

The status of secondary imperfectivization in Polish: Evidence from VP idioms¹

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Abstract:

This paper offers new insights into the status of secondary imperfective morphology and its interaction with different classes of aspectual affixes based on the analysis of their compatibility with basic perfective and basic imperfective VP idioms in Polish. We provide new evidence in favor of the vP-external status of secondary imperfective morphology and we propose a new architecture of aspectual morphology in Polish in which there are two classes of vP-external superlexical prefixes: high and low. The former are projected in several functional projections above secondary imperfective morphology while the latter are projected below it in a single dedicated functional projection. Additionally, we provide new evidence that a semelfactive morpheme in Polish is realized vP-internally. We argue that it acts as a verbalizer projected in the head of vP. Concerning the computation of aspectual meaning, inspired by earlier claims made for Russian, we argue that in Polish one should separate morphological derivation of perfective and imperfective verbs from their aspectual interpretation with the former happening earlier during the derivation and the latter taking place later at the level of AspP where IMP/PERF null operators are computed on the basis of the information provided by the highest aspectual morpheme in the hierarchy.

Keywords: VP idioms, Polish aspect, secondary imperfective, lexical prefixes, superlexical prefixes

1. Introduction

There is an ongoing debate in Slavic aspectology concerning the status of aspectual morphology. In Polish, almost all verbs (including infinitives) have perfective and imperfective variants. Polish perfective verbs usually contain a prefix e.g., *pisać¹* – *napisać^P* ‘to write’ or a suffix *błyskać¹* – *błysnąć^P* ‘to flash’. Imperfective verbs are either bare (unprefixed) *pisać¹* ‘to write’ or derived by means of an -yw- suffix *podpisywać¹* ‘to sign’ or -a- as in *wbijać¹* ‘to hammer’ (cf. Bogusławski 1963; Nagórko 1998; Wróbel 1999, 2001; Willim 2006, Szymanek 2010). However, there is no single dedicated perfective marker in Polish. In fact, a single verbal stem can cooccur with many different aspectual prefixes e.g., *podpisać^P* ‘to sign’, *napisać^P* ‘to write down’, *wypisać^P* ‘to prescribe’, *przepisać^P* ‘to copy sth in writing’ and a single prefix can cooccur with multiple verbal stems, e.g., *podskoczyć^P* ‘to jump up’, *podstawić^P* ‘to put underneath’, *podnieść^P* ‘to lift’, *podpisać^P* ‘to sign’, *podgrzać^P* ‘to heat sth up a little bit’. As is evident from the English translations of the provided examples, verbal stems can acquire different, sometimes remotely related readings depending on the attached prefix. This made many linguists postulate that verbal prefixes or suffixes are not the markers of perfectivity but rather aspectual meanings are conveyed by the entire perfective or imperfective stems (see e.g., Bogusławski 1963; Piernikarski 1969; Grzegorzczak 1997; Willim 2006). This claim has been disputed by many scholars who have argued that aspectual morphemes do not form a uniform class and a distinction should be made between lexical prefixes (also referred to as qualifying, resultative, internal) and superlexical prefixes (modifying, external) (see e.g., Babko-Malaya 1999; Ramchand 2004, 2008a, b; Romanova 2004, 2006; Svenonius 2004 a, b; Di Sciullo and Slabakova 2005; Arsenijević 2006; Biskup 2007, 2012, 2019; Žaucer 2009, 2012; Markova 2011; Biały 2012; Wiland 2012; Biskup and Zybatow 2015). It is standardly assumed that a crucial difference between lexical and superlexical prefixes is that only the former can change the meaning, the argument structure and the selectional restrictions of the base verb in unpredictable ways while the latter have a predictable meaning and distribution. Only the former can have secondary imperfective counterparts. Superlexical prefixes can precede the lexical ones but lexical prefixes cannot precede the superlexical ones (see Section 3 for a more detailed discussion). However, it is hotly debated which prefixes are lexical and which are superlexical and how they interact with

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secondary imperfective morphology in different Slavic languages (Schoorlemmer 1995; Babko-Malaya 1999; Milićević 2004; Svenonius 2004 a, b; Filip 2005, Arsenijević 2006; Romanova 2006; Ramchand 2008a, b; Tatevosov 2008; Žaucer 2008, 2010; Markova 2011; Biskup 2019; Antonyuk-Yudina, Arsenijević, Quaglia and Simonović submitted; Rothstein 2020; Tatevosov 2020 and earlier work). We intend to contribute to this dispute by addressing the question of the status of secondary imperfectivization in Polish with special emphasis on its interaction with different types of superlexical prefixes and VP idioms.

Following Marantz (1997), Ramchand (2008a), we assume that “vP” is a domain for the assignment of idiosyncratic encyclopedic information. This view is compatible with Arad (2003) who proposes that the boundary for special meanings is the point where the root merges with the categorical head and Borer (2014) who argues that it is the point of merger of the first functional argument above VP. Along the lines of Ramchand (2008a, 2017) we assume that vP is a syntactic head that projects an Initiator argument and closes the first derivation cycle (cf. Horvath and Siloni for a different view).² It has been shown by Kędzierska et al. (2018) for Polish that it is relatively easy to change the tense or add modal verbs and negation to VP idioms without altering their figurative meaning because these modifications concern higher functional projections – external to vP. On the other hand, it is very difficult to change the number of the NP object or modify it by using adjectival or relative clause modification because these modifications concern vP internal elements. Their study revealed that aspectual modification creates a much less clear picture as some aspectual morphemes are more easily acceptable with VP idioms in Polish and others are completely out. For this reason we decided to use Polish VP idioms as a testing ground to investigate which aspectual morphemes are projected vP internally and which are projected vP externally. VP idioms in Polish constitute a perfect testing ground for this set of questions because they are themselves aspectually heterogeneous; namely some of them are by default perfective, e.g., *rozprostować kości* ‘to relax by stretching one’s body’ [lit. to stretch one’s bones] and some are by default imperfective, e.g., *klepać biedę* ‘to be poor’ [lit. pat poverty]. Therefore, VP idioms can be used to test which aspects of our linguistic knowledge are internal to this assumed domain of special idiomatic meanings (referred to in the following text as ‘vP internal’) and which are external to this domain (henceforth ‘vP external’). It will be shown in this study how the positioning of particular markers in the proposed architecture of aspectual morphology follows from their compatibility with basic perfective and basic imperfective VP idioms.

2.1 Some facts about aspectual morphology in Polish

Łazarczyk (2010) proposes the following morphological structure of a Polish verb (cf. Jabłońska 2004, 2007) :

² Harley (2015) proposes, along the lines of Kratzer (1996), that the locus of merge of the Agent is the higher Voice Phrase (*VoiceP*) and that vP and *VoiceP* should be kept distinct from vP where the *Voice* introduces the external argument and delimits a phase whereas v encodes causative semantics and verbalizes roots. According to Harley (2014: 269) interpretations of derivations even after the first categorizer can still be idiosyncratic. It has been demonstrated by Kędzierska et al. (2018) that it is relatively easy to change the tense or add modal verbs and negation to Polish VP idioms without altering their figurative meaning because these modifications concern higher functional projections – external to vP. Given this, it is true that interpretations of derivations even after the first categorizer can be idiosyncratic as long as the elements added above the idiomatic part of the derivation do not interfere with VP internal semantics of the idiom (for instance tense and modal morphemes can be easily added to the VP idioms in Polish) but it does not necessarily mean that they are part of the idiomatic domain, they simply do not interfere with the semantics of idiomatic verbal phrases. There are two reasons why we prefer the proposal that the domain of idiomatic meaning is vP and not VoiceP. First, according to Zdziebko (2017: 570), the Voice head is introduced above AspP in Polish and is present in transitive verbs and the passives based on transitive verbs. If VoiceP is projected above AspP in Polish, it is not easy to explain why basic perfective and imperfective VP idioms (the ones without an empty slot e.g. *wpędzić kogoś w maliny* ‘lit. to lead someone to the raspberry bushes’ (to mislead someone) and those whose DP complements are not self-standing idioms) cannot undergo passivization without the loss of their idiomatic meaning e.g. **kości zostały/były rozprostowane* ‘to relax by having one’s body stretched’ [lit. bones were stretched], **para nie została/była puszczona z ust* ‘secret was not revealed’ [lit. steam was not released from the mouth]. Second, we prefer the view that vP is the domain of idiomatic meanings because it matches the existing approaches to the locus of lexical and superlexical aspectual morphemes with the lexical prefixes being vP internal and causing idiosyncratic changes in the meaning of the roots and the superlexical ones being vP external and causing predictable semantic changes in the meaning of the verbal bases.

PREFIX(ES) + ROOT + SECONDARY IMPERFECTIVE/HABITUAL/SEMELFACTIVE + THEME VOWEL + TENSE + AGR

The least morphologically complex aspectual forms are primary imperfectives (bare, i.e., ‘unprefixed’ verbs), as exemplified in (1).

- (1) *pis-a-ć¹* ‘to write’
ROOT + THEME VOWEL + INFINITIVE

Primary imperfective forms can be perfectivized by means of a prefix, as shown in (2).

- (2) *na-pis-a-ć^P* ‘to write down’
PREFIX + ROOT + THEME VOWEL + INFINITIVE

Some prefixed verbs can be imperfectivized by means of an -yw- or -a- suffixes (see (3a-b)).

- (3) a. *pod-pis-yw-a-ć¹* ‘to sign (imperfective)’
PREFIX + ROOT + SECONDARY IMPF + THEME VOWEL + INFINITIVE
b. *w-bij-a-ć¹* ‘to hammer’
PREFIX + ROOT + SECONDARY IMPF + INFINITIVE

The secondary imperfective morphology is used to undo the perfectivizing contribution of some prefixes. Most secondary imperfectivized perfective verbs do not have primary imperfective equivalents in Polish, hence the term secondary imperfective may sound misleading. We use the term secondary imperfective to talk about verbs derived from perfective verbal bases by means of secondary imperfectivizing morphology (this issue will be discussed in more detail in later sections).

There is also a semelfactive morpheme in Polish which perfectivizes iterative verbs (see (6)).

- (4) *jęk-nq-ć^P* ‘to moan once’
PREFIX + ROOT + SEMELFACTIVE + INFINITIVE

Willim (2006) proposes that Polish imperfective verbs with an iterative meaning (e.g., *błyszczyć¹* ‘to flash repeatedly’) describe activities which refer to a series of iterated atomic events happening by default on a single occasion. As such they can co-occur with a prefix *za-* as in *zabłyszczyć^P* ‘to start flashing repeatedly’ (cf. Willim 2006: 223). Willim (2006: 223) suggests that ‘whether an activity has a derived semelfactive verb depends on whether it conceptually specifies the minimal part or a unit of the process it denotes’. Moreover, she suggests that such atomic subevents in the denotation of iterative verbs have to be individuated linguistically in the lexical entry of a verbal predicate. By contrast, Taraldsen Medová and Wiland (2019) observe that semelfactive stems have nominal roots in Polish, as in [*kop*]_N-*nq-ć* ‘to kick once’, *jęk-nq-ć* ‘to moan once’. This speaks in favor of the role of the semelfactive prefix as a verbalizer.

There is also a habitual suffixes -yw- in Polish which is homophonous with the secondary imperfective suffixes -yw- but unlike secondary imperfective -yw- the habitual one attaches only to a restricted class of imperfective verbs, as shown in (5) (see Łazarczyk 2010, Filip and Carlson 2015).

- (5) a. *czyt-yw-a-ć¹* ‘to read from time to time’ (derived from *czytać¹* ‘to read’)
b. *pis-yw-a-ć¹* ‘to write from time to time’ (derived from *pisać¹* ‘to write’)
c. *gr-yw-a-ć¹* ‘to play from time to time’ (derived from *grać¹* ‘to play’)
d. *wid-yw-a-ć¹* ‘to see from time to time’ (derived from *widzieć¹* ‘to see’)
ROOT + HABITUAL SUFFIX + THEME VOWEL + INFINITIVE

In addition, there are some bare perfective verbs in Polish suggesting that perfectivity does not require the presence of a prefix. A list of bare perfective verbs is provided in Łazarczyk (2010: 16-17) and it includes *kupić*^P ‘to buy’, *dać*^P ‘to give’, *chwycić*^P ‘to grab’, *chybić*^P ‘to miss’, *czepić*^P *się* ‘to cling to’, *lec*^P ‘to lie down’, *paść*^P ‘to fall down’, *puścić*^P ‘to let go’, *rzec*^P ‘to say’, *ruszyć*^P ‘to set in motion’, *rzucić*^P ‘to throw’, *skoczyć*^P ‘to jump’, *stawić*^P *się* ‘to show up’, *strzelić*^P ‘to shoot’, *trafić*^P ‘to reach’.

There are also bi-aspectual bare forms in Polish which can alternate between perfective and imperfective uses e.g., *aresztować*^{P/I} ‘to arrest’ *kanonizować*^{P/I} ‘to canonize’, *koronować*^{P/I} ‘to crown’, ‘*mianować*^{P/I} ‘to name (to an office).’

As stated in the introduction, the choice of aspectual morphology for the expression of perfective and imperfective aspect is in most cases not predictable and a prefixed verbal stem can acquire different, sometimes remotely related readings depending on the aspectual prefix it co-occurs with. In fact, many prefixes used to derive perfective verbs modify the selectional restrictions related to the semantics of the selected object and/or the argument structure of the basic verb (see (6) from Willim 2006: 184, 188).

- (6) a. *kupić*^P ‘to buy something’ – *przekupić*^P ‘to bribe someone’
b. *gotować*^I ‘to cook’ – *przygotować*^P ‘to prepare’

This might indicate that aspectual morphemes are part of the verbal lexical entries. However, as mentioned in the introduction, not all aspectual prefixes behave alike. It has been pointed out in the literature that aspectual morphemes should be divided into lexical (also referred to as qualifying, resultative, internal) and superlexical (also referred to as modifying, external).

3. The division into lexical and superlexical aspectual prefixes and the status of secondary imperfectivization

The following criteria are standardly used to classify aspectual morphemes into lexical and superlexical (see Table 1).

Table 1. Standard diagnostics for lexical vs. superlexical prefixes

LEXICAL PREFIXES	SUPERLEXICAL PREFIXES
- alter the argument structure of a verbal predicate (7) - cause idiosyncratic changes in the lexical meaning of a verbal predicate (8a) - impose idiosyncratic restrictions on the choice of arguments of a verbal predicate (8b) - have secondary (derived) imperfective counterparts (9) - do not stack (13b)	- do not change the argument structure (10) - cause predictable changes in the meaning of a verbal predicate (11-14) - precede the lexical prefixes but lexical prefixes do not precede the superlexical ones (15b) - usually disallow secondary imperfectivization (9b) - allow for stacking (15a) (cf. Wiland 2012)3

- (7) *plakać*^I ‘to cry’ – *wyplakać*^P *awans* ‘to cry out a promotion’
(8) a. *gotować*^I ‘to cook’ – *przygotować*^P ‘to prepare’
b. *kupić*^P *coś* ‘to buy something’ – *przekupić*^P *kogoś* ‘to bribe someone’
(9) a. *przygotować*^P ‘to prepare’ – *przygotowywać*^I ‘to be preparing’
b. *poczytać*^P ‘to read for a while’ – **poczytywać*^P ‘to be reading for a while’
(10) a. *czytać*^I *książkę* ‘to read a book’ – *poczytać*^P *książkę* ‘to read a book for a while’

3 Superlexical prefixes can cooccur but they have to respect a certain hierarchy; see (24).

- b. *gotować*^l *makaron* ‘to cook pasta’ – *nagotować*^p *makaronu* ‘to cook a lot of pasta’
- (11) delimitative *po-*
poczytać^p ‘to read for a while’
poleżeć^p ‘to lie for a while’
- (12) distributive *po-*
pootwierać^p *okna* ‘to open the windows, each in turn’
pozamykać^p *drzwi* ‘to close the doors, each in turn’
- (13) cumulative *na*-⁴
nagotować^p ‘to cook a lot’
nasmażyć^p ‘to fry a lot’
- (14) saturative *na-*
najeść^p *się* ‘to eat to the full’
naczytać^p *się* ‘to read to the full’
- (15) a. *po*^{superlexical (distributive)-przy}^{lexical} *gotowywać* (*różne zadania na test*)
‘to prepare (different tasks for a test)’
b. **przy*^{lexical} *po*^{superlexical (distributive)-gotowywać}

Wiland’s (2012) list of superlexical prefixes in Polish is shown in Table 2.

Table 2. Superlexical prefixes in Polish according to Wiland (2012)

SUPERLEXICAL PREFIX	EXAMPLE
Distributive	<i>porozkładać</i> ‘to distribute’
Attenuative	<i>poddusić</i> ‘to stew a bit’
Delimitative	<i>poczytać</i> ‘to read for a while’
Saturative	<i>najeść się</i> ‘to eat to the full’
Cumulative	<i>naścinać</i> ‘to cut a lot of sth’
Excessive	<i>przekrzyczeć</i> ‘to shout louder than sb’
Repetitive	<i>przepisać</i> ‘to write sth again’
Perdurative	<i>przesiedzieć</i> ‘to sit through the length of some event’
Compleitive (additive)	<i>dokroić</i> ‘to slice more of sth’
Terminative	<i>odśpiewać</i> ‘to sing a song from the beginning to the end’

According to Romanova (2004) and Svenonius (2004 a, b), among others, lexical and superlexical prefixes occupy different syntactic positions with respect to *vP*: lexical prefixes are *vP* internal and superlexical prefixes are *vP* external, as shown in (16).

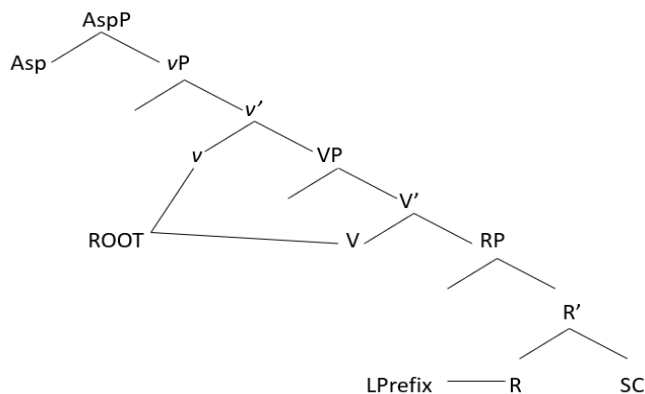
- (16) [external prefixes [secondary imperfectivizing -yw(a) [_{vP} [_{vP} internal prefixes V]]]]
-

In this study, we account for the distribution of lexical and superlexical prefixes in the framework of Ramchand (2004, 2008a, b) who postulates the existence of the first-phase syntax, which corresponds to the event building phase of the derivation. This means that the information classically seen to be part of lexical items including event structure and argument structure information is decomposed into specific syntactic and semantic categories. The event structure syntax is assumed to consist of three

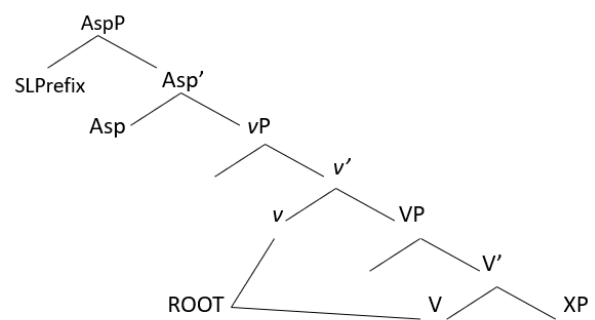
⁴ Concerning the cumulative prefix *-na*, one may reasonably ask whether it is a legitimate superlexical prefix it may add its own argument. However, we follow Pereltsvaig (2006) in assuming that affecting argument structure is not an exclusive property of lexical prefixes as there are certain kinds of arguments which are not event participants but rather some kind of measure arguments of functional superlexical prefixes.

subevents: an initiational subevent, a process denoting subevent and a subevent corresponding to the result state. Each of them has its own projection ordered hierarchically $\text{InitP} \gg \text{ProcP} \gg \text{ResP}$ and each of them has a corresponding event participant projected in the specifier position (Initiator, Undergoer and Resultee). In Ramchand (2008a, b), she argues that lexical prefixes, which interact with the basic lexical meaning of the root and thus create a new event description in fact originate in the Result subeventual projection, as shown in (17). By contrast, superlexical prefixes are assumed by Ramchand (2008a: 1707) to “occur directly in the aspectual projection as specifiers of the null aspectual head”, as shown in (18) (ibid.). Ramchand (2008a) assumes that her first-phase syntax can be the place for the assignment of idiosyncratic encyclopedic information, which is compatible with the observation that the lexical prefixes, which are generated in the first-phase syntax can change the meaning of the verb in an idiosyncratic way.

(17)



(18)



According to some authors, apart from the lexical and superlexical prefixes, there are also purely perfectivizing (Bogusławski 1963; Grzegorzczkova, Laskowski & Wróbel 1984; Svenonius 2004a, 2004b; Willim 2006 (but see also Isačenko 1960; Filip 1999; Janda & Nessel 2010; Janda & Lyashevskaya 2012 for the opposite point of view). Unlike lexical prefixes, purely perfectivizing prefixes do not affect the argument structure or the selectional restrictions of the verbal predicate they are attached to and they seem to only impose a final temporal boundary on the event and in that sense they are semantically bleached and abstract. For this reason, Ramchand (2008a: 1709, footnote 11) assumes that purely perfectivizing prefixes are generated in the aspectual head projection outside the first phase (the event decomposition phase). Importantly, purely perfectivizing prefixes do not form secondary imperfective (SI) forms in Polish, as shown in (19).

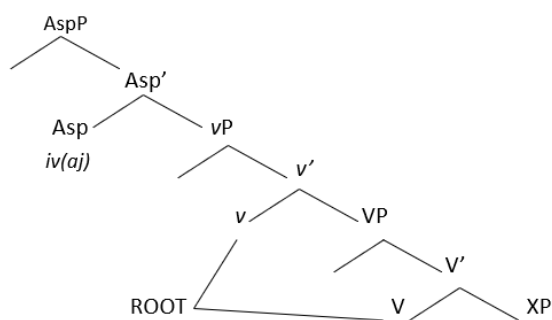
(19)

a.	pisać ^I	/	napisać ^P	/	*napisywać ^{SI}	‘to write’
b.	robić ^I	/	zrobić ^P	/	*zrobiwać ^{SI}	‘to do’
c.	czytać ^I	/	przeczytać ^P	/	*przeczytywać ^{SI}	‘to read’

We will explain the status of purely perfectivizing prefixes in Section 4.

Regarding the locus of secondary imperfective morphology in the aspectual hierarchy, Ramchand (2008a: 1704) takes it to be the head of AspP, which is a projection above little vP, as shown in (20).

(20)



Similarly, Filip (2005) claims that the Slavic imperfective suffix is an inflectional morpheme which serves as a morphological exponent of the aspectual imperfective operator IPFV. She argues that the imperfective operator must be located above the level of event semantics at which telicity of verbs and predicates is defined. We agree with Ramchand (2008a) and Filip (2005) that the semantics of the secondary imperfectivizing suffix *-yw(a)* is predictable. Being predictable in terms of its meaning and productive in terms of its distribution, secondary imperfectivizing suffix *-yw(a)* is more similar to external prefixes, which may indicate that the morpheme *-yw(a)* is projected in a *vP*-external syntactic position; see (21).

- (21) [external prefixes [secondary imperfectivizing (SI) *-yw(a)* [_{vP} [_{VP} internal prefixes V]]]]
- ⇓
SUPERLEXICAL
⇓
LEXICAL

One problem for the view that SI morphology heads the Aspect Phrase is that not all superlexical prefixes in Polish are subject to secondary imperfectivization and some of them can perfectivize secondary imperfectivized forms, as shown in Table 3.

Table 3. Superlexical prefixes and secondary imperfectivization

SUPERLEXICAL PREFIX	PERFECTIVE	SECONDARY IMPERFECTIVE
Distributive	<i>porozkładać</i> ‘to distribute’	* <i>porozkładowywać</i>
Delimitative	<i>poczytać</i> ‘to read for a while’	* <i>poczytywać</i>
Saturative	<i>naścinać się</i> ‘to cut sth to the full	* <i>naścinywać się</i>
Cumulative	<i>naścinać</i> ‘to cut a lot of sth’	* <i>naścinywać</i>
Attenuative	<i>poddusić</i> ‘stew a bit’	<i>podduszać</i>
Excessive	<i>przekrzyczeć</i> ‘to shout louder than sb’	<i>przekrzykiwać</i>
Repetitive	<i>przerobić</i> ‘to do sth again’	<i>przerabiać</i>
Perdurative	<i>przespać</i> ‘to sleep through the length of some event’	<i>przesypiał</i>
Completive (additive)	<i>dokroić</i> ‘to slice more of sth’	<i>dokrajać</i>
Terminative	<i>odśpiewać</i> ‘to sing a song from the beginning to the end’	<i>odśpiewywać</i>

These facts suggest that there are superlexical prefixes which are realized above SI morphology and those which are projected below it. Those superlexical prefixes which are projected above secondary imperfective morphology are referred to as HIGH SUPERLEXICAL PREFIXES and those superlexical prefixes which are projected below secondary imperfective morphology are called LOW SUPERLEXICAL PREFIXES. We would like to incorporate this observation into Wiland’s (2012) hierarchy of aspectual superlexical prefixes based on his analysis of prefix stacking in Polish; see (22).

Based on his analysis of prefix stacking in Polish, Wiland (2012) proposes the hierarchy of aspectual morphology shown in (22):

(22) DIST >> ATT >> DELIM >> SAT >> CUMUL >> EXC >> REP >> PERD >> COMPL >> TERM

In his hierarchy, an attenuative prefix is located high but we would like to argue that in fact it is realized lower. Our claim is based on the observation that distributive, delimitative, saturative and cumulative prefixes can stack over the attenuative prefix, as illustrated in (23) respectively (see also [removed for anonymization]).

- (23) a. **po-pod-duszać** wszystkie warzywa (jedno po drugim)
DIST-ATT-stew_{INF} all vegetables (one after another)
‘to stew all vegetables one after another’
- b. **po-pod-duszać** warzywa w woku przez chwilę
DELIM-ATT-stew_{INF} vegetables in wok for while
‘to stew vegetables a little bit for a while in a wok’
- c. **na-pod-duszać** się warzyw
SAT-ATT-stew_{INF} REFL vegetables
‘to stew vegetables a little bit excessively’
- d. **na-pod-duszać** dużo roladek mięsnych
CUM-ATT-stew_{INF} a lot rolls_{GEN} meat_{ADJ.PL.GEN}
‘to stew a lot of meat rolls yesterday’

Moreover, verbs with an attenuative prefix can be secondarily imperfectivized. In order to serve as input to this operation an attenuative prefix must be located below the projection occupied by the secondary imperfective morphology. Based on all these observations, we would like to propose the following modified aspectual hierarchy with secondary imperfective morphology dividing HIGH and LOW superlexical prefixes, see (24) (cf. Kwapiszewski 2021 for a different view).

(24) ^{HIGH}{DIST >> DELIM >> SAT >> CUMUL} >> SI >> ^{LOW}{EXC, REP, ATT, PERD, COMPL, TERM}^{5,6}

In the proposed architecture of Polish aspectual morphology high superlexical prefixes occupy separate functional projections, as evidenced by the fact that they can stack over each other; see (25).

- (25) [po- [na- [[podpis]-yw(ać)]_{IPFV}]_{PFV}]_{PFV} dokumentów
‘to DIST-CUM-sign a lot of documents’

By contrast, there is only one projection for low superlexical prefixes (see also Endo and Wiland 2012). This is so because low superlexical prefixes never cooccur so their relative ordering with respect to each other cannot be established. This is shown in (26).

- (26) a. *[prze- [pod- [gotow(ać)]_{IPFV}]_{PFV}]_{PFV} mięso
‘to PERD-ATT-cook meat’
- b. *[pod- [prze- [gotow(ać)]_{IPFV}]_{PFV}]_{PFV} mięso
‘to ATT-PERD-cook meat’

⁵ As pointed out by an anonymous reviewer even though verbs with delimitative prefixes cannot be in general be secondarily imperfectivized as in *popracowywać ‘to work for a while from time to time’, *pospacerowywać ‘to walk for a while from time to time’, there are some uses of po- prefixes with iterative verbs which seem to undergo secondary imperfectivization, as in postukiwać ‘to knock at sth from time to time’, pokrzykiwać ‘to shout at sb from time to time’. The reviewer refers to Szymanek (2010a: 156) who analyses such examples as secondary imperfective verbs with delimitative po- (postukać ‘to knock at sth for a while’, pokrzyczeć ‘to shout at sb for a while’). Interestingly, these examples can be further perfectivized with a high saturative prefix na- as in napostukiwać się ‘to knock at sth from time to time to the full’. This may indicate either that delimitative prefixes may function as either low or high or that po- in postukać is not a delimitative prefix but rather an inceptive one meaning to start knocking repeatedly. The inceptive meaning of this prefix gets more pronounced when this verb is used in an imperative mood postukaj! ‘start knocking!’, pomrugaj ‘start winking!’.

⁶ A more fine-grained classification of aspectual prefixes was also proposed by Tatevosov (2008) and Markova (2011) and Biskup (2021). However, there are some differences between their proposal and ours which may follow from some characteristics specific to the investigated languages.

- c. **[od- [prze- [krzycz(eć)]_{IPFV}]_{PFV}]_{PFV} kolegę*
'to TERM-EXC-shout friend'
- d. **[prze - [od- [śpiw(ać)]_{IPFV}]_{PFV}]_{PFV} hymn*
'to EXC-TERM-sing anthem'

In order to shed more light on the aspectual morphological architecture in Polish, we examined the constraints on the use of aspectual prefixes and suffixes with VP idioms. Recall from the introduction that we follow the view proposed by Marantz (1997), Ramchand (2008a) and compatible with Arad (2003) and Borer (2014) that *vP* is a domain for the assignment of idiosyncratic encyclopedic information. Therefore, VP idioms can be used to test which aspects of our linguistic knowledge are internal to this assumed domain of special idiomatic meanings (referred to in the following text as 'vP internal') and which are external to this domain (henceforth 'vP external').

4. Imperfective and perfective VP idioms and their interaction with aspectual morphology in Polish

In Polish we distinguish between perfective and imperfective VP idioms, referred to as basic perfective and basic imperfective VP idioms respectively. The former by default contain perfective verbs (with lexical prefixes and bare perfective verbs), as illustrated in (27). The latter by default contain imperfective verbs (bare imperfective verbs), as shown in (28).

- (27) a. *nabrać wody w usta* 'to keep secret' (lit. to take water in the mouth)
- b. *rozprostować kości* 'to stretch one's bones' (lit. to stretch one's bones)
- c. *odkryć Amerykę* 'to discover America' (lit. to discover America)
- d. *zaciśnąć pasa* 'to tighten one's belt' (lit. to tighten belt)
- e. *wyłożyć karty na stół* 'to make things explicit' (lit. put cards on table)
- (28) a. *bujać w obłokach* 'to dream' (lit. rock in the clouds)
- b. *klepać biedę* 'to be poor' (lit. pat poverty)
- c. *trzymać język za zębami* 'to keep secret' (lit. to hold tongue behind teeth)
- d. *czuć miętę do kogoś* 'to be infatuated with sb' (lit. to feel mint to someone)
- e. *pluć sobie w brodę* 'to regret' (lit. to spit oneself in chin)

In [removed for anonymization], we showed that all basic perfective VP idioms undergo secondary imperfectivization; see (29) for illustration.

- (29) a. *nabierać^{SI} wody w usta* 'to keep secret' (lit. to take water in the mouth)
- b. *rozprostowywać^{SI} kości* 'to stretch one's bones' (lit. to stretch one's bones)
- c. *odkrywać^{SI} Amerykę* 'to discover America' (lit. to discover America)
- d. *zaciśkać^{SI} pasa* 'to tighten one's belt' (lit. to tighten belt)
- e. *wykładać^{SI} karty na stół* 'to make things explicit' (lit. put cards on table)

More precisely, we reported new data showing that basic perfective VP idioms are significantly more frequent but equally acceptable as their secondary imperfective counterparts. We took this to indicate that perfective VP idioms are the basic forms and that their secondary imperfective counterparts are derived. Additionally, we concluded that secondary imperfectivization is a productive *vP* external morphological operation. The assumption that basic perfective VP idioms are stored in the lexicon as such is additionally supported by the observation that when the prefix of perfective VP idioms is dropped (as shown in (30)), it results in their significantly lower acceptability (and to the loss of their idiomatic meaning) as compared to the basic perfective forms. This, in turn, suggests that prefixes of perfective VP idioms are *vP* internal.

- (30) a. *brać wody w usta* '#to keep secret' (lit. to take water in the mouth)
- b. *prostować kości* '#to stretch one's bones' (lit. to straighten one's bones)
- c. *kryć Amerykę* '#to discover America' (lit. to cover America)

- d. *cisnąć pasa* ‘#to tighten one’s belt’ (lit. to squeeze belt)
 e. **łożyć karty na stół* ‘#to make things explicit’

Additionally, as suggested by an anonymous reviewer, an additive prefix *do-* can be found in basic perfective VP idioms and it can be secondarily imperfectivized without a loss of its idiomatic meaning in Polish suggesting that it is a lexical rather than a superlexical prefix, as shown in (31)

ADDITIVE

- (31) *dolać^P/dolewać^{SI} oliwy do ognia*
 to ADD-pour oil to fire
 ‘to fuel a conflict’

As far as basic imperfective VP idioms are concerned, one could expect that they should be compatible with all vP-external superlexical prefixes in our proposed hierarchy.

This expectation is only partly fulfilled as basic imperfective VP idioms are compatible with most but not all superlexical prefixes. The superlexical prefixes that are compatible with basic imperfective VP idioms are the following: distributive, delimitative, saturative and perdurative prefixes, as illustrated in (32)-(35).

DISTRIBUTIVE

- (32) a. *chować głowę w piasek*
 ‘to hide one’s head in the sand’
 b. *Wszyscy po-chowali głowę w piasek.*
 all_{NOM} DIST-hide_{PST.3PL} head_{ACC} in sand_{ACC}
 ‘Everyone hid his/her head in the sand.’

DELIMITATIVE

- (33) a. *grać na nerwach*
 ‘to get on sb’s nerves’
 b. *Po-grał nam na nerwach cały wieczór*
 DELIM-play_{PST.3SG.M} USDAT on nerves_{LOC} [whole evening]_{ACC}
i wyszedł zadowolony.
 and leave_{PST.3SG.M} satisfied
 ‘He played on our nerves the whole evening and then left satisfied.’

SATURATIVE

- (34) a. *szukać dziury w całym*
 ‘to pick holes’
 b. *Na-szukał się dziur w całym.*
 SAT-look_for_{PST.3SG.M} REFL hole_{GEN.PL} in whole
 ‘He looked for holes in the whole (to the full).’

PERDURATIVE

- (35) a. *lecieć na opinii*
 ‘to live on one’s reputation’
 b. *Prze-leciał na opinii cały ten rok.*
 PERD-fly_{PST.3SG.M} on opinion_{LOC.SG} whole this year_{ACC}
 ‘He flew on the opinion throughout the whole year.’

By contrast, cumulative and attenuative prefixes are incompatible with imperfective VP idioms, as shown in (36)-(37).⁸

⁷ The verb *łożyć* exists in Polish in a collocation *łożyć na kogoś* ‘to be forced to finance sb’. Its use in (29e) is ungrammatical.

⁸ In [removed for anonymization] we explain how the semantics of the cumulative and attenuative prefixes interferes in the VP-internal semantics of basic imperfective VP idioms unlike distributive, delimitative, saturative and perdurative prefixes.

CUMULATIVE

- (36) a. *budować zamki na piasku*
 ‘to build castles in the air’
 b. #*Na-budował zamków na piasku.*
 CUM-build_{PST.3SG.M} castle_{GEN.PL} on sand
 lit. ‘He built a lot of castles on the sand.’

ATTENUATIVE

- (37) a. *dusić każdy grosz*
 ‘to pinch every penny’
 b. #*Jest chytrusem i pod-dusza każdy grosz.*
 be_{PRS.3SG} cunning_person_{INS} and ATT-pinch_{PRS.3SG} every penny
 lit. ‘He is very cunning and pinches slightly every penny.’

Concerning terminative, repetitive and excessive prefixes, there were no verbs inside our tested imperfective VP idioms which naturally combine with these prefixes making it impossible to take a definite stand on the issue of their compatibility with VP idioms in Polish.

Concerning the incompatibility of cumulative and attenuative prefixes with imperfective VP idioms, one might argue that they are *vP* internal (lexical) prefixes. There is one problem which makes us refrain from drawing this conclusion. The problem in question has to do with the cumulative prefix *na-*. On the one hand, it does not allow secondary imperfectivization, hence it patterns with other clearly superlexical prefixes. However, on the other hand, cumulative *na-* is incompatible with imperfective VP idioms, hence it seems to behave like other apparently lexical prefixes. Recall also that all perfective VP idioms are subject to secondary imperfectivization, which was taken as evidence that secondary imperfective morphology is *vP* external. An important observation is that cumulative *na-* stacks over secondarily imperfectivized verbs leading to their perfectivization, as exemplified in (38). This indicates that cumulative *na-* must be higher than secondary imperfectivizing morphology, meaning that it is even more *vP* external.

- (38) [*na-[[podpis]-yw(a)-]*IPFV]_{PFV} *dokumentów*
 ‘to sign a lot of documents’

Taken together, we can conclude that a prefix which is incompatible with imperfective VP idioms does not have to be *vP*-internal. Based on this observation and based on the fact that the semantics of superlexical prefixes which are incompatible with basic imperfective VP idioms is predictable, we would like to argue that all the superlexical prefixes in Wiland’s hierarchy (except the completive (additive one) are indeed *vP*-external. Our next claim is that these superlexical prefixes which do not undergo secondary imperfectivization in Polish (distributive, saturative, delimitative, cumulative) occupy a higher position in the functional hierarchy than secondary imperfective morphology. Accordingly, those superlexical prefixes which allow for secondary imperfectivization (perdurative, excessive, repetitive, attenuative, and terminative) are located below the functional projection of secondary imperfective (SI) but still *vP*-externally, as shown in (39) and detailed in (40).

- (39) ^{PERF}[{DIST >> DELIM >> SAT >> CUMUL} ^{IPF}[SI ^{PERF}[{PERD, EXC, REP, ATT, TERM} ^{IPF/PFV}[_v THEME VOWEL [(LEXICAL PREFIX) ^{IPF/PFV}[_v ROOT]]]]]]⁹

⁹ The reason why we assume that roots enter the derivation as perfective or imperfective is that there are bare imperfective verbal forms as in *niszczyć*^I ‘to destroy’, *pić*^I ‘to drink’ and there are bare perfective forms in Polish as in *kupić*^P ‘to buy’, *dać*^P ‘to give’, *chwycić*^P ‘to grab’.

(40)

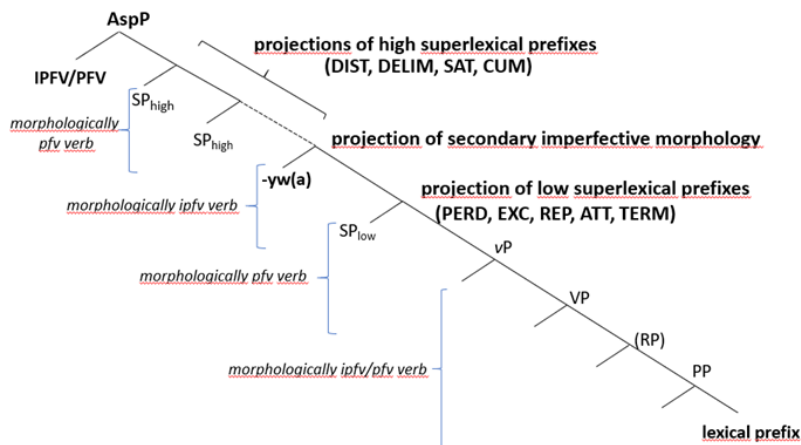


Figure 1. The architecture of Polish aspectual morphology

Concerning purely perfectivizing (empty) prefixes, we would like to suggest that they occupy the same position as low superlexical prefixes because like low superlexical prefixes, purely perfectivizing prefixes cannot stack over other prefixes. What seems to be problematic for this view is that verbs with purely perfectivizing prefixes do not undergo secondary imperfectivization, as shown in (41).

- (41) a. **[[na- [pis]]_{PFV} -ywać]_{IPFV}*
 ‘to PURELY PFV-write’
 b. **[[na- [malow]]_{PFV} -ywać]_{IPFV}*
 ‘to PURELY PFV-paint’
 c. **[[s- [kończ]_{PFV} -ać]_{IPFV}*
 ‘to PURELY PERF-finish’
 d. **[[s- [chow]]_{PFV} -ywać]_{IPFV}*
 ‘to PURELY PFV-hide’
 e. **[[s- [krzyżow]]_{PFV} -ywać]_{IPFV}*
 ‘to PURELY PFV-cross’

One reason for this is that these prefixes do not contribute any lexical meaning to the verb and they play only an aspectual function. Therefore, they form aspectual pairs with their primary imperfective counterparts. There is no need to secondary imperfectivize them if the same imperfective meaning can be expressed by means of a less morphologically marked primary imperfective form. Curiously, verbs with purely perfectivizing prefixes can be secondarily imperfectivized only when they serve as input to higher cumulative or distributive perfectivizing prefixes, as shown in (42).

- (42) a. *[po-[[na- [pis]]]_{PFV}-ywa-ć]_{IPFV}]_{PFV}
 'to DIST-PURELY PERF-write'
 b. *[po-[[na- [malow]]]_{PFV}-ywa-ć]_{IPFV}]_{PFV}
 'to DIST-PURELY PERF-paint'**

Even though these forms are not very productive, we found examples of their use on the internet, as shown in (43).

- (43) a. Niektórzy chcieli, żeby im *po-na-pis-yw-ał*^P
 some wanted in order to them DIST-PURELY PFV-write-SI_{PST}
 po wierszu.
 DIST poem.

- ‘Some of them wanted him to write one poem for each of them.’
- b. Poprzedni właściciel *po-na-malow-yw-ał^P* na nich
 previous owner DIST-PURELY PFV-PAINT-SI_{PST} on them
 różne kółeczka i wzorki.
 various circles and patterns.
 ‘The previous owner painted various circles and patterns on them.’

In these examples verbal forms with purely perfectivizing prefixes are secondary imperfectivized to be able to serve as input to high superlexical prefixes. These data suggest that purely perfectivizing prefixes in Polish are realized in the same position as low superlexical prefixes. Our modified hierarchy including purely perfectivizing prefixes is presented in (44).

- (44) $^{PERF}[\{DIST >> DELIM >> SAT >> CUML\}^{IPF}[SI^{PERF}[\{PERD, EXC, REP, ATT, TERM, PURELY PERFECTIVIZING\}^{IPF/PFV}[_v \text{ THEME VOWEL } [(LEXICAL \text{ PREFIX})^{IPF/PFV}[\sqrt{ROOT}]]]]]]]$

Additionally, purely perfectivizing prefixes are compatible with basic imperfective VP idioms in Polish, as in *schować głowę w piasek* ‘to hide_{PFV} the head in the sand’, which provides further evidence in favor of their vP-external status.

Regarding the semelfactive morpheme *n(q)-*, as in *jęknąć* ‘to moan once’, *krzyknąć* ‘to shout once’, which attaches to nominal roots, as observed by Wiland and Medová (2019), we treat it as a verbalizer projected in the head of the verbalizing projection vP. This follows from the observation that it is in a complementary distribution with other theme vowels spelling out the verbalizing *v* (see Biskup 2021 for a similar view for Czech). Additionally, the fact that we found a VP idiom in Polish with a semelfactive morpheme i.e., *kopnąć w kalendarz* ‘lit. to kick the calendar’ (to kick the bucket) speaks in favor of a vP-internal status of the semelfactive morpheme. A modified hierarchy including a semelfactive morpheme is presented in (45).

- (45) $^{PERF}[\{DIST >> DELIM >> SAT >> CUML\}^{IPF}[SI^{PERF}[\{PERD, EXC, REP, ATT, TERM, PURELY PERFECTIVIZING\}^{IPF/PFV}[_v \text{ SEMELFACTIVE }^{IPF/PFV}[(LEXICAL \text{ PREFIX})^{IPF/PFV}[\sqrt{ROOT}]]]]]]]$

Finally, in his recent study, Kwapiszewski (2021) proposes a purely morphosyntactic analysis of secondary imperfective, according to which the distribution of secondary imperfective morphology (SI) is subject to the following rule:

- (46) $Asp \leftrightarrow SI / [AspP \text{ Asp } [_vP \dots \text{Lexical Prefix}]]$
 Asp is realized by SI morphology iff vP contains a prefix at PF

Kwapiszewski (2021) argues that his account is superior to two alternative accounts of secondary imperfective: Perfective Base Hypothesis and Resultative Base Hypothesis. According to the former, secondary imperfective must contain a perfective layer *Aspperf*, which can be challenged by the fact that not all perfective verbs can undergo secondary imperfectivization, as evidenced by the ungrammaticality of secondarily imperfectivized semelfactive verbs. Notice that semelfactives express punctual events and they do not introduce a change of state. As such they do not contain any result subevent in their event structure. It has been suggested by Łazarczyk and Tatevosov (2015) that secondary imperfectives combine with complex events and they atelicize them. Kwapiszewski (2021) also challenges the Resultative Base Hypothesis, for a verb to undergo a secondary imperfectivization rule it must contain a resultative phrase. He points out that there are bare imperfectives such as for example *budzić¹* ‘to awake’, *niszczyć¹* ‘to destroy’ and *psuć¹* ‘to break down’ which have a resultative semantics (meaning that they are subeventally complex) but which do not allow for secondary imperfectivization.

One major problem for Kwapiszewski's (2021) proposal is that there are some unprefixd (bare) perfective verbs which undergo secondary imperfectivization in Polish, as exemplified on the basis of their uses in base perfective VP idioms shown in (47).

- (47) a. *dać^P komuś w kość – dawać^{SI} komuś w kość* [lit. to give sb in a bone] 'to make sb tired'
 b. *dostać^P obuchem w głowę – dostawać^{SI} obuchem w głowę* [lit. to get a hit with a warhammer on the head] 'to be severely criticized'
 c. *puścić^P parę z ust – puszczać^{SI} parę z ust* [lit. to let the steam out of one's mouth] 'to reveal secret'
 d. *sprzedać^P coś na pniu – sprzedawać^{SI} coś na pniu* [lit. to sell sth on the trunk] 'to sell sth easily and quickly'

The fact that these bare perfective verbs belong to basic perfective VP idioms strongly suggests that they are stored as perfective in the lexicon. Another problem for Kwapiszewski's (2021) account is that there are in fact derived perfective verbs (not stored in the lexicon as such but formed via superlexical prefixes vP-externally) which also undergo secondary imperfectivization, as shown in (48).

- (48) a. *podduśić^P – podduśzać^{SI}* 'stew a bit' (attenuative superlexical prefix)
 b. *przekrzyczeć^P – przekrzykiwać^{SI}* 'to shout louder than sb' (excessive superlexical prefix)
 c. *przerobić^P – przerabiać^{SI}* 'to do sth again' (repetitive superlexical prefix)
 d. *przespać^P – przesypiać^{SI}* 'to sleep through the length of some event' (perdurative superlexical prefix)

We would like to propose that the Perfective Base Hypothesis can be maintained with some modifications. First, only those perfective bases which are realized below the SI projection can be secondarily imperfectivized. This raises a question of why semelfactives cannot be secondarily imperfectivized. This suggests that another restriction is needed, namely only those perfective bases which are realized below the SI projection and express a change of state can serve as input to the secondary imperfectivizing operation in Polish.

5. Aspectual morphology and the computation of aspectual meaning in Polish

A reasonable question to ask is how the aspectual meaning is computed in Polish. Recall that both Ramchand (2008a) and Filip (2005) claim that the Slavic imperfective suffix is a morphological exponent of the aspectual imperfective operator IPFV. This view is problematic for the observation that secondary imperfective forms can be secondarily perfectivized by means of high superlexical prefixes. In order to better account for the observed facts, we would like to account for Polish facts by resorting to Tatevosov's (2015, 2020) claim made for Russian that one should separate morphological derivation of perfective and imperfective verbs from their aspectual interpretation with the former happening earlier during the derivation and the latter taking place later at the level of AspP (see (40)). More specifically, Tatevosov (2020) claims that aspectual morphology may merge lower than the aspectual operators IPFV or PFV, which are inserted and computed at the level of AspP on the basis of the information provided by the highest aspectual morpheme – "the topmost piece of structure spelled out as "verbal morphology" (Tatevosov 2020: 19), "which can either be a derivational morpheme, or, in the absence of such, the verb root itself". This allows us to explain why some superlexical prefixes may co-occur with secondary imperfective morphology. It co-occurs with those superlexical prefixes which occupy a lower projection (leading to secondary imperfectivization) and can itself serve as input for superlexical prefixes which occupy a higher position (leading to perfectivization). In that sense, we assume that IPFV or PFV semantic operators are phonologically null. The meaning of PFV in Polish is fairly specific and it expresses a single temporally bounded

event. By contrast, IPFV may give rise to many interpretations. The two most canonical readings of IPFV in Polish are a single ongoing event reading and a plural event reading. In both uses the eventualities in the denotation of IPFV is temporally unbounded. We adopt a modified version of Kratzer's (1998) semantics of perfective and imperfective aspect. We assume that aspect existentially quantifies over an event variable and maps a predicate of events on a predicate of times by locating a temporal trace of an event with respect to the evaluation time given by tense. Perfective aspect locates the temporal trace of an event within the evaluation time while imperfective aspect locates the evaluation time within the temporal trace of an event, as shown in (45).

- (45) PERFECTIVE $\sim > \lambda w. \lambda t. \lambda P \langle et \rangle. \exists e[e \text{ is in } w \wedge \tau(e) \subseteq t \wedge P(e)]$
 IMPERFECTIVE $\sim > \lambda w. \lambda t. \lambda P \langle et \rangle. \exists e[e \text{ is in } w \wedge t \subseteq \tau(e) \wedge P(e)]$

However, as argued by [removed by anonymization], one crucial modification is needed to capture an important contrast between perfective aspect in French and in Polish. Boneh and Doron (2009, 4) claim that in French plural events happening on different occasions such as *Paul est allé-prfv à la messe le dimanche pendant trente ans* 'Paul went to church on Sundays for 30 years', perfective aspect expresses a habit which is limited within the boundaries of a given time span. By contrast, perfective aspect in Polish cannot express habits included within the boundaries of a given time span as in **Paweł poszedł-pfv do kościoła w niedziele, przez 30 lat* 'Paul went to church on Sundays for 30 years', even though this should be possible according to the definition of perfective given in (45). This indicates that perfective aspect in Polish imposes an additional restriction on an event argument, namely that it is non-iterated. To sum up, perfective aspect in Polish, apart from locating a temporal trace of an event within a reference time, requires that an event e which satisfies a predicate P does not consist of the sum of proper subevents which also satisfy P . This modification is included in the semantic entries of Polish perfective and imperfective aspect in (46).

- (46) PERFECTIVE $\sim > \lambda w. \lambda t. \lambda P \langle et \rangle. \exists e[e \text{ is in } w \wedge \tau(e) \subseteq t \wedge P(e) \wedge e \neq \sigma e' [P(e') \wedge e' \subset e]]$
 IMPERFECTIVE $\sim > \lambda w. \lambda t. \lambda P \langle et \rangle. \exists e[e \text{ is in } w \wedge t \subseteq \tau(e) \wedge P(e)]$

6. Conclusions

The present paper sheds a new light on the status of secondary imperfective morphology and its interaction with different classes of superlexical prefixes on the basis of their compatibility with basic perfective and basic imperfective VP idioms in Polish. On the basis of new facts we:

- (i) postulate a new architecture of aspectual morphology in Polish in which there are two classes of vP-external superlexical prefixes: high and low. The former are projected in different functional projections above secondary imperfective morphology while the latter are projected below it in a single dedicated functional projection;
- (ii) provide evidence that secondary imperfective morphology is projected vP-externally in its own functional projection;
- (iii) provide new data which are compatible with Tatevosov's (2020) view that aspectual morphology needs to be separated from aspectual interpretation. While the former can be merged lower in the structure, aspectual interpretation takes place in a higher AspP projection (for aspectual operators PFV and IPFV) on the basis of the topmost piece of structure spelled out as verbal morphology.
- (iv) propose a revised Perfective Base Hypothesis on secondary imperfectivization. Namely, we propose that only those perfective bases which are realized below the SI projection and express a change of state can serve as input to the secondary imperfectivizing operation in Polish.

These claims are made for Polish with the hope that it will fuel more cross-Slavic research on aspect based on the interaction of aspectual morphology and VP idioms.

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