

TWO STRUCTURES OF INTRANSITIVE DEGREE ACHIEVEMENTS IN SLAVIC CGG 35, Universitat de Barcelona, May 27–29, 2026

1 SLAVIC MEETS DEGREE ACHIEVEMENTS

Slavic degree achievements are often discussed through the prism of **thematic vowel contrast**: Medová 2013, Caha & De Clercq & Vanden Wyngaerd 2023 for Czech, Jabłońska 2007 for Polish, Arsenijević & Milosavljević 2021, Milosavljević & Arsenijević 2022, Kovačević & Milosavljević & Simonović 2024 for Serbo-Croatian (SC), Simonović & Mišmaš 2022 for Slovenian, Vyshnevska 2025 for Ukrainian, among others

- | | | | |
|-----|----|---|----------------------------|
| (1) | a. | zjasnĕt ‘to become clear’/zjasnit ‘to make clear’ | Czech, Caha et al. 2023 |
| | b. | głupieć ‘to get stupid’/głupić ‘to make stupid’ | Polish, Jabłońska 2007:109 |
| | c. | p’ianeti ‘to become drunk, intoxicated’, p’ianiti ‘to intoxicate’ | Russian |
| | d. | otupeti ‘to become blunt, numb’/otupiti ‘to make blunt’ | Serbo-Croatian |
| | e. | rumeneti ‘to become yellow’/rumeniti ‘to make yellow’ | Slovenian, Marvin 2002:100 |
| | f. | veselity ‘to become merrier’/veselyty ‘to make merrier’ | Ukr., Vyshnevska 2025:174 |

Across the deadjectival verb pairs in (1):

- *e*-verbs are intransitive (and unaccusative)
- *i*-verbs are transitive

In Ukrainian a phonological change turned the former /i/ into /i/ and the former /e/, into /i/, but otherwise it preserves the same historical contrast

Question: what kind of relation holds between *e*- and *i*-verbs?

Three broad approaches to deadjectival change-of-state verbs have been proposed in the literature (adapted for our data below):

- (i) *i*-verbs are causativized *e*-verbs (Ramchand 2008:90–93, Wyngaerd & De Clercq & Caha 2022, Caha et al. 2023)
- (ii) *e*-verbs are decausativized *i*-verbs (Chierchia 2004 (1989), Reinhart 1991, 2016, Levin & Rappaport Hovav 1994, 1995)
- (iii) both are independently derived from the same adjectival stem/root (Harley 1995, 2008, 2012, Doron 2003a, b, Alexiadou +...)

Proposal (cf. Alexiadou & Anagnostopoulou 2004, Alexiadou 2010 for Greek, Labelle 1992, Labelle & Doron 2010, for French, see also Alexiadou & Anagnostopoulou & Schäfer 2015):
minimally two underlying structures for intransitive deadjectival degree achievements:

- uncausatives: **inchoatives** (*e*-verbs) and mutatives (imperfective *nu*-verbs)
Not all *e*- and *nu*-verbs are degree achievements! But others do not concern us here
- causatives (unmarked) and **decausatives** (SE-marked intransitives): *i*-verbs
Again, *i*-verbs are not limited to deadjectival degree achievements

The Slavic facts support two distinct, non-intersecting structures, for one-place deadjectival degree achievements (anticausatives)

We use the term *anticausative* as a cover term for intransitive degree achievements

Structure of the talk:

- *e*-/*i*-asymmetries
- evidence for two distinct one-place syntactic structures
- crosslinguistic parallels from Romance
- implications for the architecture of deadjectival degree achievements

Takeaway messages:

- Slavic deadjectival degree achievements provide converging evidence for two distinct types of one-place change-of-state verbs: uncausatives and decausatives
- Prefixation further allows us to distinguish the process-orientation of uncausatives from the result-orientation of decausatives

2 UNCASUATIVES (E-) AND (DE)CAUSATIVES (I-): ASYMMETRIES

2.1 Meanings

For Russian most of the points below were also made by Vadim Dyachkov; see also Tatevosov 2014a on *nu*-verbs
Starting point: *i*-verbs do not have the semantics of causativized *e*-verbs (cf. Dyachkov 2021, 2023 for Russian):

- (2) a. crveneti ‘to become red(der), blush’, crveniti ‘to color red’ Serbo-Croatian
b. crneti ‘to become tanned’, crniti ‘to color black’
c. beleti ‘to turn white(r); be white’, beliti ‘to whitewash, color white’ Russian
d. tolsteti ‘to become fat(ter)’, tolstiti ‘to make look fat(ter)’

As expected, deadjectival *e*-verbs denote autonomous processes, whereas deadjectival *i*-verbs denote externally caused ones

And *e*- and *i*-verbs very often evoke different events:

- (3) a. Ada je crnila obrve. Serbo-Croatian
Ada be.3SG black-TH_I.PTCP.FSG eyebrows
‘Ada was blackening her eyebrows.’
b. Ada je crnela (od sunca).
Ada be.3SG black-TH_E.PTCP.FSG from sun
‘Ada was becoming tanned.’
c. *Sunce je crnilo Adu.
sun be.3SG black-TH_I.PTCP.NSG Ada.ACC
- (4) a. Ot tainstvennogo lekarstva on molodel/pomolodel/*omolodel. Russian
from mysterious medicine he Ø/PO-/O-young.TH_E.PAST.MSG
‘He was becoming/became young(er) from the mysterious drug.’
b. Tainstvennoe lekarstvo molodilo/omolodilo/*pomolodilo ego.
mysterious medicine Ø/PO-/O-young.TH_E.PAST.MSG him
‘The mysterious drug rejuvenated him.’
c. Korotkaja strižka molodila/*omolodila/*pomolodila ego.
short haircut Ø/PO-/O-young.TH_E.PAST.FSG him
‘Short hair was making him look younger.’

And these different types of processes are reflected in prefixation.

2.2 Prefixation Requirement

Slavic prefixation makes the verb perfective, foregrounding the result state (for more detail see Filip 1992, 2000, 2026, Janda et al. 2013, Tatevosov 2014a, b and references therein)

For most verbal stems the default form is unprefixed and imperfective

In Russian, out of ~190 deadjectival *e*-stems in our database 13 require a prefix to form a verb

Out of the 222 deadjectival *i*-stems in our database, 139 (62,6%) could give rise to unprefixed imperfectives

So **6,8% of deadjectival *e*-stems vs. 37,4% of deadjectival *i*-stems require a prefix**

In Serbo-Croatian as well, autonomous processes (inchoative use) may be unprefixed while requiring a prefix for the same stem in a transitive use (externally caused result state):

- | | | |
|-----|------------------------------|--|
| (5) | Autonomous process: | Externally caused result state: |
| a. | (o)slep-e-ti ‘to lose sight’ | o-slep-i-ti ‘to blind’, za-slep-i-ti ‘deceive’ |
| b. | (po)lud-e-ti ‘to go mad’ | iz-lud-e-ti ‘make/drive mad’ |

Despite the non-productivity of the *e*-class and leveling, the contrast persists in Serbo-Croatian as well

2.3 Prefix Selection

Prefix selection systematically correlates with verb type and event-structural orientation

The **default perfectivizing prefixes** differ for *e*- and *i*-verbs (for Russian, this was also noted by Dyachkov 2021, 2023)

For SC, we use a manually annotated subset of the MaCoCu Croatian Web V2 corpus (177 classified tokens) and for Russian, we draw on our own datasets (ca. 180 *e*-verbs in total) and non-SE-marked *i*-verbs that have *e*-counterparts (63 *i*-verbs in total)

See the Appendix for our data sources

Distributional evidence

Prefix distribution in Russian and SC: *po-* is the clearest positive correlate of *e*-verbs/inchoative uses; *o-/ob-* is less diagnostic, since it is attested with both *e*- and *i*-verbs.

What we are looking at here for Russian is the ~43 causative deadjectival *i*-verbs with an *e*-counterpart

Dataset	po-	o-/ob-	za-	other
Russian <i>e</i> -verbs (~190)	80	39	48	marginal
Russian <i>i</i> -counterparts of <i>e</i> -verbs (43)	9	25	4	marginal
SC inchoative tokens (143)	62	43	low (≤10%)	marginal
SC causative/decausative tokens (34)	0	21	13	0

In Serbo-Croatian, the contrast between change-of-state *e*- and *i*-verbs is undergoing levelling (see Marelj & Matushansky 2026 for details), but prefix choice is systematically correlated with inchoative vs causative/decausative uses

The percentage of *za-* in the inchoative set for this slice is even smaller, actually. The 9.8 % is inflated by a single stem (*star* ‘old’), which accounts for 8/14 *za*-tokens. Note also that this *e*-verb has lost its *i*-counterpart in Modern Croatian, with the causative expressed periphrastically.

Consequently, *i*-verbs prefixed with *po-* do occur in SC, but in our annotated dataset all such uses are inchoative:

- (6) a. ... zbog srama joj je lice iznenada **pocrvenilo**... SC
 because shame.GEN her.DAT AUX face suddenly red.TH1.PTCP.FSG
 ‘Because of shame her face suddenly reddened.’

- b. ... drveni dijelovi zgrade su s vremenom **potamnili**...
 wooden parts building.GEN AUX with time dark.TH_I.PTCP.MPL
 ‘Wooden parts of the building darkened with time.’
- c. ... zbog starosti kosa mu je rano **osijedila**...
 because old.age hair him.DAT AUX early gray.TH_I.PTCP.FSG
 ‘Because of old age his hair turned gray prematurely.’

For the color-verb domain, the last locus where the historical *e-* vs *i-*contrast remains partially preserved, albeit under clear pressure from levelling, the most common prefix in Serbian for *i-*verbs is *na-*, while for *e-*verbs it is *po-*:

- (7) a. Ada je nacrnila obrve. Serbo-Croatian
 Ada be.3SG NA.black-TH_I.PTCP.FSG eyebrows
 ‘Ada (has) blackened her eyebrows.’
- b. Ada je pocrnela (od sunca).
 Ada be.3SG PO.black-TH_E.PTCP.FSG from sun
 ‘Ada got tanned.’

Given that prefixes inform us about the underlying event structure, the divergence in prefix selection between *i-*verbs and *e-*verbs becomes difficult to reconcile with a derivational relation between them.

2.4 Pairing Gaps and Triplets

Most Russian *e-*verbs have no corresponding *i-*verbs (cf. Dyachkov 2018:107–108, 2023, as well as the numbers above: ≈190 deadjectival *e-*verbs and ≈43 causative *i-*verbs that share a stem with *e-*verbs):

- (8) a. (po/ob)liseti ‘to become bald(er)’_{PFV/IPFV}, *lisiti Russian
 b. zaxireti/xireti ‘to grow sickly, wither’_{PFV/IPFV}, *xiriti
 c. ržaveti ‘to turn rusty(er)’, *ržaviti

Not all *i-*verbs have *e-*variants either, but this is not unexpected:

- (9) a. bodriti ‘to invigorate, encourage’ (from bodrij ‘cheerful, brisk’), *bodreti Russian
 b. uglubiti ‘to make deeper’_{PFV} (from glubokij ‘deep’), *glubeti/*uglubet
- (10) a. kiseliti ‘to make sour’ (from kisel ‘sour’), *kiseleti Serbo-Croatian
 b. sušiti ‘to dry’ (from suh ‘dry’), *sušeti

By contrast, there exists a productive and transparent process of forming explicitly marked unaccusative counterparts of causative deadjectival *i-*verbs

- (11) a. Tristram je osušio cveće. Serbo-Croatian
 Tristram AUX dry.PFV.PTCP.MSG flowers.COLL.NSG
 ‘Tristram dried up the flowers.’
- b. Cveće se osušilo.
 flower.COLL.NSG SE dry.PFV.PTCP.NSG
 ‘The flowers dried up’

- (12) a. Incident uglubil raskol meždu stranami. Russian
incident deepen.PFV.PAST.MSG rift.ACC between countries
'The incident deepened the rift between the countries.'
- b. Ètot raskol uglubils'ja blagodar'ja novomu incidentu.
this rift.NOM deepen.PFV.PAST.FSG.SE thanks.to new incident
'This rift deepened because of the new incident.'

Slavic languages therefore distinguish two **morphosyntactically distinct** types of deadjectival degree achievements:

- *e*-verbs, aka uncausatives
- *i*-verbs, causatives and decausatives (SE-marked *i*-verbs)

Slavic uncausatives and decausatives have different derivational suffixes

Crucially, the two structures may coexist within triplets, albeit with subtle nuances in interpretation:

- (13) a. Nož je o-tup-e-o od upotrebe. Serbo-Croatian, uncausative
knife is PFX-blunt-TH_E-PAST.MSG from use
'The knife got blunt from use.'
- b. Nož se o-tup-i-o od upotrebe. decausative
knife SE PFX-blunt-TH_I-PTCP.MSG from use
'The knife got blunt from use.'
- c. O-tup-e-l-a sam od bola. uncausative
PFX-blunt-TH_E-PTCP-FSG am from pain
'I became numb from pain.'
- d. *O-tup-i-l-a sam (*se) od bola. decausative
PFX-blunt-TH_I-PTCP-FSG am SE from pain
- (14) a. D'Artanjan čuvstvoval, što tup-e-et. Russian, uncausative
D'Artagnan felt that blunt-TH_E-PRES.3SG
'D'Artagnan felt that he was becoming dense.'
- b. Vsiakij instrument ot raboty tup-i-t-s'ja. decausative
any instrument from work blunt-TH_I-PRES.3SG-SE
'Any instrument becomes blunt from work.'

Not every deadjectival *i*-causative gives rise to a decausative, but when they do, the semantic link is transparent

Though not necessarily predictable: decausatives can denote non-telic eventualities, as in *kruglit'* 'to make round' vs. *kruglits'ja* 'to become round', but also 'to look round'

3 INTERMEDIATE SUMMARY

Slavic provides evidence for **two types of one-place deadjectival change-of-state verbs**: uncausatives and decausatives

They are associated with **different event-structural profiles**:

- uncausatives (*e*-verbs) foreground the unfolding autonomous process
- (de)causatives (*i*-verbs) focus on the attainment of a result

Morphological evidence tracks these differences:

- distinct verbal thematic vowel morphology (-e- vs. -i-)
- SE-marking on decausatives
- obligatory prefixation (section 2.2)
- systematic prefix-selection differences (section 2.3)

Are these morphological distinctions reflected in syntax?

4 A TALE OF TWO SYNTAXES

Can *e*-verbs also be decausative, but unmarked?

The unaccusativity of *e*-verbs and decausatives is not identical

Evidence: Serbo-Croatian prenominal past participles

Hoekstra 1984, Ackema & Schoorlemmer 1995, Aljović 2000, Marelj 2004, a.o.: prenominal past participles as an unaccusativity diagnostic:

- (15) a. the fallen guests (unaccusative)
b. broken window, written book, eaten meal, etc. (transitive)

The prenominal past participle can only track the internal argument:

- unaccusative: the prenominal past participle exists and can be used prenominally
- transitive: likewise
- unergatives do not form past participles that can be used prenominally

Serbo-Croatian: different past-participle forms for transitives and unaccusatives:

- unaccusatives: *l*-participles
- transitives: *n*-participles

- (16) a. pristig-**l**-i gosti (unaccusative)
arrive-PTCP-MPL guests
'arrived guests'
- b. razbij-**en-i**/*razbi-**l**-i prozor (transitive)
break-PTCP-MSG window
'broken window'

Hence Serbo-Croatian tests not only for the status of the argument (internal vs. external), but also for the syntactic structure it is a part of:

- *l*-participles are for the internal arguments of one-place verbs
- *n*-participles are for the internal argument of transitive verbs (and for decausatives)

Only the *l*-participle is grammatical with the deadjectival *e*-verbs:

- (17) a. po-ru~~m~~e~~n~~-**e-l**-i/*porumenj-**e-n**-i obrazi
PO-blush-THE-PTCP-MPL cheeks
'cheeks that have blushed'
- b. po-~~ž~~ut-**e-l**-o/*po~~ž~~uće-**n**-o lišće
PO-yellow-THE-PTCP-MPL leaves.COLL
'leaves that have yellowed'

This implies that deadjectival *e*-verbs are one-place unaccusatives in Serbo-Croatian

On the other hand, deadjectival *i*-verbs allow only for *n*-participles to be used prenominally:

- (18) a. na-rumenj-en-i/*na-rumen-e-l-i obrazi
NA-blush.TH-PTCP-MPL cheeks
'cheeks that had been rouged'
- b. na-crnj-en-e/*na-crn-e-l-e obrve
NA-black.TH-PTCP-FPL eyebrows
'eyebrows that had been painted black'

Upshot: whereas *e*-verbs pattern with 'run-of-the-mill' unaccusatives like *stići* 'arrive', *i*-verbs pattern with the 'run-of-the-mill' transitive verbs like *razbiti* 'break'.

No comparable argument can be constructed for Russian because it has active past participles, which always track the nominative subject

Other syntactic unaccusativity tests do not distinguish derived and underived unaccusatives

5 SUMMARY

Slavic provides evidence for two types of one-place change-of-state verbs, associated with different event-structural profiles and distinct syntactic configurations:

- uncausatives (*e*-verbs)
- decausatives (SE-marked *i*-verbs)

Morphological evidence that tracks these differences:

- distinct verbal thematic vowel morphology (*-e-* vs. *-i-*)
- SE-marking on decausatives
- distinct prenominal participial morphology in SC (section 3):
 - *l*-participles for *e*-verbs
 - *n*-participles for *i*-verbs
- obligatory prefixation (section 2.2)
- systematic prefix-selection differences (section 2.3)

Data from alternating stems, i.e., stems giving rise to both *e*- and *i*-verbs are particularly revealing in this respect: prefix choice is differentiated across inchoative and causative uses, suggesting that prefix-selection asymmetries cannot be reduced to accidental lexicalization.

- (19) a. po-red-e-tʃ 'to become sparse' (20) a. *po-red-i-tʃ Russian
b. *pro/iz-red-e-tʃ b. pro/iz-red-i-tʃ 'to thin out'
c. *raz-red-e-tʃ c. raz-red-i-tʃ 'to rarify'

Uncausatives and causatives built from the same stem are not derivationally linked, unlike causatives and decausatives.

The Slavic facts support a distinction between process-oriented and result-oriented one-place verbs

6 ARE SLAVIC LANGUAGES UNIQUE?

Our observations join the growing body of literature suggesting that one-place change-of-state verbs come in more than one syntactic structure (see Alexiadou et al. 2015 for crosslinguistic coverage).

Romance languages independently exhibit a contrast between simple/unmarked (i.e. active) intransitives and SE-marked decausatives (Zribi-Hertz 1987, Labelle 1992, Legendre & Smolensky 2009, Labelle & Doron 2010, among others):

- (21) a. El trueno despertó a Vicky. Spanish, Vivanco 2021
 the thunder woke.up DOM Vicky
 ‘Thunder woke up Vicky.’
 b. Vicky (se) despertó.
 Vicky (SE) woke.up
 ‘Vicky woke up.’
- (22) a. quemar (intr.) ‘burn, emit heat, burn well’ Cuervo 2014
 b. quemarse ‘burn down/up, catch fire’
 c. quemar (tr.) ‘burn, set on fire’

Semantic distinction, first suggested for French (Zribi-Hertz 1987, Labelle 1992, Legendre & Smolensky 2009):

- simple/unmarked anticausative: asserts the autonomy of the process
- SE-marked anticausative: focuses on the attainment of a result state

Similar observations have been made for SE-marked and unmarked anticausatives in Italian (Centineo 1995, Folli 2001, 2002, 2014, Cennamo & Jezek 2011, Cennamo 2012, Alexiadou et al. 2015:82–88, Bentley 2024, among others) and in Spanish (Cuervo 2014, Vivanco 2021).

Cuervo 2014 derives this contrast configurationally, **distinguishing mono-eventive process structures from bi-eventive structures containing a result-state component.**

Romance and Germanic do not use prefixation in conjunction with perfectivization in the way Slavic languages do. Nevertheless, Zribi-Hertz 1986:341 observes that prefixed verbs are more likely to exhibit a result-oriented interpretation (see also Manente 2008).

The Slavic facts support the distinction between process-oriented and result-oriented one-place predicates but additionally suggest that lexical-semantic contrasts cannot be reduced entirely to configurational decomposition.

Unlike elsewhere, Slavic distinguishes the two types not only by SE-marking, but also through verbal thematic vowels (-e- vs. -i-) and prefixation asymmetries that correlate with different event-structural perspectives.

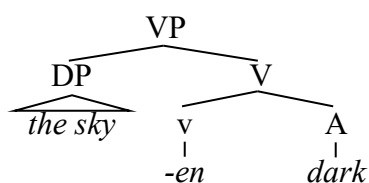
7 TWO VIEWS ON DEADJECTIVAL DEGREE ACHIEVEMENTS

Composition vs. decomposition: what does *v* combine with?

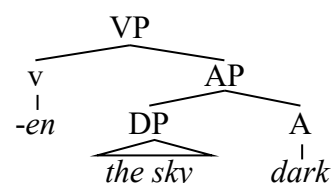
What is the internal argument of an unaccusative (the undergoer) an argument of?

Two archetypal approaches to deadjectival degree achievements attested in the literature:

(23) a. direct composition



b. complex event formation



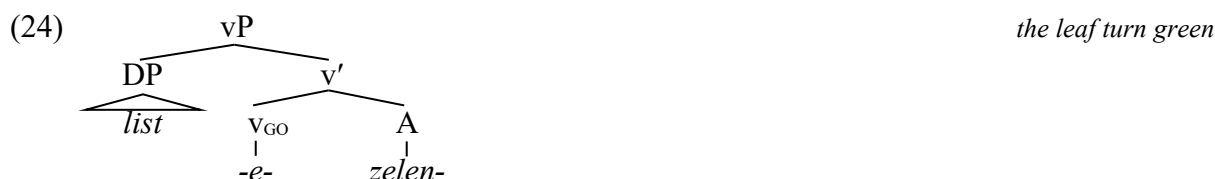
Alexiadou & Anagnostopoulou & Schäfer 2006, Alexiadou 2010:183: direct verbalization
 As the *v*-A constituent is a complex head, its argument is still internal

Harley 2008, 2012, 2017, Ramchand 2008:91: underlying small-clause structure (syntactically represented result state) for change-of-state verbs

7.1 Our proposal

Hypothesis: the structure underlying uncausatives (*e*-verbs) differs from that of (de)causatives, with the adjectival stem (i.e., the scale) combining with the verbalizer directly (as in motion verbs):

The label *v*_{GO} is used purely for the ease of exposition



While such an event might have a cause, it is not encoded in the structure of the verb

This structure is fully compatible with the semantics of the deadjectival verbalizer INCREASE, (Hay & Kennedy & Levin 1999, Kennedy & Levin 2008):

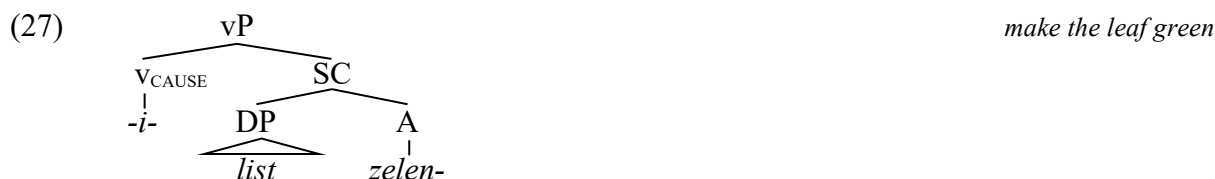
(25) $\llbracket \text{bel-} \rrbracket = \lambda x. \lambda t. \text{white}(x)(t)$

(26) $\llbracket \text{INCREASE} \rrbracket (\varphi)(x)(d)(e) = 1$ iff $\varphi(x)(\text{SPO}(e)) + d = \varphi(x)(\text{EPO}(e))$
 where *SPO*(*e*) is the starting point of the event & *EPO*(*e*), the end point of the event

The verbalizer INCREASE $\langle \langle e, \langle t, d \rangle \rangle, \langle e, \langle d, \langle v, t \rangle \rangle \rangle$ combines with an adjectival stem (= a function from individuals and times to degrees), an individual and a degree (i.e., a differential) to yield a set of events

Causatives (and decausatives) are more likely to have the SC structure:

Important: the exponent *-i-* does not encode causation (given that *i*-verbs can involve any Vendlerian event-type), this representation is a simplification



This syntactic and semantic representation **entails bi-eventive telicity** (cf. Cuervo 2014)

Yet the presence of a result state in the semantics of a verb does not entail culmination

See Minor 2025 on telic verbal roots encoded as imperfectives in Russian

We have come closer to understanding why deadjectival degree achievement causatives prefer prefixes, but nothing we know forces the specification of a result state

And the syntax of prefixation in both structures remains an issue

7.2 Conclusion and further questions

The minimal outcome: **two types of anticausatives**

Two morphosyntactically distinct anticausative structures (in accordance with previous work):

- uncausatives: the *e*-thematic suffix, mono-eventive change-of-state syntax
- decausatives: the *i*-thematic suffix, bi-eventive small-clause syntax, SE-marking

The syntactic representation of mono- vs. bi-eventive structures correlates with their behavior with respect to prefixation

7.2.1 Essive readings of *e*-verbs

In both languages color *e*-verbs give rise to stative readings:

- (28) a. Vdali zelenel les. Russian, RNC
in.the.distance green.PAST.MSG forest
'Far away the forest shone green.'
- b. On byl černym kak smola, beleli tol'ko zuby.
he was black.INS as tar whiten.PAST.PL only teeth
'He was pitch-black, only his teeth shone white.'
- (29) a. Dan se beleo. Serbo-Croatian
day SE whiten.PCPL.MSG
'The day was glisteningly white.'
- b. Šuma se zelenela. Serbo-Croatian
forest SE green.PCPL.FSG
'The forest was beamingly green.'

Important: it is *only* color *e*-verbs that give rise to the stative readings

In Serbo-Croatian stative readings require SE-marking

In Russian SE-marking used to be possible, remains marginally possible:

- (30) a. lužok zelenels'ja, točno vymytyj RNC, up to the 19th c.
meadow green.PAST.MSG.SE as.if washed
'The meadow shone green, as if freshly washed.'
- b. Inej belels'ja na ee šubke. RNC, up to the 20th c.
hoarfrost whiten.PAST.MSG.SE on her fur coat
'Hoarfrost glistened white on her fur coat.'

Stative readings are derived from transformative (inchoative) ones:

- possible for color (and suchlike: *light*, *dark*, etc.) verbs only
- take the prefix *za-* to form perfectives in Russian and Serbo-Croatian.
- require overt SE-marking in Serbo-Croatian

By the same reasoning as before, **the inchoative reading should not be derived as causation of a state**

Essive readings of change-of-state color verbs also attested in Hebrew, Catalan (Oltra-Massuet & Castroviejo 2013, 2014, Acedo-Matellán & Gibert-Sotelo 2022), Spanish (Oltra-Massuet & Castroviejo 2013, 2014), Italian (Rasia 2023), and French (Joüon 1930):

- (31) a. El glaç blanqu-ej-a pel camí. Catalan, AM&GS2022
the ice white-EJ-PRES.3SG on the path
'The ice shines white on the path.'
- b. La platja brut-ej-a.
the beach dirty-EJ-PRES.3SG
'The beach looks dirty.'

In some languages such readings are not limited to color verbs, but more work is needed

7.2.2 Restitutive *again*: an elusive result state?

Motivation for the underlying small-clause structure: restitutive reading of *again*:

- (32) John opened the door again. Harley 2012
- a. Restitutive: The door had been open before, and John reopened it.
- b. Repetitive: John had opened the door before, and he did it again.

The restitutive reading in (32a) can be explained if the adverbial is adjoined to the SC

But does the restitutive reading track the result state as a syntactic constituent?

Horvath & Siloni 2011, citing Chierchia & McConnell-Ginet 1990: not all deadjectival degree achievement verbs permit the restitutive reading of *again* (e.g., *clean* does not), and this reading is harder for speakers to achieve anyway

Which is not a strong counterargument, since the lack of the restitutive reading may be due to pragmatic factors

Conversely, restitutive *again* may provide a reading that does not appear to be compatible with the semantics of the verb

- (33) Scenario (based on Olshanetsky 2023): Reish Lakish has sold himself to a lanista. His friends, appalled by this, decide: We'll work hard and save money and eventually...

My (vy)kupim ego snova!
we PFX.buy.1PL him again
'We will buy him (back) again!'

The result state of the verb *buy* is either that of having been bought or that of being owned

Could (33) evoke the reading of abstract possession (*my daughter*)? If yes, can one *sell* it as well? We think not

But even if we're just talking about restoring possession, **possession is only part of the result state of the verb *buy***: the set of things *bought* is not identical to the set of things *gifted/given*

- (34) Mary really liked that brooch she had to sell. #Let's give or sell it to her again.

Potential problem: non-structural accounts of *again* (e.g., Fabricius-Hansen 2001, Klein 2001) would not predict its interaction with word order

Yet Slavic *again* can be preverbal, which is not obviously compatible with structural accounts

To be continued, but at this point we suspect that **the restitutive reading of *again* may track something other than the lexically encoded result state**

And in Slavic it requires perfectivity

APPENDIX: DATA SOURCES

A.1 Serbo-Croatian corpus data

Methodology:

- MaCoCu Croatian Web V2 (very large web corpus, hundreds of millions of tokens)
- Targeted, lexically guided extraction: regex search targeting deadjectival change-of-state verbs (primarily *l*-participles) on a predefined set of roots
- 256,696 matches in corpus, 440 retrieved tokens (preloaded concordance subset), and 177 tokens manually annotated (inchoative/causative/SE-decausative)
What happened with the remaining ±263? They were either non-transparent forms (e.g. MSG *-io* of the past participle, present tense forms, etc.) or the context was not sufficient to determine the use. Therefore, these tokens were excluded due to insufficient transparency for classification
- Dataset is not random or exhaustive; internally valid, not globally representative
- Dataset is strongly skewed toward inchoatives: 143/177 (80.8%) vs 34/177 (19.2%)

Basic distribution: inchoative: 143 (80.8%) & causative + SE-decausative: 34 (19.2%)

A.2 Russian datasets

For *e*-verbs, we constructed a database of non-SE-marked *e*-verbs, mostly culled from Zaliznjak 2010 and Slioussar 2012, and sorted by stem category. Each stem was counted only once

For *i*-verbs, we extracted the full set of ≈7300 prefixed and unprefixed *i*-verbs from Zaliznjak 2010 and Slioussar 2012, and manually annotated them, yielding a set of ≈1200 deadjectival *e*-verbs built on ≈230 stems. Both SE-marked and unmarked *i*-verbs were included in the set

For a more detailed comparison we used a manually constructed list of 63 *i*-verbs that have an *e*-verb counterpart; 50 of these were deadjectival, 43 of the latter had a causative interpretation

8 REFERENCES

- Acedo-Matellán, Víctor & Gibert-Sotelo, Elisabeth. 2022. Revisiting *-ej(ar)* verbs in Catalan: Argument and event structure. *Isogloss. Open Journal of Romance Linguistics* 8 (4), 1–28. <https://doi.org/10.5565/rev/isogloss.166>.
- Ackema, Peter & Schoorlemmer, Maaike. 1995. Middles and nonmovement. *Linguistic Inquiry* 26 (2), 173–197. <http://www.jstor.org/stable/4178895>.
- Alexiadou, Artemis. 2010. On the morphosyntax of (anti)causative verbs. In Rappaport Hovav, Malka & Doron, Edit & Sichel, Ivy (eds.). *Lexical Semantics, Syntax, and Event Structure*, 177–203. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199544325.003.0009>.
- Alexiadou, Artemis & Anagnostopoulou, Elena. 2004. Voice morphology in the causative-inchoative alternation: evidence for a non-unified structural analysis of unaccusatives. In Alexiadou, Artemis & Anagnostopoulou, Elena & Everaert, Martin (eds.). *The Unaccusativity Puzzle*, 114–136. Oxford: Oxford University Press.
- Alexiadou, Artemis & Anagnostopoulou, Elena & Schäfer, Florian. 2006. The properties of anticausatives crosslinguistically. In Frascarelli, Mara (ed.). *Phases of Interpretation*, 187–212. Berlin: De Gruyter Mouton. <https://doi.org/10.1515/9783110197723.4.187>.
- Alexiadou, Artemis & Anagnostopoulou, Elena & Schäfer, Florian. 2015. *External arguments in transitivity alternations: a layering approach*. Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199571949.001.0001>.
- Aljović, Nadira. 2000. Unaccusativity and aspect in Serbo-Croatian. In Czinglar, Christine & Köhler, Katharina & van der Torre, Erik Jan & Zimmermann, Malte (eds.). *ConSOLE VIII Proceedings*, 1–15. Leiden: SOLE.
- Arsenijević, Boban & Milosavljević, Stefan. 2021. Serbo-Croatian theme vowels carry functional features. (Paper presented at *Theme vowels in V(P) Structure and beyond*, University of Graz, April 22–23, 2021).
- Bentley, Delia. 2024. The causative alternation in Italian: A case study in the parallel architecture of grammar. In Gibson, Edward & Poliak, Moshe (eds.). *From Fieldwork to Linguistic Theory – A Tribute to Dan Everett*, 225–273. Berlin: Language Science Press. <https://doi.org/10.5281/zenodo.12665923>.
- Caha, Pavel & De Clercq, Karen & Vanden Wyngaerd, Guido. 2023. Zero morphology and change-of-state verbs. *Zeitschrift für Sprachwissenschaft* 42 (1), 35–62. <https://doi.org/10.1515/zfs-2022-2012>.
- Cennamo, Michela. 2012. Aspectual constraints on the (anti)causative alternation in Old Italian. *Transactions of the Philological Society* 110 (3), 394–421. <https://doi.org/10.1111/j.1467-968X.2012.01322.x>.
- Cennamo, Michela & Jezek, Elisabetta. 2011. The anticausative alternation in Italian. *Luoghi della traduzione : le interfacce : atti del XLIII Congresso internazionale di studi della Società di linguistica Italiana (SLI), Verona, 24-26 settembre 2009*, 809–823. Roma: Bulzoni, <http://digital.casalini.it/10.1400/195035>.
- Centineo, Giulia. 1995. The distribution of *si* in Italian transitive/inchoative pairs. In Simons, Mandy & Galloway, Teresa (eds.). *Proceedings of Semantics and Linguistic Theory V*, 54–71. Ithaca: Cornell Linguistics Circle.
- Chierchia, Gennaro. 2004. A semantics for unaccusatives and its syntactic consequences. In Alexiadou, Artemis & Anagnostopoulou, Elena & Everaert, Martin (eds.). *The Unaccusativity Puzzle*, 22–59. Oxford: Oxford University Press.
- Chierchia, Gennaro & McConnell-Ginet, Sally. 1990. *Meaning and grammar: An introduction to semantics*. Cambridge: MIT Press.
- Cuervo, María Cristina. 2014. Alternating unaccusatives and the distribution of roots. *Lingua* 141, 48–70. <https://doi.org/10.1016/j.lingua.2013.12.001>.
- Doron, Edit. 2003a. Agency and voice: the semantics of the Semitic templates. *Natural Language Semantics* 11 (1), 1–67. <https://doi.org/10.1023/A:1023021423453>.

- Doron, Edit. 2003b. Transitivity alternations in the Semitic template system. In Jacqueline, Lecarme (ed.). *Research in Afroasiatic Grammar II*, 127–149. John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.241.09dor>.
- Dyachkov, Vadim. 2018. Типология деадъективных глаголов [Typology of deadjectival verbs]. Doctoral dissertation, Moscow State University.
- Dyachkov, Vadim. 2021. Theme vowels *e* and *i* in Russian: implementing the cartographic approach. *Balkanica et Slavia* 1 (2), 181–204.
- Dyachkov, Vadim. 2023. The position of the theme vowels *e* and *i* in the functional spine of Russian verbs: evidence from denominal and deadjectival verbs. (Paper presented at *SLE 2023*, Athens, August 29 – September 1, 2023).
- Fabricius-Hansen, Cathrine. 2001. "Wi(e)der" and "again(st)". In Caroline, Féry & Wolfgang, Sternefeld (eds.). *Audiatur Vox Sapientiae*, 101–130. Berlin: Akademie Verlag. <https://doi.org/doi:10.1515/9783050080116.101>.
- Filip, Hana. 1992. Aspect and interpretation of nominal arguments. In Canakis, Costas P. & Chan, Grace P. & Denton, Jeanette Marshall (eds.). *Papers from the 28th Regional Meeting of the Chicago Linguistic Society*, 139–158. Chicago: University of Chicago Press.
- Filip, Hana. 2000. The quantization puzzle. In Tenny, Carol L. & Pustejovsky, James (eds.). *Events as Grammatical Objects*, 39–96. Stanford, California: CSLI.
- Filip, Hana. 2026. The relation of Slavic verb prefixes to perfective aspect. In *Languages*, 5. <https://doi.org/10.3390/languages11010005>.
- Folli, Raffaella. 2001. On the relation of priority between causative and inchoative constructions. In D'hulst, Yves & Rooryck, Johan & Schrotten, Jan (eds.). *Romance Languages and Linguistic Theory 1999*, 143–166. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.221.06fol>.
- Folli, Raffaella. 2002. Resultatives: small clauses or complex VPs? In Beyssade, Claire & Bok-Bennema, Reineke & Drijkoningen, Frank & Monachesi, Paola (eds.). *Romance Languages and Linguistic Theory 2000*, 153–170. Amsterdam: John Benjamins Publishing Company. <https://doi.org/10.1075/cilt.232.10fol>.
- Folli, Raffaella. 2014. Causatives and inchoatives in the lexicon and in the syntax: Evidence from Italian. In *Causation in Grammatical Structures*, ed. by Copley, Bridget & Martin, Fabienne, 351–371. Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780199672073.003.0013>.
- Harley, Heidi. 1995. Subjects, Events and Licensing. Doctoral dissertation, MIT.
- Harley, Heidi. 2008. On the causative construction. In *The Oxford Handbook of Japanese Linguistics*, ed. by Miyagawa, Shigeru, 20–53. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780195307344.013.0002>.
- Harley, Heidi. 2012. Lexical decomposition in modern syntactic theory. In *The Oxford Handbook of Compositionality*, ed. by Hinzen, Wolfram & Machery, Edouard & Werning, Markus, 328–350. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199541072.013.0015>.
- Harley, Heidi. 2017. The “bundling” hypothesis and the disparate functions of little *v*. In D'Alessandro, Roberta & Franco, Irene & Gallego, Ángel J. (eds.). *The Verbal Domain*, 3–28. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780198767886.003.0001>.
- Hay, Jennifer & Kennedy, Christopher & Levin, Beth. 1999. Scalar structure underlies telicity in “degree achievements”. In Matthews, Tanya & Strolovitch, Devon (eds.). *Proceedings of SALT IX*, 127–144. Ithaca: CLC Publications.
- Hoekstra, Teun. 1984. *Transitivity; Grammatical Relations in Government-Binding Theory*. Dordrecht: Foris.
- Horvath, Julia & Siloni, Tal. 2011. Causatives across components. *Natural Language & Linguistic Theory* 29 (3), 657–704. <https://doi.org/10.1007/s11049-011-9135-3>.

- Jabłońska, Patrycja. 2007. Radical decomposition and argument structure. Doctoral dissertation, University of Tromsø.
- Janda, Laura A & Endresen, Anna & Kuznetsova, Julia & Lyashevskaya, Olga & Makarova, Anastasiia & Nessel, Tore & Sokolova, Svetlana. 2013. *Why Russian aspectual prefixes aren't empty: prefixes as verb classifiers*: Slavica Publishers.
- Joüon, Paul. 1930. Sémantique des verbes statifs de la forme *qatila* (*qatel*) en arabe, hébreu et araméen. *Mélanges de l'Université Saint-Joseph* 15, 1-32.
- Kennedy, Christopher & Levin, Beth. 2008. Measure of change: The adjectival core of degree achievements. In McNally, Louise & Kennedy, Christopher (eds.). *Adjectives and adverbs: Syntax, semantics and discourse*, 156–182. Oxford: Oxford University Press.
- Klein, Wolfgang. 2001. Time and Again. In Féry, Caroline & Sternefeld, Wolfgang (eds.). *Audiatur Vox Sapientiae*, 267–286. Berlin: Akademie Verlag.
- Kovačević, Predrag & Milosavljević, Stefan & Simonović, Marko. 2024. Theme-vowel minimal pairs show argument structure alternations. *Journal of Linguistics*, 1–30. <https://doi.org/10.1017/S0022226723000415>.
- Labelle, Marie. 1992. Change of state and valency. *Journal of Linguistics* 28 (2), 375–414. <https://doi.org/10.1017/S0022226700015267>.
- Labelle, Marie & Doron, Edit. 2010. Anticausative derivations (and other valency alternations) in French. *Probus* 22 (2), 303–316. <https://doi.org/10.1515/prbs.2010.011>.
- Legendre, Géraldine & Smolensky, Paul. 2009. French inchoatives and the Unaccusativity Hypothesis. In *Hypothesis A / Hypothesis B: Linguistic Explorations in Honor of David M. Perlmutter*, 229–246: The MIT Press. <https://doi.org/10.7551/mitpress/7670.003.0016>.
- Levin, Beth & Rappaport Hovav, Malka. 1994. A preliminary analysis of causative verbs in English. *Lingua* 92, 35–77. [https://doi.org/10.1016/0024-3841\(94\)90337-9](https://doi.org/10.1016/0024-3841(94)90337-9).
- Levin, Beth & Rappaport Hovav, Malka. 1995. *Unaccusativity: At the syntax-lexical semantics interface*. Linguistic Inquiry Monograph 26. Cambridge, Mass.: MIT Press.
- Manente, Mara. 2008. L'aspect, les auxiliaires 'être' et 'avoir' et l'hypothèse inaccusative dans une perspective comparative français/italien. Doctoral dissertation, Università Ca' Foscari di Venezia & Université de Paris 8.
- Marelj, Marijana. 2004. Middles and Argument Structure across Languages. Doctoral dissertation, Utrecht University.
- Marelj, Marijana & Matushansky, Ora. 2026. Lost in translation: *e-* and *i-*ornaments. (Paper presented at *Grote Taaldag 2026*, Utrecht University, January 27, 2026).
- Marvin, Tatjana. 2002. Topics in the stress and syntax of words. Doctoral dissertation, MIT.
- Medová, Lucie. 2013. Anticausatives and unaccusatives in Czech. In Podobryaev, Alexander (ed.). *Formal Approaches to Slavic Linguistics (FASL 20). The Second MIT Meeting (2011)*, 184–199. Ann Arbor, Michigan: Michigan Slavic Publications.
- Milosavljević, Stefan & Arsenijević, Boban. 2022. What differentiates Serbo-Croatian verbal theme vowels: content or markedness? *Glossa: a journal of general linguistics* 7 (1), 1–36. <https://doi.org/10.16995/glossa.8535>.
- Minor, Serge. 2025. Grammatical aspect and event structure in Russian: Mismatches and re-alignment. (Paper presented at *SlavIA 2025*, University of Venice, November 6–7, 2025).
- Olshanetsky, Haggai. 2023. Were there Jewish gladiators? A re-valuation of the available archaeological and textual evidence. *'Atiqot* / 119-148 ,111 עתיקות, <https://www.jstor.org/stable/27224958>.
- Oltra-Massuet, Isabel & Castroviejo, Elena. 2013. Approaching results in Catalan and Spanish deadjectival verbs. *Catalan Journal of Linguistics* 12, 131-154. <https://doi.org/10.5565/rev/catjl.17>.
- Oltra-Massuet, Isabel & Castroviejo, Elena. 2014. A syntactic approach to the morpho-semantic variation of *-ear*. *Lingua* 151, 120-141. <https://doi.org/10.1016/j.lingua.2014.07.018>.

- Ramchand, Gillian. 2008. *Verb Meaning and the Lexicon: A First Phase Syntax*. Cambridge: Cambridge University Press.
- Rasia, M. Eugenia. 2023. Maximal syntactic/semantic divergence in deadjectivals: Evidence from Romance. *Canadian Journal of Linguistics/Revue canadienne de linguistique* 68 (1), 135-148. <https://doi.org/10.1017/cnj.2023.2>.
- Reinhart, Tanya. 1991. Lexical properties of ergativity. (Paper presented at *Workshop on Lexical Specification and Lexical Insertion*, University of Utrecht, December 9–11, 1991).
- Reinhart, Tanya. 2016. The theta system: syntactic realization of verbal concepts. In Everaert, Martin & Marelj, Marijana & Reuland, Eric (eds.). *Concepts, Syntax, and Their Interface* Cambridge, Massachusetts: MIT Press.
- Simonović, Marko & Mišmaš, Petra. 2022. Lowest theme vowels or highest roots? An ‘unaccusative’ theme-vowel class in Slovenian. *Glossa: a journal of general linguistics* 7 (1). <https://doi.org/10.16995/glossa.5809>.
- Slioussar, Natalia. 2012. Некоторые сведения о формообразовательных классах русских глаголов [Some data on the inflectional classes of Russian verbs]. Ms., Utrecht institute of Linguistics OTS/СПбГУ.
- Tatevosov, Sergei. 2014a. Event structure and the anticausative and unaccusative in Russian. In Melnik, Nurit (ed.). *Proceedings of IATL 2013*, 189-210. Cambridge, MA: MITWPL.
- Tatevosov, Sergei. 2014b. Perfectivity in Russian: a modal analysis. In Iyer, Jyoti & Kusmer, Leland (eds.). *Proceedings of NELS 44*, vol. 2, 196–210. CreateSpace Independent Publishing Platform.
- Vivanco, Margot. 2021. Scalar constraints on anticausative SE: the aspectual hypothesis revisited. In Armstrong, Grant & MacDonald, Jonathan E. (eds.). *Unraveling the complexity of SE*, 291–318. Cham: Springer International Publishing. https://doi.org/10.1007/978-3-030-57004-0_12.
- Vyshnevskia, Anastasiia. 2025. Comparative morphology across categories: Ukrainian adjectives, adverbs, and deadjectival verbs. Doctoral dissertation, KU Leuven. Amsterdam: LOT.
- Wyngaerd, Guido Vanden & De Clercq, Karen & Caha, Pavel. 2022. A nanosyntactic approach to Dutch deadjectival verbs. *Linguistics in the Netherlands* 39, 240–262.
- Zaliznjak, Andrey A. 2010. *Грамматический словарь русского языка [Grammatical Dictionary of the Russian Language]*. Moscow: AST.
- Zribi-Hertz, Anne. 1986. Relations anaphoriques en français. Doctoral dissertation, Université Paris 8.
- Zribi-Hertz, Anne. 1987. La réflexivité ergative en français moderne. *Le français moderne* 55, 23–54.