

RUSSIAN NOMINALIZATIONS AS A WINDOW ON THE VERBAL THEME
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1. THE RUSSIAN THEME

The Russian verb may contain additional morphology between the lexical stem and tense:

- (1) a. PRFX + stem + v + ASP + THEME + TENSE + AGR
 b. pere- -start- ov- iv- áj- e- t
 over start V IMPF TH PRES 3SG
is restarting

Some verbs are athematic: nothing intervenes between the stem and tense. Most are not:

- (2) a. lez- e- t
 climb PRES 3SG
is climbing/climbs
 b. lez- l- a
 climb PAST FSG
was climbing/climbed
- (3) a. čit- áj- e- t
 read TH PRES 3SG
is reading/reads
 b. čit- á- l- a
 read TH PAST FSG
was reading/read

Tradition allows for at least these thematic suffixes:

(4)		PRES.1SG	PRES.2SG	PAST.FSG	INF	MEANING	SUFFIX
	a.	léz-u	léz-e-šj	léz-l-a	léz-tj	'climb'	∅
	b.	čit-áj-u	čit-áj-e-šj	čit-á-l-a	čit-á-tj	'read'	a(j)
	c.	bel-éj-u	bel-éj-e-šj	bel-é-l-a	bel-é-tj	'be white'	e(j)
	d.	to-n-ú	tó-n-e-šj	to-nú-l-a	to-nú-tj	'sink'	(n)u _{1,2}
	e.	kolj-ú	kól-e-šj	kol-ó-l-a	kol-ó-tj	'stab'	o, e
	f.	smolj-ú	smol-í-šj	smol-í-l-a	smol-í-tj	'tar'	i
	g.	gorj-ú	gor-í-šj	gor-é-l-a	gor-é-tj	'burn'	e

The syntactic and semantic contribution of these suffixes is a matter of contention:

- Aronoff 1994 (for Latin): theme vowels are phonological markers of conjugation class membership
- Oltra Massuet 2000, Arregi 2000, Oltra-Massuet and Arregi 2005 (for Spanish and Catalan): theme vowels are adjuncts to functional projections, see Roca 2010 for a counter-proposal in a different framework

Nevertheless, **attempts are made to identify them with a specific syntactic role:**

This is all in the context of Marantz 1984: verbs are created by little *v*, introducing the external argument

- Fábregas 2018, 2021 (for Spanish): themes are light verbs; see Oltra-Massuet 2021 for counter-argumentation
- Grestenberger 2021 (for Greek): most themes are *v*, there is one theme (-*e/o*-) with no semantic contribution
- Arsenijević and Milosavljević 2021 (for Serbo-Croatian): themes are *v*; -*a*- carries the feature [v], -*i*- has [v] and [scale]
- Kovačević, Milosavljević and Simonović 2021 (for Serbo-Croatian): flavors of *v*: -*i*- derives causative transitives; unaccusatives and anticausatives, -*ova*- derives unergatives (and a limited set of typically lexicalized transitives)

Prediction: we should detect a syntactic and/or semantic effect from the presence and absence of a theme vowel in **deverbal derivation**

Disclaimer: I have a position (Matushansky 2021) on thematic suffixes in (4): I do not think that they form a unified class (so some suffixes should be regarded as aspectual (-*nu*-, cf. also Markman 2008) or verbalizing (-*e*-, see also Mišmaš and Simonović 2021 for Slovenian) and I'm very skeptical of the idea that those of them that cannot be assigned clear semantics are v or Voice. But for this project I step away from my own views and start from scratch

The verbal classes in (4b-d, f) are productive. And those in (4a-c, e-g) allow nominalization
The semelfactive -*nu*- does not allow nominalization most probably because nominalizations imply a process. The same is likely to be true for the stative -*nu*-

Two clear morphological distinctions shown by nominalizing suffixes:

For broader spectrum studies of Russian nominalizations see de Valdivia Pujol 2014 on the event/result type and Lychyk 1995, Hippisley 1998 and particularly Naccarato 2017 on agentive nominals

- presence/absence of a theme suffix
- categorial sensitivity: certain nominalizing suffixes can only combine with verbs, others are omnivorous

Are these two properties the same? Does the lack or the presence of a theme suffix entail the corresponding change in semantics?

Spoiler: no to both

Plan for the talk:

- detecting the theme suffix in nominalizations
- *nomina actoris* (*er*-nominalizations)
- augmented nominalizations
- *nomina actionis* (*ing*-nominalizations)
- intermediate conclusions

Take-home message: the thematic suffix contributes something meaningful; we just don't yet know what

2. THE DIAGNOSTIC: TRANSITIVE SOFTENING

Russian hates hiatus. Vowel sequences are resolved either by the deletion of the first vowel or (if the first vowel is a front one and the second one isn't) by the creation of a glide (Jakobson 1948, Halle 1963, Lightner 1972, etc.)

The *CjV* sequence in Russian gives rise to a consonant mutation known as *transitive softening* (переходное смягчение; Halle 1963, Lightner 1972, Coats and Lightner 1975, Bethin 1992, etc.):

- (5) a. vid- e- tʃ
see TH INF
to see
- b. vid- e- i- t ⇒ *vidit* V-before-V deletion
see TH PRES 3SG
sees
- c. vid- e- i- u ⇒ *vidju* ⇒ vižu V-before-V glide formation
see TH PRES 1SG
I see

So, second conjugation verbs can be used to detect the presence of absence of a theme before vocalic suffix (first conjugation verbs cannot because their thematic suffixes would just delete before another vowel)

With consonantal suffixes there is obviously no issue (but it is not always obvious whether a suffix is consonantal)

3. AGENTIVE (-ER) NOMINALIZATIONS

There is one thematic agentive suffix (-*telʲi*-) and it is productive

There are many athematic suffixes that give rise to agentive nominals and at least one of them (-*ščik*-) is both productive and purely agentive:

- | | | | | | | | | | | | | | |
|--------|----------------|------------|----------|------------|----------|--------|----------------|----------------|------------|----------|------------|-----------|------------|
| (6) a. | strax-
fear | ov-
VBZ | a-
TH | l-
PAST | a
FSG | (7) a. | pere-
over- | strax-
fear | ov-
VBZ | a-
TH | l-
PAST | a-
FSG | sʲ
REFL |
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The choice between the two patterns of derivation is stem-based, sometimes both are possible (see below)

3.1. Some background on agentive nominalizations

Rappaport Hovav and Levin 1992, Alexiadou and Schäfer 2010, McIntyre 2014, Roy and Soare 2014: eventive and non-eventive *er*-nouns:

Rappaport Hovav and Levin 1992:

- eventive: episodic (imply an event) and projecting full argument structure (AS)
- non-eventive: professions and instruments (dispositional) and non-AS

Alexiadou and Schäfer 2010: both can contain overt *v* (-*ize*-, etc.), so both are eventive

- (i) eventive: contain *v*, episodic Asp, can project full argument structure
- (ii) dispositional (professions; instruments): contain *v*, dispositional Asp (incompatible with a complement on semantic grounds, see McIntyre 2014 for an objection)
- (iii) non-verbal: root-based, no *v* (*diner*, *best-seller*, etc., see Ryder 1999)

Roy and Soare 2014 (on French): verbal only, all contain *v* and Asp; use adjectival modification for diagnostics (frequency vs. amount)

- (i) eventive episodic: can have specific and definite complements
- (ii) eventive dispositional: generic, can only have non-referential complements (incl. professions)
- (iii) non-eventive (instruments): incompatible with a complement

McIntyre 2014: eventive (observes that a complement is not necessary for an event entailment) vs. non-eventive (functional and dispositional). Argues that sometimes *er* combines with a head (V) rather than a VP

Marvin 2016: Slovenian suffix -*lec*- (verbal only):

- professions and instruments allow genitive complements
- specific complement: agentive or profession, *instrument; instruments only allow non-specific complements
- modification with eventive adjectives is impossible with professions or instruments (so grouping as in McIntyre 2014, pace Roy and Soare 2014)

Proposes to derive the distinctions from the complement

Ryder 1999: besides Agents and Instruments, deverbal *er*-derivation may denote Patients (e.g., *scratcher* ‘a lottery ticket that is scratched’, Locations (e.g., *diner*) and others (e.g., *fundraiser*, *loafers*). **The *er*-suffix can also be non-deverbal** (e.g., *porker*, *left-hander*, *foreigner*, etc.)

Because Russian has many agentive suffixes, many of the hypotheses above can be tested (I won't try it now)

3.2. Theme-retaining (-*telj*-) agentive nominalizations

Paykin 2003: discussion of different agentive suffixes in Russian: *-telj*- nouns can be agents or instruments

The agent suffix *-telj*- is a monomorphemic suffix that is **purely deverbal and added on top of the theme suffix**

Lychyk 1995 notes that there are some denominal *telj*-formations that contain intermediate verbal morphology without there being the corresponding verb, e.g., *doždevatelj* ‘water sprinkler’ ← *doždi* ‘rain’ (**doždevatj*)

Russian *-telj*- nouns produce no derivations from other categories and no Patients, Locations or facilitating instruments

So Rappaport Hovav and Levin’s (1992) external argument generalization is true for Russian, but not for English

- (8) a. pre- obraz- ov- a- telj agent/instrument
 trans- form VRB TH NMZ
transformer
- b. vy- kľuč- a- telj ← vy- kľuč- a- tj instrument
 turn.off TH NMZ PRFX-key TH INF
on-off switch to turn off
- c. uč- i- telj ← uč- i- tj agent
 teach TH NMZ teach TH INF
teacher to teach

The argument structure of the base is not lost in the derived agentive noun, but quirky case is:

- (9) a. ľubitiĵ muzyku love.INF music.ACC
to love music b. ľubiteliĵ muzyki/*muzyku love.ER music.GEN/ACC
a music lover
- (10) a. pravitiĵ stranoj rule.INF country.INS
to rule a country b. praviteliĵ strany/*stranoj rule.ER country.GEN/INS
the ruler of the country
- (11) a. podražatiĵ Düreru imitate.INF Durer.DAT
to imitate Durer b. podražателиĵ Dürera/*Düreru imitate.ER Durer.ACC/DAT
an imitator of Durer

As expected, instruments and professions resist specific complements but allow non-specific ones:

- (12) a. preobrazovatelĵ rŷavčiny instrument
 transformer rust.GEN
rust transformer
- b. preobrazovatelĵ našego Otečestva agent (not a profession)
 transformer our.GEN motherland.GEN
the transformer of our motherland
- c. pre.po.da- v- a- telĵ ← pre.po.da- v- a- tj profession/agent
 lecture IMPFV TH ER PRFX.PREFIX.give IMPFV TH ER
lecturer to lecture
- d. prepodavatelĵ kursa “Ostrovnye ograničeniĵa” agent
 lecturer course.GEN “Island constraints”
the deliverer of the course ‘Island constraints’

Prediction: no *telj*-nominals from unaccusatives, reflexive and decausative verbs (no external argument, no initiator derivation)

Inner (lexical) aspect prefixes (8), (12) and the secondary imperfective suffix can be present

The presence or absence of the secondary imperfective suffix depends on the stem. Usually, all *-telj*-nominalizations formed from the same verbal root are identical, but near-minimal pairs do exist, especially in pseudo-Latinate OCS verbs with completely unpredictable semantics:

- (13) a. **pre.po.da-** v- a- telj ← **pre.po.da-** v- a- tj root: *-da-*
 lecture IMPFV TH ER PRFX.PREFIX.give IMPFV TH INF
lecturer *to be a lecturer, to lecture*
- b. **pre.da-** a- telj ← **pre.da-** a- tj
 betray TH ER PRFX.give TH INF
betrayer *to betray*

The perfective stem for (13a) with the meaning ‘to lecture’ is archaic

Sometimes a verb has no imperfective stem at all, as in (14a): there is no verb **zavestitj*:

Note the transitive softening in (14a) showing that the theme (-i-) is present

- (14) a. **za.vešč-** i- a- telj ← **za.vešč-** i- a- tj root: *-vest-*
 bequeath IMPFV TH ER PRFX.assert IMPFV TH INF
testator *to bequeath*
- b. **pred.voz.vest-** i- telj ← **pred.voz.vest-** i- tj
 foretell TH ER PRFX.PREFIX.assert TH INF
a foreteller *to foretell*

But it doesn’t seem to be the defining factor, as the choice for one or the other might be random even with one stem (but this seems to be super-rare):

- (15) a. **u.lavli-** iv- i- telj ← **u.lav** li- iv- a- tj
 lecture IMPFV TH ER PRFX.catch TH IMPFV TH INF
a device for catching *to catch (imperfective)*
- b. **u.lov-** i- telj ← **u.lov-** i- tj
 betray TH ER PRFX.catch TH INF
a device for catching *to catch*

Zaliznjak 1980 lists compounds derived from both: *gazoulavlivatelj* ‘gas-catcher’ and *gazoulovitelj* ‘gas-catcher’, but *zvukoulavlivatelj* ‘sound trapper’ vs. *zvukoulovitelj* ‘sound trapper’, *grazeulovitelj* ‘dirt-trapper’, *pyleulovitelj* ‘dust-trapper’, etc. – the perfective stem seems more productive

The choice for having or not having the secondary imperfective suffix seems a lot more tightly connected to the root than in *nomina actionis*

Resulting interpretations are semantically transparent, some of the few exceptions are:

- (16) a. *roditelj* ‘parent’ ← *roditj* ‘to give birth to (a child)’
 b. *nastojatelj* ‘abbot’ ← *nastojati* ‘to insist, persist’
 c. *obyvateľj* ‘average man, philistine’ ← no independently attested verbal stem, should be **obyvatj* (from *byvatj* ‘to be’ (habitual) + prefix)

Summary for *-telj*:- what is relevant for us:

- the *-telj*- suffix is purely deverbal and obligatorily retains the theme
- it may contain inner aspect prefixes and the secondary imperfective suffix
- the role of the secondary imperfective suffix is unclear and root-dependent
- quirky case assignment is lost in agentive formation
- the interpretation can be eventive or non-eventive

3.3. Theme-lacking (-ščík-, -nik-, -k-) agentive nominalizations

Russian athematic agentive nominals are also formed with a number of suffixes (see Naccarato 2017:63 for a partial list)

Lychyk 1995, Naccarato 2019:69: agentive suffixes are often non-category-specific and have broader distribution (true not only for Russian, but also for other languages, cf. Booij 2007)

The suffix *-ec-* (underlyingly *-ĭc-*) seems very similar to the English *-er*: it is category-neutral, and it can form non-EA deverbal nominals:

- (17) a. *černec* ‘monk’ ← *čornyj* ‘black’ category-neutral
 b. *borec* ‘fighter’ ← *borot’sja* ‘to fight’
 c. *londonec* ‘Londoner’ ← *London* ‘London’
- (18) a. *prodavec* ‘salesman’ ← *pro.da-v-a-tj* ‘to sell’ agent
 b. *resec* ‘cutter, cutting tool’ ← *rez-a-tj* ‘to cut’ instrument
 c. *rubec* ‘scar’ ← *rub-i-tj* ‘to chop’ theme
 d. *postavec* ‘cabinet, tall boy’ ← *po.stav-i-tj* ‘to place’ location

For both (18c, d) the lack of transitive softening indicates the lack of a theme (-i-)

Both eventive and non-eventive interpretations are possible and quirky case can be retained (but both are rare):

- (19) a. *torgovec redkimi knjigami* ← *torgov-a-tj* ‘to trade’ quirky case
 merchant rare.INS books.INS
a trader in rare books
- b. *providec našej dejstvitelnosti* ← *provid-e-tj* ‘to foresee’ eventive
 foreseer our.GEN reality.GEN
a foreseer of our reality

This is an old Slavic suffix, productive mostly in compounds

Lychyk 1995: the suffix *-ščík-* yields mostly nouns denoting workers or specialists in the field determined by the stem, which can be [±V]

He also notes that many deverbal *-ščík-* nouns have an intermediate nominal stage, and I think this is right

- (20) a. *plazmenščik* ‘physicist who studies plazma’ ← *plazmennyj* ‘plasma’_{ADJ}
 b. *ogranščik* ‘precious stone cutter’ ← *ograniti* ‘to facet’
 c. *detektivščik* ‘a mystery novel writer’ ← *detektiv* ‘a mystery novel’

Professions and instruments are also possible:

Palatalization in (22a) is due to the front yer in the suffix (underlyingly *-ščík-*)

- (21) a. *upakovščik* ‘packer’ ← *u.pakov-a-tj* ‘to pack’ profession/doer
 b. *frezerovščik* ‘milling machine operator’ ← *frezerov-a-tj* ‘to mill’ profession
- (22) a. *tralščik* ‘trawler, mine-sweeper’ ← *tral-i-tj* ‘to trawl’ instrument
 b. *bombardirovščik* ‘bomber/bomber pilot’ ← *bombardirov-a-tj* ‘to bomb’

Complements are possible, both specific and non-specific:

- (23) a. *postavščik prodovol’stvija* ← *po.stav-i-tj* ‘to supply’ profession
 supplier provisions.SG.GEN
a food supplier
- b. *Upakovščik moego zakaza, vidimo, daltonik...* eventive
 packer my.GEN order.GEN apparently color-blind
The packer of my order is apparently color-blind.

Here we have some indication that the English *-er* may correspond to two different suffixes, the category-neutral *-ec-* and the more restricted and far more productive *-ščik-*

Semantically, *-ščik-* is very much like *-tel-*

The suffix *-un-* is **strictly deverbal and athematic** yielding agentive (Vinogradov 1952:222) and instrumental (Vinogradov 1952:238) nominals:

One exception (Vinogradov 1952:222): *gorbun* ‘a hunchback’ from *gorb* ‘a hump’

- (24) a. *govor-un* ‘talker, chatterbox’ ← *govor-i-tj* ‘to talk’ (not **govorjun*)
 b. *kol-un* ‘wood-chopper’ ← *kol-o-tj* ‘to prick, chop’
 c. *beg-un* ‘runner’ (human or technical) ← *beg-a-tj* ‘to run’

Strictly deverbal derivation can be athematic, which seems to entail that it is not the thematic suffix that creates the verb

Vinogradov 1952 lists the suffix *-un-* as non-productive, but Czerwiński 2015 lists one recent derivation, *nesun* ‘office thief’ from *nesti* ‘to carry’

3.4. Comparison

There is no detectable semantic difference between athematic and thematic agentive nominals

Everyone agrees that eventive agentive nominals with an overt specific complement have the most structure, and both athematic and thematic agentive nominals can function this way:

- (25) Kto prodavec/pokupatel' ètoj mašiny?
 who seller/buyer this.GEN car.GEN
Who is the seller/buyer of this car?

While athematic nominals cannot be formed from secondary imperfectives in *-yv-*, this does not seem to affect their interpretation

4. AUGMENTED ATHEMATIC SUFFIXES

Paykin 2003: with stems that cannot take the suffix *-ščik-* for phonological reasons, the suffix *-lščik-* is used:

- (26) a. *sušitj* ‘to dry’ → **sušščik*, *sušilščik* ‘drier’ (a person)
 b. *nositj* ‘to carry’ → **nosščik*, *nosilščik* ‘a porter, carrier’

This *-l-* is far from innocent: it requires the verbal theme

In fact, it does not seem to be phonologically conditioned:

- (27) a. *bol-e-tj* ‘to support, be a fan of’ → *bol-e-lščik* ‘to support, be a fan of’
 b. *smol-itj* ‘to coat with tar’ → *smol-i-lščik*, *smolščik* ‘a tarring professional’
 c. *smol-itj* ‘to smoke (a cigarette)’ → *smol-i-lščik* ‘a chain-smoker’

The nominalizing suffix *-nik-* also has a *-l'nik-* variant, as do *-ec-* (*-lec-*) and *-k-* (*-lk-*):

The non-productive place-denoting suffix *-n-* (taking bases denoting professionals and returning the place of the relevant professional activity) becomes *-l'n-* with verbal bases

- (28) a. *okuč-nik* ‘hiller’ ← *okuč-i-tj* ‘to earth up’
 b. *budi-l'nik* ‘alarm clock’ ← *bud-i-tj* ‘to wake up’
- (29) a. *torgov-ec* ‘merchant’ ← *torgov-a-tj* ‘to trade’
 b. *skita-l-ec* ‘wanderer’ ← *skit-a-tj-s'a* ‘to wander’
- (30) a. *moj-k-a* ‘sink, washer’ ← *my-tj* ‘to wash’ (cf. imperative *moj*)
 b. *gre-l-k-a* ‘hot-water bottle’ ← *gre-tj* ‘to warm up’

The *-l-* augment is in fact the ancient active past participle (current past tense) suffix

And it is also used in deverbal adjectives (e.g., *xolodil'nyj* 'cooling'), which may be the intermediate step

There is no semantic difference between *-l'nik-* and *-nik-*, or *-lščik-* and *-ščik-*, or *-lk-* and *-k-*

But as a result, secondary imperfective stems become possible:

- (31) a. pro.cěž- iv- a- l'-ščik ← pro.cěž-iv-a-tj 'to strain' (PRF: *pro.ced-i-t'*)
 strain IMPF TH NMZ
strainer (human)
- b. s.ši- v- á- lk- a ← s.ši-v-a-tj 'to sew together' (PRF: *s.ši-t'*)
 with.sew IMPFV TH NMZ NOM
a machine for sewing things together

As strange as it may seem, thematic nominalization seems to require an additional derivational step

One can try to argue that this is pure phonology. I won't, since there might be another augment around, *-n-*, that I haven't looked at yet (*stojanka* 'stop', *ogranka* 'cut, faceting', *soderžanka* 'kept woman', etc.). And there are:

5. EVENT/RESULT (-ING) NOMINALIZATIONS

On the semantic side both derivations allow for the event readings *and* the result reading:

- (32) a. risov- a- l- a b. risov- a- n- ij- e
 draw TH PAST FSG draw TH PPP NMZ NOM
[she] drew drawing
- (33) a. risov- a- l- a- s' b. risov- k- a
 draw TH PAST FSG REFL draw DIM NOM
[she] showed off showing off, posing

The choice between the two patterns of derivation is stem-based, sometimes both are possible (e.g., *štrixovanie* vs. *štrixovka* 'shading, hatching', the former has the process reading only, but this might be accidental)

The pattern in (32b) is more productive and more regular (less likely to give rise to idiomatic interpretations), very similar to *-ing* in English

All other suffixes are more like *-al* in *arrival*, *-age* in *stowage*, etc.: they sort of block the more productive one and are more idiosyncratic

Schoorlemmer 1995 examines all deverbal *ing*-nominalizations in Russian as a single category and does not note any distinctions between them

The same is true for English *ing*-nominalizations (Grimshaw 1990)

5.1. Theme-retaining event/result nominalizations (*nomina actionis*)

Pazelskaya and Tatevosov 2006, Tatevosov 2011, 2013, 2015, Pazelskaya 2009a, b, 2012, Valdivia, Castellví and Taulé 2013, Pereltsvaig 2018, etc.): focus on aspectual characteristics

- (34) a. pre- obraz- ov- a- n- a PPP
 trans-form VRB TH PPP FSG
transformed
- b. pre- obraz- ov- a- n- ij- e -ing
 trans-form VRB TH PPP NMZ NOM
transformation, transform

Babby 1993, 1997, Sadler, Spencer and Zaretskaya 1997, Rappaport 2001, Pazelskaya and Tatevosov 2008: derivation by the combination of the PPP-suffix (which has three surface realizations, [n], [en] and [t]) and the abstract nominalizing suffix *-ij-* (with an allomorph *-ĭj-*, cf. *zdorovje/zdravie* ‘health’):

The underlying form of the surface [n]/[en] and even the distribution of the two allomorphs are subject to debate (see Feldstein 1986, Garde 1998:329-332)

- (35) a. ot- kry- t- a PPP
 from cover PPP FSG
[is] opened, discovered
- c. ot- kry- t- ij- e -ing
 from cover PPP NMZ NOM
discovery

This **allomorphy** is phonologically determined but not derived by regular phonological rules (Halle 1973, Feldstein 1986, Garde 1998:329-332, Sadler, Spencer and Zaretskaya 1997)

The lack of a theme suffix in (35) is due to the fact that the verb is athematic: the *-t-* allomorph is only found with athematic verbs and after the suffix *-nu-*

Babby 1993: for both PPPs and event/result nominals “the initial verb’s external theta-role is dethematized, and the initial verb stem is converted into a [+N] (nominal) stem”

Pazelskaya and Tatevosov 2008: a two-step derivation:

- (36) stem $\left\{ \begin{array}{l} + \emptyset \rightarrow \text{verb} \\ + \text{PPP} \rightarrow \text{nominal} \end{array} \right. \left\{ \begin{array}{l} + \emptyset \rightarrow \text{participle} \\ + \text{ij} \rightarrow \text{nominal} \end{array} \right.$

The distribution of Grimshaw’s (1990) three readings (complex event, simple event, result) depends on the stem (Schoorlemmer 1995, Sadler, Spencer and Zaretskaya 1997, Pazelskaya 2003, 2009a, b, etc.):

Notice the transitive softening in (37b, d), showing the presence of the verbal theme *-i-*

- (37) a. pis- a- n- ij- e RES/CEN
 write TH PPP NMZ NOM
writing
- b. kip’jač- en- ij- e SE/CEN
 boil.TH PPP NMZ NOM
boiling
- c. star- a- n- ij- e SE
 try TH PPP NMZ NOM
endeavour
- d. ot.noš- en- ij- e RES
 PREFIX.carry.TH PPP NMZ NOM
relation

Resulting interpretations are semantically transparent, some of the few exceptions are:

- (38) a. *imenie* ‘manor’ ← *imeti* ‘to possess’
 b. *priležanie* ‘assiduity, diligence’ ← *priležati* ‘to adjoin, to lie adjacent to’

Internal structure: both Aktionsart prefixes and the secondary imperfective suffix are allowed:

- (39) a. ot- kry- v- a- n- ij- e
 PREFIX cover IMPV TH PPP NMZ NOM
opening

- b. ras- pečat- yv- a- n- ij- e
 PREFIX print IMPV TH PPP NMZ NOM
printing out

The use of the secondary imperfective suffix is not necessary for the process interpretation (see Pazelskaya 2003 for discussion and references)

PPP-*ij*- summary: what is relevant for us in thematic *nomina actionis*:

- a given PPP-*ij* nominal can have a complex event, simple event or result reading, or some combination of the three
- they **can have idiosyncratic interpretations** (as far as I can see, these are always non-eventive)
- secondary imperfectives form only PPP-*ij* nominals and these have only complex event readings (Schoorlemmer 1995 lists some exceptions like *vsxlipyvanie* ‘sob’)
- the presence of inner aspect prefixes does not require the secondary imperfective suffix for imperfective interpretation and its presence seems to distinguish lexical nuances (e.g., the idiomatic *raspisanie* ‘schedule’ vs. the predictable *raspisyvanie* ‘assigning, painting’ from *raspisať/raspisyvat’* ‘to assign, paint’)
- the PPP-*ij* sequence is purely deverbal and obligatorily retains the theme

This theme-retaining nominalization is very regular and mostly predictable (as well as most recent chronologically)

5.2. Theme-lacking event/result nominalizations

Athematic *ing*-nominalizations can be formed with a variety of suffixes (see Pazelskaya 2009b for a partial list), though none seem to be as productive as the PP-*ij* combination

They are clearly not purely deverbal. For instance, the abstract suffix *-stv-* derives states (40a), abstract properties (40b), group nouns (40c) and also activities (41):

- (40) a. *vdovstvo* ‘widowhood’ ← *vdova* ‘widow’
 b. *udobstvo* ‘comfort’ ← *udobnyj* ‘comfortable’
 c. *kupečestvo* ‘merchant class, the state of being a merchant’ ← *kupec* ‘merchant’
 d. *proizvodstvo* ‘production’ ← *proizvodit’* ‘to produce’

- (41) pro.iz.vod- stv- o ← pro.iz.vod- i- t’ RES/EN/CEN
 produce NMZ NOM produce TH INF
writing to produce

The suffix *-k-* is a diminutive (42a), a feminizer (42b), a deadjectival nominalizer (42c) and a generic nominalizer in principle (42d, e), permitting deverbal nominalization (42f):

- (42) a. *myška* ‘small mouse’ ← *myš’i* ‘mouse’
 b. *avtor* ‘author’ ← *avtorka* ‘a female author’
 c. *zel’onka* ‘brilliant green’ ← *zel’onyj* ‘green’
 d. *kastorka* ‘Castor oil’ ← *kastorovoe maslo* ‘Castor oil’, from a cranberry root
 e. *palka* ‘a stick’, from a cranberry root
 f. *peredelka* ‘redoing, alteration, also: jolly mess’ ← *peredelat’i* ‘to redo’
 cf. *peredelyvanie* ‘redoing’ ← *peredelyvat’i* ‘to redo (impf.)’

Derivation by truncation (null derivation, **conversion**) is also possible:

- (43) a. *vybros* ‘ejection’ ← *vy.bros-i-t’i* ‘to toss out, eject’
 b. *spusk* ‘descent’ ← *s.pusk-a-t’i-s’ia* ‘to descend’

Pazelskaya 2009a, b notes that it is not always obvious what the direction of the derivation is, but the presence of purely verbal prefixes (43a) is a clear sign of null derivation

Most Russian prefixes also function as prepositions, but *vy-* ‘out of’ is an exception

Schoorlemmer 1998: non-PPP-*ij* nominals show both event and result interpretations (similar results in, e.g., Alexiadou and Grimshaw 2008, for English *-ing* vs. *-ment*):

The lack of transitive softening in (44b) (would have been *gotovlika*) or in (47c) below shows the lack of the theme

(44) a.	zavar-	k-	a	←	za.var-	i-	tj	RES/CEN
	prepare	NMZ	NOM		PRFX.cook	TH	INF	
	<i>brewing, brew; wielding</i>				<i>to brew; to wield</i>			
b.	gotov-	k-	a	←	gotov-	i-	tj	EN/CEN
	prepare	NMZ	NOM		prepare	TH	INF	
	<i>food preparation</i>				<i>to prepare</i>			
c.	nastoj-	k-	a	←	na.stoj-	a-	tj	RES
	brew	NMZ	NOM		PRFX.stand	TH	INF	
	<i>a kind of liqueur</i>				<i>to brew (make liquor from)</i>			

Pazelskaya 2009a, b: event/result nominals derived by *-k-* and by *-0-* have the same range of interpretations as those derived by the PPP-*ij* sequence

Corpus studies analyzing the distribution of deverbal nominals in with *-nij-*, *-k-* and *-0-* by tracking and analyzing the occurrences in the corpus of 10 frequent nouns of each type in a situation reading:

- (i) the base can be telic or atelic for all three types
- (ii) *-0-* *nomina actionis* are mildly preferentially intransitive, while *-k-* and *-nij-* ones are preferentially transitive
- (iii) for most properties examined (including durative adverbials and adjectives, overt internal argument, the presence of a possessor, ability to control, etc.): no obvious difference between *-k-* and *-nij-* nominals

Such nouns can contain verbal prefixes (42f), but **not secondary imperfective suffixes**

What is relevant for us in thematic *nomina actionis*:

- a given non-thematic deverbal nominal can have a complex event, simple event or result reading, or some combination of the three
- they **can have idiosyncratic interpretations** (as far as I can see, these are always non-eventive)
- they cannot contain secondary imperfective suffixes, but can contain inner (lexical) aspect prefixes
- the presence of inner aspect prefixes permits imperfective interpretation
- none of these suffixes seem purely deverbal or can retain the theme

5.3. Comparison

When two types of nominals are derived from the same stem, non-PPP-*ij* nominals may fail to show an eventive interpretation, but PPP-*ij* nominals must have it:

(45) a.	stoj-	a-	tj
	stand	TH	INF
	<i>to stand</i>		

- b. stoj- a- n- ij- e process nominal
stand TH PPP NMZ NOM
standing
- c. stoj- k- a result nominal
stand NMZ NOM
stance

But often both nominals are eventive:

- (46) a. šifr- ov- a- l- a verb
cipher/code VBZ TH PAST FSG
[she] ciphered/coded
- b. šifr- ov- a- n- ij- e process nominal
cipher/code VBZ TH PPP NMZ NOM
ciphering/coding
- c. šifr- ov- k- a process/result nominal
cipher/code VBZ NMZ NOM
ciphering/coding; ciphered message
- (47) a. ras- pečat- (yv-) a- l- a verb
PREFIX print IMPV TH PAST FSG
[she] printed out (perfective/imperfective)
- b. ras- pečat- yv- a- n- ij- e process nominal
PREFIX print IMPV TH PPP NMZ NOM
printing out
- c. ras- pečat- k- a process/result nominal
PREFIX print NMZ NOM
printing out, printout

From the point of view of argument structure and inner aspect thematic and athematic deverbal nouns do not differ (Schoorlemmer 1998, Pazelskaya 2009a, b)

The main (only) difference is that **only thematic nominalization can contain the secondary imperfective suffix**

While it is also purely deverbal, the question remains open if athematic suffixes are necessarily category-neutral. One possible counterexample is the non-productive suffix *-īb-* (e.g., *kos'ba* ‘mowing’), Luka Szucsich, p.c.

Summarizing, the presence or absence of the theme vowel does not seem to affect the resultant interpretation of event nominals

Similar observation in Oltra-Massuet 2021 for the *ción*-nominalization with thematic vs. athematic verb stems in Spanish (*construcción* vs. *edificación* ‘building’)

The fact that the PPP-*ij* sequence is complex correlates with what we have observed with the augment *-l-*

I’m not sure *-k-* nominalizations are not complex, as they might trigger ablaut (e.g., *nabojka* ‘heel protector’, from the root *-bīj-*, cf. zero-derived *priboj* ‘surf, breakers’), which the non-deverbal *-k-* never does

Descriptively, **deverbal nominalization containing a thematic suffix appears to require an intermediate step that is at least historically non-finite**

Apparent exception: the agentive suffix *-telj-* (the standard view is that it is a cognate of the Latin *-tōr-*, from PIE, see Naccarato 2019:62)

5.4. On the stems of *-telj-* nouns

Possibility: *-telj-* is derived from the infinitive (and the double [t] is degeminated)

Evidence: athematic verbs with infinitives not ending in [tj]

Only two of them combine with *-telj-*:

Although in other Slavic languages such examples are regular (Luka Szucsich, p.c.)

- (48) a. *blʹustí* ‘to guard’ (*-blʹud-*) → *blʹustitelʹ* ‘keeper, guardian’
 b. *rastí* ‘to grow’ (*-rost-*) → *rastitelʹnyj* ‘vegetal’ (via the missing stem **rastitelʹ*; there is also the transitive verb *rastítʹ* ‘to grow’, but it is unlikely to be the base)

However, 2nd conjugation *-e-*verbs show that this impression is misleading: the few of them that form *-telj-*agentives, do so with the thematic suffix *-i-*:

- (49) a. *zr-e-tj* ‘to behold’, *zr-i-t* ‘beholds’ → *zritelʹ* ‘spectator’
 b. *smotr-e-tj* ‘to watch’, *smotr-i-t* ‘watches’ → *smotritelʹ* ‘inspector, custodian’
 c. *povel-e-tj* ‘to order’, *povel-i-t* ‘orders’ → *povelitelʹ* ‘lord, master’
 d. *gn-a-tj* ‘to chase’, *gon-i-t* ‘chases’ → *gonitelʹ* ‘oppressor’

This is not the present tense suffix, since *-a-*verbs of the second conjugation retain their *-a-* in the agentive (one verb):

- (50) *derž-a-tj* ‘to hold’, *derž-i-t* ‘holds’ → *deržatelʹ* ‘holder’

I think this supports my hypothesis (Matushansky [in progress]) that themes can undergo ablaut

6. CONCLUSION AND FURTHER QUESTIONS

Theme-lacking nominals do not seem to be semantically different from athematic nominals in areas where they intersect:

- core interpretations: agent (developing into instrument) and event/result
- athematic nominals have other meanings available as well (e.g., place)

Athematic nominals cannot be formed from secondary imperfectives in *-yv-*

Three types of deverbal nominalization in Russian:

- purely deverbal suffixes: *-telj-* and PPP-*ij*, which attach on top of the theme, and *-un-*, which doesn’t
- non-categorizing suffixes: *-0-*, *-k-*, etc. (general purpose nominalizers with vague semantics) and *-nik-*, *-ščik-*, *-ec-* (with agentive semantics only)
- mixed nominalization: a combination of suffixes (*-l-* + *-nik-*, *-ščik-* or *-k-*)

Russian null-derived nominalizations seem to be deverbal (we know this from the presence of verbal prefixes), yet athematic (and the lack of a theme cannot be attributed to phonology)

Thematic nominalizations can contain more material (secondary imperfective suffix), but the resulting range of meanings is the same

What seems to emerge as the full picture is that **the presence of a theme suffix necessitates the presence of another suffix between the theme and the nominalizer**

Babby 1993, Pazelskaya and Tatevosov 2008 suggest that these suffixes are deverbalizers, and true nominalizers are added on top

We still don’t know what the presence of a theme does

But **there is absolutely no reason to believe that it introduces the event argument or the external argument**: both inner aspect and the semantic external argument are present to the same extent in thematic and athematic deverbal nominals

Issues for future work:

- is there another way of testing if the suffix *-telj-* is built on the infinitive stem?
- why do we need the *-l-* and PPP augments? What is the difference between them?
- null-derived nominalizations are overwhelmingly event/result ones when simple yet permit agentive interpretation in compounding. Why?
- de-participial (i.e., PPP-*ij*) event/result nominalizations are interestingly restricted when it comes to secondary imperfectives derived with the zero allomorph of the SI suffix (Sadler, Spencer and Zaretskaya 1997)
- derivation with a **missing step** remains a huge puzzle (apparent extension of the circumfix issue, except that the two suffixes are contiguous)

7. APPENDIX: SOME ADDITIONAL DATA

7.1. *-l-* augmentation

It seems that augmented derivation is more recent and more productive

When both *-lk-* and *-k-* are possible for the same stem, the non-augmented one generally yields a process nominal and the augmented one, an instrument:

- (51) a. *davilka* ‘a press’ ← *dav-i-tj* ‘to press’
b. *davka* ‘a crush, jam’
- (52) a. *doilka* ‘a malking machine’
b. *dojka* ‘milking’

However, in the absence of a pair the reverse distribution of interpretations is possible:

- (53) a. *dudka* ‘a pipe’ ← *dud-e-tj* ‘to pipe’ instrument
b. *lejka* ‘a watering can’ ← *li-tj* ‘to pour’
- (54) a. *otdelka* ‘finishing, trimmings’ ← *ot.del-a-tj* ‘to finish, to trim’ event/result
b. *parilka* ‘a sweating room (in a sauna)’ ← *par-i-tj-s’ja* ‘to take a steam bath’ place

All *-lščik-* derivations are animate

7.2. Compounding

Both *-o-* and *-k-* suffixes can create **agentive nouns** as well, but mostly in compounds:

- (55) a. *les-o-rub* ‘logger’ ← *les* ‘forest’ + *rub-i-tj* ‘to chop’ agent
b. *led-o-rub* ‘ice-axe’ ← *led* ‘ice’ + *rub-i-tj* ‘to chop’ instrument
- (56) a. *sam-o-uč-k-a* ‘autodidact’ ← *sam* ‘self’ + *uč-i-tj* ‘to study’ agent
b. *m’as-o-rub-k-a* ‘meat grinder’ ← *m’aso* ‘meat’ + *rub-i-tj* ‘to chop’ instrument

The *-o-* suffix does not create agentive nouns outside of compounds (and while productive, it only applies to a closed class of roots), the *-k-* suffix does so rarely (and then usually yields instruments rather than agents):

- (57) a. *zaznajka* ‘conceited person’ ← *za.zna-tj-s’ja* ‘to take on airs’ agent
b. *lejka* ‘watering pot’ ← *li-tj* ‘to pour’ (root: *-lij-*, cf. imperative *lej*) instrument

Why does compounding make more options available? Same noted for English **parasyntetic compounds**, e.g., *churchgoer*

Both *-0-* and *-k-* suffixes are not category-specific

For *-k-* it has been shown in (42). For *-0-* it is far more complicated because back-formation is often reanalyzed:

This is a very complicated topic. See Sigalov 1986 for some discussion of truncation in Russian

- (58) a. *fizik* ‘psychicist’ ← *fizika* ‘physics’ denominal
 b. *demokrat* ‘democrat’ ← *demokratija* ‘democracy’
 c. *liberal* ‘a liberal’ ← *liberalizm* ‘liberalism’ (or *liberal’nyj* ‘liberal’)
 d. *memorial* ‘a memorial’ ← *memorial’nyj* ‘memorial’ deadjectival

7.3. Missing steps

Tradition views the PPP-*ij* complex as a single suffix

PPP-*ij* nominals can be formed from **passive and intransitive verbs** (looks like *priscianic word formation* (Matthews 1972)):

- (59) a. *muč-i-tj* reflexive
 dolor-TH-INF
to torture
 b. *muč-i-tj-s’ja*
 dolor-TH-INF-REFL
to suffer
 c. *muč-0-en-ij-u*
 dolor-TH-PPP-NMZ-DAT_{II}
suffering
- (60) a. *pas-tj* unaccusative
 fall-INF
to fall
 b. *pad-en-ij-u*
 fall-PPP-NMZ-DAT_{II}
suffering

Missing derivational steps: Russian **secondary imperfectives** do not form PPPs (Sadler, Spencer and Zaretskaya 1997, Borik and Gehrke 2018), but they can form PPP-*ij* nominals, even though the contribution of the suffix there does not seem to be aspectual, see Comrie 1980, Sadler, Spencer and Zaretskaya 1997)

Ineffability is attested though for null-derived “theme-changing” secondary imperfectives, which do not allow PPPs (Sadler, Spencer and Zaretskaya 1997)

The issue of missing derivational steps is huge for Russian morphology, but too complicated to deal with here

8. REFERENCES

- Alexiadou, Artemis, and Jane Grimshaw. 2008. Verbs, nouns and affixation. In *SinSpeC (1)*, ed. by Florian Schäfer. *Working Papers of the SFB 732, University of Stuttgart*, 1–16.
- Alexiadou, Artemis, and Florian Schäfer. 2010. On the syntax of episodic vs. dispositional *er* nominals. In *The Syntax of Nominalizations across Languages and Frameworks*, ed. by Artemis Alexiadou and Monika Rathert, 9–38. Berlin: Mouton.

- Aronoff, Mark. 1994. *Morphology by Itself*. Cambridge, MA: MIT Press.
- Arregi, Karlos. 2000. How the Spanish verb works. Paper presented at *Linguistic Symposium on Romance Languages (LSRL) 30*, University of Florida, Gainesville, February 24-27, 2000.
- Arsenijević, Boban, and Stefan Milosavljević. 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.
- Babby, Leonard. 1993. A theta-theoretic analysis of -en- suffixation in Russian. *Journal of Slavic Linguistics* 1, 3-43.
- Babby, Leonard. 1997. Nominalization in Russian. In *Formal Approaches to Slavic Linguistics, The Cornell Meeting 1995*, ed. by Wayles Browne, Ewa Dornisch, Natalia Kondrashova and Draga Zec, 53-85. Ann Arbor: Michigan: Slavic Publications.
- Bethin, Christina Y. 1992. Iotation and gemination in Ukrainian. *The Slavic and East European Journal* 36, 275-301.
- Booij, Geert. 2007. Polysemy and Construction Morphology. In *Leven met woorden*, ed. by Fons Moerdijk, Ariane van Santen and Rob Tempelaars, 355-364. Leiden: Instituut voor Nederlandse Lexicologie.
- Borik, Olga, and Berit Gehrke. 2018. Imperfective past passive participles in Russian. In *Advances in formal Slavic linguistics 2016*, ed. by Denisa Lenertová, Roland Meyer, Radek Šimík and Luka Szucsich, 53-76. Berlin: Language Science Press.
- Coats, Herbert S., and Theodore M. Lightner. 1975. Transitive softening in Russian conjugation. *Language* 51, 338-341.
- Comrie, Bernard. 1980. Nominalizations in Russian: lexical noun phrases or transformed sentences? In *Morphosyntax in Slavic*, ed. by Catherine V. Chvany and Richard D. Brecht. Columbus: Slavica Publishers.
- Czerwiński, Piotr. 2015. *Негативно оценочные лексемы языка советской действительности. Обозначение лиц [Negative evaluating lexemes of the language of the Soviet reality]*: LitRes.
- Fábregas, Antonio. 2018. Theme vowels are verbs. In *The Unpublished Manuscript: A collection of Lingbuzz papers to celebrate Michal Starke's 50th birthday*, ed. by Pavel Caha, Karen De Clercq and Guido Vanden Wyngaerd, 51-62: Lingbuzz.
- Fábregas, Antonio. 2021. Theme vowels: a Kaynean analysis for Spanish. Ms., University of Tromsø.
- Feldstein, Ronald F. 1986. The Russian verbal stress system. *International Journal of Slavic Linguistics and Poetics* 33, 43-61.
- Garde, Paul. 1998. *Grammaire russe: phonologie et morphologie (2nd edition)*. Paris: Institut d'études slaves.
- Grestenberger, Laura. 2021. Are (Ancient Greek) theme vowels verb(alizer)s? Paper presented at *Theme vowels in V(P) Structure and beyond*, University of Graz, April 22-23, 2021.
- Grimshaw, Jane. 1990. *Argument Structure*. Cambridge, Mass.: MIT Press.
- Halle, Morris. 1963. О правилах русского спряжения [About the rules of Russian conjugation]. In *American Contributions to the Fifth International Congress of Slavists 1, September 1963, Sofia*, 113-132. The Hague: Mouton.
- Halle, Morris. 1973. The accentuation of Russian words. *Language* 49, 312-348.

- Hippisley, Andrew R. 1998. Indexed stems and Russian word formation: a network morphology account of Russian personal nouns. *University of Kentucky Linguistics Faculty Publications* 43.
- Jakobson, Roman. 1948. Russian conjugation. *Word* 4, 155-167.
- Kovačević, Predrag, Stefan Milosavljević, and Marko Simonović. 2021. Theme-vowel minimal pairs show argument structure alternations. Paper presented at *Theme vowels in V(P) Structure and beyond*, University of Graz, April 22-23, 2021.
- Lightner, Theodore M. 1972. *Problems in the Theory of Phonology, Vol. I: Russian Phonology and Turkish Phonology*. Edmonton: Linguistic Research, Inc.
- Lychyk, Victor. 1995. Russian agentive noun formation in the 1970s. *Canadian Slavonic Papers / Revue Canadienne des Slavistes* 37, 137-161.
- Marantz, Alec. 1984. *On the Nature of Grammatical Relations*. Cambridge, Mass.: MIT Press.
- Markman, Vita. 2008. On Slavic semelfactives and secondary imperfectives: Implications for the split 'AspP'. In *Proceedings of the 31st Annual Penn Linguistics Colloquium. Pennsylvania Working Papers in Linguistics* 14/1, 255-268.
- Marvin, Tatjana. 2016. On agentive and instrumental deverbal nominalizations in Slovenian. *Jezikoslovlje* 17, 321-337.
- Matthews, P. H. 1972. *Inflectional Morphology: A Theoretical Study Based on Aspects of Latin Verb Conjugation*. Cambridge: Cambridge University Press.
- Matushansky, Ora. 2021. ThEmAtIc nOn-Uniformity of Russian vocalic verbal suffixes. In *Theme vowels in V(P) Structure and beyond (ThV2021)*. University of Graz (Online).
- Matushansky, Ora. [in progress]. Ablaut and transitive softening in the Russian verb. Ms., CNRS.
- McIntyre, Andrew. 2014. Constraining argument structure in nominalizations: The case of English -er. *Lingua* 141, 121-138.
- Mišmaš, Petra, and Marko Simonović. 2021. Roots pretending to be theme vowels: *e/i* in Slovenian. Paper presented at *Theme vowels in V(P) Structure and beyond*, University of Graz, April 22-23, 2021.
- Naccarato, Chiara. 2019. Agentive (para)synthetic compounds in Russian: a quantitative study of rival constructions. *Morphology* 29, 1-30.
- Naccarato, Maria Chiara. 2017. Compound agent nouns in Russian: A comparison of rival word-formation constructions. Doctoral dissertation, University of Bergamo.
- Oltra-Massuet, Isabel. 2021. On the nature of theme vowels: a view from Catalan and Spanish. Paper presented at *Theme vowels in V(P) Structure and beyond*, University of Graz, April 22-23, 2021.
- Oltra-Massuet, Isabel, and Karlos Arregi. 2005. Stress-by-Structure in Spanish. *Linguistic Inquiry* 36, 43-84.
- Oltra Massuet, Isabel. 2000. *On the notion of theme vowel: A new approach to Catalan verbal morphology*. MIT Occasional Papers in Linguistics 19.
- Paykin, Katia. 2003. Deverbal nouns in Russian: in search of a dividing line. In *Contrastive Analysis in Language: Identifying Linguistic Units of Comparison*, ed. by Dominique Willems, Bart Defrancq, Timothy Coleman and Dirk Noël, 172-193. London: Palgrave Macmillan UK.

- Pazelskaya, Anna. 2003. Аспектуальность и русские предикатные имена [Aspectuality and Russian predicate nominals]. *Вопросы языкознания [Questions of linguistics]* 2003, 72-90.
- Pazelskaya, Anna. 2009a. Модели деривации и синтаксическая позиция отглагольных существительных по корпусным данным [Derivational patterns and syntactic positions of deverbal nominals (on corpus data)]. *Компьютерная лингвистика и интеллектуальные технологии [Computational linguistics and intellectual technologies]* 8, 373-378.
- Pazelskaya, Anna. 2009b. Модели деривации отглагольных существительных: взгляд из корпуса [Derivational models of deverbal nominals: a view from the corpus]. In *Корпусные исследования по русской грамматике [Corpus studies in Russian grammar]*, ed. by K.L. Kiseleva, V.A. Plungjan, E.V. Rakhilina and S.G. Tatevosov, 65-91. Moscow: Probel.
- Pazelskaya, Anna. 2012. Verbal prefixes and suffixes in nominalization: Grammatical restrictions and corpus data. In *Oslo Studies in Language*, ed. by Atle Grønn and Anna Pazelskaya, 245-261.
- Pazelskaya, Anna, and Sergei Tatevosov. 2006. Uninflected VPs, deverbal nouns and the aspectual architecture of Russian. In *Formal Approaches to Slavic Linguistics 14. The Princeton Meeting*, ed. by James Lavine, Steven Franks, Mila Tasseva-Kurkchieva and Hana Filip, 258-276. Ann Arbor, Michigan: Michigan Slavic Publications.
- Pazelskaya, Anna, and Sergei Tatevosov. 2008. Отглагольное имя и структура русского глагола [The deverbal noun and the structure of the Russian verb]. In *Исследования по глагольной деривации [Investigations into verbal derivation]*, ed. by Vladimir Plungjan and Sergei Tatevosov, 348-380. Moscow: Jazyki slavjanskix kul'tur.
- Pereltsvaig, Asya. 2018. Eventive nominalizations in Russian and the DP/NP debate. *Linguistic Inquiry* 49, 876-885.
- Rappaport, Gilbert C. 2001. The geometry of the Polish nominal phrase: problems, progress, and prospects. In *Generative Linguistics in Poland: Syntax and Morphosyntax (Proceedings of the GLiP-2 Conference held in Warsaw, Poland, 9-10 Dec. 2000)*, ed. by Piotr Bański and Adam Przepiórkowski, 173-189. Warsaw: Polish Academy of Sciences.
- Rappaport Hovav, Malka, and Beth Levin. 1992. -Er nominals: implications for a theory of argument structure. In *Syntax and the Lexicon*, ed. by Tim Stowell and Eric Wehrli, 127-153. New York: Academic Press.
- Roca, Iggy. 2010. Theme vowel allomorphy in Spanish verb inflection: An autosegmental optimality account. *Lingua* 120, 408-434.
- Roy, Isabelle, and Elena Soare. 2014. On the internal eventive properties of -er nominals. *Lingua* 141, 139-156.
- Ryder, Mary Ellen. 1999. Bankers and blue-chippers: an account of -er formations in Present-day English. *English Language and Linguistics* 3, 269-297.
- Sadler, Louisa, Andrew Spencer, and Marina D. Zaretskaya. 1997. A morphomic account of a syncretism in Russian deverbal nominalizations. In *Yearbook of Morphology 1996*, ed. by Geert Booij and Jaap van Marle, 181-216. Dordrecht: Kluwer Academic Publishers.
- Schoorlemmer, Maaïke. 1995. Participial Passive and Aspect in Slavic. Doctoral dissertation, Utrecht University.

- Schoorlemmer, Maaïke. 1998. Complex event nominals in Russian: properties and readings. *Journal of Slavic Linguistics* 6, 205-254.
- Sigalov, Pavel. 1986. Об усечении вообще и дезинтеграции в частности (усечение и дезинтеграция) [About truncation in general and desintegration in particular]. *Russian Linguistics* 10, 215-233.
- Tatevosov, Sergei. 2011. Severing perfectivity from the verb. *Scando-Slavica* 57, 216-244.
- Tatevosov, Sergei. 2013. Множественная префиксация и ее следствия (Заметки о физиологии русского глагола) [Multiple prefixation and its consequences. Remarks on the physiology of Russian verb]. *Вопросы языкознания [Questions of linguistics]* 2013, 42-89.
- Tatevosov, Sergei. 2015. Severing imperfectivity from the verb. In *Slavic Grammar from a Formal Perspective*, ed. by Gerhild Zybatow, Petr Biskup, Marcel Guhl, Claudia Hurlig, Olav Mueller-Reichau and Maria Yastrebova, 465-494. Bern, Switzerland: Peter Lang.
- Valdivia, Glòria de, Joan Castellví, and Mariona Taulé. 2013. Morphological and lexical aspect in Russian deverbal nominalizations. In *Current Studies in Slavic Linguistics*, ed. by Irina Kor Chahine. *Studies in Language Companion* 146, 267-280.
- de Valdivia Pujol, Glòria. 2014. Russian Deverbal Nouns: Lexical Denotation, Argument Structure & Translation Mismatches. Doctoral dissertation, Universitat de Barcelona.
- Vinogradov, V. V. ed. 1952. *Грамматика русского языка [The Grammar of the Russian Language]*. Moscow: Soviet Academy of Sciences.
- Zaliznjak, A. A. 1980. *Грамматический словарь русского языка [Grammatical Dictionary of Russian Language]*. Moscow: Izdatel'stvo Russkij Jazyk.