The status of secondary imperfectivization: Evidence from VP idioms

DOROTA KLIMEK-JANKOWSKA AND JOANNA BŁASZCZAK
University of Wrocław

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 *v*P-external status of secondary imperfective morphology and we propose a new architecture of aspectual morphology in Polish in which there are two classes of *v*P-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.

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., *pisać*[I] – **na***pisać*[P] 'to write' or a suffix *błyskać*[I] – *błysnąć*[P] 'to flash'. Imperfective verbs are either bare (unprefixed) *pisać*[I] 'to write' or derived by means of an *-yw-* suffix *podpisywać*[I] 'to sign' or *-a-* as in *wbijać*[I] 'to hammer' (cf. Bogusławski 1963, Nagórko 1998, Wróbel 1998, 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., *pod***pisać**[P] 'to sign', *na***pisać**[P] 'to write down', *wy***pisać**[P] 'to prescribe', *prze***pisać**[P] 'to copy sth in writing' and a single prefix can cooccur with multiple verbal stems, e.g., **pod***skoczyć*[P] 'to jump up', **pod***stawić*[P] 'to put underneath', **pod***nieść*[P] 'to lift', **pod***pisać*[P] 'to sign', **pod***grzać*[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 has led many linguists to 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, Grzegorczykowa 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 2008a,b, Romanova 2004, 2007, Svenonius 2004a,b, Sciullo & Slabakova 2005, Arsenijević 2006, Biskup 2012, 2019, Žaucer 2009, 2012, Markova 2011, Wiland 2012). 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 (SI) 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 secondary imperfective morphology in different Slavic languages (see e.g. Schoorlemmer 1995, Babko-Malaya 1999, Milićević 2004, Svenonius 2004a,b,

Filip 2005, Arsenijević 2006, Romanova 2007, Žaucer 2009, 2010, Markova 2011, Biskup 2019, Rothstein 2020). 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). We assume that vP is a syntactic head that projects an Initiator argument and closes the first derivation cycle (cf. Horvath & Siloni 2019 for a different view).[1] 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 povert]). 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 SOME FACTS ABOUT ASPECTUAL MORPHOLOGY IN POLISH

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

(1)   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 (2).

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[1]Harley (2014) 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), 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, this view 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.

(2)   pis-a-ć[I]
ROOT+THEME.VOWEL+INFINITIVE
'to write'

Primary imperfective forms can be perfectivized by means of a prefix, as shown in (3).

(3)   na-pis-a-ć[P]
PREFIX+ROOT+THEME.VOWEL+INFINITIVE
'to write down'

Some prefixed verbs can be imperfectivized by means of an -yw- or -a- suffixes, as shown in (4-a)–(4-b).

(4)   a.   pod-pis-yw-a-ć[SI]
PREFIX+ROOT+SECONDARY.IMPF+THEME.VOWEL+INFINITIVE
'to sign (imperfective)'
        b.   w-bij-a-ć[SI]
PREFIX+ROOT+SECONDARY.IMPF+INFINITIVE
'to hammer'

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 (5)).

(5)   jęk-ną-ć[P]
PREFIX+ROOT+SEMELFACTIVE+INFINITIVE
'to moan once'

Willim (2006) proposes that Polish imperfective verbs with an iterative meaning (e.g., *błyszczeć*[I] '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 *zabłyszczeć*[P] 'to start flashing repeatedly'. 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 et al. (2019) observe that semelfactive stems have nominal roots in Polish, as in *kop-ną-ć* 'to kick once', *jęk-ną-ć* 'to moan once'. This speaks in favor of the role of the semelfactive prefix as a verbalizer.

There is also a habitual suffix *-yw-* in Polish which is homophonous with the secondary imperfective suffix *-yw-* but unlike secondary imperfective *-yw-* the habitual one attaches only to a restricted class of imperfective verbs, see (6-a)–(6-b) (see Łazorczyk 2010, Filip & Carlson 1997).

(6)   a.   pis-yw-a-ć[i]
ROOT+HABITUAL+THEME.VOWEL+INFINITIVE
'to write from time to time'
        b.   czyt-yw-a-ć[i]
ROOT+HABITUAL+THEME.VOWEL+INFINITIVE
'to read from time to time'

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 Łazorczyk (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, as in (7) (from Willim 2006:184–188).

(7)   prze-kupić[P]
       PRZE-buy.PFV
       'to bribe'

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).[2]

LEXICAL PREFIXES	SUPERLEXICAL PREFIXES
• alter the argument structure of a verbal predicate (8)	• do not change the argument structure of a verbal predicate (9-a)
• cause idiosyncratic changes in the lexical meaning of a verbal predicate (7)	• cause predictable changes in the meaning of a verbal predicate (11)–(15)
• impose idiosyncratic restrictions on the choice of arguments of a verbal predicate (9-b)	• precede the lexical prefixes but lexical prefixes do not precede the superlexical ones (16)
• have secondary (derived) imperfective counterparts (10-a)	• usually disallow secondary imperfectivization (10-b)
• do not stack	• allow for stacking (cf. Wiland 2012)

Table 1: Standard diagnostics for lexical vs. superlexical prefixes

(8)   płakać[I] — wy-płakać[P] awans
       cry.IPFV   WY-cry.PFV promotion
       'to cry' — 'to cry out a promotion'

(9)   a.   gotować[I] — przy-gotować[P]
            cook.IPFV   PRZY-cook.PFV
            'to cook' — 'to prepare'
       b.   kupić[I] — prze-kupić[P]
            buy.PFV   PRZE-buy.PFV
            'to buy' — 'to bribe someone'

(10)   a.   przy-gotow-ać[P] — przy-gotow-yw-ać[SI]
            PRZY-cook-INF.PFV   PRZY-cook-SI-INF.IPFV
            'to prepare' — 'to be preparing'

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[2]Superlexical prefixes can cooccur but they have to respect a certain hierarchy; see (28).

    b.   po-czyt-ać^P — *po-czyt-yw-ać^{SI}
        PO-read-INF.PFV   PO-read-YW-INF.PFV
        'to read for a while' — 'to be reading for a while'

(11)   a.   czytać^I — po-czytać^P
        read.IPFV   PO-read.PFV
        'to read a book' — 'to read a book for a while'

    b.   gotować^I makaron — na-gotować^P makaronu
        cook.IPFV pasta   NA-cook.PFV pasta.GEN
        'to cook pasta' — 'to cook a lot of pasta'

(12)   DELIMITATIVE *po-*
       po-czytać^P
       PO-read.PFV
       'to read for a while'

(13)   DISTRIBUTIVE *po-*
       po-otwierać^P okna
       PO-open.PFV
       'to open the windows, each in turn'

(14)   CUMULATIVE *na-*[3]
       na-gotować^P
       NA-cook.PFV
       'to cook a lot'

(15)   SATURATIVE *na-*
       na-jeść^P się
       NA-eat.PFV REFL
       'to eat one's fill'

(16)   a.   po-przy-gotow-yw-ać^{SI} różne   zadania na test
        PO.DIST-PRZY-cook-SI-INF different task   for test
        'to prepare many different tasks for a test'

    b.   *przy-po-gotow-yw-ać^{SI} różne   zadania na test
        PRZY-PO.DIST-cook-SI-INF different tasks   for test
        'to prepare many different tasks for a test'

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

SUPERLEXICAL PREFIX	EXAMPLE	
Distributive	*po*rozkładać	'to distribute'
Attenuative	*pod*dusić	'to stew a bit'
Delimitative	*po*czytać	'to read for a while'
Saturative	*na*jeść się	'to eat one's fill'
Cumulative	*na*ścinać	'to cut a lot of sth'
Excessive	*prze*krzyczeć	'to shout louder than sb'
Repetitive	*prze*pisać	'to write sth again'
Perdurative	*prze*siedzieć	'to sit through the length of some event'
Completive (additive)	*do*kroić	'to slice more of sth'
Terminative	*od*śpiewać	'to sing a song from the beginning to the end'

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

According to Romanova (2004) and Svenonius (2004a,b), among others, lexical and superlexical
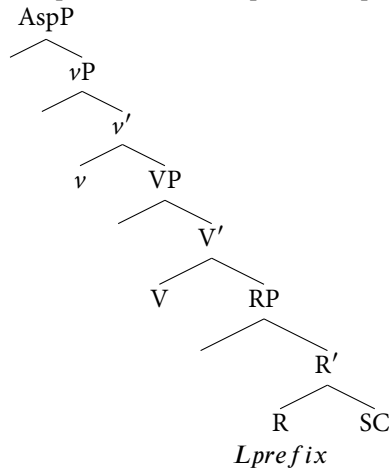
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[3]Concerning the cumulative prefix -na, one may reasonably ask whether it is a legitimate superlexical prefix as it may add its own argument. However, we follow Pereltsvaig (2006) in assuming that affecting argument structure is not an exclusive property 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.

prefixes occupy different syntactic positions with respect to vP: lexical prefixes are vP internal and superlexical prefixes are vP external, as shown in (17).

(17)   [external prefixes [secondary imperfective -*yw* [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 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 InitP ≫ ProcP ≫ 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 subevental projection, as shown in (18).

(18)   The position of lexical prefixes (Lprefix) in the syntactic hierarchy

```
AspP
  ╱╲
   vP
    ╲
     v′
    ╱╲
   v   VP
        ╲
         V′
        ╱╲
       V   RP
            ╲
             R′
            ╱╲
           R   SC
         Lprefix
```

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 (19) (ibid.).

(19)   The position of superlexical prefixes (SLprefix) in the syntactic hierarchy.

```
        AspP
       ╱  ╲
          vP
SLprefix ╱ ╲
          v′
        ╱╲
       v   VP
            ╲
             V′
            ╱╲
           V   XP
```
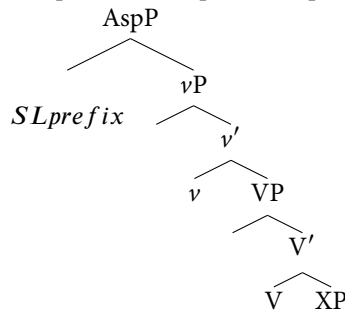
Ramchand (2008a) assumes that her first-phase syntax can be the place for the assignment of idiosyncratic encyclopedic information, which is compatible with the observation that the lexical prefixes, which are generated in the first-phase syntax, can change the meaning of the verb in an idiosyncratic way.

According to some authors, apart from the lexical and superlexical prefixes, there are also purely perfectivizing ones (Bogusławski 1963, Svenonius 2004a,b, Młynarczyk 2004, Willim 2006, but see also Filip 1999, Janda & Nesset 2010, Janda & Lyashevskaya 2013 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) 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 (20-a)–(20-b).

(20)   a.   pis-ać^I — na-pis-ać^P — *na-pis-yw-ać^{SI}
           write-INF.IPFV   NA-write-INF.PFV   NA-write-SI-INF.IPFV
           'to write, to write up, to be writing up'
   b.   rob-ić^I — z-rob-ić^P — *z-rob-iw-ać^{SI}
           do-INF.IPFV   z-do-INF.PFV   z-do-SI-INF.IPFV
           'to do, to do sth completely, to be doing sth completely'

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 (21).

(21)   The position of secondary imperfective morphology in the syntactic hierarchy according to Ramchand (2008a):

```
AspP
 ╱╲
    Asp′
   ╱  ╲
 Asp    vP
 yv    ╱ ╲
         v′
        ╱ ╲
       v   VP
          ╱ ╲
            V′
           ╱ ╲
          V   XP
```
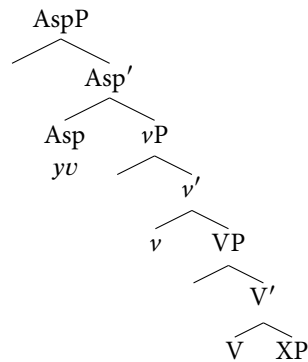
We agree with Ramchand (2008a) that the semantics of the secondary imperfectivizing suffix *-yw* is predictable. Being predictable in terms of its meaning and productive in terms of its distribution, secondary imperfectivizing suffix *-yw* is more similar to external prefixes, which may indicate that the morpheme *-yw* is projected in a vP-external syntactic position; see (22).

(22)   [external prefixes [secondary imperfective *-yw* [vP [VP internal prefixes V]]]]

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.

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 (27).

Based on his analysis of prefix stacking in Polish, Wiland (2012) proposes the hierarchy of aspectual morphology shown in (23):

(23)   DIST ≫ ATT ≫ DELIM ≫ SAT ≫ CUM ≫ 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

SUPERLEXICAL PREFIX	PERFECTIVE	SEC. IMPERFECTIVE
Distributive	**po**rozkładać 'to distribute'	*__po__rozkładowywać
Delimitative	**po**czytać 'to read for a while'	*__po__czytywać
Saturative	**na**ścinać się 'to get one's fill of cutting sth'	*__na__ścinywać się
Cumulative	**na**ścinać 'to cut a lot of sth'	*__na__ścinywać
Attenuative	**pod**dusić 'to stew a bit'	**pod**duszać
Excessive	**prze**krzyczeć 'to shout louder than sb'	**prze**krzykiwać
Repetitive	**prze**robić 'to do sth again'	**prze**rabiać
Perdurative	**prze**spać	**prze**sypiał
	'to sleep through the length of some event'	
Completive (additive)	**do**kroić 'to slice more of sth'	**do**krajać
Terminative	**od**śpiewać	**od**śpiewywać
	'to sing a song from the beginning to the end'	

Table 3: Superlexical prefixes and secondary imperfectivization

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 (24) respectively.

(24)   a.   po-pod-duszać^P wszystkie warzywa   (jedno po drugim)
          DIST-ATT-stew.PFV all   vegetables
          'to stew all the vegetables a little bit'
     b.   po-pod-duszać^P wszystkie warzywa   przez chwilę
          DELIM-ATT-stew.PFV all   vegetables for   moment
          'to stew all the vegetables a little bit for a while'
     c.   na-pod-duszać^P się   warzyw
          SAT-ATT-stew.PFV REFL vegetables.GEN
          'to get one's fill of stewing vegetables a little bit'
     d.   na-pod-duszać^P się   warzyw
          CUM-ATT-stew.PFV REFL vegetables.GEN
          'to stew a lot of meat rolls'

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. Additionally, we would like to propose that a delimitative prefix PO scopes over the distributive PO as in (25). 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 (26) (cf. Kwapiszewski 2021 for a different view).[4,5]

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[4]As pointed out by an anonymous reviewer, even though verbs with delimitative prefixes cannot 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 (2010:156) 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 get one's fill of knocking at sth from time to time'. 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/the** imperative mood postukaj! 'start knocking!', pomrugaj 'start winking!'.
[5]A more fine-grained classification of aspectual prefixes was also proposed by Tatevosov (2008) and Markova (2011). However, there are some differences between their proposal and ours which may follow from characteristics specific to the investigated languages.

(25) Kucharze po-po-roz-kładali^P przez chwilę naczynia i   zajęli się czymś
cooks   PO.DEL-PO.DIST-ROZ-put.SI over all   tables   and began REFL something
innym.
else
'The cooks put the dishes on the table for a while and they turned their attention to
something else.'

(26) DELIM ≫ DIST ≫ SAT ≫ CUM ≫ SI ≫ {EXC, REP, ATT, PERD, COMPL, TERM}

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
(27).

(27) [po-[na-[[podpis] -yw(ać)]$_{IPFV}$]$_{PFV}$]$_{PFV}$ dokumentów
DIST-CUM-sign -SI   documents
'to sign a lot of documents in turn'

By contrast, there is only one projection for low superlexical prefixes (see also Endo & Wiland
2014). 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 (28)–(31).

(28) *[prze-[pod-[gotow(ać)]$_{IPFV}$]$_{PFV}$]$_{PFV}$ mięso
PERD-ATT-cook.PFV   meat
Intended: 'to cook meat a little bit for some time'

(29) *[pod-[prze-[gotow(ać)]$_{IPFV}$]$_{PFV}$]$_{PFV}$ mięso
ATT-PERD-cook.PFV   meat
Intended: 'to cook meat a little bit for some time'

(30) *[od-[prze-[krzyczeć]$_{IPFV}$]$_{PFV}$]$_{PFV}$ kolegę
TERM-EXC-shout.PFV   friend
Intended: 'to shout louder than a friend from the beginning to the end'

(31) *[prze-[od-[śpiew(ać)]$_{IPFV}$]$_{PFV}$]$_{PFV}$ hymn
EXC-TERM-sing.PFV   anthem
Intended: 'to sing an anthem from the beginning to the end for some time'

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 (32). The latter by default
contain imperfective verbs (bare imperfective verbs), as shown in (33).

(32) a. na-brać^P wody w usta
NA-take.PFV water in mouth
'to keep secret' (lit. 'to take water in the mouth')
b. roz-prostować^P kości
ROZ-stretch.PFV bones
'to stretch one's legs' (lit. 'to straighten one's bones')

    c.   od-kryć^P Amerykę
        OD-cover.PFV America
        'to rediscover common knowledge' (lit. 'to discover America')

    d.   za-cisnąć^P pasa
        ZA-tighten.PFV belt
        'to get ready' (lit. 'to tighten one's belt')

    e.   wy-łożyć^P karty na stół
        WY-put.PFV cards on table
        'to make things explicit' (lit. 'to put cards on table')

(33)   a.   bujać^I w obłokach
        float.IPFV in clouds
        'to dream' (lit. 'to float in the clouds')

    b.   klepać^I biedę
        pat.IPFV poverty
        'to be poor' (lit. to pat poverty)

    c.   trzymać^I język za   zębami
        keep.IPFV tongue behind teeth
        'to keep a secret' (lit. 'to keep tongue behind teeth')

    d.   czuć^I miętę
        feel.IPFV mint
        'to be infatuated with someone' (lit. 'to feel mint (to someone)')

    e.   pluć^I sobie w brodę
        spit.IPFV oneself in chin
        'to regret' (lit. 'to spit oneself in the chin')

Our observation is that all basic perfective VP idioms undergo secondary imperfectivization; see (34) for illustration.

(34)   a.   na-bierać^{SI} wody w usta
        NA-take.SI water in mouth
        'to keep a secret' (lit. 'to take water in the mouth')

    b.   roz-prostow-yw-ać^{SI} kości
        ROZ-stretch-SI-INF   bones
        'to stretch one's legs' (lit. 'to straighten one's bones')

    c.   od-kr-yw-ać^{SI} Amerykę
        OD-cover-SI-INF America
        'to rediscover common knowledge' (lit. 'to discover America')

    d.   za-ciskać^{SI} pasa
        ZA-tighten.SI belt
        'to get ready' (lit. 'to tighten one's belt')

    e.   wy-kładać^{SI} karty na stół
        WY-put.SI   cards on table
        'to make things explicit' (lit. 'to put cards on table')

More precisely, in Klimek-Jankowska & Błaszczak (submitted) 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 (35)), it results in their significantly lower acceptability (and 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.

(35) a. #brać^{I} wody w usta
          brać.IPFV water in mouth
          'to keep a secret' (lit. 'to take water in the mouth')
      b. #prostować^{I} kości
          stretch.IPFV bones
          'to stretch one's legs' (lit. 'to straighten one's bones')
      c. #kryć^{I} Amerykę
          discover.IPFV America
          'to rediscover common knowledge' (lit. 'to discover America')
      d. #cisnąć^{I} pasa
          tighten.IPFV belt
          'to get ready' (lit. 'to tighten one's belt')
      e. #łożyć^{I} karty na stół
          put.IPFV cards on table
          'to make things explicit' (lit. 'to put cards on table')

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 (36).

(36) ADDITIVE
      do-lać^{P} / do-lewać^{SI} oliwy do ognia
      ADD-pour.PFV   ADD-pour.SI oil   to water
      'to fuel a conflict'

As far as basic imperfective VP idioms are concerned, one could expect that they should be compatible with all *v*P-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 (37)–(40).

(37) DISTRIBUTIVE
      a. chować^{I} głowę w piasek
          hide.IPFV head   in sand
          'to pretend sth is not happening' (lit. 'to hide one's head in the sand')
      b. Wszyscy po-chowali^{P} głowę w piasek.
          allNOM   DIST.hide.PFV.PST.3PL head   in sand.ACC
          'Everyone acted as if nothing serious was happening.' (lit. 'Everyone hid their head in the sand.')

(38) DELIMITATIVE
      a. grać^{I} na nerwach
          play.IPFV on nerves
          'to get on one's nerves'
      b. Po-grał^{P} wszystkim na nerwach.
          DELIM.play.PFV.PST.3SG everyone   on nerves
          'He got on everyone's nerves.'

(39) SATURATIVE
      a. szukać^{I} dziury   w całym
          search.IPFV holes.GEN.PL in whole
          'to nitpick' (lit. 'to look for holes in the whole')
      b. Na-szukał^{P} się dziur w całym.
          SAT.search.PFV.PST.3SG REFL holes in whole
          'He got one's fill of nitpicking.' (lit. 'He got one's fill of looking for holes in the whole.')

(40) PERDURATIVE

    a.   lecieć[I] na opinii
        fly.IPFV on reputation
        'to rest on one's laurels' (lit. 'to fly on one's reputation')

    b.   Prze-leciał[P]   na opinii   cały ten rok.
        PERD.fly.PFV.PST.3SG.M on opinion.LOC whole this year.ACC
        'He rested on his laurels throughout the whole year.' (lit. 'He flew on his reputation
        throughout the whole year.')

By contrast, cumulative and attenuative prefixes are incompatible with imperfective VP idioms, as shown in (41)–(42).[6]

(41) CUMULATIVE

    a.   budować[I] zamki na piasku
        build.IPFV castles on sand
        'to build castles on sand'

    b.   #Na-budował[P]   zamków   na piasku.
        CUM.build.PFV.PST.3SG.M castles.GEN on sand.LOC
        'He had unrealistic plans.' (lit. 'He built many castles on sand.')

(42) ATTENUATIVE

    a.   dusić[I]   każdy grosz
        pinch.IPFV every penny
        'to pinch every penny'

    b.   Jest chytrusem i   poddusza[SI]   każdy grosz.
        is   cunning   and ATT.pinch.IPFV.PRES.3SG every penny
        'He is very cunning and slightly pinches every penny.'

Concerning terminative, repetitive and excessive prefixes, there were no verbs in 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 (43). This indicates that cumulative *na-* must be higher than secondary imperfectivizing morphology, meaning that it is even more vP external.

(43)   [po- [na- [[podpis] -yw -ać]$_{IPFV}$]$_{PFV}$]$_{PFV}$ dokumentów
       DIST- CUM- sign   -SI -INF   documents.GEN
       'to sign a lot of documents in turn'

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 those superlexical prefixes which do not undergo secondary imperfectivization in Polish (distributibutive, saturative, delimitative,

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[6]In Klimek-Jankowska & Błaszczak (submitted) 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) 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 (44).[7]

(44) $_{\text{PFV}}$[DELIM ≫ DIST ≫ SAT ≫ CUM $_{\text{IPFV}}$[SI ≫ $_{\text{PFV}}$[{PERD, EXC, REP, ATT, TERM} $_{\text{IPFV/PFV}}$ [v THEME VOWEL [(LEXICAL PREFIX) $_{\text{IPFV/PFV}}$ [√ROOT]]]]]]

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 (45).

(45)   a.   *[[na-   [pis]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$ -ać
              PURELY.PFV- write   -SI   -INF
              Intended: 'to be writing a lot'
        b.   *[[na-   [malow]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$ -ać
              PURELY.PFV- paint   -SI   -INF
              Intended: 'to be painting'
        c.   *[[s-   [chow]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$ -ać
              PURELY.PFV- hide   -SI   -INF
              Intended: 'to be hiding'
        d.   *[[s-   [krzyżow]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$ -ać
              PURELY.PFV- cross   -SI   -INF
              Intended: 'to be crossing'

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 (46).

(46)   a.   [po-   [[na-   [pis]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$]$_{\text{PFV}}$ -ać
              DIST- PURELY.PFV- write   -SI   -INF
              'to be writing a lot'
        b.   [po-   [[na-   [malow]]$_{\text{PFV}}$ -yw]$_{\text{IPFV}}$]$_{\text{PFV}}$ -ać
              DIST- PURELY.PFV- paint   -SI   -INF
              'to be painting a lot'

Even though these forms are not very productive, we found examples of their use on the internet, as shown in (47).

(47)   a.   Niektórzy chcieli, żeby   im   po-na-pis-yw-ał$^{\text{P}}$ po   wierszu
              some   wanted COMPL them DIST-PURELY.PFV-write-SI-PST.3SG DIST poem
              'Some wanted him to write one poem for each of them.'
        b.   Poprzedni właściciel po-na-malow-yw-ał   na nich kółeczka i
              previous   owner   DIST-PURELY.PFV-paint-SI-PST.3SG on them circles   and
              wzorki.
              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

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[7]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'.

prefixes in Polish are realized in the same position as low superlexical prefixes. Our modified hierarchy including purely perfectivizing prefixes is presented in (48).

(48) $_{\text{PFV}}$[DELIM ≫ DIST ≫ SAT ≫ CUM $_{\text{IPFV}}$[SI ≫ $_{\text{PFV}}$[{PERD, EXC, REP, ATT, TERM, PURELY.PFV}
        $_{\text{IPFV/PFV}}$ [v THEME VOWEL [(LEXICAL PREFIX) $_{\text{IPFV/PFV}}$ [$\sqrt{}$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(ą)-*, as in *jęknąć* 'to moan once', *krzyknąć* 'to shout once', which attaches to nominal roots, as observed by Taraldsen et al. (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 complementary distribution with other theme vowels spelling out the verbalizing v. Additionally, the fact that we found a VP idiom in Polish with a semelfactive morpheme i.e., *kopnąć w kalendarz* 'lit. to kick in 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 (49).

(49) $_{\text{PFV}}$[DELIM ≫ DIST ≫ SAT ≫ CUM $_{\text{IPFV}}$[SI ≫ $_{\text{PFV}}$[{PERD, EXC, REP, ATT, TERM, PURELY PFV}
        $_{\text{IPFV/PFV}}$ [v SEMELFACTIVE/THEME VOWEL [(LEXICAL PREFIX)
        $_{\text{IPFV/PFV}}$[$\sqrt{}$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 rule presented in (50).

(50)   Asp ↔ SI / [AspP Asp^o [vP …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 Asp$_{\text{PFV}}$, 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 Łazorczyk (2010) 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 *budzić*[I] 'to awake', *niszczyć*[I] 'to destroy' and *psuć*[I] '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 unprefixed (bare) perfective verbs which undergo secondary imperfectivization in Polish, as exemplified on the basis of their uses in base perfective VP idioms shown in (51).

(51)   a.   dostać obuchem   w głowę — dostawać$^{\text{SI}}$ obuchem   w głowę
             get.PFV warhammer.INSTR in head   get.SI   warhammer.INSTR in head
             'to be severely criticized'
        b.   puścić parę   z ust   — puszczać$^{\text{SI}}$ parę   z ust
             let.PFV steam.ACC of mouth   let.SI   steam.ACC of mouth
             'to reveal a secret'
        c.   sprzedać coś   na pniu — sprzedawać$^{\text{SI}}$ coś   na pniu
             sell.PFV something on trunk   sell.SI   something on 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 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 (52).

(52) a. pod-dusić — pod-duszać[SI]
    POD-stew.PFV POD-stew.SI
    'stew a bit' (attenuative superlexical prefix)
  b. prze-krzyczeć — prze-krzykiwać[SI]
    PRZE-shout.PFV PRZE-shout.SI
    'to shout louder than sb' (excessive superlexical prefix)
  c. prze-pisać — prze-pisywać[SI]
    PRZE-write.PFV PRZE-write.SI
    'to write something again' (repetitive superlexical prefix)
  d. prze-spać — prze-sypiać[SI]
    PRZE-sleep.PFV PRZE-sleep.SI
    'to sleep through something again' (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 in turn suggests that another restriction is needed, namely only those perfective bases which are realized below the SI projection and which 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 Ramchand (2008a) claims 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 the Polish facts by resorting to Tatevosov's (2011, 2015) 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 (45). More specifically, Tatevosov (2011, 2015) 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" (see Tatevosov 2011, 2015), "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.

6 CONCLUSIONS

The present paper sheds 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:

1. 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;

2. provide evidence that secondary imperfective morphology is projected *v*P-externally in its own functional projection;

3. provide new data which are compatible with Tatevosov's (2011, 2015) 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.

4. 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.

ABBREVIATIONS

ACC	accusative	NOM	nominative
AGR	agreement	P	perfective
AspP	Aspect Phrase	PL	plural
ATT	attenuative	PERD	perdurative
COMPL	completive	PFV	perfective
CUM	cumulative	REFL	reflexive
DELIM	delimitative	SAT	saturative
DIST	distributive	SC	small clause
EXC	excessive	SG	singular
GEN	genitive	SI	secondary imperfective
I	imperfective	SLprefix	superlexical prefix
INF	infinitive	REP	repetitive
INSTR	instrumental	RP	Result Phrase
IPFV	imperfective	TERM	terminative
Lprefix	lexical prefix		

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CONTACT

dorota.klimek-jankowska@uwr.edu.pl
joanna.blaszczak@uwr.edu.pl

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