The Morphosyntax of Slavic Aspect: P Clitics, Spanning, and the Superset Principle

Arkadiusz Kwapiszewski

University of Oxford

NELS 51, 6-8 November 2020, UQAM

Introducing Slavic Aspect

- In Slavic languages, most verbs are either **perfective** or **imperfective**
  - **Perfective** ⇝ quantised / bounded
  - **Imperfective** ⇝ homogenous / unbounded (incl. atelic, progressive, iterative, habitual, generic, stative)

- Standard aspectual diagnostics (cf. Borik 2006)
  - only imperfectives occur in the complement of phase verbs (e.g. *begin*, *finish*)
  - only imperfectives derive present active participles
  - passives of perfectives and imperfectives select different auxiliaries in Polish

The Morphology of Slavic Aspect

- Most **bare stems** are **imperfective** (1a, 2a)
- Most **prefixed stems** are **perfective** (1b, 2b)

(1) a. bud-owa-ć^{I}
build-TH-INF
'to build'

b. **roz**-bud-owa-ć^{P}
apart-build-TH-INF
'to expand by building'

(2) a. rob-i-ć^{I}
make-TH-INF
'to make'

b. **za**-rob-i-ć^{P}
behind-make-TH-INF
'to earn'

- N.B. All examples in this talk are from Polish

The Morphology of Slavic Aspect

- Stems **suffixed with AJ/YWA** are **imperfective** (3a, 4a)
- AJ/YWA does not attach to bare stems (3b, 4b)

(3) a. **roz**-bud-ow(a)-**ywa**-ć^{I}
apart-build-TH-SI-INF
'to expand by building'

b. *bud-ow(a)-**ywa**-ć
build-TH-SI-INF

(4) a. **za**-rab-i-**a(j)**-ć^{I}
behind-make-TH-SI-INF
'to earn'

b. ***rab-i-**a(j)**-ć
behind-make-TH-SI-INF

- The forms in (3a)/(4a) are known as **secondary imperfectives (SI)**

The Morphology of Slavic Aspect

(5) a. bud-owa-ć^{I} **BARE IMPERFECTIVE**

build-TH-INF

'to build'

b. **roz**-bud-owa-ć^{P} **PREFIXED PERFECTIVE**

apart-build-TH-INF

'to expand by building'

c. **roz**-bud-ow(a)-**ywa**-ć^{I} **SECONDARY IMPERFECTIVE**

apart-build-TH-SI-INF

'to expand by building'

d. *bud-ow(a)-**ywa**-ć *BARE SECONDARY IMPERFECTIVE

build-TH-SI-INF

The Aims of this Talk

- What determines the distribution of AJ/YWA?
  A. the SI suffix selects for **resultativity**
  B. the SI suffix selects for **perfectivity**
  C. the SI suffix appears on **prefixed** verbs

- Options A-B entail that AJ/YWA is the spell-out of some aspectual operator, projected in the syntax and interpreted at LF
- Option C entails that the appearance of AJ/YWA is morphophonological in nature, with no impact on syntax or semantics

The Aims of this Talk

- What determines the distribution of AJ/YWA?
  A. the SI suffix selects for **resultativity**
  B. the SI suffix selects for **perfectivity**
  C. the SI suffix appears on **prefixed** verbs

- **Roadmap**
  - **Part I:** present arguments against A-B
  - **Part II:** implement option C in a syntactic model of word formation

A. The SI suffix selects for resultativity?

- The hypothesis that the SI suffix selects for a result subevent is formulated in Ramchand (2008) and Tatevosov (2015, ms.) on the basis of Russian data

(6) YVA is an Eventiser (Tatevosov 2015, ms.)

$\|\mathrm{YVA}\| = \lambda R.\, \lambda e.\, \exists s[R(e)(s)]$

- On this view, the SI suffix is a semantic operator which 'extracts' the activity part from an event predicate consisting of activity and result components

(7) a. *Activity*

maszer-owa-**(*ywa)**-ć^{I}

march-TH-SI-INF

'to march'

b. *Activity + Result*

w-maszer-ow(a)-**ywa**-ć^{I}

in-march-TH-SI-INF

'to march in'

A. The SI suffix selects for resultativity?

- This analysis predicts that **bare stems denote simple activities**
  - *bare stem + AJ/YWA ⇒ bare stems lack a result component

- However, there are many bare imperfectives in Polish which pass the standard tests for resultativity, but which cannot be suffixed with AJ/YWA

(8) *Bare Imperfectives with a Result Component*

a. prostować[I] 'to straighten', niszczyć[I] 'to destroy', wiązać[I] 'to tie', budzić[I] 'to wake up', psuć[I] 'to break', ginąć[I] 'to perish', łapać[I] 'to catch', gromadzić[I] 'to gather'

b. *prostow-**ywa**-ć, *niszcz-**a(j)**-ć, *wiąz-**ywa**-ć, *budz-**a(j)**-ć

A. The SI suffix selects for resultativity?

- Restitutive modification (von Stechow 1996)

(9) Kiedy jakiś żołnierz zasypiał^{I}, kapitan **{ znowu / z powrotem }** go **budz-i-ł^{I}**.
When some soldier fell asleep captain again with return him wake-TH-PST
'Whenever a soldier fell asleep, the captain woke him up again.'

- Result-oriented durative adverbials (Piñón 1999)

(10) Adam **łącz-y^{I}** te kabelki **na dwie minuty**, żeby uruchomić^{P} maszynę.
Adam connect-TH these cables for two minutes to switch on machine
'Adam is connecting these cables for two minutes in order to switch on the machine.'

B. The SI suffix selects for perfectivity?

- The suggestion that SI is a higher aspectual operator has been made in Borer (2005), Jabłońska (2008) and Caha & Ziková (2016), among many others
- On this view, prefixes perfectivise the clause (11b), while **the SI suffix is an imperfectivising operator** projecting on top of the [PFV] layer (11c)

(11)	a.		[(IPFV)	[stem]]	Bare Imperfective
	b.		[**PFV**	[pfx + stem]]	Prefixed Perfective
	c.	[**IPFV$_{SI}$** ⇒AJ/YWA	[**PFV**	[pfx + stem]]]	Secondary Imperfective

B. The SI suffix selects for perfectivity?

- By assumption, the structures in (11) are built in the syntax, not in the lexicon
- This means that the [PFV] feature in (11c) is sent to LF for interpretation
- Since (11a) and (11c) contain different sets of aspectual projections, we predict syntactic and/or semantic contrasts between bare and secondary imperfectives

(11)	a.		[(IPFV)	[stem]]	Bare Imperfective
	b.		[**PFV**	[pfx + stem]]	Prefixed Perfective
	c.	[**IPFV$_{SI}$** ⇒AJ/YWA	[**PFV**	[pfx + stem]]]	Secondary Imperfective

B. The SI suffix selects for perfectivity?

- However, this prediction is not borne out!
- Bare and secondary imperfectives pattern together in all aspectual diagnostics
- There is no evidence for [PFV] embedded inside secondary imperfectives (11c)

(11)	a.		[(IPFV)	[stem]]	Bare Imperfective
	b.		[**PFV**	[pfx + stem]]	Prefixed Perfective
	c.	[**IPFV$_{SI}$** ⇒AJ/YWA	[**PFV**	[pfx + stem]]]	Secondary Imperfective

B. The SI suffix selects for perfectivity?

- For example, secondary imperfectives have only one reading under negation, just like bare imperfectives (12a) and unlike prefixed perfectives (12b)

(12) a. Marek nie bud-owa-ł^{I} / **roz**-bud-ow(a)-**ywa**-ł^{I} nigdy garażu. BARE / SECONDARY IMPERFECTIVE
Mark NEG build-TH-PST apart-build-TH-SI-PST never garage
i. ✓Mark has never attempted to build / extend a garage.
ii. ✗Mark has attempted to build / extend a garage but he never finished.

b. Marek nie **roz**-bud-owa-ł^{P} nigdy garażu. PREFIXED PERFECTIVE
Mark NEG apart-build-TH-PST never garage
i. ✓Mark has never attempted to extend a garage.
ii. ✓Mark has attempted to extend a garage but he never finished.

C. The SI suffix appears on prefixed verbs!

- The distribution of AJ/YWA cannot be captured at the level of syntax/semantics

(13) *SI suffixation is a PF phenomenon*
AJ/YWA is the realisation of imperfective aspect in the context of a VP-internal prefix

- A similar claim is made in Schoorlemmer (1995), but she formulates her analysis in the framework of Parallel Morphology (Borer 1988)

- In what follows, I implement (13) in a purely syntactic model of word formation

Word Formation is Syntactic

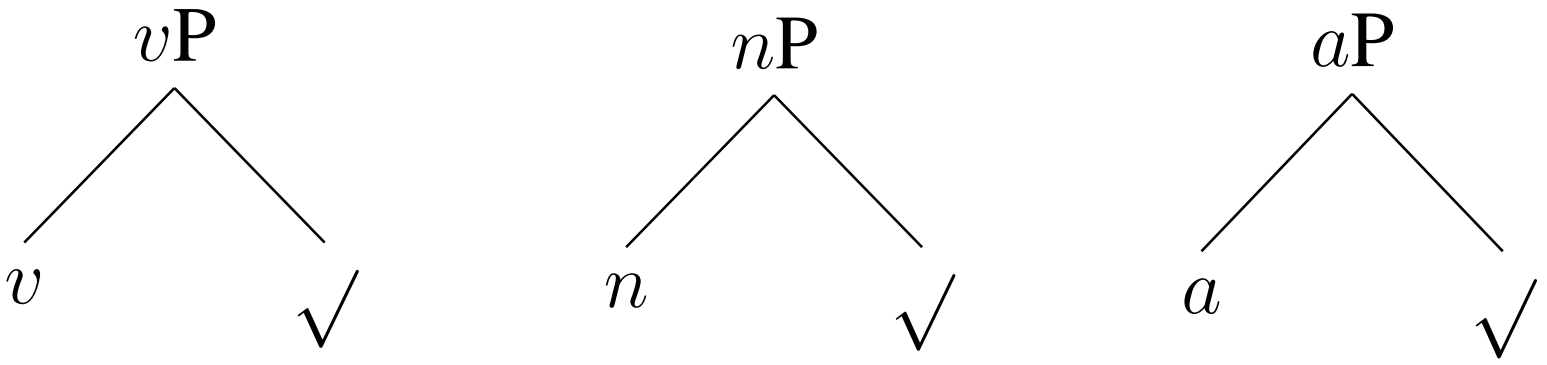
- I adopt two assumptions common to Distributed Morphology (Halle & Marantz 1993, Embick 2010) and Nanosyntax (Caha 2009, Starke 2010)

- *Syntactic Hierarchical Structure All the Way Down*
  - Syntax is the only generative engine of grammar
  - Elements within syntax and within morphology enter into the same types of constituent structures

- *Late Insertion*
  - Syntax is devoid of phonological information
  - Lexical items are inserted into syntactic structures after spell-out

Theme Vowels as Verbalisers

- In Distributed Morphology, roots enter syntax without a category
- Categorisation is achieved by the functional heads *v, n* and *a*



- **Slavic theme vowels are exponents of the verbalising head *v***

  (cf. Svenonius 2004a, Caha & Ziková 2016, Biskup 2019)

Theme Vowels as Verbalisers

- They appear in verbs and deverbal formations but not in simple nouns:

(14) a. kos-i-ć^{I}

mow-TH-INF
'to mow'

b. kos-a

mow-FEM.NOM
'a scythe'

- They participate in argument structure alternations:

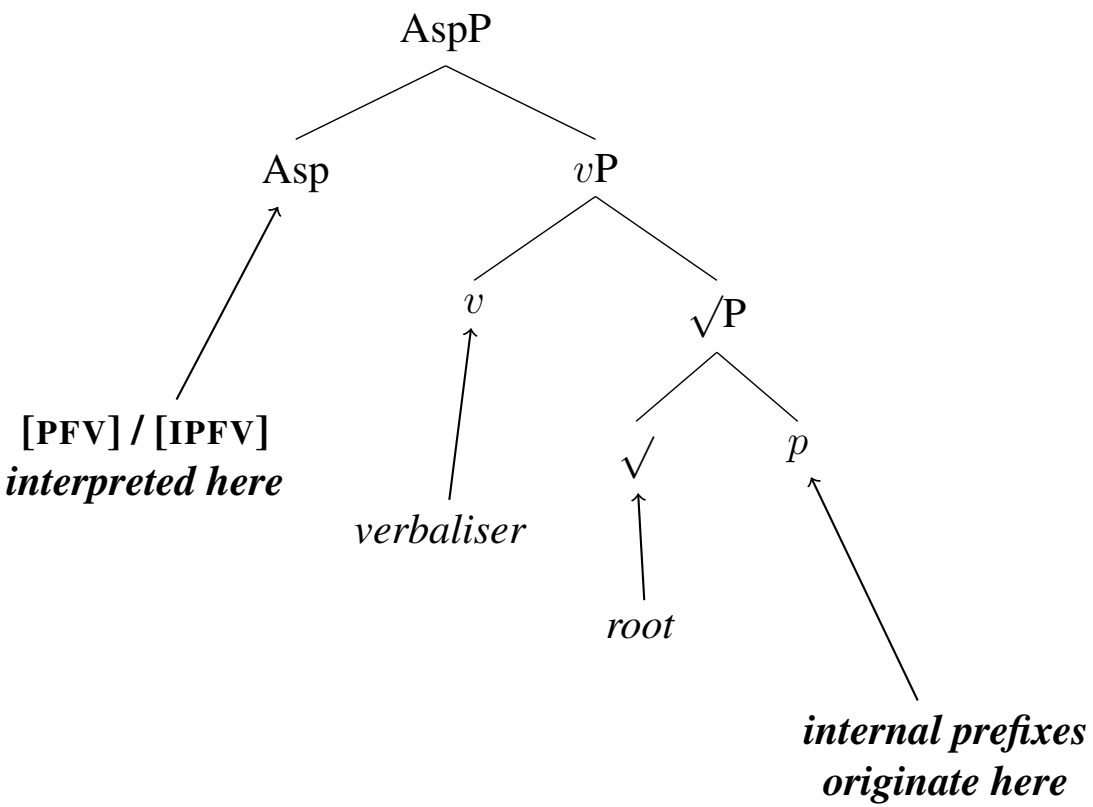
(15) a. gas-i-ć^{I}

extinguish-TH-INF
'to put out' (causative)

b. gas-ną-ć^{I}

extinguish-TH-INF
'to go out' (unaccusative)

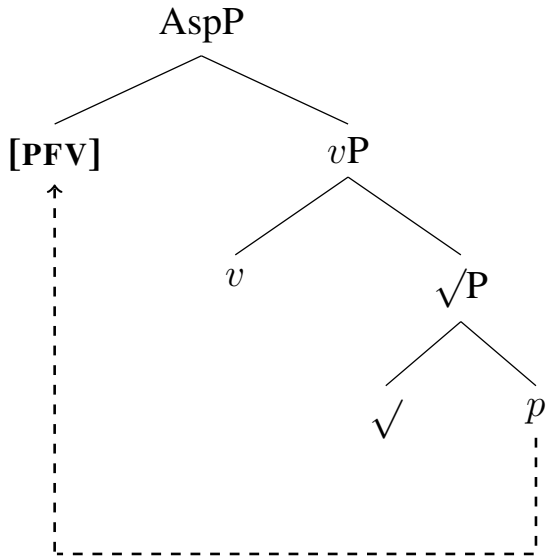
The Syntax of Slavic Aspect



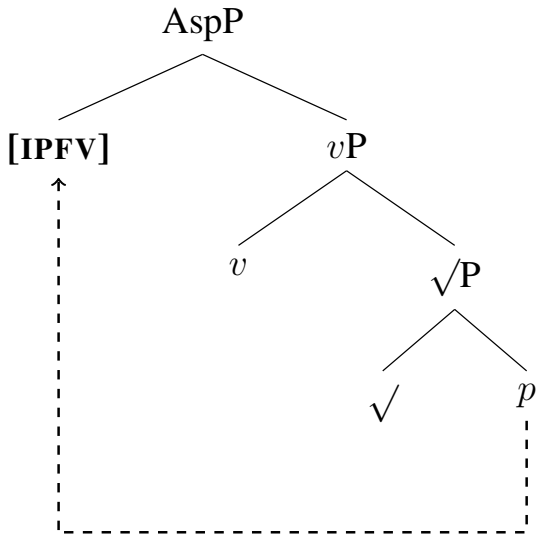
- Standard structure in the literature (cf. Svenonius 2004b, Gehrke 2008, Ramchand 2008, Gribanova 2013, Biskup 2019)
- Slavic prefixes belong to the prepositional category (Gehrke 2008)
- Theme vowels are verbalisers (Svenonius 2004a, Biskup 2009)
- I abstract away from the position of Voice and verbal arguments

Prefixes and Asp

- **Question 1:** How do prefixes license [PFV]?
- **Question 2:** How do prefixes condition the realisation of [IPFV] as AJ/YWA?

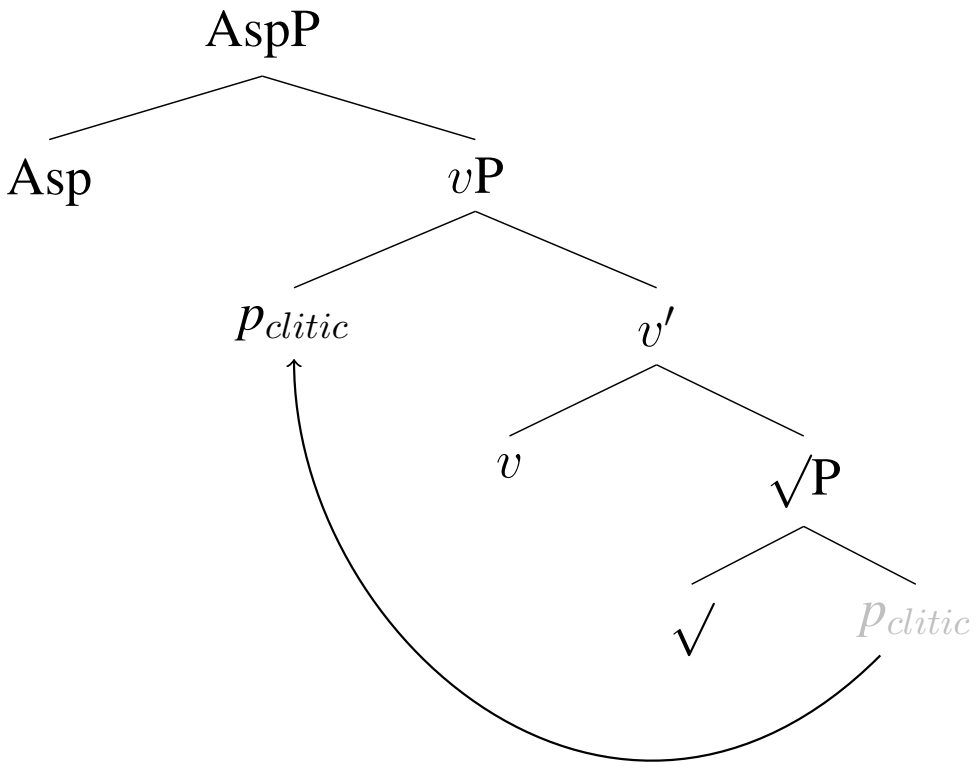


prefixes license perfective aspect



prefixes condition the realisation of [IPFV]

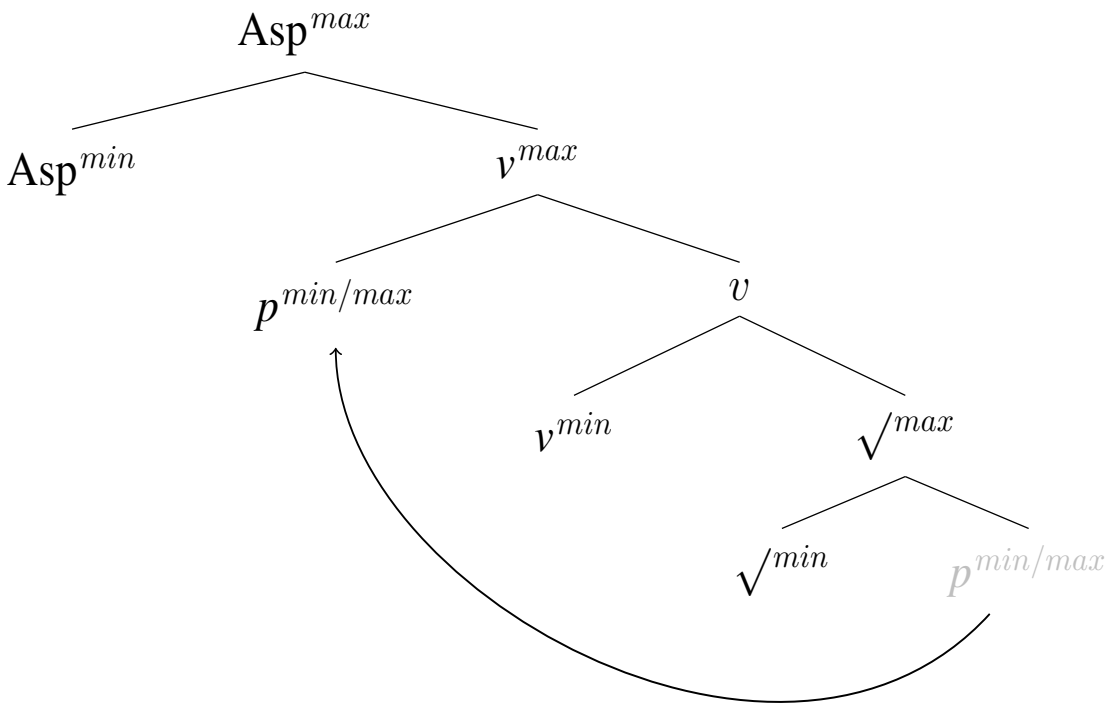
Proposal: Slavic Prefixes are Clitics



- I assume that *v* and *p* are phase heads
- The merger of *v* triggers the spell-out of all phases embedded in its complement
- The spell-out of *p* fails because *p* is a clitic which must adjoin to a host
- In order to prevent the derivation from crashing, *p* evacuates to the phase edge

- N.B. The hypothesis that categorial heads are phases is an integral part of DM (cf. Marantz 2007, Newell 2008, Embick 2010)

Proposal: Slavic Prefixes are Clitics



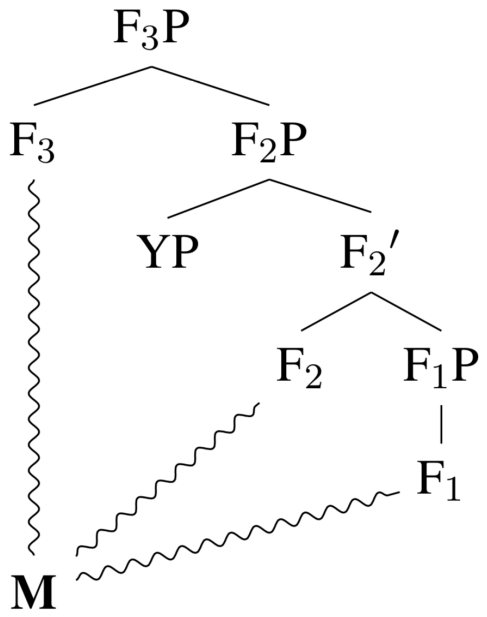
- **Slavic prefixes are min/max constituents in terms of Bare Phrase Structure** (Chomsky 1994)
- Hence, the movement of $p^{min/max}$ to *v*P is an instance of phrasal movement
- At the same time, $p^{min/max}$ may function as a head in its derived position
- I propose that ***p*$^{min/max}$ counts as an intervening head for the purposes of spanning insertion** (Svenonius 2012)

Spanning

- Lexical items are inserted into spans (=contiguous sequences of heads) (Abels & Muriungi 2008, Svenonius 2012, Merchant 2015)

- This tree comprises the following spans:
  - $\langle F_1 \rangle$, $\langle F_2 \rangle$, $\langle F_3 \rangle$
  - $\langle F_1, F_2 \rangle$, $\langle F_2, F_3 \rangle$
  - $\langle F_1, F_2, F_3 \rangle$

- Specifiers don't count…
  - …except for min/max specifiers!



Other Principles

- **Superset Principle** (cf. Caha 2009)
  A lexical item of the form Exp ⇔ S is insertable into any subspan of S

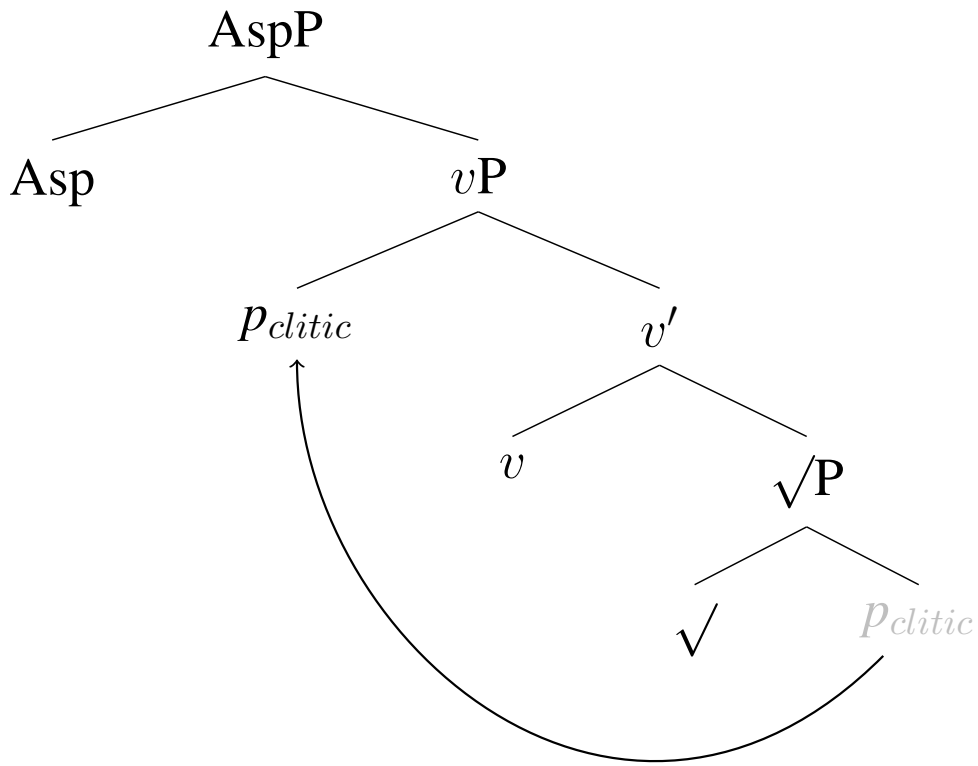
- **Exhaustive Lexicalisation** (Fábregas 2007)
  Every syntactic feature must be lexicalised

- **Minimise Exponence** (adapted from Siddiqi 2006, 2009)
  Use as few morphemes as possible to lexicalise all syntactic features

The Morphosyntax of Slavic Aspect

- Lexical items:
  - **theme** ⇔ ⟨*v*, IPFV⟩
  - **SI** ⇔ ⟨IPFV⟩
  - **prefix** ⇔ ⟨*p*, PFV⟩

- **Proposal**
  - theme vowels and prefixes are specified for aspectual features
  - $p^{min/max}$ counts as an intervening head for the purposes of spanning

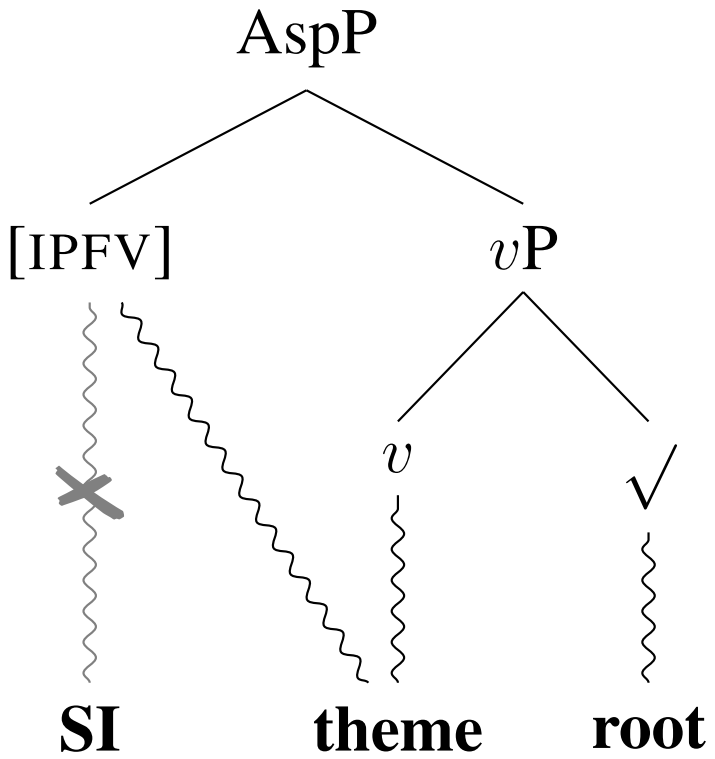


Bare Imperfectives

(16) a. bud-owa-ć[I]
build-TH-INF

b. *bud-ow(a)-**ywa**-ć
build-TH-SI-INF

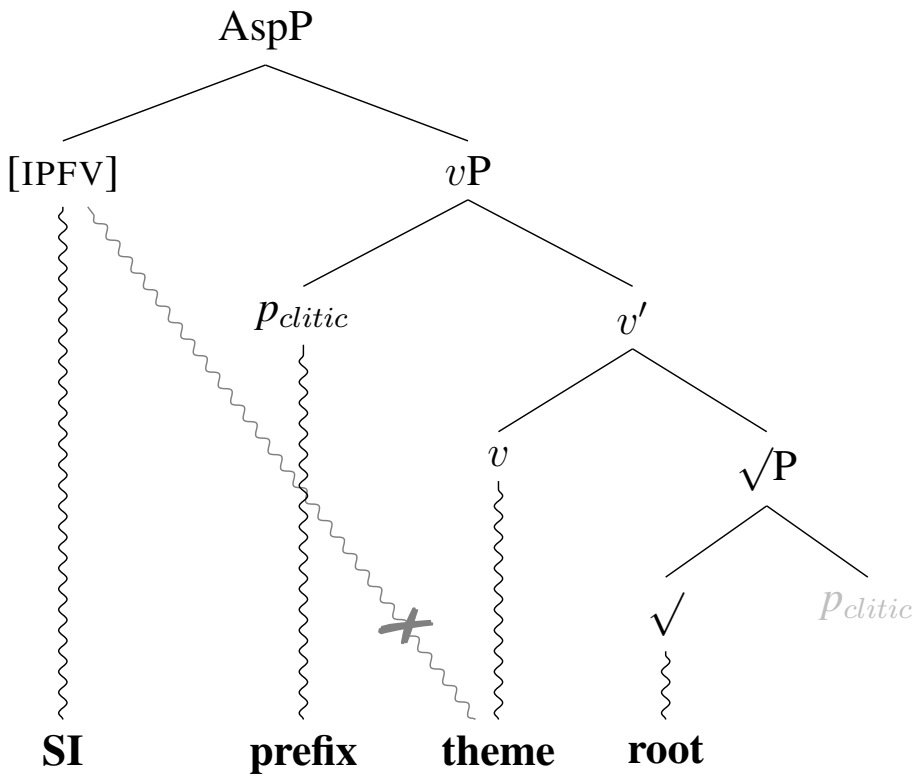
- (16a) wins by Minimise Exponence



Secondary Imperfectives

(17) **roz**-bud-ow(a)-**ywa**-ć^{I}

apart-build-TH-SI-INF

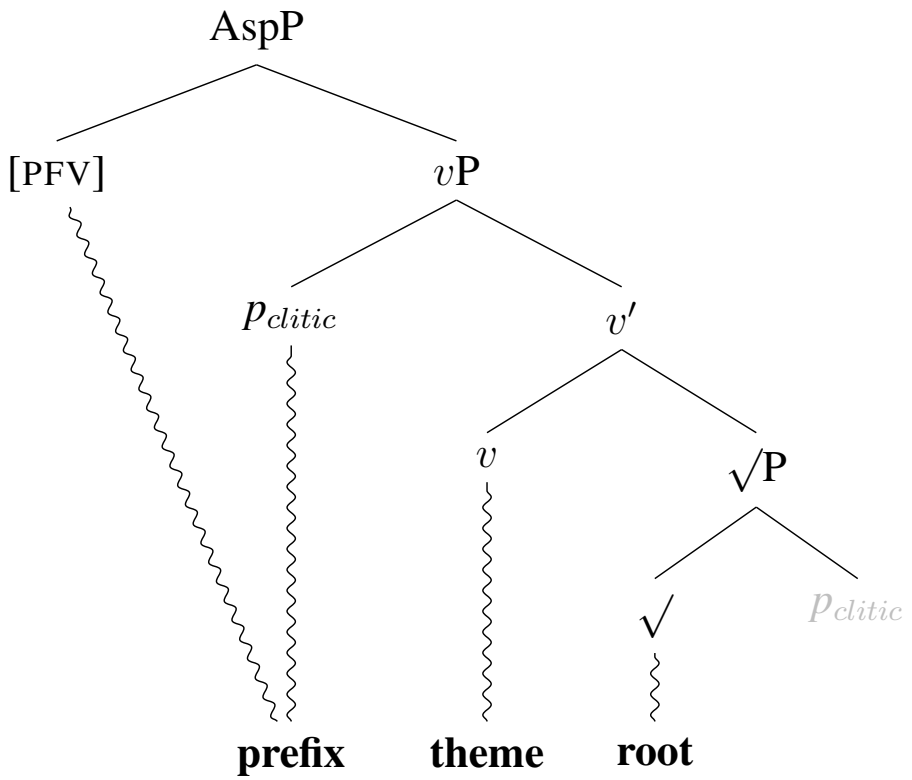


- ⟨*v*, IPFV⟩ is not a span in this tree
- the theme shrinks to ⟨*v*⟩ in accordance with the Superset Principle
- the SI suffix is inserted into ⟨IPFV⟩ to satisfy Exhaustive Lexicalisation

Prefixed Perfectives

(18) **roz**-bud-owa-ć^{P}

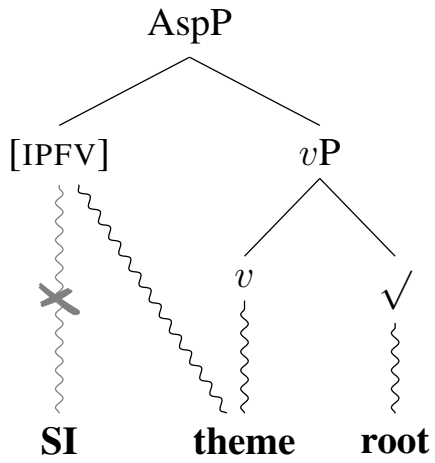
apart-build-TH-INF

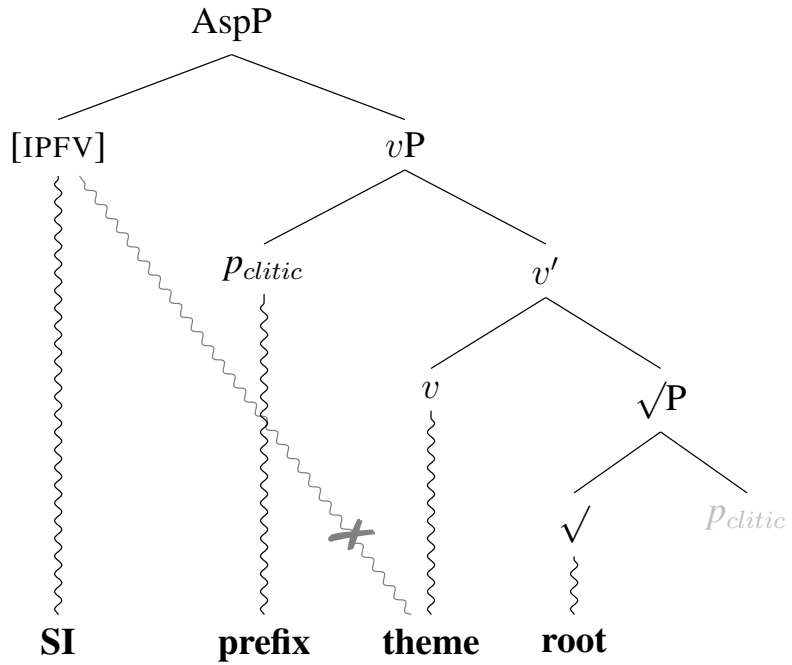


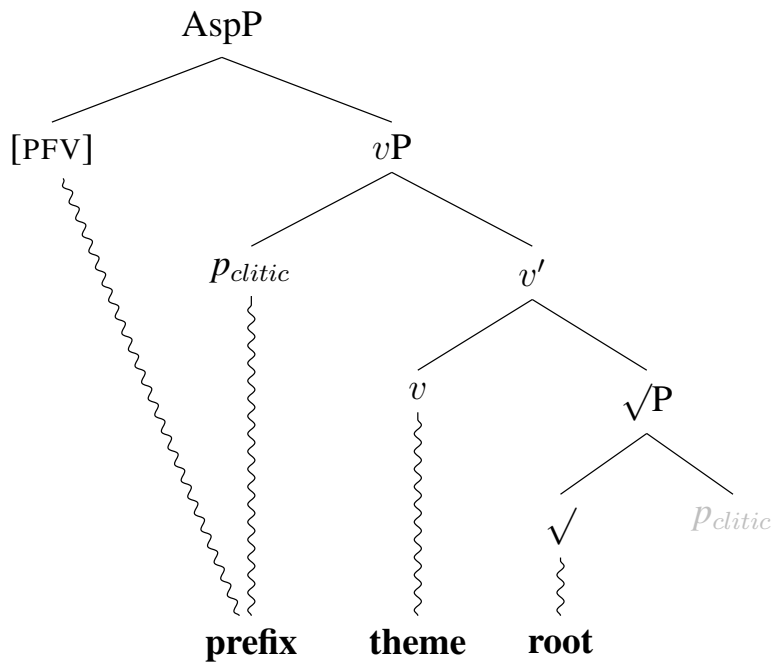
- ⟨*p*, PFV⟩ is a span in this tree
- prefixes license [PFV] simply by lexicalising this feature, thus satisfying Exhaustive Lexicalisation

Recap

theme	⇔	⟨*v*, IPFV⟩
SI	⇔	⟨IPFV⟩
prefix	⇔	⟨*p*, PFV⟩







(19) a. bud-ow(a)-ć^{I}
build-TH-INF

b. **roz**-bud-ow(a)-**ywa**-ć^{I}
apart-build-TH-SI-INF

c. **roz**-bud-owa-ć^{P}
apart-build-TH-INF

Extension to Semelfactives

- Semelfactive verbs are derived by means of the suffix NĄ
- They pattern as perfective in the standard aspectual diagnostics

(20) a. kop-a-ć^{I}
kick-TH-INF
'to kick'

b. kop-**ną**-ć^{P}
kick-SML-INF
'to kick once'

- Crucially, the semelfactive suffix NĄ is in complementary distribution with theme vowels (21a) and with AJ/YWA (21b)

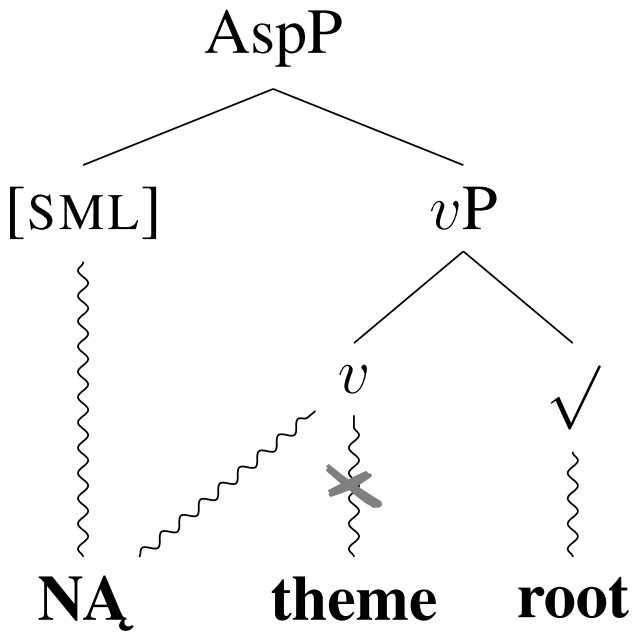
(21) a. *kop-a-**ną**-ć
kick-TH-SML-INF

b. *kop-**n(ą)-ywa**-ć
kick-SML-INF-INF

Extension to Semelfactives

(22) a. kop-**ną**-ć[P]
kick-SML-INF
'to kick once'

b. *kop-a-**ną**-ć
kick-TH-SML-INF



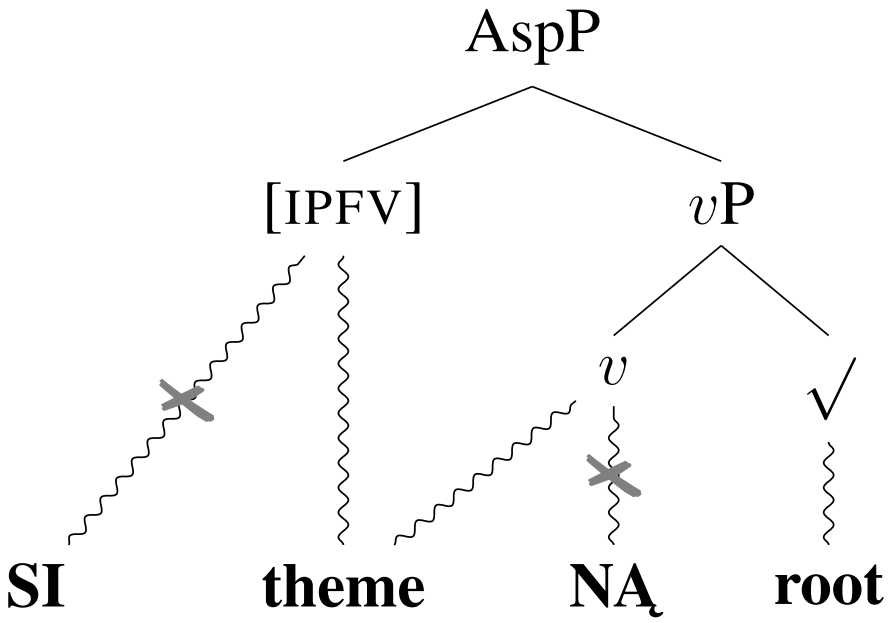
- **Lexical item**
  - **NĄ ⇔ ⟨*v*, SML⟩**

- (22a) wins by Minimise Exponence

Extension to Semelfactives

(23) a. kop-a-ć[I]
kick-TH-INF
'to kick'

b. *kop-**n(ą)-ywa**-ć
kick-SML-SI-INF



- (23a) wins by Minimise Exponence

Summary

- The SI suffix does not select for resultativity or perfectivity
- Instead, it is inserted into [IPFV] in the context of an internal prefix
- Slavic prefixes are $p^{min/max}$ clitics which adoin to the edge of the vP phase
- $p^{min/max}$ counts as an intervening head for the purposes of spanning insertion
- A combination of the Superset Principle, Minimise Exponence and Exhaustive Lexicalisation suffice to derive all and only the attested stems

References

- Abels, K. & P. Muriungi (2008). The focus particle in Kîîtharaka: syntax and semantics. *Lingua* 118, pp. 687-731.
- Biskup, P. (2019). *Prepositions, Case and Verbal Prefixes: The Case of Slavic*. John Benjamins.
- Borer, H. (2005). *The Normal Course of Events*. Oxford University Press.
- Borik, O. (2006). *Aspect and Reference Time*. Oxford: Oxford University Press.
- Borsley, D. & E. Jaworska (1988). A note on prepositions and case marking in Polish. *LI* 19(4).
- Bošković, Ž. (2005). On the locality of left branch extraction and the structure of NP. *Studia Linguistica* 59(1).
- Caha, P. (2009). *The Nanosyntax of Case*. Ph.D. dissertation.
- Caha, P. & M. Ziková (2016). Vowel length as evidence for a distinction between free and bound prefixes in Czech. *Acta Linguistica Hungarica* 63(3), pp. 331-377.
- Chomsky, N. (1994). Bare Phrase Structure. Cambridge, MA: MIT Occasional Papers in Linguistics 5.
- Embick, D. (2010). *Localism versus globalism in morphology and phonology*. Cambridge, MA: MIT Press.
- Fábregas, A. (2007). An exhaustive lexicalisation account of directional complements. *Nordlyd 34*(2).
- Gehrke, B. (2008). Ps in Motion: On the semantics and syntax of {P} elements and motion events. Utrecht: LOT.
- Jabłońska, P. (2008). *Radical Decomposition and Argument Structure*. PhD Thesis, University of Tromsø.
- Marantz, A. (2007). Phases and words. In *Phases in the Theory of Grammar*, pp. 191-222.

References

- Merchant, J. (2015). How much context is enough? Two cases of span-conditioned stem allomorphy. *LI* 46, pp. 273-304.
- Newell, H. (2008). *Aspects of the morphology and phonology of phases.*
- Piñón, C. (1999). A semantics for durative adverbials. In *Proceedings of the 18th West Coast Conference on Formal Linguistics*, pp. 420-433. Somerville, Mass.: Cascadilla Press.
- Ramchand, G. (2008). Perfectivity as aspectual definiteness: time and the event in Russian. *Lingua* 118(11).
- Schoorlemmer, M. (1995). *Participial Passive and Aspect in Russian*. Utrecht: OTS Publications.
- Siddiqi, D. (2009). *Syntax Within the Word*. John Benjamins.
- Starke, M. (2009). Nanosyntax: A short primer to a new approach to language. *Nordlyd 36*, pp. 1-6.
- Svenonius, P. (2004a). Slavic prefixes and morphology. *Nordlyd*, 32(2).
- Svenonius, P. (2004b). Slavic prefxes inside and outside VP. *Nordlyd*, 32(2).
- Svenonius, P. (2012). Spanning. Ms.
- Tatevosov, S. (2015). Severing imperfectivity from the verb. In *Proceedings of FDSL 10,* pp. 465-494.
- Tatevosov, S. (2018). On the aspectual architecture of Russian. Ms. *Moscow State University*.
- Taraldsen Medová, L. & B. Wiland (2019). Semelfactives are bigger than degree achievements. In *NLLT* 37, pp. 1463–1513.
- von Stechow, A. (1996). The different readings of *wieder* ‘again’: A structural account. *Journal of Sem.* 13, pp. 87-138.