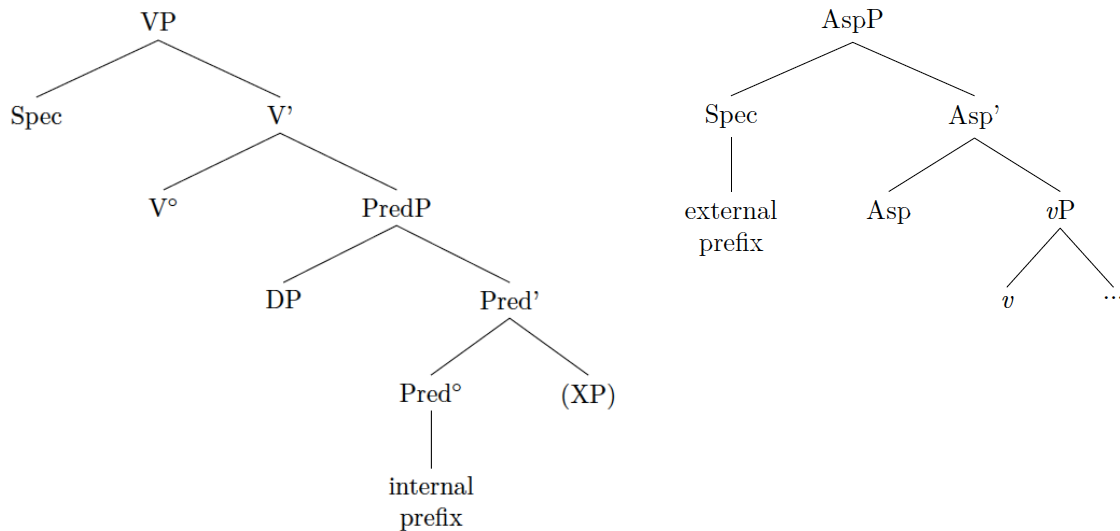
In her dissertation, Gehrke provides a thorough analysis of the category P which arguably groups together adpositions, verbal prefixes/particles and cases with spatial meaning. For the purpose of my thesis, I will limit the discussion to Ps that combine with verbs, namely verbal prefixes (and particles). Similarly to Svenonius, Gehrke differentiates between two prefixal types in Slavic: internal (= lexical) and external (= superlexical) prefixes. The notion of event structure is crucial in her account since the essential difference between both prefixes is that

*“internal prefixes participate in structuring the event by supplying or identifying the upper bound of a BECOME event [...], which is an essential part of accomplishment and achievement structures. External prefixes, on the other hand, merely modify already existing structures but do not add anything to the event structure”* (Gehrke 2008: 146).

This difference can be illustrated by the varying syntactic structures. (23a) depicts the structure of an internal and (23b) the structure of an external prefix. Gehrke assumes that the internal prefix is the head of a PredP since it involves accomplishment structures consisting of resultative predicates. The external prefix, on the other hand, is generated in the specifier of AspP just as in Svenonius’ proposal.

(23) a. internal prefix (Gehrke 2008: 164))

b. external prefix (Gehrke 2008: 164, after Ramchand 2004)



Gehrke discusses the prefixes' different behaviors regarding the internal aspect (telicity/lexical aspect) and the external aspect (perfectivity/grammatical aspect). She concludes that even though prefixes play a crucial role in aspectual marking, they “*turn out to be neither [uniform] perfectivity nor [uniform] telicity markers*” (Gehrke 2008: 161). Instead, she relates the internal prefix to inner aspect and the external prefix to external aspect. However, Gehrke admits that only in Russian the external prefix is related to perfectivity and in Czech these prefixes do not always function as perfectivity markers<sup>15</sup>.

Again, it follows from the structures in (23) that internal prefixes can change the argument structure, whereas external prefixes do not show such an effect. Additionally, Gehrke agrees with Svenonius in that only internal prefixes allow SI and external prefixes do not. Next, internal prefixes can induce idiosyncratic meaning, whereas external prefixes are typically predictable and compositional in nature or function as adverbial modifier.

Gehrke introduces a third category of prefixes – *empty prefixes* which turn imperfective verbs into their perfective counterpart without affecting the meaning. Although these prefixes affect

<sup>15</sup> For this very reason, Gehrke assumes that the Czech external prefix is not generated in SpecAspP as illustrated in (23b). Instead, Czech external prefixes are considered to be adverbial modifiers that attach as VP adjuncts. Nevertheless, the remaining distinguishing properties of internal and external prefixes which will be of importance to my thesis are the same in Russian and Czech. This follows from the crucial structural difference, namely that the Czech external prefix, in contrast to the internal prefix, is base-generated outside of VP.

the external aspect, they pattern mostly with internal prefixes. This prefixal category will be ignored in the further discussion since I am focusing on prefixes that contribute semantics.

As already indicated, Czech and Russian external prefixes seem to vary in structure (and some other aspects). Since Gehrke is more concerned with internal prefixes, her dissertation does not discuss Czech external prefixes thoroughly. In addition, it has to be mentioned that she considers only two Czech external prefixes – *po-* and *pro-*. The question arises whether all other prefixes, despite their productive and compositional meaning, are to be classified as internal and whether Gehrke’s differentiation can be extended to the entire Czech prefixal system.

#### **4.3.3 Biskup (2019)**

Biskup’s account varies noticeably from Gehrke’s and Svenonius’ proposals since his differentiation between lexical and superlexical prefixes is neither clear-cut nor of great importance to his account. Biskup shows that, in most cases, superlexical prefixes can pattern with lexical prefixes which is why he assumes a similar syntactic structure for both prefixal types. Biskup proposes that “*[lexical and some superlexical] prefixes are incorporated prepositions projecting their argument structure in the complement position of the verbal root that functions as a result state predicate*” (Biskup 2019: 1).

He illustrates that lexical and superlexical prefixes can affect argument structure, induce perfectivity and telicity and combine with secondary imperfectives. The question arises how to distinguish lexical and superlexical prefixes in this proposal. It turns out that Biskup assumes one single derivation for Slavic prefixes and proposes a different classification of prefixes. He groups together all prefixes with regular meanings and opposes them to idiosyncratically prefixed verbs. More precisely, he accounts for four classes of prefixed verbs taking into consideration the meaning of the verb too: I) prefix with regular meaning + verb with regular meaning, II) prefix with regular meaning + verb with irregular meaning, III) prefix with irregular meaning + verb with regular meaning and IV) prefix with irregular meaning + verb with irregular meaning. His proposed derivation will be discussed in further detail in section 5.

#### **4.3.4 Interim summary about prefixes in Slavic**

Table (24) summarizes and compares the three accounts discussed so far. While Gehrke and Svenonius insist on the differentiation between lexical (internal) and superlexical (external) prefixes on the base of varying properties, their structural proposals for Slavic prefixes are quite similar. According to Biskup, lexical and superlexical prefixes pattern together in many respects and share the same underlying structure. What differentiates Slavic prefixes in his

account is their meaning. Some prefixes show regular and predictable semantics, while others have idiosyncratic meanings.

## (24) A comparison of Svenonius' (2004), Gehrke's (2008) and Biskup's (2019) accounts

	<b>Svenonius (2004)</b>		<b>Gehrke (2008)</b>		<b>Biskup (2019)</b>	
	<b>lexical</b>	<b>superlexical</b>	<b>internal</b>	<b>external</b>	<b>lexical</b>	<b>superlexical</b>
<i>meaning</i>	resultative, spatial, idiosyncratic, regular	adverbial, auxiliary like, quantificational, regular	idiosyncratic, regular	adverbial, regular	spatial, idiosyncratic, regular,	adverbial, regular
<i>aspect</i>	induce perfectivity and telicity	induce perfectivity, no information concerning telicity	induce inner aspect	induce outer aspect <sup>16</sup>	induce perfectivity and telicity	induce perfectivity and telicity
<i>argument structure (AS)</i>	affect AS	do not affect AS	affect AS	do not affect AS	affect AS	affect AS
<i>SI</i>	possible	impossible	possible	impossible	possible	possible
<i>structural properties</i>	VP internal, head of RP	VP external, Spec of AspP	VP internal, head of PredP	VP external, Spec of AspP <sup>17</sup>	VP internal, incorporated prepositions	can be VP internal, can be incorporated prepositions

Referring back to prefixed reflexives, two obvious questions arise. Are the prefixes in prefixed reflexive verbs lexical or superlexical? Can the prefixes in these constructions be treated in a uniform way or do they behave differently in some respects? These questions, in fact, are part of the research question introduced at the very beginning of my thesis. To approach the answers to them and to the remaining research questions, I conducted an elicitation study.

## 5. Empirical part: Elicitation study

The elicitation study consists of two parts. The goal of the first step was to find out more about the underlying structure of the prefixes in prefixed reflexives. Concretely, I wanted to figure out whether the prefixes have to be classified as lexical/internal or superlexical/external and whether the differentiation between the two prefixal types is of importance to my discussion or not. This undertaking refers directly to the research questions (II) and (III) and helps to approach questions (I) and (V) since the results will reveal where to locate the prefix in the clausal structure. As remainder, all research questions are repeated here.

<sup>16</sup> This is not valid for Czech (consider footnote 15)

<sup>17</sup> This is not valid for Czech (consider footnote 15).

- (I) What is the connection between the prefix and the reflexive clitic?**
- (II) Are the prefixes in prefixed reflexives lexical or superlexical?**
- (III) Can the prefixes be treated in a uniform way or do they behave differently?**
- (IV) Is this a subtype of inherently reflexives as it is claimed in the literature?**
- (V) How can this pattern be modelled syntactically?**

In the second part of the data gathering, I wanted to detect whether the verbs under investigation are transitive or intransitive, meaning whether the reflexive clitic can be treated as a (semantically empty) syntactic dummy element or as a DP/NP-like argument that can be replaced by any other DP. This discussion refers to the research question (IV) since the reflexive clitic in semantically reflexive verbs patterns parallel to real DPs whereas *SE* in inherently reflexives is semantically empty. Furthermore, it is crucial to know if the verbs are transitive or intransitive (unergative or unaccusative) to conceptualize the syntactic structure of the verbs (V), and finally, to determine the connection between the prefix and the clitic (I).

Three prefixes that come hand in hand with the reflexive clitic were chosen to be scrutinized in detail: *na- se*, *roz- se* and *u- se*. The prefix *na- se* induces accumulative semantics (Svenonius 2004: 230; Biskup 2019: 6). The prefix *roz- se* adds an inceptive (Biskup 2019: 24) or excessive/augmentative meaning (Svenonius 2004: 230; Oertle 2016: 286). In my investigation, I mainly applied the inceptive *roz- se*. *U- se* implies that the action was executed until total exhaustion or even death. Hence, it can be translated as ‘to death’, or in German as ‘zu Tode’, while it can be understood literally or in the figurative sense.

The methodical setup of the elicitation study can be summarized in the following way. The experimental items were Czech sentences containing the relevant prefixes and varying in one single factor. The relative varying factors are discussed one by one in the following subsections. The minimal pairs were collectively presented to the participants who had to judge whether the sentences sound grammatically correct to them or not. Sometimes, it was necessary to check and verify the grammatical judgement in a personal discussion. Luckily, that was possible since I was in close contact with my participants. The participants were three native speakers of Czech living in Prague. The data collection was partly held remotely and partly in person.

## 5.1 Empirical part I: lexical vs. superlexical prefixes

For the first part of the empirical data elicitation, the homonymous non-reflexivizing prefixes (*na-*, *roz-*, *u-*) were compared to the reflexive constructions (*na- se*, *roz- se*, *u- se*) by considering three characteristics: *grammatical and lexical aspect*<sup>18</sup>, *argument structure* and *secondary imperfectivization*. According to Gehrke and Svenonius, these properties are meant to determine whether the prefixes are lexical or superlexical. On the basis of their possible meanings, prefixes in reflexive prefixed verbs are expected to be superlexical since they always show productive and compositional meaning. On the other hand, their homonymous non-reflexivizing counterparts can exhibit irregular and idiosyncratic semantics, hence these prefixes are supposed to be lexical. The hypotheses can be summarized in the following way:

- (25) a. The reflexivizing prefixes *na- se*, *roz- se* and *u- se* are superlexical.
- b. The non-reflexivizing prefixes *na-*, *roz-* and *u-* are lexical (idiosyncratic meaning possible).

However, there is a little caveat. All authors agree that if a construction involves special meaning, the prefix has to be lexical since superlexical prefixes cannot have irregular semantics. But of course, special meaning is never required and prefixes with regular meaning can be lexical too. Thus, one cannot conclude anything about the nature of the prefixes from constructions with regular semantics and other properties need to be considered as well. Since reflexivizing prefixes exclusively show productive, non-idiomatic meanings, classifying them as superlexical seems to be more plausible<sup>19</sup>. And since the non-reflexivizing prefixes are the ones which can depict idiosyncratic meaning, I consider these elements as lexical, bearing in mind that the non-reflexivizing prefixes showing regular meaning could be superlexical as well.

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<sup>18</sup> Although it already became obvious from the literature that aspect marking does not clearly distinguish between lexical or superlexical prefixes in Czech, I nevertheless include this property because of its importance.

<sup>19</sup> The literature confirms my intuition about the superlexical prefixes. Svenonius and Biskup mention the accumulative prefix *na-* and classify them as superlexical. However, Svenonius admits that the accumulative *na-* sometimes allows secondary imperfectivization (Svenonius 2004: 230) and interacts with argument structure (Svenonius 2004: 236). Biskup shows that the superlexical prefix *na-* patterns with lexical prefixes anyway.

I took a look at non-reflexivizing prefixes with regular and irregular semantics and it turned out that the (ir-)regular meaning does not influence their morphosyntactic behavior<sup>20</sup>.

Gehrke's and Svenonius' proposals make different predictions about lexical and superlexical prefixes than Biskup's analysis. This implies that the outcome of the elicitation study will not only tell us how to classify the reflexivizing and non-reflexivizing prefixes, but also which proposal to follow. Comparing the authors' classifications and the predictions in (25), Gehrke, Svenonius and Biskup agree in regard of lexical prefixes predicting that non-reflexivizing prefixes affect (inner) aspect, argument structure and allow SI. However, they disagree concerning superlexical prefixes. Gehrke's and Svenonius' accounts predict that reflexivizing prefixes should not have an effect on argument structure and should disallow SI. In contrast, Biskup's analysis proposes that the reflexivizing prefixes behave the same as the non-reflexivizing elements.

In sum, the aim of the data elicitation is I) to determine whether the reflexivizing prefixes can be classified as superlexical and their non-reflexive counterparts as lexical and II) whether a clear-cut differentiation between these two elements is relevant at all. In the following sections, I discuss the results of the elicitation study part I.

### 5.1.1 Grammatical aspect: Perfectivity<sup>21</sup>

It is known that only imperfective verbs combine with the future auxiliary *bude* 'will/going to' since the perfective verb (in present tense morphology) already bears a future connotation (the imperfective verb does not have to occur with the future auxiliary to be grammatical). The verbs with reflexivizing and non-reflexivizing prefixes were combined with *bude* to test whether these verbs are perfective or imperfective. In addition, I checked a control sentence with the unprefixed (imperfective) verb containing the future auxiliary, to be sure that it is the factor,

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<sup>20</sup> It has to be mentioned that a non-reflexivizing item can be either quite similar in meaning to the reflexivizing prefix, as for example in *napracovat se/ napracovat (hodiny)* 'to work a lot' / 'to work overtime' and *rozběhnout se/ rozběhnout něco* 'to start running' / 'to get sth. going' or pretty different, as for instance in *namluvit se/ namluvit někomu něco* 'to talk a lot' / 'to make sb. believe sth.' and *upít se/ upít* 'to drink oneself to death' / 'to take a sip'. Hence, as I already alluded to above, it could be argued that the non-reflexivizing prefixes which are very close in meaning to their reflexivizing counterparts are of the same prefixal type, namely superlexical. I tested prefixed verbs with related and distant meanings and the results show that the prefixes pattern the same.

<sup>21</sup> An additional reason to test perfectivity was that some online dictionaries (<https://prirucka.ujc.cas.cz/> 11.05.2022; <https://slovníky.lingea.cz/> 11.05.2022 ) designated the reflexivizing prefix *na- se* as perfective and imperfective. This fact requires empirical verification.



*bude*, that induces (un-)grammaticality. The examples in (26)-(34) illustrate that the reflexivizing and non-reflexivizing prefixes pattern identically regarding grammatical aspect. Both elements induce perfectivity.

The grammaticality of the control items in (26b), (27b) and (28b) illustrates that the unprefixes verb is imperfective since it can combine with the future auxiliary *bude*. The sentences in (26a), (27a) and (28a) confirm that imperfective verbs are licit without the future auxiliary.

- (26) a. Pří hraní této role na jevišti (hodně) mluví.  
 By playing this role on stage.LOC (a lot) talk.IPFV.3.SG  
 ‘By playing this role he/she is talking (a lot) on stage.’
- b. Pří hraní této role bude na jevišti (hodně) mluvit.  
 By playing this role be.FUT.3.SG on stage.LOC (a lot) talk.IPFV.INF  
 ‘By playing this role he/she will talk (a lot) on stage.’
- (27) a. Petr běhá k matce.  
 Petr run.IPFV.3.SG to mother.DAT  
 ‘Peter is running to his mother.’
- b. Petr bude běhat k matce.  
 Petr be.FUT.3.SG run.IPFV.INF to mother.DAT  
 ‘Peter will run to his mother.’
- (28) a. Jana pije vodu.  
 Jana drink.IPFV.3.SG water.ACC  
 ‘Jana is drinking water.’
- b. Jana bude pít vodu.  
 Jana be.FUT.3.SG drink.IPFV.INF water.ACC  
 ‘Jana will drink water.’

The contrast between (29a), (30a), (31a) and (29b), (30b), (31b) indicates that the prefixed reflexive verbs are perfective since they cannot combine with *bude*.

- (29) a. Pří hraní této role se na jevišti hodně na-mluví.<sup>22</sup>  
 By playing this role SE on stage.LOC a lot NA-talk.PFV.3.SG  
 ‘By playing this role he/she talks a lot on stage.’
- b. \*Pří hraní této role se bude na jevišti hodně na-mluvit.  
 By playing this role SE be.FUT.3.SG on stage.LOC a lot NA-talk.PFV.INF
- (30) a. Petr se roz-běhne k matce.  
 Petr SE ROZ-run.PFV.3.SG to mother.DAT  
 ‘Petr will start running to his mum.’
- b. \*Petr se bude roz-běhnout k matce.  
 Petr SE be.FUT.3.SG ROZ-run.PFV.INF to mother.DAT
- (31) a. Jana se u-píje (vínem).  
 Jana SE U-drink.PFV.3.SG (wine.INS)  
 ‘Jana drinks herself to death with wine.’
- b. \*Jana se bude u-pít (vínem).  
 Jana SE be.FUT.3.SG U-drink.PFV.INF (wine.INS)

Comparing the non-reflexive verbs in (32a), (33a) and (34a) to the ones in (32b), (33b) and (34b), one can observe exactly the same effect as for the reflexive counterparts. The prefixed verbs are ungrammatical in combination with the future auxiliary, too. Hence, they (or the

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<sup>22</sup> The reflexivizing prefix *na-* *se* demands a quantificational element to be grammatical. This aspect will be discussed in further detail in section 6.

- II) a. Pří hraní této role se na jevišti hodně na-mluví.  
 By playing this role SE on stage.LOC a lot NA-talk.PFV.3.SG  
 ‘By playing this role he/she is talking a lot on stage.’
- b. \*Pří hraní této role se na jevišti na-mluví.  
 By playing this role SE on stage.LOC NA-talk.PFV.3.SG

configurations involving them) induce perfectivity. Reflexive and non-reflexive prefixed verbs behave the same way in regard of grammatical aspect.

- (32) a. Petr nám na-mluví nějaké nesmysly.  
Petr us.DAT NA-talk.PFV.3.SG some nonsense.ACC  
‘Peter makes us believe nonsense.’
- b. \*Petr nám bude na-mluvit nějaké nesmysly.  
Petr us.DAT be.FUT.3.SG NA-talk.PFV.INF some nonsense.ACC
- (33) a. Petr roz-běhne motor.  
Petr ROZ-run.PFV.3.SG motor.ACC  
‘Peter starts the motor.’
- b. \*Petr bude roz-běhnout motor.  
Petr be.FUT.3.SG ROZ-run.PFV.INF motor.ACC
- (34) a. Jana u-pije ze sklenice.  
Jana U-drink.PFV.3.SG from glass.GEN  
‘Jana takes a sip from the glass.’
- b. \*Jana bude u-pít ze sklenice.  
Jana be.FUT.3.SG U-drink.PFV.INF from glass.GEN

### 5.1.2 Lexical aspect: Telicity

Telic verbs can be combined with *in*-adverbials but not with *for*-adverbials, whereas the opposite is true for atelic verbs. The reflexivizing and non-reflexivizing prefixes were combined with *in*- and *for*-adverbials respectively in order to test whether these predicates are telic or atelic. Again, I made use of a control item containing a verb without prefix to be sure that the adverbial choice is crucial for (un-)grammaticality. The judgments of the following sentences in (35)-(40) show that verbs with reflexivizing and non-reflexivizing prefixes are both telic and that the bare verbs without prefixes are atelic.

Contrasting (35a), (36a) and (37a) with (35b), (36b) and (37b) respectively illustrates that the unprefixes verbs are atelic since they combine with *for*-adverbials, but not with *in*-adverbials.

(35) a. Petr pracoval pět hodin.  
 Petr work.PTCP.IPFV five hour.GEN.PL  
 ‘Peter worked for five hours.’

b. \*Petr pracoval za pět hodin.  
 Petr work.PTCP.IPFV in five hour.GEN.PL

(36) a. Jan mluvil pět minut.  
 Jan talk.PTCP.IPFV five minut.GEN.PL  
 ‘Jan was talking for five minutes.’

b. \*Jan mluvil za pět minut.  
 Jan talk.PTCP.IPFV in five minut.GEN.PL

(37) a. Katja pila dvacet let.  
 Katja drink.PTCP.IPFV twenty year.GEN.PL  
 ‘Kate was drinking for twenty years.’

b. \*Katja pila za dvacet let.  
 Katja drink.PTCP.IPFV in twenty year.GEN.PL

The prefixed verbs are grammatical with *in*-adverbials (consider (38a,c), (39a,c) and (40a,c)) and ungrammatical with *for*-adverbials (consider (38b,d), (39b,d) and (40b,d)) regardless of the presence of the reflexive clitic. This is clear evidence for telicity. Prefixed verbs with and without reflexive elements are telic.

(38) a. Petr se za pět hodin už dost na-pracoval.  
 Petr SE in five hour.GEN.PL enough NA-work.PTCP.PFV  
 ‘Peter worked enough in five hours.’

b. \*Petr se pět hodin už dost na-pracoval.  
 Petr SE five hour.GEN.PL enough NA-work.PTCP.PFV

- c. Petr na-pracoval dost přesčasů za pět měsíců.  
Petr NA-work.PTCP.PFV enough overtime.GEN.PL in five month.GEN.PL  
‘Petr worked enough overtime in five months.’
- d. \*Petr na-pracoval dost přesčasů pět měsíců.  
Petr NA-work.PTCP.PFV enough overtime.GEN.PL five month.GEN.PL
- (39) a. Jan se roz-mluvil za pět minut.  
Jan SE ROZ-talk.PTCP.PFV in five minut.GEN.PL  
‘Jan warmed up his voice and mouth muscles in five minutes.’
- b. \*Jan se roz-mluvil pět minut.  
Jan SE ROZ-talk.PTCP.PFV five minut.GEN.PL
- c. Jan roz-mluvil kamarádovi za pět minut tetování.  
Jan ROZ-talk.PTCP.PFV friend.DAT in five minut.GEN.PL tattoo.ACC  
‘Jan talked his friend out of getting a tattoo in five minutes.’
- d. \*Jan roz-mluvil kamarádovi pět minut tetování.  
Jan ROZ-talk.PTCP.PFV friend.DAT five minut.GEN.PL tattoo.ACC
- (40) a. Katja se u-pila za dvacet let.  
Katja SE U-drink.PTCP.PFV in twenty year.GEN.PL  
‘Kate drank herself to death in twenty years.’
- b. \*Katja se u-pila dvacet let.  
Katja SE U-drink.PTCP.PFV twenty year.GEN.PL
- c. Katja u-pila za tři hodiny z jedné sklenice.  
Katja U-drink.PTCP.PFV in three hour.ACC.PL from one glass.GEN  
‘Kate sipped from one glass in three hours.’
- d. \*Katja u-pila tři hodiny z jedné sklenice.  
Katja U-drink.PTCP.PFV three hour.ACC.PL from one glass.GEN

### 5.1.3 Argument structure

In a third step, I tested the prefixes' effect on the argument structure of the verb. The prefixes with and without reflexive clitic were combined with a direct object in ACC case. Arguments bearing oblique case or occurring in form of a PP were checked as well. Sentences containing an unprefixed verb and a direct object in ACC case or the reflexive clitic served as control items. The examples in (42)-(50) illustrate the transitivity/reflexivity effect of the prefixes in a systematic way and demonstrate that these elements with and without clitic affect the argument structure of the verb. More precisely, this subsection allows to draw the generalization in (41).

#### (41) The prefix-argument-structure generalization:

*The attached prefix opens a new argument position on the verb. This argument position corresponds to the internal argument and can be filled either with a direct object in ACC case or a reflexive clitic bearing ACC case.*

The control items in (42a) and (43a) show that the unprefixed verbs can optionally take a direct object in ACC case. However, the object in ACC case becomes obligatory in constructions with prefixed verbs since the sentences with prefixed verbs without a direct object in ACC case are ungrammatical. This effect can be observed by comparing (42b), (43b) and (44b) to (42c), (43c) and (44c) respectively<sup>23</sup>. In sum, the prefix without a reflexive element transitivity the verb.

- (42) a. Marie zpívá (lidovky).  
Marie sing.IPFV.3.SG folk song.ACC  
'Mary is singing (folk songs).'

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<sup>23</sup> With some verbs like *upít* 'take a sip' the object does not have to be expressed (consider III). I assume that these verbs have a covert argument just as verb like *eat* and *drink* always have.

- III) Jana u-pije.  
Jana U-drink.PFV.3.SG  
'Jana is taking a sip.'

- b. Marie na-zpívá lidovky.  
 Marie NA-sing.PFV.3.SG folk song.ACC  
 ‘Mary records folk songs.’
- c. \*Marie na-zpívá.  
 Marie NA-sing.PFV.3.SG
- (43) a. Petr mluví (nesmysly).  
 Petr talk.IPFV.3.SG nonsense.ACC  
 ‘Peter is talking (nonsense).’
- b. Petr roz-mluví mamce večeři se sousedem.  
 Petr ROZ-talk.PFV.3.SG mother.DAT dinner.ACC with neighbor.INS  
 ‘Petr talks this mother out of having dinner with the neighbor.’
- c. \*Petr roz-mluví.  
 Petr ROZ-talk.PFV.3.SG
- (44) a. Jana mluví.  
 Jana talk.IPFV.3.SG  
 ‘Jana is talking.’
- b. Jana u-mluví rodiče.  
 Jana U-talk.PFV.3.SG parent.ACC  
 ‘Jana persuades her parents.’
- c. \*Jana u-mluví.  
 Jana U-talk.PFV.3.SG

The control items in (45a), (46a) and (47a) show that the unprefix verb cannot combine with the reflexive clitic. Instead, in order to be grammatical without DO, the prefixed verb requires *SE*. This becomes very obvious by comparing (45b), (46b) and (47b) to (45c), (46c) and (47c) respectively. It can be added to the conclusion above that the prefixed verbs without direct

object in ACC case OR the reflexive clitic are ungrammatical. Hence, the prefix transitivizes OR reflexivizes the verb.

- (45) a. \*Marie se zpívá.  
Marie SE sing.IPFV.3.SG
- b. Marie se (hodně) na-zpívá (lidovek).  
Marie SE a lot NA-sing.PFV.3.SG (folk song.GEN)  
'What a great number of folk songs will Marie sing!'  
(translation parallel to Medová 2009: 47)
- c. \*Marie na-zpívá.  
Marie NA-sing.PFV.3.SG
- (46) a. \*Petr se mluví.  
Petr SE talk.IPFV.3.SG
- b. Petr se roz-mluví.  
Petr SE ROZ-talk.PFV.3.SG  
'Petr starts talking.'
- c. \*Petr roz-mluví.  
Petr ROZ-talk.PFV.3.SG
- (47) a. \*Jana se mluví.  
Jana SE talk.IPFV.3.SG
- b. Jana se u-mluví.  
Jana SE U-talk.PFV.3.SG  
'Jana will talk herself to death.'
- c. \*Jana u-mluví.  
Jana U-talk.PFV.3.SG



Furthermore, the sentences in (48a) and (50a) illustrate that the reflexive prefixed verbs can optionally occur with an object in oblique case (GEN case in (48a)) or an object in form of a PP (50a). The unacceptability of the items in (48b), (49b) and (50b) demonstrates that *SE* cannot cooccur with an object in ACC case. The reflexive element and the direct object seem to be in complementary distribution; hence it is plausible to assume that they occupy the same position in the syntactic tree. This position, in turn, is conditioned by the prefix on the verb.

- (48) a. Marie se (hodně) na-zpívá (lidovek).  
 Marie SE a lot NA-sing.PFV.3.SG (folk song.GEN)  
 ‘What a great number of folk songs will Marie sing!’  
 (translation parallel to Medová 2009: 47)
- b. \*Marie se na-zpívá lidovky.  
 Marie SE NA-sing.PFV.3.SG folk song.ACC
- (49) a. Petr se roz-mluví.  
 Petr SE ROZ-talk.PFV.3.SG  
 ‘Petr starts talking.’
- b. \*Petr se roz-mluví projev.  
 Petr SE ROZ-talk.PFV.3.SG speech.ACC
- (50) a. Jana se u-pracuje (na tom článku).  
 Jana SE U-talk.PFV.3.SG on this article.LOC  
 ‘Jana will work herself to death on this article.’
- b. \*Jana se u-pracuje článek.  
 Jana SE U-talk.PFV.3.SG article.ACC

For the sake of order, the table (51) summarizes the argument structure effects of the prefixes which are in line with the generalization stated in (41).

(51) Argument structure effects of the prefixes

verb	argument structure
bare verb without prefix or <i>SE</i> e.g. <i>mluvit</i>	DO in ACC case is optional
prefixed verb without <i>SE</i> e.g. <i>rozmluvit</i>	DO in ACC is obligatory
unprefixed verb with <i>SE</i> e.g. <i>*mluvit se</i>	ungrammatical
prefixed verb with <i>SE</i> e.g. <i>rozmluvit se</i>	object in oblique case/as PP optional; DO in ACC case ungrammatical

5.1.4 Secondary imperfectivization

In a last step of the first data collection, I applied the diagnostic of secondary imperfectivization. Secondary imperfectives are built with the affix *-va-* that attaches to the verbal root. Hence, I asked my informants to form sentences with the prefixed, but imperfective, verbs. My informants were able to form grammatical sentences with reflexive and non-reflexive prefixed imperfective verbs. The examples (52)-(57) illustrate a selection of the produced sentences. Notice that the reflexivizing and non-reflexivizing prefixes can be found in secondary imperfectives.

- (52) V té práci jsem se pravidelně na-pracová-va-la více, než  
in that job be.1.SG SE regularly NA-work-VA-PTCP.IPVF more than  
bylo zdrávo.  
be.PST.N.SG healthy  
'In that job, I regularly worked more than it was healthy.'

- (53) Jan na-pracová-vá přesčasy, protože si chce  
Jan NA-work-VA.3.SG.IPVF overtime.ACC because SE.DAT want.3.SG.IPVF  
vzít v létě volno.  
take.INF.PFV in summer free  
'Jan is working overtime because he wants to be off in summer.'

- (54) Vtipy byly tak dobře, že publikum vždycky spolehlivě  
jokes be.PST.PL so good COMP audience always reliably  
roze-smá-va-ly.  
ROZ-laugh-VA-PTCP.IPVF  
'The jokes were so good that they always and reliably made the audience laugh.'

- (55) Publikum se vždy před začátkem živého vysílání  
audience SE always before start.INS live show.GEN  
roze-smá-va-lo, aby pořad působil přirozeně.  
ROZ-laugh-VA-PTCP.IPVF COMP TV show sound.PTCP.IPVF naturally  
‘Before the start of the live show, the audience always laughed for a while to make the  
TV show sound naturally.’
- (56) Během stavby pyramid se otroci často u-pracová-va-li  
during construction.GEN pyramid.GEN SE slaves often U-work-VA-PTCP.IPVF  
k smrti.  
to death  
‘During the construction of the pyramids, slaves often working themselves to death.’
- (57) Majitelé továrny u-pracová-va-li svoje zaměstnance  
owner factory.GEN U-work-VA-PTCP.IPVF their employee.ACC  
beztrestně.  
without punishment  
‘The owners of the factory worked their employees to death without punishment.’

### 5.1.5 Discussion of the findings

The outcome of the data collection is very clear. Reflexivizing and non-reflexivizing prefixes behave identically with respect to perfectivity, telicity, and secondary imperfectivization. Prefixes with and without *SE* induce perfectivity and telicity and allow the formation of secondary imperfectives. Treating transitivization and reflexivization as the same operation in regard of argument structure, both prefixal types pattern the same. They create a position for the direct object in ACC case resulting in argument structure augmentation. In the following section, it will become clear why transitivization and reflexivization are sometimes treated as equivalent operations here. The table in (58) summarizes the results comparing them to Gehrke’s, Svenonius’ and Biskup’s predictions.

(58) A comparison of the three account's predictions and the results of the study

	Svenonius (2004), Gehrke (2008)		Biskup (2019)		verbs under investigation	
	lexical/ internal	superlexical/ extern	lexical	superlexical	non-refl. prefixes	refl. prefixes
<i>meaning</i>	resultative, spatial, idiosyncratic, regular	adverbial, auxiliary like, quantificational, regular	spatial, idiosyncratic, regular	adverbial, regular	idiosyncratic, regular	regular
<i>aspect</i>	induce (perfectivity and) telicity	induce perfectivity <sup>24</sup>	induce perfectivity and telicity	induce perfectivity and telicity	induce perfectivity and telicity	induce perfectivity and telicity
<i>AS</i>	affect AS	do not affect AS	affect AS	affect AS	affect AS	affect AS
<i>SI</i>	possible	impossible	possible	possible	possible	possible
<i>structural properties</i>	VP internal, head of RP/PredP	VP external, Spec of AspP <sup>25</sup>	VP internal, incorporated prepositions	can be VP internal, can be incorporated prepositions	?	?

The result of the investigation can be interpreted in two ways. Either we follow Svenonius and Gehrke, concluding that non-reflexivizing as well as reflexivizing prefixes have to be classified as lexical since they pattern with this prefixal type in all three diagnostics. The other option is to agree with Biskup, assuming that lexical and superlexical prefixes show similar morphosyntactic behavior allowing that reflexivizing and non-reflexivizing prefixes can pattern similarly, too.

I decided to follow Biskup for two reasons. Firstly, although non-reflexivizing and reflexivizing prefixes act the same in regard of the four diagnostics, they differ in meaning. Reflexivizing prefixes are always productive, but non-reflexivizing prefixes can be productive and idiosyncratic as well. Following Biskup, it is still possible to distribute the reflexivizing prefixes to the group of superlexical prefixes and at least some non-reflexivizing prefixes, namely the ones with idiosyncratic semantics, to the class of lexical prefixes. It is more informative to retain this difference instead of affirming that all prefixes belong to the same category, as would have been the case following Gehrke and Svenonius<sup>26</sup>. The second reason is that Biskup

<sup>24</sup> According to Gehrke (2008), this is not true for Czech (consider footnote 15).

<sup>25</sup> According to Gehrke (2008), this is not true for Czech (consider footnote 15).

<sup>26</sup> At this point it remains open if all non-reflexivizing prefixes are lexical or if some of them are superlexical in fact. For instance, Biskup classifies the inceptive prefix *roz-* as superlexical (Biskup 2019: 24). But, as I already mentioned, it is not clear to me, how Biskup decides between lexical and superlexical prefixes. In the following discussion, the differentiation will not be of big importance anymore.

provides a detailed syntactic and semantic analysis of verbal prefixes as incorporated prepositions based on the various types of meaning (compositional vs. non-compositional prefixes). As I just suggested, this is the most important factor of distinction in my classification, too. His account will be discussed in detail in section 6 and serves as the basis of my own proposal.

In response to the research question (II), as repeated below, I claim that the prefixes in prefixed reflexive verbs are superlexical, but structurally, they have to attach inside the VP. Concerning research question (III), so far, one can say that the verbs with the three different prefixes behave identically. To approach question (I) and (V), I follow Biskup's claim that prefixes are incorporated prepositions in the complement position of the verbal root. A full account of the structures will be provided in section 6.

- (I) What is the connection between the prefix and the reflexive clitic?**
- (II) Are the prefixes in prefixed reflexives lexical or superlexical?**
- (III) Can the prefixes be treated in a uniform way or do they behave differently?**
- (IV) Is this a subtype of inherently reflexives as it is claimed in the literature?**
- (V) How can this pattern be modelled syntactically?**

## **5.2 Empirical part II: Unergative? Unaccusative? Or even transitive?**

In the second part of the data gathering, I wanted to go into the matter of transitivity, unergativity and unaccusativity. Knowing whether the verbs are transitive, unergative or unaccusative is very important to determine whether the construction at stake can be distributed to the group of inherently reflexive verbs, as it is claimed in the literature, or rather to semantically reflexive verbs. This means that the second empirical part was aimed to approach research questions (I), (IV) and (V). To find out if the reflexive verbs with the different prefixes are transitive, unergative or unaccusative, I took a look at agentivity, *ný*-/ *tý*-participles and the possibility to replace the reflexive clitic with a real argument.

Following Hudoušková (2016), I assume that *SE* is an NP-like argument that in semantically and inherently reflexive verbs occupies the argument position of the verb. I argue that semantically reflexives and inherently reflexives are different in that the clitic, in the first case,

is syntactically present and available for semantic interpretation, whereas in the latter case, the reflexive element is only visible in syntax, but invisible for semantic interpretation. In other words, the reflexive clitic in inherently reflexive constructions is a syntactic dummy element without interpretable semantics. This claim is justified by the fact that only in semantically reflexive structures, the reflexive clitic can be replaced by a real argument (consider (59)) and that only semantically reflexive verbs can form adjectival passives with past passive participles (see (60)). According to Biskup (2019: 78), past passive *ný/-tý*-participles can only be formed with transitive verbs which implies that the semantically reflexive verb *mýt se* ‘wash’ has to be transitive in some respects (past passive participles can also be derived from unaccusative verbs, but these participles show a different ending, namely *-lý*. I will come back to the option of unaccusativity). In this sense, semantically reflexive verbs are syntactically and semantically transitive constructions with a direct object that refers to the agent of the verb.

(59) a. Petr se myje.

Petr SE wash.IPFV.3.SG

‘Peter is washing himself.’

b. Petr myje Aničku.

Petr wash.IPFV.3.SG Anička.ACC

‘Peter is washing Anička.’

(60) Petr se u-myl. Petr je teď u-mytý.<sup>27</sup>

Petr SE U-wash.PTCP.PFV Petr be.3.SG now U-wash.PTCP.PASS.PFV

‘Peter washed himself. Peter is now washed/clean.’

In contrast, inherently reflexive verbs are syntactically transitive (bearing an element in the direct object position), but semantically intransitive since the reflexive clitic cannot be replaced by a direct argument in ACC case (see (61)) and the adjectival passive is not possible (consider (62)). This means that, as the designation already tells us, inherently reflexive verbs bear a syntactically inherent reflexive clitic that is invisible in semantic interpretation. (Note that in (61a), *Marie* is an oblique object bearing GEN case.)

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<sup>27</sup> In this example, the prefix *u-* is an *empty prefix* (terminology of Gehrke (2008)), meaning that it does not contribute any connotation, but turns the imperfective verb into its perfective counterpart. In fact, *ný/-tý*-participles can only be derived from transitive, perfective verbs. Imperfective verbs form the present passive participle.

- (61) a. Jana se ptá Marie.  
 Jana SE ask.IPFV.3.SG Marie.GEN  
 ‘Jana is asking Marie.’
- b. \*Jana ptá Marii.  
 Jana ask.IPFV.3.SG Marii.ACC U
- (62) Jana se ze-ptala. \*Jana je ted’ ze-ptaná.  
 Jana SE ZE-ask.PTCP.PFV Jana be.3.SG now ZE-ask.PTCP.PASS.PFV

Following the literature that prefixed reflexive verbs are classified as inherently reflexives, and having established the difference between semantically and inherently reflexive verbs, the hypotheses in (63) can be made.

- (63) a. Prefixed reflexive verbs do not allow adjectival passives/past passive participles.
- b. In prefixed reflexive verbs, the reflexive clitic cannot be replaced by another direct argument in ACC case.

In addition to adjectival passives and the replacement of direct objects, I tested agentivity at first (as I just mentioned, adjectival passives are possible with unaccusative verbs too, but result in a different ending). In sum, I applied the diagnostics *agentivity*, *adjectival passive* and *replacement of the direct object* to find out whether the verbs under investigation are transitive, unaccusative or unergative. It has to be added that there are very few tests for agentivity, unaccusativity and unergativity in Czech since most of the diagnostics do not work in this language (Biskup 2019: 80; Medová 2008: 27). However, theones applied here yield quite interesting results.

### 5.2.1 Agentivity

According to Biskup (2019: 80), agentive verbs can combine with the agent-oriented adverb *úmyslně* ‘intentionally’. The examples in (64)-(66) show that all prefixed reflexive verbs can occur in combination with the agent-oriented adverb when the context is suitable. This fact is clear evidence for agentivity.

- (64) Karel se úmyslně roz-cvičil dřív, aby měl  
 Karel SE intentionally ROZ-exercise.PTCP.PFV earlier COMP have.PTCP.IPFV  
 dost času.GEN  
 enough time  
 ‘Karel intentionally started to exercise earlier to have enough time.’
- (65) Petr se úmyslně u-pracoval. Zemřela mu žena a  
 Petr SE intentionally U-work.PTCP.PFV die.PTCP.PFV him.DAT wife and  
 už ne-chtěl dál žít.  
 then NEG-want.PTCP.IPFV longer live.INF.IPFV  
 ‘Peter intentionally worked himself to death. His wife died and he didn’t want to live any longer.’
- (66) Jana se hodně na-pracovala úmyslně, protože chtěla  
 Jana SE a lot NA-work.PTCP.PFV intentionally because want.PTCP.IPFV  
 hodně vydělávat.  
 a lot earn.INF.IPFV  
 ‘Jana intentionally worked a lot because he wanted to earn a lot of money.’

However, another test that suggests agentivity is not applicable to the verbs under investigation. Agentive verbs can form *nomen agentis* (consider (67)), but the prefixed verbs do not allow *nomen agentis* (see (68)).

- |      |    |               |  |              |
|------|----|---------------|--|--------------|
| (67) | a. | pracovat      |  | pracovník    |
|      |    | work.INF.IPFV |  | worker       |
|      |    | ‘work’        |  | ‘the worker’ |
|      | b. | mluvit        |  | mluvčí       |
|      |    | talk.INF.IPFV |  | speaker      |
|      |    | ‘talk’        |  | ‘speaker’    |
- 
- |      |    |                               |    |              |
|------|----|-------------------------------|----|--------------|
| (68) | a. | u-pracovat                    | se | *u-pracovník |
|      |    | U-work.INF.PFV                | SE | U-worker     |
|      |    | ‘work until total exhaustion’ |    |              |



- |    |                  |    |               |
|----|------------------|----|---------------|
| b. | na-pracovat      | se | *na-pracovník |
|    | NA-work.INF.PFV  | SE | NA-worker     |
|    | 'work a lot'     |    |               |
|    |                  |    |               |
| c. | roz-mluvit       | se | *roz-mluvčí   |
|    | ROZ-talk.INF.PFV | SE | ROZ-speaker   |
|    | 'start talking'  |    |               |

The first test depicts evidence for agentivity whereas the latter one does not. However, it has to be mentioned that the *nomen agentis*-test does not work with prefixed reflexive verb in other languages, too. Consider the examples in (69) from German.

- |      |    |                    |  |                   |
|------|----|--------------------|--|-------------------|
| (69) | a. | arbeiten           |  | der Arbeiter      |
|      |    | work.INF           |  | the worker        |
|      |    | 'work'             |  | 'the worker'      |
|      |    |                    |  |                   |
|      | b. | sich ein-arbeiten  |  | *der Ein-arbeiter |
|      |    | SE EIN-work.INF    |  | the EIN-worker    |
|      |    | 'learn the ropes'  |  |                   |
|      |    |                    |  |                   |
|      | c. | (einen Bus) fahren |  | der Fahrer        |
|      |    | (a bus) drive.INF  |  | the driver        |
|      |    | 'drive (a bus)'    |  | 'the driver'      |
|      |    |                    |  |                   |
|      | d. | sich verfahren     |  | *der Ver-fahrer   |
|      |    | SE VER-drive.INF   |  | the VER-driver    |
|      |    | 'lose one's way'   |  |                   |

It seems that prefixed reflexive verbs are illicit in *nomen agentis* in this language as well. Although this observation is pretty interesting, it won't be discussed in further detail here and I conclude that the prefixed reflexive verbs are agentive since they can combine with the agent-oriented adverb *úmyslně*.

### 5.2.2 Adjectival passive with *ný/-tý*-participles

As I outlined above, *ný/-tý*-participles can only be derived from transitive verbs (Biskup 2019: 78)<sup>28</sup>. Surprisingly, adjectival passive is the first property where the three prefix constructions do not behave uniformly. *Rozmluvit se* and *upracovat se* allow adjectival passives (consider (70) and (71)), whereas *napracovat se* is illicit in this form (see (72)). The grammaticality of the sentences in (70) and (71) is clear evidence for transitivity. The example in (72) shows that *napracovat se* does not select a semantic direct object, hence this verb is (semantically) intransitive.

- (70) Marie se roz-mluvila.      Marie je      teď      roz-mluvená.  
Marie SE ROZ-talk.PTCP.PFV Marie be.3.SG now ROZ-talk.PTCP.PASS.PFV  
'Marie warmed up her voice. She is now ready to talk.'

- (71) Petr se u-pracoval.      Petr je      teď      u-pracovaný.  
Petr SE U-work.PTCP.PFV Petr be.3.SG now U-work.PTCP.PASS.PFV  
'Peter worked himself to death. He is now exhausted/dead from work.'

- (72) Karel se na-pracoval.      \*Karel je      teď      na-pracovaný.  
Karel SE NA-work.PTCP.PFV Karel be.3.SG now NA-work.PTCP.PASS.PFV

This empirical finding suggests that the prefixes *roz-* *se* and *u-* *se* produce semantically transitive verbs, but the prefix *na-* *se* does not induce semantic transitivity. In section 6, I will try to give an explanation to this puzzle.

### 5.2.3 Replacing the reflexive clitic with a real argument

Transitive constructions consist of an agentive subject and a direct object. Replacing the reflexive clitic with a direct object indicates that the prefixed reflexive verbs are transitive

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<sup>28</sup> Unaccusative verbs can form past passive participles too, but their ending differs from these of participles derived from transitive verbs. Past passive participle from unaccusative verbs end on *-lý*. In addition, the previous subsection illustrated that the prefixed reflexive verbs are agentive which excludes the possibility of unaccusativity.

meaning that the reflexive clitic is a semantically interpretable object<sup>29</sup>. Again, the examples in (73)-(75) illustrate that the prefixed verbs do not behave identically. The reflexive element in *rozmluvit se* and *upracovat se* (consider (73) and (74)) can indeed be replaced by another direct object. In contrast, replacing *SE* with another argument in *napracovat se* results in ungrammaticality (see (75)).

- (73) a. Dítě se roz-mluví.  
child SE ROZ-talk.PFV.3.SG  
'The child starts talking.'
- b. Terapeutka roz-mluví dítě.  
therapist ROZ-talk.PFV.3.SG child.ACC  
'The therapist makes the child to start talking.'
- (74) a. Karel se u-pracoval.  
Karel SE U-work.PTCP.PFV  
'Karel worked himself to death.'
- b. Šéf u-pracoval zaměstnance.  
boss U-work.PTCP.PFV employee.ACC  
'The boss worked his employees to death.'
- (75) a. Petr se hodně na-pracuje.  
Petr SE a lot NA-work.PFV.3.SG  
'Petr works a lot.'

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<sup>29</sup> It is important to specify that although *SE* can be replaced by an ACC object and semantically interpreted as a direct object, its morphosyntactic status remains that of a defective element. *SE* in semantically reflexive verbs is not a full direct object or pronoun. For instance, *SE* alone cannot trigger case agreement. (Medová 2009: 163)

- (IV) a. Petr se u-myl celý.  
Petr SE U-wash.PTCP.PFV whole.NOM.M.SG  
'Petr washed himself entirely.'
- b. \*Petr se u-myl celého.  
Petr SE U-wash.PTCP.PFV whole.ACC.M.SG

- b.      \*Šéf    hodně      na-pracuje      zaměstnance.  
          boss    a lot      NA-work.PFV.3.SG    employee.ACC

The second test of transitivity confirms the results of the first diagnostic. While *roz-* *se-* and *u-* *se-* verbs pattern with transitive verbs, *na-* *se-* constructions seem to be intransitive. Interestingly, even an inherently reflexive verb can change into a semantically reflexive verb by adding the prefix *roz-*. The verb *smát se* ‘laugh’ inheres the reflexive clitic meaning it is intransitive. It is impossible to form the adjectival passive (consider (76)) and *SE* cannot be replaced by another argument (see (77)).

- (76)    Jana se    směje.                      \*Jana je      teď      smatá/smaná.  
          Jana SE laugh.IPFV.3.SG      Jana be.3.SG now      laugh.PTCP.PASS.IPFV

- (77)    a.      Jana se      směje.  
          Jana SE      laugh.IPFV.3.SG  
          ‘Jana is laughing’

- b.      \*Jana směje                      publikum.  
          Jana laugh.IPFV.3.SG      audience.ACC

However, if the prefix *roz-* attaches to the verbal stem the verb turns into a transitive and therefore semantically reflexive verb. The verb *rozesmát se* ‘start laughing/ burst out laughing’ allows adjectival passive (see (78)) and the reflexive clitic can be replaced by another direct object (consider (79)).

- (78)    Dítě se      roze-směje.                      Dítě je      roze-smáté.  
          child SE      ROZ-laugh.PFV.3.SG      child be.3.SG ROZ-laugh.PTCP.PASS.PFV  
          ‘The child starts laughing. The child is laughing/smiling.’

- (79)    a.      Jana se roze-směje.  
          Jana SE ROZ-laugh.PFV.3.SG  
          ‘Jana burst out laughing.’

- b.        Jana roze-směje                      publikum.  
             Jana ROZ-laugh.PFV.3.SG        audience.ACC  
             ‘Jana makes the audience to burst out laughing.’

#### 5.2.4 Discussion of the findings

The second part of the elicitation study provides some surprising results. Firstly, the preliminary conclusion that all three prefixes behave the same way has to be revised (research question (III)). The transitivity tests showed that *roz-* *se-* and *u-* *se-* verbs pattern identically, namely with semantically reflexive and transitive verbs. In contrast, *na-* *se-* verbs seem to be similar to semantically intransitive, hence inherently reflexive verbs. Referring back to research question (IV), one can infer that only the prefix *na-* *se* creates inherently reflexive verbs, as it is claimed in the literature, and the prefixes *roz-* *se* and *u-* *se* generate semantically reflexive verbs. This finding is quite interesting since it clearly contradicts previous work on *SE* in prefixed verbs. As a consequence, the research questions (I) and (V) might have to be answered in two different ways. While the reflexive clitic in the *na-* *se*-combination is a semantically empty element, *SE* in *roz-* *se* and *u-* *se* is a true reflexive clitic indicating the correspondence between the agent and the patient of the action. As I mentioned in footnote 29, it is nevertheless important to distinguish between regular direct objects or pronominal clitics on the one hand and the reflexive clitic on the other hand. These elements, although they syntactically pattern similarly, do not have the same morphosyntactic status. In section 6, I will try to syntactically model the differences between the relative prefixes and the particular elements in direct object position syntactically.

#### 5.3 Interim summary

The data gathering revealed surprising findings, and some hypotheses have to be rejected. According to Gehrke (2008) and Svenonius (2004), the prefixes in prefixed reflexive verbs pattern with lexical prefixes. Following Biskup (2019), these elements can be classified as superlexical while showing lexical properties. I agree with Biskup in that the prefixes in prefixed reflexives are superlexical, but are merged internally to the VP as incorporated prepositions in the complement position of the verbal root. Furthermore, the three prefixes do not pattern identically. The prefixes *roz-* *se* and *u-* *se* create semantically reflexive verbs with a reflexive clitic that is coreferential to the agent of the predicate, whereas *na-* *se* produces inherently reflexive verbs with a semantically vacuous *SE*. The table (80) summarizes the

prefixes' properties. In the next section, I want to provide a thorough analysis of the prefixes as incorporated prepositions bearing in mind their diverging properties.

## (80) Summary of the prefixes' properties

prefix	superlexical	attaches VP-internal	produces inherently reflexive verbs	produces semantically reflexive verbs
<i>na- se</i>	✓	✓	✓	x
<i>roz- se</i>	✓	✓	x	✓
<i>u- se</i>	✓	✓	x	✓

## 6. The proposal

In section 6, I want to provide a possible derivation for the prefixed reflexive verbs by mainly building on Biskup's (2019) analysis of Slavic prefixes. But before going into the syntactic modelling of the constructions, I want to elaborate on the different meanings of the prefixes. *Roz- se*, *u- se* and *na- se* do not only differ in their reflexive nature, but also in the fact that the former two induce resultative meanings, whereas the latter one has an accumulating connotation without a precise result statement. As I will argue below, this very point will be crucial to derive their different syntactic behavior.

Next, I will introduce Biskup's (2019) proposal of Slavic prefixes as incorporated prepositions. His account aligns with the findings of the empirical study since he does not differentiate between lexical and superlexical prefixes, but assumes a common structure for both prefixal types. This fact allows to maintain the assumption that the prefixes *roz- (se)*, *u- (se)* and *na- (se)* are superlexical although they attach VP-internally.

Since the prefixes *roz- (se)* and *u- (se)* induce semantically reflexive verbs with a resultative meaning and the prefix *na- (se)* triggers inherently reflexive verbs with cumulative semantics, the derivation for these prefixes has to differ somewhat. I propose that the P-elements enter the derivation either with a *res-* or *cum-* feature that specifies the relative meaning. Additionally, the reflexive clitic *SE* of semantically reflexive verbs has to be bound in the course of the derivation. In contrast, *SE* in inherently reflexive verbs is inserted as a semantically vacuous element.

## 6.1 Differences in the semantics of the prefixes

The prefixes *roz-* *se* and *u-* *se* turn the verb into resultative constructions since they induce a change of state with a specific result. As I will argue in the next subsection, it is the constituency of resultatives which implies semantic transitivity. In contrast, *na-* *se* adds the meaning of extensive, but vague accumulation, in the sense that the exact measure and result of the verb's action remain unclear (Filip 2000).

As there is no literal translation of the prefix *na-* (*se*) in English or German, it is somehow difficult to grasp its exact connotation. However, the empirical data and the literature suggest that the prefix does not contribute a resultative meaning, as the other prefixes do. The empirical evidence for this claim comes from the fact that my informants did not accept sentences with *na-* *se*-verbs without a quantificational element, as I mentioned in footnote 22. In Czech, the meaning of the prefix *na-* *se* seems to be somehow defective in the sense that it requires further quantificational information to be grammatical. However, the quantificational supplements do not have to give a precise amount of quantity. Vague expressions like *hodně* 'a lot' or *dost* 'enough' are sufficient to license the predicate. Biskup (2019) mentions that in Russian and Polish the accumulative *na-* (without reflexive element) marks the direct object with partitive GEN case, hence it requires plural entities and mass nouns (Biskup 2019: 16, 19, 38). Again, the quantification of *na-* seems to be extensive, but unprecise. This fact is surprising, since the prefix *na-* (*se*) induces telicity and perfectivity, and one would expect a delimitation of the quantity because of the delimitation of the event. However, this paradoxical fact might also explain why some dictionaries mark verbs with the prefix *na-* *se* as imperfective (see footnote 21). I will not discuss the mismatch of aspect and vague quantity measure in further detail here, but stress the fact that *na-* *se* does not induce a resultative meaning, as the other prefixes do. For further discussion of the quantificational issue, I refer the reader to Filip (2000, 2005) who questions the assumption that prefixes are grammatical perfectivity marker.

### 6.1.1 Background about resultative constructions: Levin & Rappaport Hovav 2001

In this subsection, I want to provide further theoretical evidence for the transitivity status of the resultative constructions with the prefixes *roz-* *se* and *u-* *se*. This discussion supports the surprising empirical findings of the second data elicitation which were in contradiction to the literature. Another reason to investigate the transitivity of resultative constructions in more detail is the fact that since Levin & Rappaport Hovav (1995), resultative constructions like the

ones in (81) are actually called *fake reflexives*<sup>30</sup>. This contradicts my idea to classify the resultative constructions at stake as semantically reflexives and deserves further investigation.

(81) Dora shouted herself hoarse.

(Levin & Rappaport Hovav 1995: 35)

Levin & Rappaport Hovav (1995) argue that English resultative constructions are, in fact, not semantically reflexive. On the contrary, they assume that the reflexive pronoun in (79) has to be inserted because of a syntactic requirement called the *Direct Object Restriction* (DOR). The DOR implies “*that a resultative phrase may be predicated of the immediately postverbal NP, but may not be predicated of a subject or of an oblique complement*” (Levin & Rappaport Hovav 1995: 34). This means that in transitive (82) and unaccusative verbs (83), the resultative construction can directly be predicated of the element in direct object position. Meanwhile, in unergative verbs, as there is no direct object, the reflexive pronoun has to be inserted to license the correct reading. In (84), the resultative construction with an unergative verb and without the reflexive pronoun is ungrammatical since the resultative predicate has no constituent to be predicated of.

(82) She soaps me slippery all over.

(Levin & Rappaport Hovav 1995: 34)

(83) The river froze solid.

(Levin & Rappaport Hovav 1995: 39)

(84) \*Dora shouted hoarse.

(Levin & Rappaport Hovav 1995: 35)

However, in a later work, Levin & Rappaport Hovav (2001) argue that the DOR is not sufficient to explain all kinds of resultative constructions in English. Alternatively, they provide a semantic account based on the mapping of event structure to syntax.

The empirical evidence in (85)-(86) clearly challenges the DOR since the examples illustrate that resultative predicates can be subject oriented without inserting a reflexive pronoun. Hence,

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<sup>30</sup> *Fake reflexive* can be understood as an alternative designation for *inherently reflexive*.



resultative constructions are not exclusively restricted to the underlying object. In (85), *the wise men* are the subject and at the same time the argument of the result state *being out of Bethlehem*. In (86), *John* is *on the other side of the room* as a consequence of his own performance of *dancing*.

(85) The wise men followed the star out of Bethlehem.

(Levin & Rappaport Hovav 2001: 770, originally from Wechsler 1997: 313)

(86) John danced mazurkas across the room.

(Levin & Rappaport Hovav 2001: 770, originally from Verspoor 1997: 151)

Levin & Rappaport Hovav (2001) argue that the sentence in (81) differs from the examples in (85)-(86) in that the first one shows a complex event structure, whereas the latter ones depict simple event structures.

More precisely, resultative constructions consist of two subevents. The first event is expressed by the verb and the second one by the resultative phrase. The sentence in (81) implies the event of *shouting* and the event of becoming *hoarse*. The instances in (85)-(86) involve the event of *following* and *dancing*, respectively, and the event of *being out of Bethlehem* and *being on the other side of the room*, respectively. The temporal relation between both subevents differ in (81) and (85)-(86): “*In the bare XP pattern [(85)-(86)] the progress of the event denoted by the verb and the progress towards the achievement of the result state are temporally dependent, while in the reflexive pattern [(81)] they need not be.*” (Levin & Rappaport Hovav 2001: 775). The sentence in (87) illustrates that, in unergative resultatives, the event described by the verb and the achieved result state can be temporally independent.

(87) Sam sang enthusiastically during the class play. He woke up hoarse the next day and said, ‘Well, I guess I’ve sung myself hoarse.’

(Levin & Rappaport Hovav 2001: 775)

In contrast, in the sentences (85)-(86), the event expressed by the verb and the event of reaching the result start and end at the same time, they are temporally dependent and coexisting. For this reason, the authors claim a complex event structure for the sentence in (81) and a simple event structure for the utterances in (85)-(86). The **argument-per-subevent condition** in (88) defines the mapping from the event structure to syntax.

**(88) Argument-per-subevent condition:**

There must be at least one argument XP in the syntax per subevent in the event structure.

(Levin & Rappaport Hovav 2001:779)

Following this condition, the event complexity is represented by the realization of arguments: “*event structures with two subevents must give rise to sentences with both a subject and an object, while simple event structures would give rise to sentences that require only a subject*” (Levin & Rappaport Hovav 2001: 779). This assumption directly explains the presence of the reflexive pronoun in fake reflexives since these constructions consist of two potentially independent subevents and each participant of each subevent has to be expressed. Hence, the authors argue against syntactic accounts that treat the reflexive pronoun in fake reflexives as a “*syntactic placeholder*”, and alternatively, rely on a semantic explanation for the presence of the reflexive element (Levin & Rappaport Hovav 2001: 780). Concerning the sentences in (85)-(86), it follows from the generalization in (88) and their simple event structure that the subject of the result state does not have to be expressed twice<sup>31</sup>.

**6.1.2 Background about resultative constructions: Kaufmann & Wunderlich (1998)**

Independently, Kaufmann & Wunderlich (1998) developed a similar analysis of resultative constructions which differentiates between *strong* and *weak* resultatives. According to the authors, in weak resultatives, a result phrase is introduced which predicates over the argument licensed by the verb. On the other hand, in strong resultatives, the result phrase predicates over an object that is not subcategorized by the verb but is a new and partially independent argument. In the weak resultative in (89), *the meat* is the object licensed by the action *cutting* and at the same time the argument of the result state *being in small pieces*. This is different in the strong resultative in (90), since the object of the verb *drinking* is some pragmatically implied alcoholic beverage, and the result state of *being under the table* (meaning being very drunk) takes the argument *the guests*.

(89) Jim cut the meat into small pieces.

(Kaufmann & Wunderlich 1998: 9)

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<sup>31</sup> One could argue that the sentences in (85)-(86) do meet the argument-per-subevent condition even if their event structure were complex since the sentences contain an object. However, both constructions can be changed into sentences without object. E.g. ‘The wise men went out of Bethlehem.’ and ‘Nova danced across the room.’

(90) John drank the guests under the table.

(Kaufmann & Wunderlich 1998: 9)

(Transitive) weak and strong resultatives can be formalized as in (91) and (92), respectively, where the variable Q refers to the result state. In (91) and (92), the argument of Q varies. In weak resultatives, y is the argument of the verb and of Q, and in strong resultatives, y is only the argument of the verb and z is the argument of Q.

(91) Weak resultatives:  $\lambda Q. \lambda y. \lambda x. \lambda s. \{ \text{VERB}(x,y) \ \& \ \text{BECOME } Q(y) \} (s)$

(92) Strong resultatives:  $\lambda Q. \lambda z. \lambda y. \lambda x. \lambda s. \{ \text{VERB}(x,y) \ \& \ \text{BECOME } Q(z) \} (s)$

Further, the authors assume that unergative verbs have to turn into strong resultatives because the intransitive verb cannot subcategorize for an internal argument, and the resultative phrase has to license the second object. In (93), the object *lawn* is the argument of the result state of *being flat/mud* and not of the agent *the joggers*.

(93) The joggers run the lawn \*(flat/ to mud).

(Kaufmann & Wunderlich 1998: 18)

If unergative verbs bring forth strong resultatives, a second argument has to be inserted, even if the result phrase predicates over the subject. In this case, the second argument is a reflexive pronoun which must be realized as the object of the result phrase. In (94), the resultative phrase of *being tiered* takes the reflexive pronoun *themselves* as argument.

(94) The joggers run \*(themselves) tired.

(Kaufmann & Wunderlich 1998: 18)

Resultative constructions derived from unergative verbs can be formalized as in (95). The agent of the verb and the object of the result state Q are two distinct arguments, namely x and z. Concerning reflexive resultative constructions, the authors add that “*It is possible to realize ‘z’ by a reflexive pronoun, which must be bound to ‘x’ clause-internally, so that ‘x’ and ‘z’ become coindexed in the syntax.*” (Kaufmann & Wunderlich 1998: 21)

(95) Unergative strong resultatives:  $\lambda Q. \lambda z. \lambda s. \{\text{VERB}(x) \ \& \ \text{BECOME } Q(z)\} (s)$

In sum, Levin & Rappaport Hovav (2001) provide evidence for the argumental status of the reflexive element in reflexive resultative constructions based on event structure properties. Kaufmann & Wunderlich (1998) argue in a similar vein, postulating two different arguments for unergative strong resultatives<sup>32</sup>. As I already argued that the *roz-* *se-* and *u-* *se-*verbs pattern like transitive verbs and that both prefixes induce a resultative meaning, I assume the structure in (95) to be the template for the resultative *roz-* *se-* and *u-* *se-*constructions where Q corresponds to the superlexical, resultative meaning of the prefixes.

## 6.2 Closer look at Biskup's (2019) account

Biskup proposes that Slavic prefixes stem from prepositional phrases which merge in the complement position of the verb. In the course of derivation, the prefixes incorporate into the verbal root and relate the verbal event to the state introduced by the prepositional phrase. One of his central arguments for his claim concerns the argument structure of the verb:

*“We have seen that prefixes can manipulate argument structure of the base predicate in various ways. Argument structure is standardly determined in the verbal domain and selectional requirements are saturated under mutual c-command. Thus, given the fact that prefixes can introduce unselected arguments [...] and given that the majority of prefixes is homophonous with a preposition and has a meaning identical or similar to the preposition, the most straightforward analysis is that prefixes project a prepositional phrase in the verbal domain that introduces the appropriate arguments.”*  
(Biskup 2019: 20)

The empirical data introduced in section 4.4.3 and the generalization about the prefix' effect on argument structure supports Biskup's assumption about the prepositional nature of prefixes. The second important ingredient of his analysis is that he assumes:

*“that prepositions mostly introduce a [result] state and the verbal root another eventuality and that the prefixal head of the prepositional phrase introduces a CAUSE operator, which relates these two subevents.”* (Biskup 2019: 15)

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<sup>32</sup> From this point on, it is more appropriate to talk about transitive instead of unergative structures.

This claim is in accordance with the discussion about the resultative meaning of prefixed reflexive verbs put forth earlier in this section. The tree in (97) exemplifies Biskup’s derivation of the Russian sentence in (96). It is important to sketch out the rough traits of his proposal to be able to build on it.

### 6.2.1 Derivation of a non-defective PP

Biskup calls the prepositional phrase in (96) “*non-defective PP because both arguments of the preposition ([čemodan] and [komnatu]) are present in the syntactic derivation. In addition, the preposition is overtly realized and assigns prepositional case to its complement.*” (Biskup 2019: 57f) (the difference between a non-defective PP and a defective PP will be clarified later).

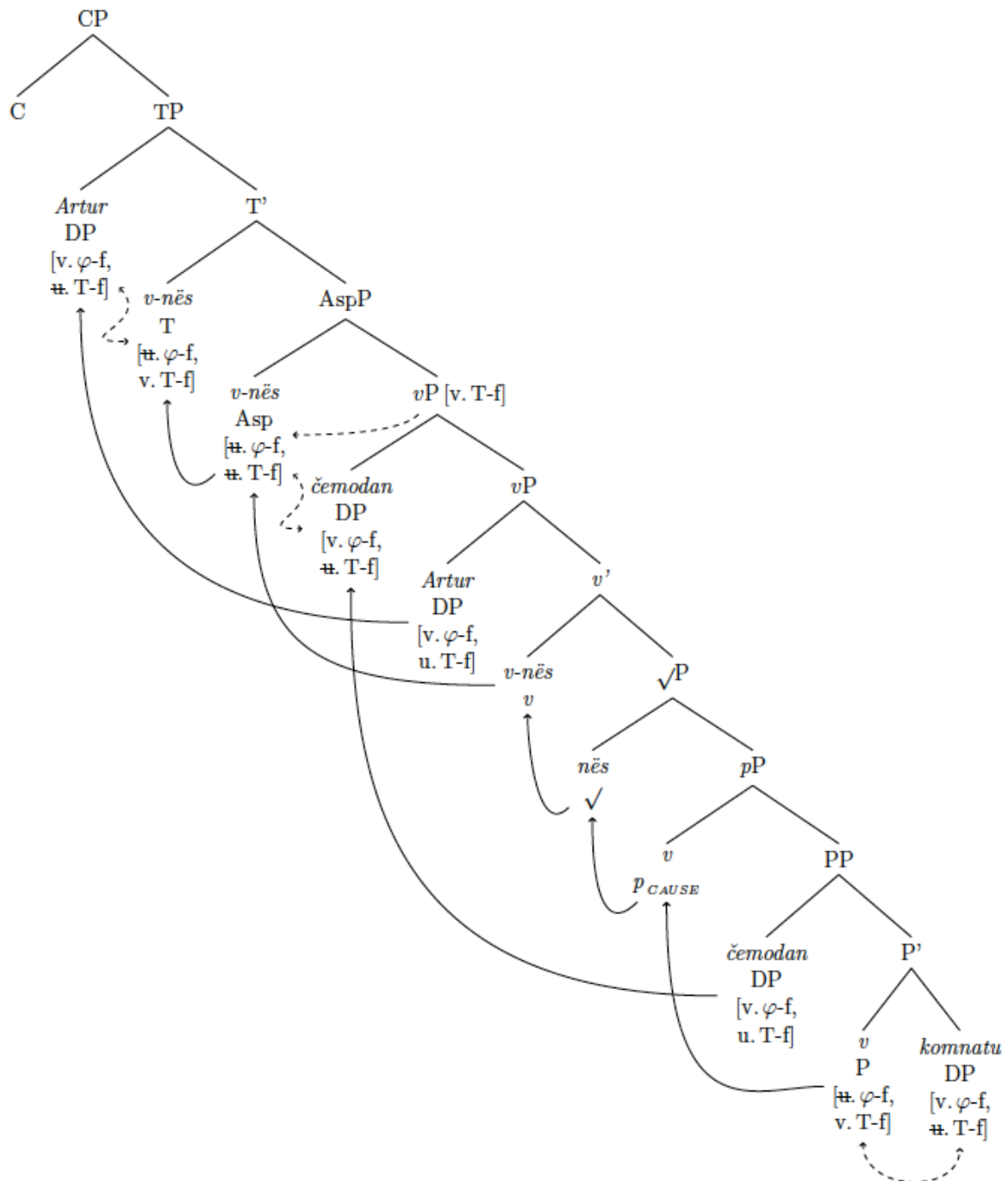
- (96)    Artur                v-něs                čemodan                v komnatu.  
           Artur.NOM        in-carry                suitcase.ACC    in room.ACC  
           ‘Artur carried the suitcase in the room.’

(Biskup 2019: 32)

In Biskup’s proposal, prepositional and structural cases are derived via an Agree relation between  $\phi$ -features and Tense-features. Hence, case assignment and agreement are two aspects of the same operation. The syntactic tree in (97) illustrates the derivation of the sentence in (96). The arrows indicate movement and the dashed lines feature checking and assignment. The abbreviation ‘v.  $\phi$ -f’ stands for ‘valued  $\phi$ -features’ and ‘u.  $\phi$ -f’ stands for ‘unvalued  $\phi$ -features’. Analogously, ‘v. T-f’ means ‘valued Tense-features’ and ‘u. T-f’ indicates ‘unvalued Tense-features’.

In a first step, the prepositional head P merges with the DP *komnatu* ‘room’. Biskup extends Pesetsky & Torrego’s (2004, 2006) idea of Tense-features on DPs to structural case. He claims that prepositions bear unvalued  $\phi$ -features and valued Tense-features and that DPs enter the derivation with valued  $\phi$ -features and unvalued Tense-features (Biskup 2019: 32).

(97) Syntactic derivation of a non-defective PP (Biskup 2019: 33)



The opposite feature properties of the elements allow reciprocal feature checking which results in ACC case on *komnatu*. Next, P' merges with *čemodan* 'suitcase' – a DP with valued φ-features and unvalued Tense-features which remain unchecked for the moment. The PP is selected by the head *p* into which the preposition incorporates. In non-defective PPs, the preposition is also pronounced in the lower position. The head *p* is of prefixal type and bears a *CAUSE* operator. In Biskup's words, *p* "works as glue between the verbal event and the state

expressed by the prepositional phrase [...], it relates these two parts by means of the CAUSE relation” (Biskup 2019: 36). Further, the prefixal *p* incorporates into the root of the verb. In a next step, the root phrase attaches to little *v* with agentive properties and the agent DP *Artur* is inserted in Spec of *v*P. Since Biskup assumes that the *v*P is a phase, *čemodan* has to move to the edge of *v*P to be available for case checking from a head above *v*P. The *v*P merges with the head of the aspect phrase that enters the derivation with unvalued  $\phi$ -features and unvalued Tense-features. The incorporated preposition bears the Tense-feature [perfective] and values the unvalued Tense-features of Asp. This is how the prefix assigns perfective aspect to the verb. According to Biskup, the telicity effect of prepositions is not directly related to the [perfective] Tense-feature, but rather a lexical property of prepositions (Biskup 2019: 36). Therefore, the unvalued  $\phi$ -features of the Asp head are valued by the  $\phi$ -features of the closest DP – *čemodan* which in turn gets its unvalued Tense-features checked by the Asp head resulting in ACC case. This means that the [perfective] Tense-feature has to be assigned before the Asp head probes for the DP. In a next step, the aspectual phrase merges with the T head and its unvalued  $\phi$ -features probe to find the DP *Artur* which gets NOM case. At the very end, the subject has to move to the TP or CP via topicalization to derive the right word order.

The mechanisms just described illustrate the derivation of the regular and compositional prefix *v* ‘in’ that is repeated as the relative preposition in the same sentence. This is what Biskup defines as the PP being non-defective. However, Biskup also discusses defective PPs, which he defines as implying a prefix with a regular but abstract meaning and which lack the corresponding preposition in the sentence.

### 6.2.2 Derivation of a defective PP

Biskup considers the meanings of compositional superlexical prefixes as an abstraction of their prepositional meanings. Despite their figurative interpretation, these prefixes are regarded as regular, since they contribute the same semantics when they attach to different verbs and they are often mentioned in the dictionary (Biskup 2019: 52f). This group of prefixes is of particular interest to me, since prefixed reflexive verbs contain this very kind of figurative, but productive, superlexical prefixes. Biskup even mentions the Russian reflexive verb *naplakat'sja* ‘cry a lot’ as an example of a superlexically prefixed verb with the abstract meaning of the superlexical prefix *na-* (*sja*) ‘a lot’ (Biskup 2019: 53).

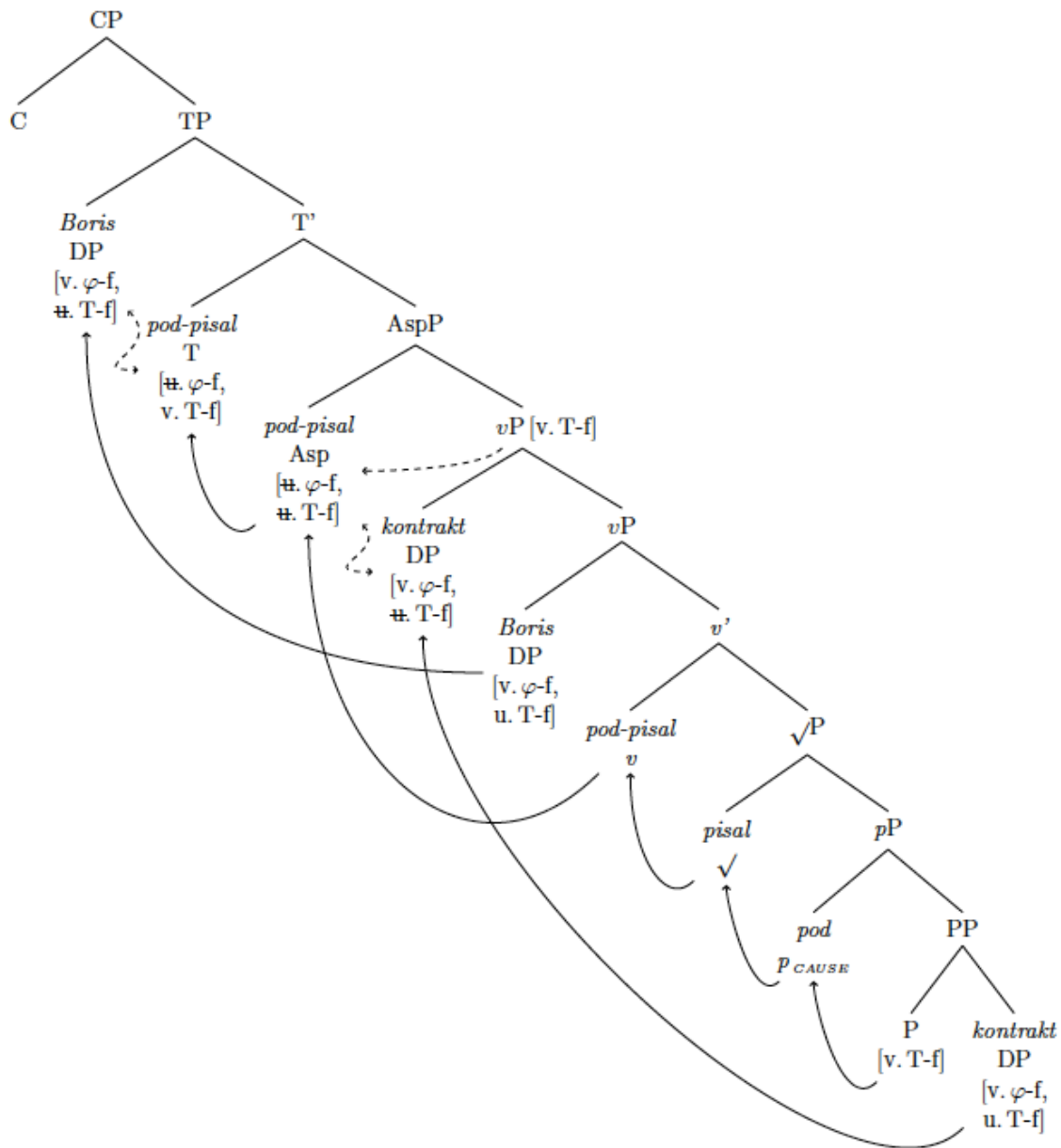
In contrast to a non-defective PP, a defective PP comes with a defective P head in the sense that it does not select the second argument in SpecPP position and it lacks its  $\phi$ -features (the valued

(98) Boris pod-pisal kontrakt.  
Boris.NOM under-wrote contract.ACC  
'Boris signed the contract. (Biskup 2019: 61)

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(99) Syntactic derivation of a defective PP



### 6.3 Modifying Biskup (2019)

In the following subsection, I will present my own proposal which builds on Biskup's analysis of prefixes as incorporated prepositions, but exhibits some key modifications. The changes are partly motivated by the difference between the prefixes *roz-* *se/ u-* *se* implying resultative meanings and creating semantically reflexive verbs and the prefix *na-* *se* implying vague quantitative meanings and creating inherently reflexive verbs. Hence, the modifications allow to postulate two slightly different syntactic derivations for both prefixal types and allow to model prefixed verbs with direct object and reflexive clitic. I combine Biskup's proposal for non-defective PPs and defective PPs since I make use of the structural template of non-defective

PPs although the P head enters the derivation as defective. Additionally, I argue in favor of a *BECOME* operator in the pP instead of a *CAUSE* operator. Nevertheless, there is a *cause* feature present in my proposal, that is introduced at a later point of the derivation, namely in the vP domain, indicating agentive properties of the verb.

### 6.3.1 Prefixed verbs with resultative meaning

In a first step, I want to introduce the modifications that are motivated by the resultative nature of the prefixes *roz-* and *u-*. Additionally, I want to clarify the differences between the *BECOME* operator and the *cause* feature. To keep it simple at first, I illustrate the modified derivation of the prefixed verb without the reflexive clitic, but with the direct object in ACC case. The sentence in (100) exemplifies a prefixed verb with resultative meaning<sup>33</sup> and direct object in ACC case.

- (100)   Terapeut       roz-mluví       dítě.  
           therapist      ROZ-talk.PFV.3.SG   child.ACC  
           ‘The therapist makes the child talk.’

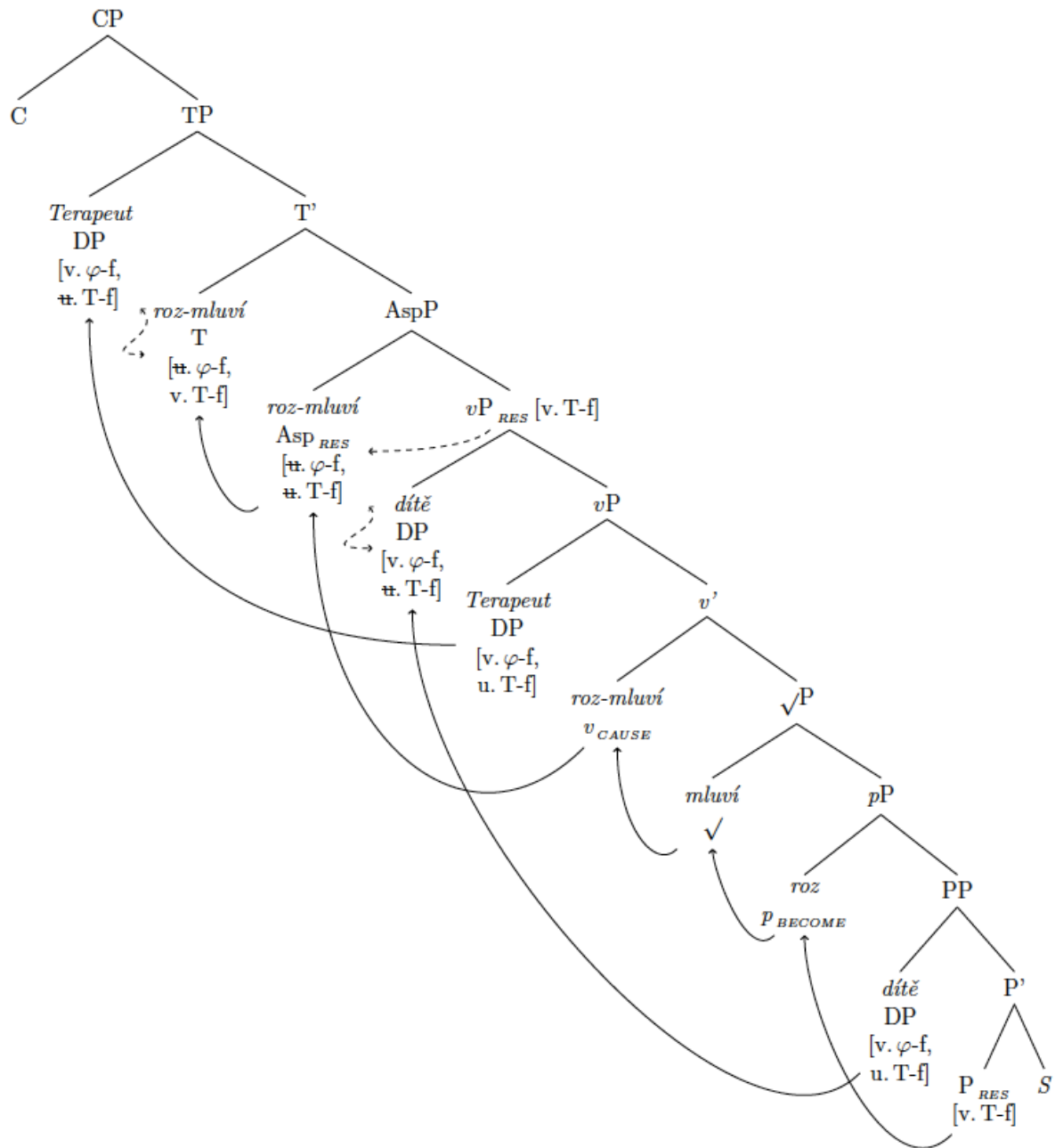
The head P enters the derivation as a defective head, meaning without  $\phi$ -features and without phonological content. However, it bears a valued [perfective] Tense-feature and a *res*-feature that induces a resultative meaning. The *res*-feature specifies the [perfective] Tense-feature since it indicates where the aspectual limitation, meaning perfectivity, originates from. The perfectivity stems from the resultative meaning of P.

In the first step of the derivation, the prepositional head *P-res* merges with an abstract state *S* in argument position to fuse to the resultative state. I assume that the argument position of P is not occupied by the direct object, as it is in Biskup’s analysis of defective PPs, but by the abstract state *S* indicating the condition that the direct object is in after undergoing the resultative change. The direct object is introduced in the SpecPP position.

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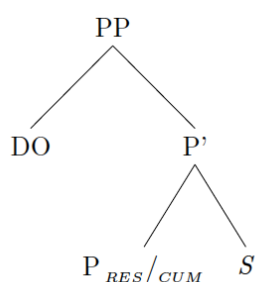
<sup>33</sup> The sentence has a resultative meaning since the result of the therapist’s treatment is that the child is now in the state of being able to talk.

(101) Syntactic derivation of a prefixed verb with direct object in ACC case



The syntactic template of non-defective PPs with an argument and specifier projection implies several advantages over the reduced defective template even if the P head lacks  $\phi$ -features and is phonologically silent. First of all, the fusion of the resultative P-element and the silent but functional state *S* can capture the result state in an obvious way. (Note here that we want to derive that not all prefixes imply the meaning of a precise result.) The structure in (102) exemplifies the PP once again.

(102) Syntactic structure of PP



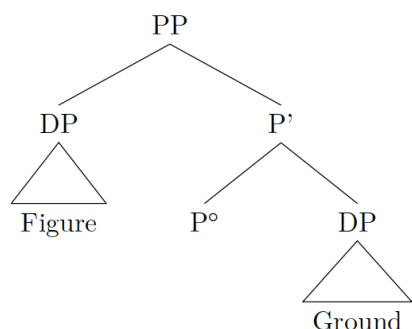
This proposal is similar to Den Dikken's idea of clauses as R(elator) P(hrases) (Den Dikken 1993, 2006). According to Den Dikken, the R head of the RP creates a predicative relation between the subject in specifier position and the predicate in complement position. In my case, the P head produces a predicative relation between the direct object in specifier position and the (abstract) state *S* in complement position.

Further evidence for the *S* argument comes from the fact that not all result states are silent. When the prefix *u-* attaches to the verb, the resultative meaning 'to death' is often explicitly expressed by the PP *k smrti* 'to death'. In fact, many times, my informants added the PP *k smrti* 'to death' to the relative sentence while talking about the meaning of the prefix *u-*. They produced sentences like the one in (103).

- (103) Šéf      u-pracoval              zaměstnance              k      smrti.  
          boss    U-work.PTCP.PFV      employee.ACC              to      death.DAT  
          'The boss worked his employees to death.'

This means that the *S* argument is not always silent, but can take the shape of a PP. Another advantage of using the non-defective template is that we can maintain Talmy's (1978, 2000) Figure-Ground pattern of PPs exemplified in (104).

(104) Figure-Ground template of PPs (Talmy 1978, 2000)



According to Talmy (1978, 2000), the Figure is the entity in motion or under change relative to the Ground. The Ground can be considered as a landmark that evaluates the position of the Figure. I argue that in the PPs at stake, the direct object corresponds to the Figure in SpecPP position since it is the entity undergoing the change. The explicit or implicit state *S* relates to the Ground in argument position since it expresses the condition the Figure/direct object is in after the change happened.

As I already explained, the direct object *dítě* ‘child’ merges in SpecPP position, just as the direct object *čemodan* does in non-defective PPs in (96), and enters the derivation with valued  $\phi$ -features and unvalued Tense-features. I follow Biskup, in that *P* moves to the *p* head, analogously to V-to-*v* movement, and since the *p* head is of prefixal nature, the preposition turns into a prefix. Nevertheless, I do not agree with Biskup concerning the *CAUSE* operator that presumably relates the verbal event and the prepositional state. Alternatively, I argue in favor of a *BECOME* operator. A *cause* feature is introduced further up in the syntactic structure, namely in the *vP*, since *cause* is typically related to intentionality, meaning agentivity. I argue that the *vP* is the domain of agentivity containing the *cause* feature, whereas the *pP* is the domain of change encompassing the *BECOME* operator. Evidence for the *BECOME* operator instead of the *CAUSE* operator comes from weather verbs that can bear resultative prefixes too. The weather verb *prší* ‘rain’ is a zero-valency verb, hence it lacks the *vP* layer which would typically introduce the agent of the predicate. However, the prefix *roz-* *se* can attach to the verb turning it into an inceptive predicate (consider (105)).

- (105) a. Pršelo.  
rain.PTCP.IPFV.N  
‘It rained.’
- b. Roz-pršelo se.  
ROZ-rain.PTCP.PFV.N SE  
‘It started to rain.’

The verbs in (105) bear default agreement since they have no agent to agree with. Furthermore, in (105a), there is no *cause* relating the prefix and the verb since the verb ‘rain’ does not bear a causative connotation. It is merely a *change* with a certain result that takes place. Hence, the *pP* contains a *BECOME* and not a *CAUSE* operator. In my analysis, the *BECOME* operator has

a similar function as Biskup's *CAUSE* operator, in the sense that it works as a glue between the verbal event and the prepositional result state, but it does not imply agentivity. Additionally, the *BECOME* operator refers to Kaufman & Wunderlich's (1998) *BECOME* function in (95). In a next step, the verbal root *mluví* 'talk' selects the *pP* and the prefix incorporates into it. The *v* head, finally introducing the *cause* feature that indicates agentive properties, merges with the root phrase and the prefixed verb moves to *v*. Because of the agentive, or rather causative *v*, the agent *terapeut* 'therapist' merges in Spec*vP* position bearing valued  $\phi$ -features and unvalued Tense-features.

Furthermore, the derivation continues as described by Biskup. The DP *dítě* moves to a second Spec*vP* position because of an edge feature. Otherwise feature checking from a head above the *vP* would not be possible, since the *vP* is a phase and the phase impenetrability condition has to be guaranteed. The prefixed verb moves to the Asp head with unvalued Tense- and unvalued  $\phi$ -features. Asp selects the *vP* and the valued [perfective] Tense-feature of the incorporated preposition values the unvalued Tense-feature of Asp. This is how the prefix assigns aspectual [perfective] properties to Asp and to the verb. After that, mutual feature checking of the Asp head and *dítě* applies, resulting in ACC case assignment on the DP. The Asp head assigns case to the direct object after being Tense-checked by the [perfective] incorporated preposition. This very mechanism creates the connection between the prefix and the case of the direct object that I introduced as *the prefix-argument-structure generalization*.

Next, *roz-mluví* moves further up the tree to the T head with unvalued  $\phi$ -features and valued Tense-features. The agent *terapeut* merges in SpecTP and mutual feature checking applies, resulting in NOM case on the agent.

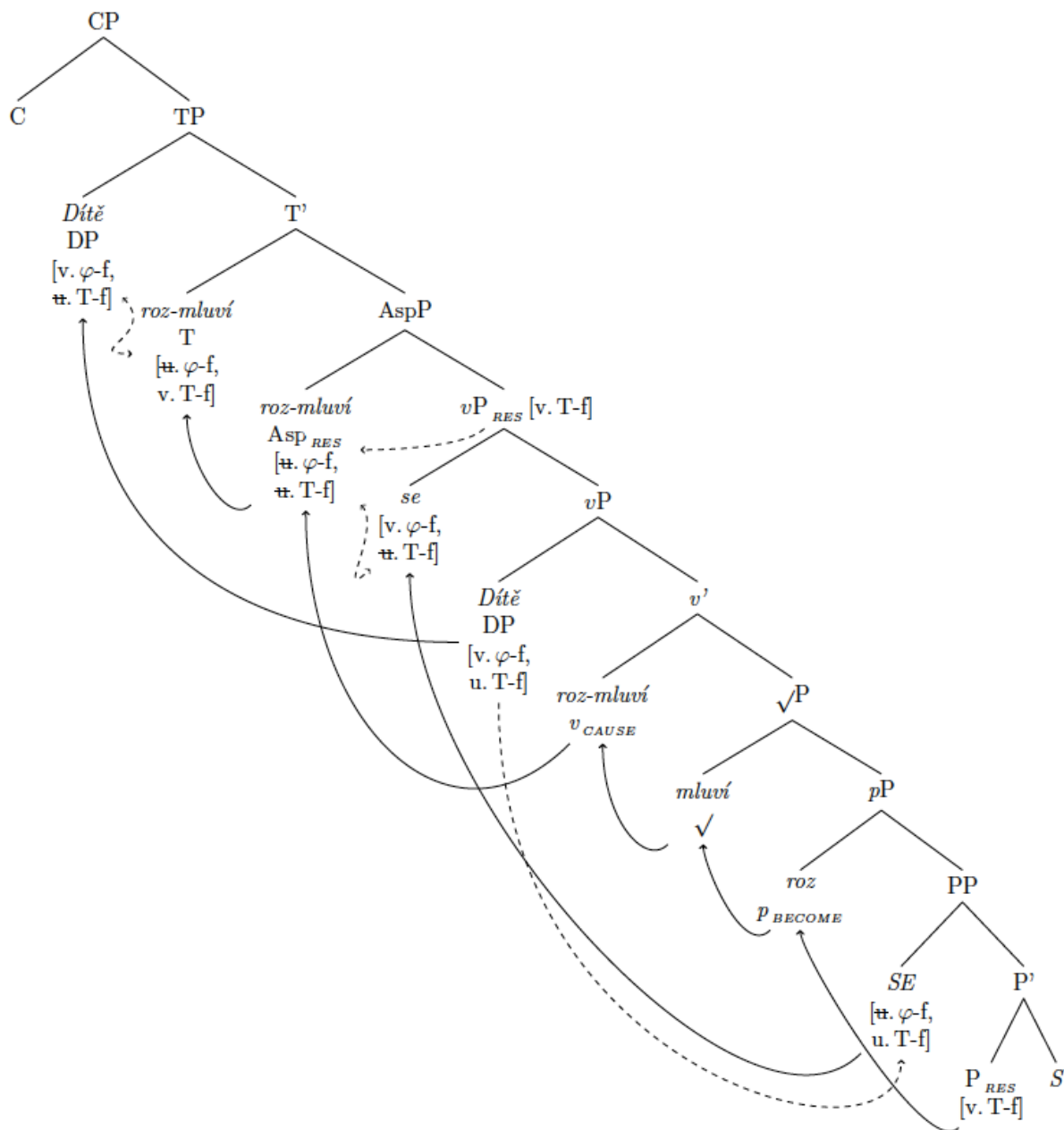
### 6.3.2 Semantically reflexive verbs

In a next step, I want to present the derivation of a prefixed verb with a semantic reflexive clitic. The structure of prefixed semantically reflexive verbs resembles the one in (104) except for the fact that the reflexive clitic has to be bound by an antecedent to create coreference between the agent and the patient resulting in *true* reflexivity. The sentence in (106) illustrates a prefixed verb with a semantically reflexive clitic. In what follows, I will not repeat every detail of the modified derivation, but focus on the differences between the sentences (100) and (106).

- (106) Dítě se roz-mluví.  
 child SE ROZ-talk.PFV.3.SG  
 'The child started to talk.'

The derivation starts as with non-reflexive verbs. The defective and silent *P-res* with valued Tense-features and lacking  $\phi$ -features merge with the state *S* creating the resultative state meaning. Again, the template of non-defective PPs is used to maintain the Figure-Ground shape with the element undergoing the change in Figure position and the relative state in Ground position.

(107) Syntactic derivation of a semantically reflexive verb with prefix



The abstract reflexive clitic *SE* enters the derivation with unvalued  $\phi$ -features and unvalued Tense-features and is inserted in SpecPP position. For the moment, *SE* is phonologically empty

because of its clitical nature and unboundedness. It probes for an element to be bound and  $\phi$ -feature valued.

The derivation continues as above. The prefixal *p* head merges with the PP and P-to-*p* movement happens. As a consequence, the P-element changes into a prefix and the *BECOME* operator links the verbal event and the prepositional state. Furthermore, the root selects the *pP* and the prefix incorporates into the verbal root *mluví*. The prefixed verb *roz-mluví* moves to the *v* head which merges with the root phrase. The *cause* feature in *v* indicates the agentive properties of the verb and the agent *dítě* with valued  $\phi$ -features and unvalued Tense-features is inserted in SpecvP.

Now, the agent can bind the abstract *SE* clitic in c-command configuration. *Dítě* values the unvalued  $\phi$ -features of the clitic creating coreference between *SE* and the antecedent. Since *SE* bears still unvalued Tense-feature, it moves to the outer SpecvP position. The [perfective] Tense-feature of the vP values the Tense-feature of the Asp head that enters the derivation with unvalued  $\phi$ - and Tense-features. The Asp head and *SE* mutually value their features and *SE* gets assigned ACC case. At this point, *SE* turns into its phonological form *se*. Referring to *the prefix-argument-structure generalization*, *SE*, although it is not a direct object with argumental status, but a clitic, is inserted in the Figure position, preventing other direct objects to be inserted. It occupies the Figure position since it indicates the element undergoing the change. In the sentence in (106), it is the agent that is undergoing the change and the reflexive clitic, being coreferential to the agent, expresses that. Furthermore, the Asp head assigns ACC case to the clitic, preventing other ACC objects to occur.

Next, the T head selects AspP and the prefixed verb moves to T. Finally, the agent *dítě* merges in SpecTP position and the T head and SpecTP check their features.

### 6.3.3 Prefixed verbs with quantitative meaning

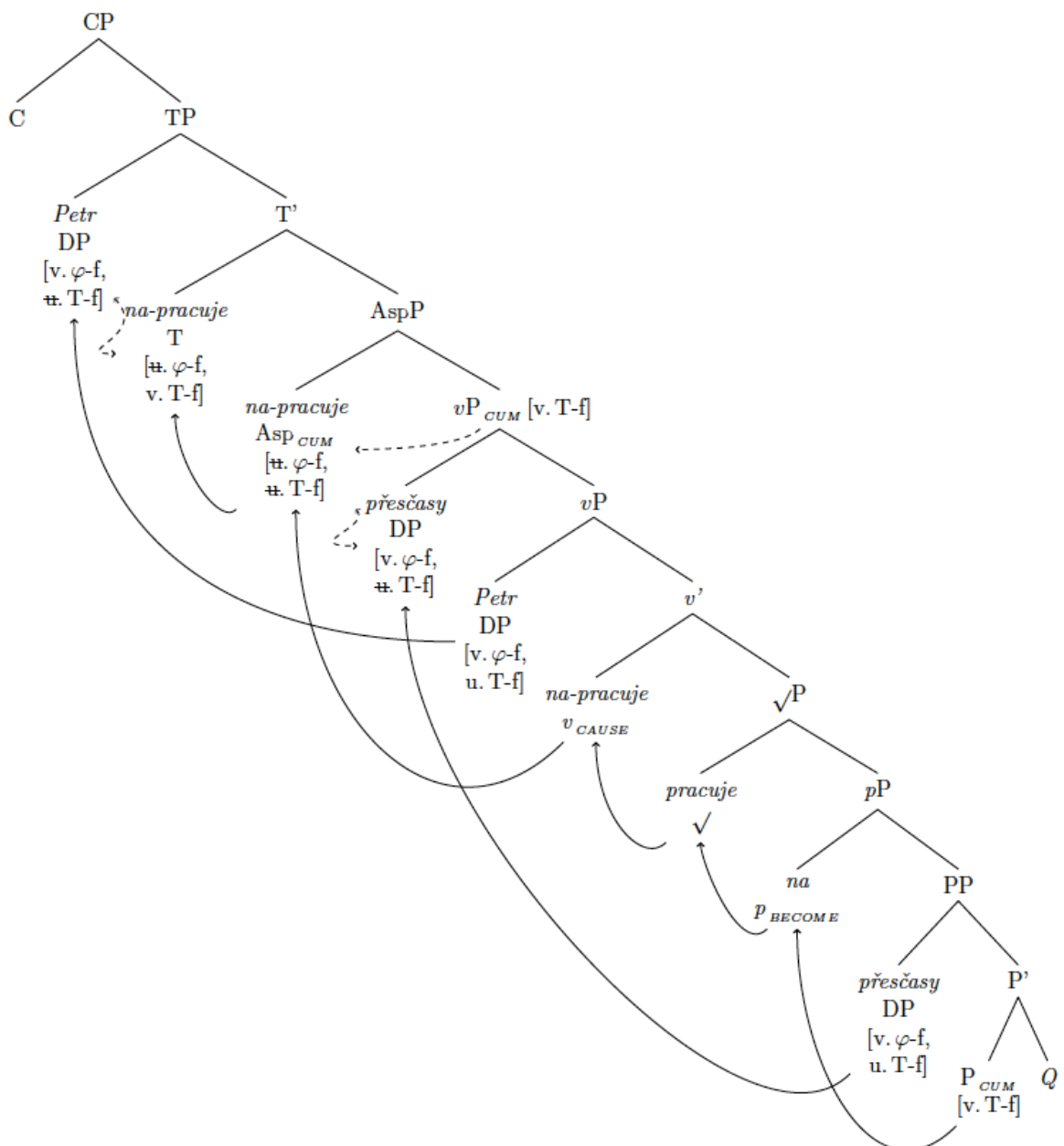
I propose that the prefix *na-* without a reflexive pronoun shows a similar derivation as described in 6.3.1., except that P bears a cumulative *cum*-feature and merges with an abstract quantificational element *Q* first. Again, I assume that P is defective, since it does not bear any phonological content and any  $\phi$ -features, but the Figure-Ground shape of non-defective PP is maintained as in the previously proposed analyses. The sentence in (108) illustrates a prefixed verb with quantitative meaning and direct object.



- (108) Petr    na-pracoval            přesčasy.  
 Petr    NA-work.PTCP.PFV    overtime.ACC  
 ‘Petr worked overtime.’

The prefix *na-* implies a cumulative and not a resultative meaning, hence P enters the derivation with a *cum*-feature and not a *res*-feature. Similar to the *res*-feature, the *cum*-feature specifies the valued [perfective]-Tense feature in the sense that it indicates where the temporal boundedness arises from.

- (109) Syntactic derivation of prefixed verbs with quantitative meaning



In a first step, the *P-cum* merges with an abstract quantity *Q* to complete the accumulative meaning of the P-element and to define the nature of accumulation. According to Schwarzschild (2006), there are four possible measure scales that can be introduced by verbs<sup>34</sup>: the *degree* which indicates the intensity of an event as a point on a scale (e.g. ‘to like syntax a lot’), the *range* which corresponds to the expansion of an event as a certain scope on a scale (e.g. ‘to expand my knowledge about Czech prefixes a lot’), the *amount of events* describing the repetition of single events (e.g. ‘to write a lot’) and the *amount of stuff* describing the consumption of something (e.g. ‘to read a lot’). Romanova (2006) states in her dissertation that the prefix “*na-* is not an extended measure function over objects” (Romanova 2006: 205), but measures the amount of events along temporal and spatial scales. For my purposes, I follow Romanova (2006) that *na-* accumulates events without going into detail here. I simply want to point out that the abstract *Q*, which merges with the cumulative P, specifies the nature of accumulation, analogously to the abstract state *S*, in the derivations above, which, in combination with the resultative P, defines the relative resultative state.

In a next step, the direct object *přesčasy* ‘overtime’ with valued  $\phi$ -features and unvalued Tense-features merges in SpecPP position. In the case of *na-*, I want to maintain the Figure-Ground shape, too, since it allows me to attribute the direct object to the Figure position and relate the precise change the direct object is undergoing to the Ground slot. In what follows, the *p* head merges with the PP and P moves to *p* becoming a prefix. The *BECOME* operator links the verbal event with the accumulative event of P. The prefix moves further up the tree incorporating into the verbal root *pracoval* ‘worked’, which selects the *pP*. Since *na-pracovat* is an agentive verb, the little *v* head containing a *cause*-feature merges with the root phrase. As a consequence, the prefixed verb moves to little *v* and the agent *Petr* is inserted in SpecvP. Analogous to the previous proposals, the direct object moves to an outer SpecvP position to be case-checked by a head above vP. This head is the Asp head. Asp enters the derivation with unvalued  $\phi$ -features and unvalued Tense-features. The [perfective] and [cumulative] Tense-feature of the incorporated preposition values the unvalued Tense-feature of Asp attributing perfective and cumulative aspect. Next, the Asp head and the DP *přesčasy* check their features and the DP gets assigned ACC case.

In Russian and Polish, the direct object of *na*-verbs has to bear partitive GEN case. Consider the examples in (110) taken from Biskup (2019: 16). The unprefixed imperfective verb in (110a) selects a direct object in ACC case. In contrast, the perfective *na*-verb has to combine

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<sup>34</sup> In our context, it is the prefix introducing the measure scale, but since the verbal prefix is a verbal element, we can consider the possible measure scales for verbs as the possible measure scales for verbal prefixes in our case.

with an object in GEN case to be grammatical. At this point, it becomes even more obvious that it is the prefix with its aspectual properties that assigns case to the direct object even if this pattern is less frequent in Czech.

- (110) a.      Patrycja piekła                      bułki /              \*bułek.  
                  Patrycja bake.PTCP.IPFV              roll.ACC              roll.ACC  
                  ‘Patrycja was baking rolls’

(Biskup 2019: 16)

- b.      Patrycja na-piekła                      bułek /              \*bułki.  
                  Patrycja NA-bake.PTCP.PFV              roll.GEN              roll.ACC  
                  ‘Patrycja baked a lot of rolls.’

(Biskup 2019: 16)

The derivation continues as usual. The prefixed verb moves to the T head selecting the AspP. The agent moves to SpecTP to check features with the T head resulting in NOM case on *Petr*.

### 6.3.4 Inherently prefixed verbs

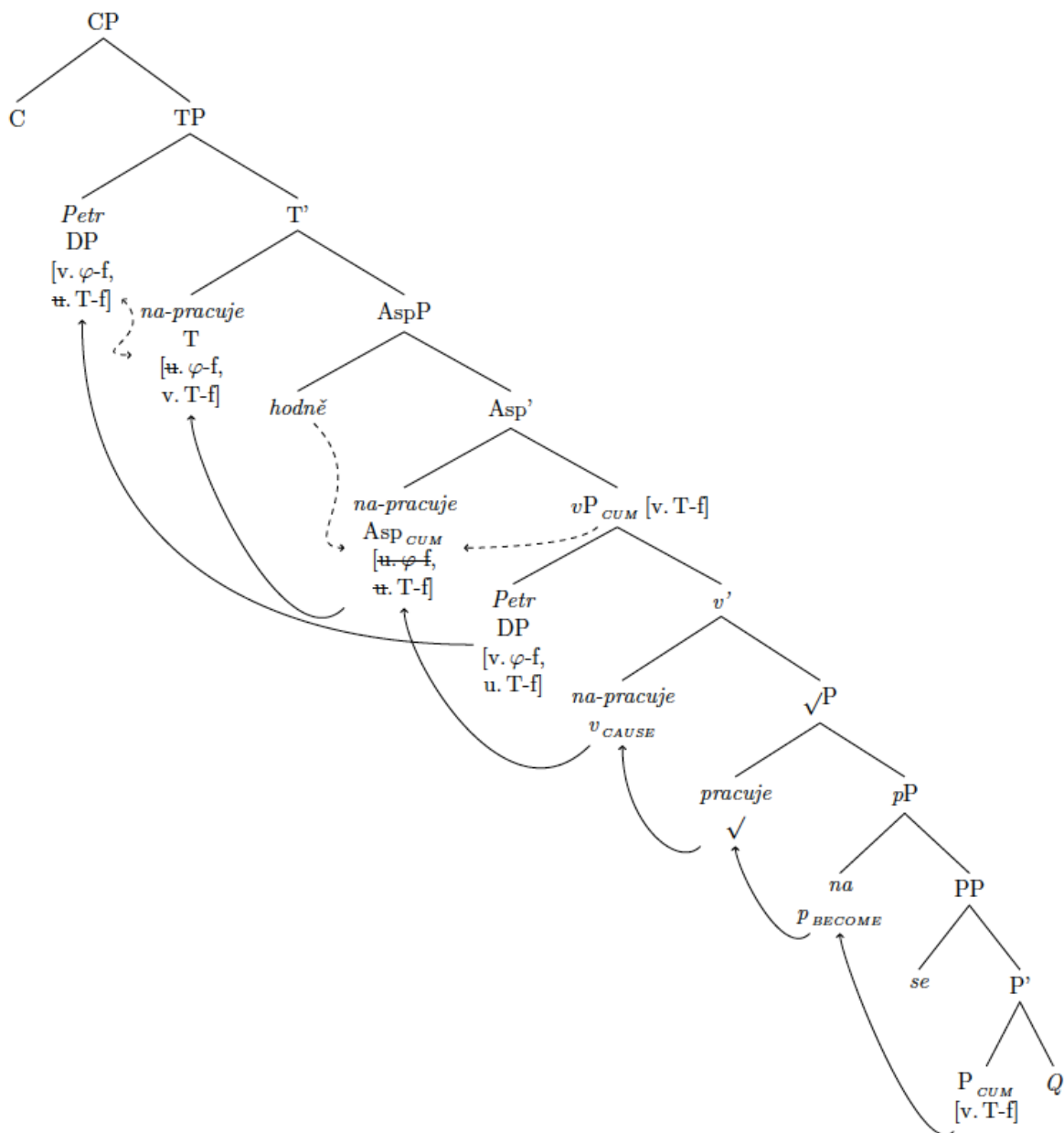
The prefix-clitic combination *na- se* produces accumulative inherently reflexive verbs. In inherently reflexive verbs, *SE* is not coreferential to the agent, but inherently present in the structure of the verb (some scholars assume that inherently reflexive verbs were once semantically reflexives and lost their true reflexivity over the course of time). I assume that in prefixed inherently reflexive verbs, *SE* is a syntactic dummy element that has to be inserted in the direct object position since the prefix, originating from a preposition, opens a new argument position that has to be filled. The sentence in (111) exemplifies an inherently reflexive verb with the prefix *na- se*.

- (111) Petr      se              hodně na-pracuje.  
                  Petr      SE              a lot      NA-work.PFV.3.SG  
                  ‘Petr is working his tail off.’

The syntactic structure in (112) exemplifies the derivation of prefixed inherently reflexive verbs. As I have argued in the previous subsection, the prefix *na- (se)* has an accumulative and not a resultative meaning. Hence, the [perfective] Tense-feature of P is of accumulative nature.

Again, *P-cum* merges with an abstract *Q* that specifies the quantificational nature of *P*. As I want to maintain the Figure-Ground pattern throughout my analysis, the Figure position has to be filled by an entity, too. I propose this entity to be *se*, an inherently reflexive clitic. An inherently reflexive clitic is not coreferential to the agent but a syntactic dummy element. Hence, *se* enters the derivation without any features that have to be valued and no coreference to the agent emerges. The syntactic dummy element is inserted since the prefix, originating from a preposition, projects the Figure position that has to be occupied.

(112) Syntactic derivation of a prefixed inherently reflexive verb



The *p* head selects the PP and P-to-*p* movement applies. P turns into a prefix that, in a next step, incorporates into the verbal root which is generated above *p*P. Since the prefixed verb *na-pracovat se* ‘work a lot’ is agentive, the *v-cause* head selects the root phrase and the agent *Petr* with unvalued Tense-features and valued  $\phi$ -features is inserted in SpecvP.

As there is no necessary case assignment on the inherent reflexive clitic, since it enters the derivation as a pre-syntactically formed item, *se* does not move to the outer SpecvP position. Instead, the Asp head with unvalued Tense- and  $\phi$ -features merges with vP. The perfective and cumulative Tense-feature of vP values the unvalued Tense-features of Asp. The unvalued  $\phi$ -features probe for a direct object to agree with, but there is none available. Alternatively, a quantificational adverb is inserted in SpecAspP since the Czech prefix-clitic combination *na-se* requires a quantificational element to be grammatical. This fact is an outcome of the empirical investigation above, where my informants did not accept sentences containing a *na-se*-verb without quantifying adverb or phrase. I propose that the quantificational adverb in SpecAspP deactivates the unvalued  $\phi$ -features of Asp to avoid a clash of the derivation. The adverb cannot check the  $\phi$ -features of Asp since it does not bear valued  $\phi$ -features by itself. However, I assume that it can deactivate the  $\phi$ -features. As an alternative to the quantificational element, a measurement DP in ACC case can be introduced to license the *na-se* prefix. Consider the sentences in (113) and (114).

- (113) Muž jel klidně, jako člověk, který se denně na-jezdí  
 man go.PTCP.IPFV calmly like man who SE daily NA-drive.PFV.3.SG  
 stovky kilometrů.  
 hundred.ACC kilometer.GEN  
 ‘The men went calmly like a man who drives hundreds of kilometers every day.’

- (114) Mnoho hodin se na-pracoval v Buchenwaldu.  
 many.ACC hours.GEN SE NA-work.PTCP.PFV in Buchenwald.LOC  
 ‘For many hours, he worked his tail off in Buchenwald.’

At first glance, the items in (113) and (114) seem to contradict the *prefix-argument-structure generalization* since the sentences contain a reflexive clitic in ACC case and an additional quantifying phrase in ACC. However, I argue that the quantifying phrase in ACC case is required to license or deactivate the unvalued  $\phi$ -features of the Asp head so that the derivation does not clash. Since the reflexive clitic in *na-se*-verbs inheres in the structure without

containing or valuing any features, another element has to value or deactivate the  $\phi$ -features of Asp. And since the Asp head bears a cumulative feature, a quantificational element can fill this role the best.

## 7. Conclusion and outlook

In the present thesis, I tried to combine two puzzles of Generative research – reflexivity and prefixation. In Czech (and other languages), attaching a prefix to the verb can trigger reflexivity which is either *true* semantic reflexivity or *vacuous* inherent reflexivity. This is the result of an elicitation study that I conducted with native speakers of Czech to work out the central properties of the prefixed reflexive verbs.

More precisely, I looked at the three prefixes *roz-* (*se*), *u-* (*se*) and *na-* (*se*) to find out how these elements influence the verb's properties such as aspect or argument structure. The study revealed that the prefixes induce perfectivity and telicity and augment the argument structure of the verb. I elaborated the last point as the *prefix-argument-structure generalization* repeated here in (115).

### (115) The prefix-argument-structure generalization:

*The attached prefix opens a new argument position on the verb. This argument position corresponds to the internal argument and can be filled either with a direct object in ACC case or a reflexive clitic bearing ACC case.*

The *prefix-argument-structure generalization* explains the reflexivizing effect of the prefixes. However, the prefixes *roz-* (*se*), *u-* (*se*) and *na-* (*se*) do not behave uniformly. *Roz-* (*se*) and *u-* (*se*) produce semantically reflexive verbs because of their resultative nature. The prefix *na-* (*se*) implies a cumulative meaning and triggers inherently reflexive verbs. This finding is interesting since it contradicts the previous literature, and it points to two slightly different structures of the prefixes.

For the derivation of the two prefixal types, I made use of Biskup's (2019) account of prefixes as incorporated prepositions. Slavic prefixes are assumed to be either lexical with an optionally irregular meaning or superlexical with an obligatorily regular meaning. Some scholars propose that lexical prefixes are attached within the *vP/VP* and superlexical prefixed above *vP/VP*. As a consequence of the structural differences, lexical and superlexical prefixes show different

morpho-syntactic behaviors. Biskup disagrees with the assumption of two different structures for lexical and superlexical prefixes, claiming that both prefixal types originate from incorporated prepositions.

Since the prefixes under investigation show very regular and productive meanings, but pattern along with lexical prefixes, I follow Biskup's (2019) analysis that treats lexical and superlexical prefixes in a uniform way. I assume that the prefixes originate from the same structure as prepositions and relate the direct object to the resultative state or cumulative quantity. In my proposal, I agree with Biskup who postulates a *pP* above the PP that turns the prepositional element into a prefix. However, it could be questioned if the *pP* above PP is necessary at all. Alternatively, the prefix could directly be generated in PP and incorporate into the verbal root without intermediate step. For the moment, I will leave this issue for future research.

Additionally, further investigations should consider the fact that prefixation does not only trigger reflexivity in Czech, but also in other languages such as German. German verbs show a similar behavior to Czech verbs, in the sense that they automatically reflexivize when a prefix/particle is added. Consider the examples in (116).

(116) a.	arbeiten	sich ein-arbeiten	jmd. ein-arbeiten
	work.INF	SE EIN-work.INF	sb. EIN-work.INF
	'work'	'learn the ropes'	'show sb. the ropes'
b.	schauen	sich um-schauen	*um-schauen
	look.INF	SE UM-look.INF	UM-look.INF
	'look'	'look around'	
c.	eilen	sich be-eilen	*be-eilen
	hurry.INF	SE BE-hurry.INF	BE-hurry.INF
	'hurry'	'hurry'	

In German, verbal particles seem to augment the argument structure of the verb, too. The relative particles on the verbs *arbeiten* 'work', *schauen* 'look' and *eilen* 'hurry' have to come hand in hand with a reflexive clitic to be grammatical. The questions arise whether verbal particles originate from a prepositional structure as well and whether the verbs are semantically reflexive or inherently reflexive verbs. These issues will be left for future research as well.

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