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# PREFIXED ADJECTIVAL PARTICIPLES

**Abstract**

*In this paper, I am concerned with prefixed adjectival participles in Czech. I show that in contrast to the most widely accepted approach to Slavic prefixes, adjectival participles can be derived by both lexical and superlexical prefixes and that lexically and superlexically prefixed participles can denote a target state as well as a resultant state. I propose that prefixed adjectival participles have the following syntactic structure* $[_{AP}\ A\ [_{PartP}\ Part\ [_{AspP}\ Asp\ [_{vP}\ v\ [_{\sqrt{P}}\ \sqrt{}\ [_{pP}\ p\ [_{PP}\ P]]]]]]]$*, where the adjectival head works as a stativizer and the prefix is an incorporated preposition. The incorporated preposition introduces a state variable in its meaning, which licenses the stativizer in the derivation.*

**Keywords**

*Participle; Adjective; Prefix; Aspect, Czech.*

## 1. Introduction

Slavic prefixes are usually divided into two types, lexical and superlexical (Isačenko 1962, Babko-Malaya 1999, Di Sciullo – Slabakova 2005, Svenonius 2004, Richardson 2007). In the widely accepted syntactic approach to Slavic prefixes, the syntactic position of lexical prefixes differs from the positions of superlexical prefixes; whereas lexicals merge in the verbal domain, superlexicals merge outside *v*P/VP (e.g. Ramchand 2004, Svenonius 2004, Romanova 2006, Gehrke 2008). Given these different positions, it has been argued that in contrast to lexicals, superlexicals cannot occur in adjectival participles; see Romanova (2006) for Russian past passive participles and Gehrke (2008) for Russian and Czech past active and past passive participles. This paper offers a detailed investigation of this matter. It is organized as follows. In Section 2, I discuss properties of *-lý* and

*-ný/-tý* adjectival participles.[1] In Section 3.1, I am concerned with syntactic properties of adjectival participles – focusing primarily on target states – and in Section 3.2 I discuss lexical and superlexical prefixes. Section 3.3 provides a sample derivation. Section 4 concludes the paper.

## 2. Data

### *2.1 -lý participles*

Imperfective intransitives derive *-l* participles and the past tense; see (1) for unaccusatives and (2) for unergatives.

(1) a. *mrzl*
froze
'(He) was cold'

b. *kvetl*
blossomed
'(It) was blossoming'

(2) a. *čaroval*
made.magic
'(He) was making magic'

b. *pracoval*
worked
'(He) was working'

The contrast between the ungrammatical (3) and the grammatical (4) with the agent-oriented *úmyslně* 'intentionally' shows that the predicates in (1) are indeed unaccusative and the ones in (2) unergative.

(3) a. **Úmyslně mrzl.*
intentionally froze

b. **Úmyslně kvetl.*
intentionally blossomed

(4) a. *Úmyslně čaroval.*
intentionally made.magic
'He was intentionally making magic.'

b. *Úmyslně pracoval.*
intentionally worked
'He was intentionally working.'

According to Levin – Rappaport Hovav (1995), resultative constructions are possible with unaccusatives, not with unergatives, but resultative predicates can be licensed with unergatives by a fake reflexive. Given this, data in (5) and (6) support our classification.[2]

(5) a. *z-mrzl na kost*
from-froze on bone
'He was chilled to the bone.'

b. *roz-kvetl do krásy*
apart-blossomed to beauty
'It blossomed into a beauty.'

1 I refer to adjectival participles derived by the *-ný/-tý* and *-lý* suffixes as '*-ný/-tý* participles' and '*-lý* participles' and to verbal participles derived by *-l* and *-n/-t* as '*-l* participles' and '*-n/-t* participles'.

2 Prefixation ensures here that the result state is reached. Below, we will also see an unaccusativity test using the formation of *-lý* participles.

(6) *U-čaroval / u-pracoval *(se) k smrti.*
at-made.magic at-worked self todeath
'He made magic/worked himself to death.'

Although the unprefixed predicates in (1) and (2) form *-l* participles, they do not derive *-lý* participles, as illustrated below.[3]

(7) a. * *mrzlý*
froze
b. **kvetlý*
blossomed

(8) a. * *čarovalý*
made.magic
b. **pracovalý*
worked

The following examples show that the formation of *-lý* participles is sensitive to aspectual properties. When the verbs are prefixed, some of them derive *-lý* participles since verbal prefixes have a perfectivizing and telicizing effect; compare (7), (8) with (9) and (10) (see also Weiss 1977 for the claim that Polish *-ły* participles can be derived only from perfective verbs and for telicity see Kratzer 1994 and Rapp 1996).

(9) a. *o-mrzlý*
about-froze
'frostbitten'
b. *roz-kvetlý*
apart-blossomed
'in blossom'

(10) a. **o-čarovalý*
about-made.magic
b. **vy-pracovalý*
out-worked

The contrast between (9) and (10) shows that only unaccusative perfective/telic verbs can derive *-lý* participles. For this reason, the formation of *-lý* participles has been used as a diagnostic of unaccusativity (see Kosta – Frasek 2004 and Medová 2012).

The formation of *-lý* participles is also dependent on the intransitivity of the predicate. According to Lamprecht et al. (1986) and Nübler (2004), transitives do not derive *-lý* participles in Modern Czech, see (11), although they form *-l* participles, as in (12).[4]

(11) a. **roz-hrabalý*
apart-raked
b. **na-budilý*
on-woke

3 Note that cases like *plynulý* 'fluent' are true adjectives (Petr et al. 1986,1).

4 Transitives with *-nou-/-nu-* are exceptional since they can often form both participles, e.g. *vytisknout* 'print' derives *vytisknutý* and *vytisklý*. According to Kopečný (1962), there are also some transitives without *-nou-/-nu-* that derive *-lý* participles, like *zděděný* 'inherited', but they are very often archaic or dialectal.

(12) a. *roz-hrabal*
apart-raked
'(He) spread sth.'

b. *na-budil*
on-woke
'(He) energized sb.'

To conclude, only perfective/telic unaccusative predicates – which are mostly derived by prefixation – form *-lý* participles (with the exception of *-nou-/-nu-* verbs, see note 4).

## 2.2 *-ný/-tý participles*

Intransitives do not derive *-n/-t* participles and the verbal passive (Karlík 2004); see (13) for unaccusatives and (14) for unergatives. Therefore intransitives also do not derive *-ný/-tý* participles; as shown in (15) and (16).

(13) a. **je mrznut*
is frozen

b. **je kveten*
is blossomed

(14) a. **je čarován*
is made.magic

b. **je pracován*
is worked

(15) a. **mrznutý*
frozen

b. **kvetený*
blossomed

(16) a. **čarovaný*
made.magic

b. **pracovaný*
worked

The formation of *-ný/-tý* participles is dependent on the presence of an accusative object. E.g. (17) shows the transitive *hrabat* 'rake' in the *-n/-t* passive and *-ný/-tý* participles. The verbal participles (17a,c) and the adjectival participles (17b,d) can be perfective (prefixed) as well as imperfective (unprefixed).

(17) a. *To listí bylo hrabáno.*
the foliage was raked
'The foliage was being raked.'

b. *hrabané listí*
raked foliage
'The foliage that is being raked.'

c. *To listí bylo roz-hrabáno.*
the foliage was apart-raked
'The foliage was spread.'

d. *roz-hrabané listí*
apart-raked foliage
'The foliage that was spread.'

In the case of verbal objects that are not marked with accusative (18a), the default agreement is present on the *-n/-t* participle in the passive; see (18b). The related *-ný/-tý* participle is ungrammatical (18c), in contrast to the participles in (17b,d).

(18) a. *(Za-)tleskali dětem.*
(behind-)clapped children$_{DAT}$
'They were applauding children. / They applauded children.'

b. *Bylo* *(za-)tleskáno* *dětem.*
was (behind-)clapped children$_{DAT}$
'Children were being applauded. / Children were applauded.'

c. **(za-)tleskané* *děti*
(behind-)clapped children$_{NOM}$

The ungrammatical participles in (15) and (16) are unprefixed. When a prefix is attached to the verbs, at least some of them can derive *-ný/-tý* participles because the prefix transitivizes them. The participles can be based on a non-reflexive verb, as in (19), or on a reflexive verb, as in (20).

(19) a. *o-čarovat*
about-make.magic
'bewitch'

b. *o-čarovaný* *stařec*
about-made.magic old.man
'a bewitched old man'

(20) a. *pře-pracovat* *se*
over-work self
'overwork'

b. *pře-pracovaný* *lékař*
over-worked doctor
'an overworked doctor'

When the base verb is not transitivized by the added prefix, the *-ný/-tý* participle is ungrammatical, as shown below.

(21) a. *Jirka* *do-pracoval.*
Jirka to-worked
'Jirka stopped working.'

b. **do-pracovaný* *Jirka*
to-worked Jirka

(22) a. *Strom* *roz-kvetl.*
tree apart-blossomed
'The tree blossomed.'

b. **roz-kvetený* *strom*
apart-blossomed tree

There is also an agentivity (causativity) restriction on the formation of *-ný/-tý* and *-n/-t* participles; consider (23) (cf. also Veselovská – Karlík 2004). Although the experiencer verb selects an accusative object and derives an *-l* participle, as in (23a), it does not derive *-n/-t* and *-ný/-tý* participles, as shown in (23b,c), independently of whether or not it is prefixed.

(23) a. *Jana* *(za-)svědila* *stará* *rána.*
Jan$_{ACC}$ (behind-)itched old wound$_{NOM}$
'The old wound itched Jan. / The old wound began to itch Jan.'

b. **Jan* *byl* *(za-)svěděn.*
Jan$_{NOM}$ was (behind-)itched

c. **(za-)svěděný* *Jan*
(behind-)itched Jan$_{NOM}$

To sum up, in the vast majority of cases, *-ný/-tý* participles are derived from agentive transitive predicates with an accusative object.

# 3. The analysis

## *3.1 Syntactic properties of adjectival participles*

Since *-l* can attach to imperfective verbs, as in (1) and (2), the ungrammaticality of *-lý* participles in (7) and (8) is not based on selectional requirements of the affix *-l*. The ungrammaticality also cannot be based on some requirements of the agreement marker *-ý* because it can attach to imperfectives, too, as shown by *hrabané* 'being raked' in (17b). Following Kratzer (2000), I assume that there is a covert affix between the participial *-l* and the ending *-ý* that represents the adjectival head (A) and works as a stativizer since the perfective *-lý* participles in (9) have a stative interpretation. Since *-ný/-tý* participles derived from perfective verbs also have a stative interpretation (cf. Kopečný 1962), I also assume the stativizer in A for perfective *-ný/-tý* participles. The stativizer cannot be realized by *-l* or *-n/-t* because these affixes also derive eventive participles like *hrabán* 'being raked' and *pracoval* 'was working' (therefore, the stativizer also cannot be attached somewhere lower in the structure). Given that unprefixed *-ný/-tý* participles are eventive (see e.g. *hrabané*), the stativizer also cannot be realized by the ending *-ý*.

Given that prefixes almost always turn atelic eventualities into telic ones, I propose that prefixes introduce a state variable into the derivation. Note that the target state operator can apply only to verbs with a 'visible' state (Kratzer 2000, Alexiadou et al. 2003). Then, the reason why the *-lý* participles in (7) are ungrammatical in contrast to (9) is that they do not have a prefix, which would introduce a state variable licensing the stativizer. Similarly, in the case of *-ný/-tý* participles derived from eventive predicates, only the prefixed participles, like *nabuzený* 'energized' (in contrast to *buzený* 'being woken'), can have a stative interpretation.[5]

As discussed in Veselovská – Karlík (2004), long endings (occurring in adjectival participles) are related to stativity and short endings (occurring in verbal participles) to eventivity in standard Czech. Hence, I propose that A is present only in adjectival participles and that it is the locus of the stativizer. In contrast, verbal participles project only PartP, thus, the extended verbal projection cannot be stativized and short endings realize φ-features of Part.

Given that *-l* participles are derived from all types of verbs, *-l* realizes any Part head, as shown in (24a), whereas *-n/-t* spells out Part with features [ag, *p*] since *-n/-t* participles can only be derived from agentive transitives; see (24b). [*p*] stands

5 In cases like *Ta knížka je lepená* 'The book is glued', *lepená* can be analyzed as an adjective (Štícha 1986).

for transitivity because all verbal non-*v*P arguments – including the direct object – merge in *p*P selected by the root (see also Section 3.2.1). I assume the copy theory of movement and the incorporation analysis of head movement, hence the agentive feature of the incorporated *v* and the categorial feature of *p* are also visible on the complex head Part.

(24) a. [PartP [Part *l* [ ]]]
b. [PartP [Part [ag, p] *n/t* [ ]]]

This predicts that a *p*P embedded under the root whose preposition does not incorporate will not enable the predicate to form *-n/-t* participles, in contrast to a *p*P whose preposition incorporates. This prediction is borne out:

(25) a. **prašan* *sněžený* *na* *střechu/střeše.*
powder snow snowed on roof$_{ACC}$/roof$_{LOC}$
b. *prašan* *na-sněžený* *na* *střechu/střeše.*
powder snow on-snowed on roof$_{ACC}$/roof$_{LOC}$
'powder snow on the roof'

We saw in 2.1 that in contrast to *-l* participles, *-lý* participles can be derived only from unaccusatives. For this reason, I assume that A selects a complement containing the unaccusative *v*, as shown in (26).

(26) [AP Astat [unacc] [PartP [Part *l* [ ]]]]

The fact that *-lý* participles are only formed from perfective/telic predicates will be derived by the semantic (in)compatibility of the stativizer with the semantic type of its sister. Specifically, the compatibility is ensured when PartP contains a state variable, which is introduced by a prefix.

As to *-ný/-tý* participles, there is no unaccusative feature on A because they are formed from transitives. The fact that stative *-ný/-tý* participles are formed from perfective/telic (prefixed) verbs will be analyzed as above in *-lý* participles. Merging the stativizing A with unprefixed *-ný/-tý* participles will result in a semantic mismatch since these participles do not contain a state variable (except a few perfective simplex verbs). And merging the non-stativizing A with the prefixed participles will not derive their stative meaning. The higher structure of *-ný/-tý* participles looks like (27). The difference between the two types is that A in the eventive (unprefixed) participles does not stativize the extended verbal projection; see (27b).

(27) a. [AP Astat [PartP [Part [ag, *p*] *n/t* [ ]]]]
b. [AP A [PartP [Part [ag, *p*] *n/t* [ ]]]]

Why is the stativizer always present in A of *-lý* participles but is not in *-ný/-tý* participles? The eventive interpretation of *-lý* participles seems to be blocked by the existence of *-cí* participles (e.g. *kvetoucí kytka* 'blossoming flower'). It is not blocked with *-ný/-tý* participles since *-cí* participles cannot modify the accusative object, as shown by *dělající chyby* 'made mistakes'.

We saw in 2.2 that *-n/-t* participles receive the default agreement when the verbal object is marked with a non-structural-accusative case, whereas *-ný/-tý* participles are ungrammatical with non-structural-accusative objects. The noun over which the adjectival participle predicates is merged outside the participle (Belletti – Rizzi 1981, McIntyre 2012, Bruening 2014). Following Bruening (2014), I assume that in the adjectival participle, there is a null operator in place of the internal argument, which is forced by the head A to move to its specifier. This movement forms a predicate of individuals.

Biskup (2015) shows that movement of the specifier of P and movement of the prepositional complement out of defective *p*P (whose P does not have φ-features and does not assign case among other things) is possible but movement of the complement out of non-defective *p*P is ungrammatical (i.e., preposition stranding is not grammatical in Czech). Given this and the assumption that non-structural cases are assigned by a covert P, the null operator generated as the complement of the non-defective P cannot move to SpecA. Therefore, the appropriate type (<e,t>) is not derived and the participle cannot combine with a noun, as in *tleskané děti* 'clapped children', based on the verb *tleskat*, taking a dative object. However, in cases like (28a) the operator can move out of *p*P since P is defective. As shown in (28b), P does not assign case (z assigns genitive) and is spelled out only as a verbal prefix.

(28) a. *z-otročená populace*
from-slaved population
'an enslaved population'

a. *z-otročili celou populaci*
from-slaved entire population
'They enslaved the entire population.'

As to *-n/-t* participles, they do not contain AP, with the probe moving the prepositional complement. Moreover, *-n/-t* participles also do not contain a null operator since the object merges directly in *p*P.

## *3.2 Prefixes*

### *3.2.1 Lexical prefixes*

Recall from Section 1 that according to the widely accepted approach to Slavic prefixes lexicals differ from superlexicals in their syntactic positions. The proposal that lexicals merge very low in the syntactic structure seems to be correct. Every lexical prefix can appear in some adjectival participle. As an illustration consider (29).

(29) a. *o-čarovaný* *stařec*
about-made.magic old.man
'a bewitched old man'

b. *na-metené* *smetí*
on-swept rubbish
'a rubbish swept on sth.'

c. *za-hloubaný* *pracovník*
behind-mused worker
'a worker lost in thoughts'

d. *roz-dělaná* *pračka*
apart-done washing.machine
a disassembled washing machine'

As shown below, these prefixes can also appear in *-lý* participles. This is not surprising because the participial morphemes *-l* and *-n/-t* merge in the same syntactic position in adjectival participles.

(30) a. *o-teklá* *noha*
about-flowed foot
'a swollen foot'

b. *na-mrzlý* *led*
on-froze ice
'ice frozen to sth.'

c. *za-padlý* *prsten*
behind-fell ring
'a ring fallen behind sth.'

d. *roz-teklá* *čokoláda*
apart-flowed chocolate
'a melted chocolate'

It depends on the type of the base verb whether the prefixed verb derives a *-lý* participle or a *-ný/-tý* participle. When a prefix is attached to an unaccusative, then a *-lý* participle is derived, as in (30). When a prefix is attached to an unergative, as in (29a,c), a *-ný/-tý* participle is derived because the verb is transitivized. When a prefix is attached to a transitive, a *-ný/-tý* participle is derived because the verb remains transitive, as in (29b,d) (cf. Schoorlemmer 1997 for Russian).

This means that prefixes can add an internal argument and this argument competes for the same syntactic position with the complement of unaccusatives and transitives. In addition, prefixes can also add an argumental *p*P. From the constructionist point of view, this suggests that prefixes are in fact prepositions, projecting a phrase with maximally two arguments, which is merged as the complement of the root. Therefore, I analyze lexicals as incorporated prepositions (for other arguments, see Biskup – Zybatow 2015), following e.g. Mulder (1992), Pitz (1994), Fowler (1996), Romanova (2006), Biskup – Putnam (2012). Then the syntactic structure of adjectival participles with lexical prefixes projecting a *p*P – which can be either transitive or intransitive – looks like (31).

(31) [AP A [PartP Part [AspP Asp [*v*P *v* [√P √ [*p*P *p* [PP P]]]]]]]

Thus, in *-lý* participles, the root merges with a *p*P (the projection of the prefix), which is in complementary distribution with the projection projected by an empty head that introduces the internal argument of the unprefixed verb (cf. Borer 2005). Hence, the argument structure is not augmented; maximally,

a prepositional phrase can be added. Since *-n/-t* spells out Part with agentive and transitive properties, only an *-l* participle and a *-lý* participle can be derived.

As to prefixed *-ný/-tý* participles derived from unergatives, the *p*P adds an unselected argument(s) to the external argument, therefore we observe transitivization of the base verb. Given the prepositional nature of prefixes and the fact that *-n/-t* spells out the Part head with the features [ag, *p*], a *-ný/-tý* participle is derived. When a prefix is attached to a transitive, the *p*P replaces the phrase introducing the internal argument of the base verb; hence the prefixed verb remains transitive. As with unergatives, given that *-n/-t* spells out the Part head with the features [ag, *p*], a *-ný/-tý* participle is derived with base transitives.

Examples in (29) and (30) also show that lexically prefixed *-lý* and *-ný/-tý* participles have a resultative/change of state meaning (cf. Svenonius 2004, Žaucer 2009); see e.g. (30b), where the telic *namrzlý* is related to the atelic verb *mrznout* 'freeze'. Compositionally prefixed verbs like (29b) and (30c) show that the result state has the prepositional/prefixal meaning, which supports the view that it is the preposition that introduces the state. Thus, by transitivization, lexicals help the unergative base verb to derive a *-ný/-tý* participle and by adding the state variable they help imperfective unaccusative base verbs to derive *-lý* participles. The fact that lexicals license the stative interpretation confirms that they are merged lower than the stativizer.

Resultant states differ from target states in that they cannot be modified by *still* (Nedjalkov – Jaxontov 1988, Taraldsen – Medová 2007). (29) and (30) show that both *-lý* and *-ný/-tý* lexically prefixed participles can denote a target state. For resultant states, consider (32).

(32) a. *Ten román je (*stále ještě) pře-čtený.*
the novel is still over-read
'The novel is (*still) read through to the end.'
b. *Ta kytka je (*stále ještě) od-kvetlá.*
the flower is still away-blossomed
'The flower is (*still) withered.'

*3.3.2 Superlexical prefixes*

All prefixes from (29) can be used as a superlexical prefix. (33) shows that these superlexicals can derive *-ný/-tý* participles; see the inchoative *o-* in (33a), the cumulative *na-* in (33b), the inchoative *za-* in (33c) and the inchoative *roz-* in (33d).

(33) a. *o-slepený řidič* b. *na-žehlená sukně*
about-dazzled driver on-ironed skirt
'a dazzled driver' 'a neatly ironed skirt'

| | | | | | |
|---|---|---|---|---|---|
| c. | *za-milovaný* | *chlapec* | d. | *roz-pracovaná* | *kniha* |
| | behind-loved | boy | | apart-worked | book |
| | 'a boy in love' | | | 'an unfinished book' | |

These prefixes can also appear in *-lý* participles; consider the inchoative *o-* in (34a), the cumulative *na-* in (34b), the attenuative *za-* in (34c) and the inchoative *roz-* in (34d).

| (34) | | | | | | |
|---|---|---|---|---|---|---|
| | a. | *o-chraptělý* | *profesor* | b. | *na-běhlé* | *ruce* |
| | | about-became.hoarse | professor | | on-ran | hands |
| | | 'a hoarse professor' | | | 'swollen hands' | |
| | c. | *za-rudlá* | *noha* | d. | *roz-měklý* | *sníh* |
| | | behind-reddened | foot | | apart-softened | snow |
| | | 'a reddened foot' | | | 'softened snow' | |

Some of the prefixes can also have other superlexical meanings, like the attenuative *na-* in *nakloněný* 'a little leaned' and the attenuative *o-* in *ovlhčený* 'a little moistened'. Other prefixes with a superlexical meaning can derive adjectival participles, too, as shown by the excessive and the repetitive *pře-* in *přesycený* 'overfed' and *převinutý* 'rewound', the distributive *po-* in *pobitý* 'killed one after another', the completive *do-* in *dostavěný* 'finished building', the terminative *od-* in *odsouhlasený* 'agreed', the attenuative *pod-* in *podmračený* 'a little frowned' and the perdurative *pro-* in *propracovaný* 'worked through'.

Generally, except the saturative *za-*, all superlexicals can occur in (both types of) adjectival participles. There is no special interaction between superlexicals and the stativizer in A. This suggests that superlexicals merge below A, just as lexicals. Recall that the target state operator existentially binds the event variable and projects the state variable and that it can apply only to verbs with a 'visible' state. Since it is the prefix that brings about the stative component, superlexicals must merge below A. Concerning telicity, adjectival participles with superlexicals behave like lexically prefixed participles. They can also turn atelic eventualities into telic ones, as shown e.g. in (33b), where the accomplishment *nažehlená* is related to the activity *žehlit* 'iron'.

As with lexicals, when a superlexical prefix is attached to an unaccusative, a *-lý* participle is derived, as in (34). When the prefix is attached to an unergative, the verb is transitivized and consequently the *-ný/-tý* participle can be derived, as in (33d). And when the prefix is attached to a transitive, the derived predicate remains transitive and a *-ný/-tý* participle is derived, as in (33b,c).[6] Thus, at least some superlexicals can be analyzed on a par with lexicals. These derivational facts are accounted for as in the case of lexicals in terms of the insertion of the appro-

6 *Oslepit* does not have an unprefixed counterpart.

priate morpheme into Part and the complementary distribution of the *p*P projected by the prefix and the *p*P introducing the object.

The presented data argue against the generalized distinction between lexicals and superlexicals with respect to the possibility of the formation of adjectival participles of the widely adopted syntax based approach. It seems that ungrammatical superlexically prefixed participles should rather be analyzed on a case-by-case basis. This is supported by the fact that one and the same superlexical can behave differently in dependency on the prefixed verb, e.g., the inchoative *roz-* derives *rozpracovaná* 'unfinished' in (33d) but does not derive a participle with *bolet* 'hurt' and the inchoative *u-* derives *uvězněný* 'imprisoned' with *věznit* 'keep in prison' but does not derive a participle with *věřit* 'believe'.

These facts can be accounted for as follows. As to *rozbolet* 'begin to hurt', the participle *rozbolený* cannot be derived because *v* is of the experiencer type but *-n/-t* needs to be inserted into Part with features [ag, *p*]. And *rozbolelý* cannot be derived since the stative A in *-lý* participle selects a complement with the unaccusative *v*. As to *(u)věřit* '(begin to) believe', it takes a dative object, which is introduced by a covert non-defective P, hence the preposition cannot be stranded, i.e., the null operator cannot move to SpecA and the derivation crashes.

(33) and (34) show that both *-lý* and *-ný/-tý* superlexically prefixed participles can denote a target state. We also saw some resultant states above, e.g., *ovlhčený* 'a little moistened', *převinutý* 'rewound', *pobitý* 'killed one after another', *odsouhlasený* 'agreed'. As for *-lý* participles, consider e.g. *po-mrzlý* 'frozen one after another'.

To sum up, since the stativizer is merged in a high syntactic position, we do not observe any peculiar interaction between it and superlexicals; almost all superlexicals can occur in adjectival participles. We have seen that by means of transitivization, superlexicals help the unergative base verb to derive a *-ný/-tý* participle. Superlexicals can also telicize, thereby helping base verbs to derive participles because telicity – the state variable – is a necessary condition for the formation of *-lý* participles and stative *-ný/-tý* participles.

### *3.3 The derivation*

As an illustration, consider the derivation of the target state participle *zapadlá* in (35).

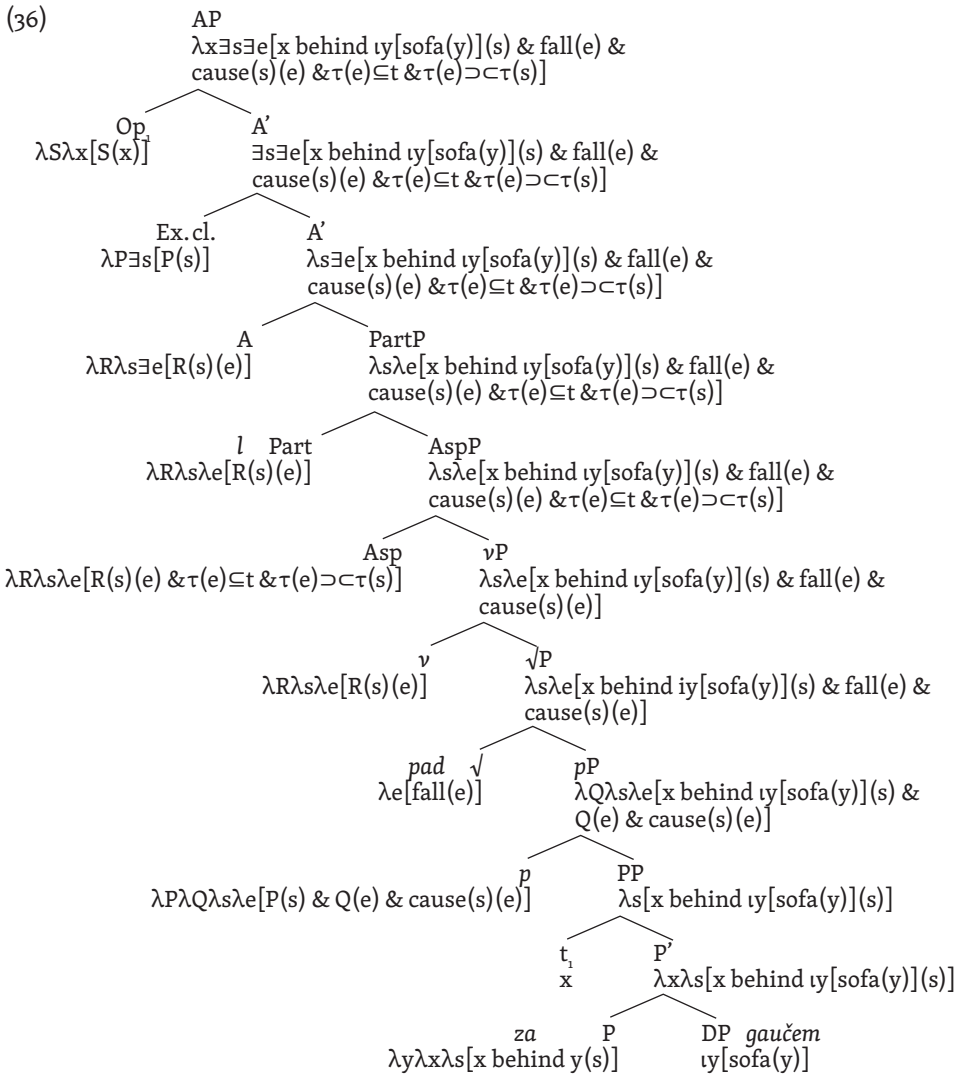
(35) *kniha* *za-padlá* *za* *gaučem*
book behind-fell behind sofa
'the book that fell behind the sofa'

The order of morphemes is derived by head incorporation to the left: [[[[*za*]*pad*]*l*]*á*] and the form of the ending *-á* is determined by the case and φ-features properties

of *kniha* via Agree. Since the complex head is not agentive, Part must be spelled out as *-l*. The unaccusative selection feature of A is satisfied because v of *zapadlá* is of the unaccusative type. Now consider the derivation (36).

*Za* localizes the referent of the external argument behind the referent of the internal argument. Importantly, P also introduces the state variable. It is this state variable that will be projected by the stativizer. The state denoted by the prepositional phrase is the result state of the prefixed predicate. The meaning of *za* applies to the definite expression *gaučem*, derived by the Strawsonian iota operator, which results in the meaning that the referent of *x* is in the state of being behind the sofa.

(36)



Then, the meaning of P' combines with the external argument. Since the modified noun *kniha* is generated outside the participle, the external argument is a null operator. In (36) it is represented by the trace of the operator because the operator moves to SpecAP. The trace is interpreted as a variable and its referent is determined by the assignment function. After movement of the operator to SpecAP, the assignment function is manipulated so that the index is mapped to the variable *x*; therefore I put *x* on all relevant nodes.

The meaning of *p* is crucial because it derives *p*P of the prefixal type. Its meaning consists of three conjuncts. The first conjunct stands for the meaning of PP, i.e., for the result state brought about by prefixation. The second conjunct introduces an event with properties of the root. The third conjunct stands for the telic property of prefixes, i.e., for the fact that prefixes bring about the causative relation between the state denoted by the prepositional phrase and the eventuality denoted by the root.[7]

The meaning of *p*P applies to the root, with the result that *x* is in the state of being behind the sofa, which is caused by the event of falling. Since unaccusatives do not have an agent, the unaccusative v is semantically empty. The perfective Asp is standardly treated as a perfective operator, which localizes the running time of the event within the reference time (Paslawska – von Stechow 2003). Instead of the usual existential quantification of the event variable, I use lambda binding here because it will be the target state operator that will existentially bind it. Because of the meaning of *p*, I also add the state variable and assume that the time of *e* abuts the time of *s*. Since participles do not have T (and their own speech time), I leave the reference time *t* variable free and the context will decide how it will be interpreted.

The participial morphology (Part) is meaningless and PartP combines with the head A, which has the meaning of Kratzer's (2000) target state operator. It existentially closes the event argument and externalizes the state variable. Since a prefix – i.e., a prefixal *p*P with a state variable – is present in the structure, the stative meaning is derived. Without a prefixal *p*P, a type mismatch would arise. Since there are no elements modifying the state in (35) and there is no reason not to existentially bind the state variable in AP already, the existential closure closes the state variable.

In AP with the moved operator, via the assignment function *g* manipulated by Predicate Abstraction (Heim – Kratzer 1998), the index 1 is mapped to the variable *x*.[8] I analyze the moved operator as an identity function, which returns the <e,t> meaning of the AP (the Predicate Abstraction step is not shown in (36)). Consequently, the AP can combine with the noun *kniha*.

7 The variable *e* ranges over dynamic as well as stative eventualities.

8 The same happens in the case of movement of the operator to the edge of *v*P, which is not shown in (36).

## 4. Conclusion

We have seen that both lexical and superlexical prefixes occur in adjectival participles. I have analyzed lexicals and (some) superlexicals as incorporated prepositions projecting *p*P in the complement position of the root. By transitivization, both types of prefixes help unergative verbs to derive *-ný/-tý* participles and by adding the state they help unaccusative verbs to derive *-lý* participles. The added state variable licenses the target state operator in the structure. Lexically and superlexically prefixed *-lý* and *-ný/-tý* participles can denote a target state as well as a resultant state.

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