Case marking in Russian eventive nominalisations revisited[*]

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In this paper, we analyse case marking in Russian eventive nominalisations recently discussed in Pereltsvaig et al. 2018 with regards to two competing theories of case: the Inherent Case Theory (Woolford 2006, 2009) and the Dependent Case Theory (Marantz 1991). We contest the view that Russian eventive nominalisations display ergative alignment (Koptjevskaja-Tamm 1993) and argue that Russian is a nominative-accusative language across the board. We propose an analysis for the syntax of Russian eventive nominalisations and show that, contrary to Pereltsvaig et al. (2018), they are in principle incapable of disproving the DCT. The resulting analysis is trivially compatible with the DCT.

1 Introductory remarks

Pereltsvaig et al. (2018) adopt the widely accepted view of Russian eventive nominalisations as instantiating ergative alignment (cf. Koptjevskaja-Tamm 1993) whereby the external argument is marked with instrumental case. Guided by this assumption, they hypothesise that, for case to be assigned configurationally, the Case Competition mechanism will apply downwards in finite clauses such as (1) and upwards in nominalisations such as (3), as schematised in (2) and (4) below for transitive cases (we use NP to refer to the noun phrase category-neutrally).[1]

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[1]We use the following abbreviations: ACC = accusative, DAT = dative, F = feminine, GEN = genitive, INF = infinitive, INSTR = instrumental, NMLZ = nominalisation, NOM = nominative, PL = plural, PRS = present. The romanisation system follows the conventions of the ALA-LC romanisation for Russian.

(1) vrag   razrushil   gorod
    enemy.NOM destroyed.PST city.ACC
    'The enemy destroyed the city.'

(2) **Dependent case in clauses**
    NP$^{\text{NOM}}$ ... V ... NP$^{\text{ACC}}$

(3) razrushenie goroda   vragom
    destruction city.GEN enemy.INSTR
    'the destruction of a/the city by the enemy'

(4) **Dependent case in nominalisations**
    V+n ... NP$^{\text{INSTR}}$ ... t_{V} NP$^{\text{GEN}}$

Pereltsvaig et al. (2018) present data from two experimental studies and use it to conclude that, whilst neither the Inherent Case Theory (ICT; Woolford 2006) nor the Dependent Case Theory (DCT; Marantz 1991) can fully account for the case assignment pattern in Russian nominalisations, only the ICT can be modified in a non-contradictory way. In order to modify the DCT, they further claim, either the thematic relations or the internal *vs.* external argument distinction must be introduced, which would run against the spirit of the DCT and effectively transform it into a version of ICT.

In this paper, we consider and subsequently reject both of these claims in favour of a simpler alternative. With regard to argument alignment, we argue that Russian is a nominative-accusative language across the board, irrespective of finiteness, which entails that the predictions formulated by Pereltsvaig et al. (2018) for the DCT and illustrated in (2) and (4) above are ill-phrased. Case Competition, we argue, always applies downwards in Russian, resulting in the unmarked case appearing on the subject and dependent case on the direct object. While trivially observable in the clausal domain, this pattern of case marking, as we will show, does not exist in eventive nominalisations. As for the internal *vs.* external argument distinction, though definitely of importance for the correct analysis of case marking, we argue that it must come extrinsically with respect to the DCT, or in fact any theory of case, *viz.* from the theory of eventive nominalisations. Consequently, the DCT requires no modifications to be able to capture the observed facts.

The paper has the following structure. We begin by summarising, in Section 2, the empirical and theoretical contribution of Pereltsvaig et al. (2018) as well as outlining the explananda for their approach and our own. We then demonstrate, in Section 3, that instrumental-marked NPs in Russian eventive nominalisations warrant an analysis as adjunct *by*-phrases and propose a theory of nominalisations capturing this insight in terms of a non-active Voice head. Section 4 develops a DCT-compliant analysis of case marking in nominalisations, which is subsequently extended to eventive nominals. Section 5 concludes that the DCT is able to capture the empirical findings of Pereltsvaig et al. (2018) without any modifications.

2 Pereltsvaig et al. (2018) in brief

2.1 Summary

The analysis proposed by Pereltsvaig et al. (2018) is based on three assumptions. Firstly, Russian eventive nominalisations are taken to exhibit an ergative case marking pattern—cf. (5) and (6): the internal argument of a transitive verb is marked by genitive just like the sole argument of an unaccusative verb:

(5) razrushenie goroda vragom
    destruction city.GEN enemy.INSTR

    'the destruction of a/the city by the enemy'

(6) vȳmiranie yazȳkov
    dying.out languages.GEN

    'dying out of languages' (Pereltsvaig et al. 2018: ex. (6b))

Further, based on their previous work (Lyutikova 2014, 2017, Pereltsvaig 2018), they take that the Russian genitive case in nominals is assigned by a functional head n, positioned lower than a possessive determiner head D. The functional head n dominates the lexical noun phrase and introduces an external argument of the nominal (Pereltsvaig et al. 2018: 223).

Finally, Pereltsvaig et al. (2018) exclude from consideration eventive nominalisations in which none of the arguments is an Agent because in these constructions in Russian 'such as psych-predicates and "resistance"-type predicates (e.g. *soprotivlenie* 'resistance'), are rife with additional complications' (Pereltsvaig et al. 2018: 225). Consequently, they assume that instrumental case in Russian eventive nominalisations is an inherent case associated with agent θ-role.

Based on these assumptions the following analysis is proposed. For the Inherent Case Theory, genitive (either on the internal argument of a transitive verb or the single argument of the intransitive verb) is assigned by a nominalising functional head n; instrumental is an inherent case associated with the Agent θ-role. Pereltsvaig et al. (2018) focus in their investigation on unergative predicates and transitive predicates whose internal argument is marked with Lexical Case and therefore is not competing for Case with the external argument. The Inherent Case Theory predicts for these cases that the external argument will be marked with instrumental.

For Dependent Case Theory, genitive is the unmarked case, whereas instrumental, according to Pereltsvaig et al. (2018), is a dependent case assigned upwards, just like dependent ergative would be in ergative-absolutive languages (Marantz 1991). Thus, for one place predicates and transitive predicates whose internal argument is marked with lexical case the DCT predicts that the external argument should be marked with genitive.

However, Russian eventive nominalisations allow variation in case marking of the external argument: it can be marked both with genitive and instrumental, cf. (7) for an

unergative predicate *khodit'* 'walk' and (8) for a transitive predicate *torgovat'* 'trade' whose internal argument is marked with lexical instrumental case.

(7) khozhdenie devushkami / devushek v tonkikh kolgotkakh
     walking   girls.INSTR / girls.GEN in thin   tights
     'walking around by girls / of girls in thin tights'
     (adapted from Pereltsvaig et al. 2018: ex. (10a))

(8) torgovlya anglichanami   / anglichan   opiumom
     trade   Englishmen.INSTR / Englishmen.GEN opium.INSTR
     'trading in opium by the British / of the British'
     (adapted from Pereltsvaig et al. 2018: ex. (7) and (8b))

To assess interspeaker variation and variability across constructions, Pereltsvaig et al. (2018) conducted two experimental studies. The first one, a fill-in-the-blanks task, highlighted a very high degree of interspeaker variation, with 99.2% of respondents using instrumental in some of the relevant examples. About 30% of respondents used instrumental only with transitive predicates whose internal argument is marked with lexical genitive case (possibly, to conform to the double genitive restriction as observed by Babby 1997). Finally, instrumental is hardly ever used with unergative predicates. In the second experiment, the same respondents were asked to provide acceptability judgements for sentences with eventive nominalisations on a non-calibrated Likert scale from 1 to 5. Each subject evaluated 2 of the 4 examples in each nominalisation type with genitive and the other 2 examples with instrumental. The results of the second study confirmed the high degree of variation among speakers with no significant correlation between those 30% that avoided instrumental case in the first study and the rest of the subjects. The acceptability of the instrumental case on the external argument varies between 1.29 for unaccusative predicates (~ not acceptable) and 3.61 for transitive predicates. Three groups of examples pattern together in terms of acceptability of instrumental according to the T-test (Pereltsvaig et al. 2018):

- the 'least acceptable' bin (i.e. unaccusatives and unadorned unergatives) are judged as low as 1.35

- the middle bin (Trans + PP, Trans + LEX (INSTR), Trans + LEX (DAT), unergatives with a PP, and transitives with a subject-control infinitive) get the average score of 2.14

- the 'most acceptable' bin (i.e. transitives with an object-control infinitive, Trans + LEX (GEN), and 'simple' transitives) scores at 3.32

Pereltsvaig et al. (2018) account for the contrast between unergatives with and without an adjunct PP, on the one hand, and the similarity between unergatives without a PP and unaccusatives, on the other, by postulating two levels of nominalisation: 'the possibility of attaching the nominalizing morpheme at two levels in the derivation: either at the verbal

root level (which we call "small nominalization") or after vP or even AspP is projected (which we call "big nominalization")' (p. 234). Further, to account for the acceptability of both genitive and instrumental case marking on the external argument in the middle bin, Pereltsvaig et al. (2018) propose to complement the Inherent Case Theory with an OT-style module, in which two Case-related constraints compete and one weakly outranks the other, 'resulting in disfavoring — but not entirely ruling out — the INSTR option' (p. 234). In the same OT-style, Pereltsvaig et al. (2018) propose that 'the constraint forcing "small nominalization" outranks all other constraints.'

In the opinion of Pereltsvaig et al. (2018), the Dependent Case Theory cannot be modified to account for the case-marking facts in Russian eventive nominalisations, unless by making reference to θ-roles (or the internal vs. external argument distinction), which will effectively turn it into a variant of the ICT.

2.2 Challenges for Pereltsvaig et al. (2018)

Summarising the empirical findings of Pereltsvaig et al. (2018), the key observations for case marking patterns in Russian eventive nominalisations are as follows:

- very low acceptability of instrumental in unaccusatives (1.29 where 1 is the lowest possible score)

- very low acceptability of instrumental in unadorned unergatives (1.41)

- average acceptability of instrumental in adjunct-containing unergatives (2.2)

The approach proposed by Pereltsvaig et al. (2018) faces a number of challenges. Firstly, instrumental is not exclusive of other θ-roles than the agent, and thus it cannot be inherent (we discuss this in Section 3.2). Secondly, genitive marking is possible on the sole argument of unergative predicates. This places unaccusative and 'unadorned' unergative predicates in the same bin. At this point Pereltsvaig et al. (2018) introduce an OT-style analysis with three constraints (p. 234):

i. a constraint forcing 'small nominalization' which outranks all other constraints. Furthermore, Pereltsvaig et al. (2018) state that 'the presence of any other argument and an adjunct forces a "big nominalization," which contains enough verbal structure to accommodate those elements.'

ii. a 'No Structural Case left behind' constrain which disfavours the Structural genitive Case not being realised (recall that, according to Pereltsvaig et al. 2018: structural genitive is assigned by the n head, usually to the internal argument, however, for the cases collected in the middle bin this is not applicable: the internal arguments if present get either a lexical case or no case at all as transitives with a subject-control infinitive)

iii. a constraint that requires instrumental on noun phrases associated with the Agent θ-role. Given that genitive is preferred over instrumental, the second constraint weakly outranks the third one.

A number of questions arise with respect to this analysis.

First of all, it is unclear at what point these OT-style constraints apply. If this happens at each step of Merge, how could a nominalisation from a transitive verb ever be derived? Since the 'small nominalisation constraint outranks all other constraints', the derivation need not proceed any further. If they apply at the phase level, how can the small nominalisation constraint be applied? Usually, OT-style analyses are applied to multiple candidate structures built from the same input elements. However, while the second and third constraint refer to case assignment in an already formed nominalisation structure, the first one deals with the size of said structure.

Further, the first constraint appears to make the analysis unfalsifiable as all tests that could be used to establish the small nominalisation structure such as incompatibility with adverbial modifiers—cf. (9) and (10)—'force' a big nominalisation.

(9) bessmȳslennoe khozhdenie sobiraemȳkh byudzhetom deneg snachala
non-sensical moving collected budget.INSTR money.GEN first
vverkh, a potom vniz
up and then down
'(a/the) pointless movement of the money collected by the budget first up and then down'

(10) khozhdenie inostrannoĭ valyutȳ vnutri stranȳ
moving foreign currency.GEN inside country
'(a/the) movement of foreign currency inside the country'

In both (9) and (10), the nominalised predicate is modified by a VP-level adjunct—a manner adverb in (9) and a locative PP in (10). We address this issue further in Section 3.3.2.

In this section, we provided a brief overview of the key findings of Pereltsvaig et al. (2018) and the analysis they propose for the case marking patterns in Russian eventive nominalisations, as well as the challenges their analysis faces. In what follows, we reconsider the empirical facts of argument encoding in Russian eventive nominalisations and develop an alternative analysis.

3 The syntax of Russian nominalisations

This section shows that, *pace* Pereltsvaig et al. (2018), instrumental-marked external arguments in Russian eventive nominalisations are not real arguments inhabiting the specifier positions of functional heads such as Voice or v, but are instead *by*-phrases adjoined to the nominalisation. The discussion is inspired by a systematic comparison of *by*-phrases in English passives and nominals presented by Bruening (2012).

3.1 Russian eventive nominalisations contain *by*-phrases

We begin our exploration of the internal structure of Russian eventive nominalisations by noting the long-observed relation of identity between the surface form of their external arguments and those of passive sentences.

(11) **Subjects in passives**

Novaya   kniga bȳla napisan-a *Pelevinȳm*
new.NOM book was written-F Pelevin.INSTR

'A new book was written by Pelevin.' (Bailyn 2011: 156)

(12) **Subjects in nominalisations**

napisan-ie knigi   *Pelevinȳm*
write-NMLZ book.GEN Pelevin.INSTR

'writing of the book by Pelevin'

As shown above, the external argument, *Pelevinȳm* 'Pelevin.INSTR', in the passive sentence (11) and eventive nominalisation (12) appears in the instrumental case. We contend that, since this identity of form is what any theory of case must account for, the simplest view is that it reflects identical structural relations.

Another surface similarity acknowledged in reference grammars (cf. Timberlake 2004: 216) between passives and eventive nominalisations concerns the morphological makeup of the verbal forms involved: the nominalised form *napisanie* 'writing' in (12) contains the passive participle *napisan* 'write.PTCP.PASS' from (11).

The main argument commonly advanced for viewing eventive nominalisations in Russian as projecting an external argument comes from their compatibility with external argument-oriented adverbs such as *deliberately* and purposive infinitival clauses. However, this argument is incapable of showing that the external argument in nominalisations is projected syntactically in the specifier of a dedicated functional head just like it is in clauses, since the same modifiers are also compatible with passives, whose external argument is projected only semantically whilst being syntactically realised as an adjunct *by*-phrase.

(13) korabl' bȳl utoplen s   tsel'yu [∅ poluchit'   strakhovku]
     ship   was sunk   with aim   receive.INF insurance
     'The ship was sunk to collect the insurance.' (Pazel'skaya & Tatevosov 2008: (10b))

Our preliminary conclusion, therefore, is that the instrumental-marked external argument in Russian eventive nominalisations has the same adjunct status as in passives. This conclusion has already been reached by Bruening (2012) for English, another nominative-accusative language.

3.2 INSTR is not inherent case

When discussing varying acceptability of instrumental, Pereltsvaig et al. (2018) argue in favour of it being an inherent case. It is not inherent. For it to be inherent in needs to be associated with one dedicated θ-role, for instance, the Agent θ-role in the view of Pereltsvaig et al. (2018: 14). However, there is no firm association between the instrumental marking and the agent θ-role in Russian eventive nominalisations. Whilst it can indeed be used to encode the Agent in both clauses and nominalisations, the instrumental marking is equally well suited to mark external arguments associated with other θ-roles.[2]

3.2.1 Transitives

Let us first consider the prototypical case, *viz.* the instrumental marking on the agent in passives and nominalisations, as in (14) and (15) respectively. As is usual for subjects, the internal argument, *gorod* 'city', appears in passive clauses in the nominative case.

(14) **Agent in a clause (passive)**

Gorod bȳl razrushen *vragom*
city   was destroyed enemy.INSTR

'The city was destroyed by the enemy.'

(15) **Agent in a nominalisation**

razrushenie goroda   *vragom*
destruction city.GEN enemy.INSTR

'the destruction of a/the city by the enemy'

In addition to agents, instrumental can appear on experiencer external arguments in both passive clauses, as in (16), and nominalisations, as in (17).

(16) **Experiencer in a clause (passive)**

Opasnost' oshchushchalas' *vsemi*   *prisutstvuyushchimi*
danger   was.sensed   all.INSTR present.INSTR

'The danger was sensed by all present.'

(17) **Experiencer in a nominalisation**

oshchushchenie opasnosti *vsemi*   *prisutstvuyushchimi*
sensation   danger.GEN all.INSTR present.INSTR

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[2]We are aware of attempts in the inherent-case literature (e.g. Woolford 2009) at analysing at least experiencer external arguments as a subclass of agents. We disagree, since doing so makes the definition of inherent case devoid of any content. For the purposes of this paper, we adopt the traditional definition of inherent case as case whose assignment is accompanied by a dedicated θ-role (e.g. that of the agent).

'the sensation of danger by all present'

Though we only illustrate the pattern with *oshchushchat'* 'sense' and *oshchushchenie* 'sensation' above, it is entirely general and extends to eventive nominalisations formed from other experiencer and perception verbs such as *znanie* 'knowledge', *vídenie* 'seeing', *slȳshanie* 'hearing', *ponimanie* 'understanding' etc.

Recipient external arguments, too, can carry the instrumental marking in clauses, as in (18), and nominalisations, as in (19).

(18) **Recipient in a clause (passive)**

Podarki bȳli poluchenȳ *rabotnikami*
presents were received workers.INSTR

'The presents were received by the workers.'

(19) **Recipient in a nominalisation**

zapret na poluchenie podarkov *rabotnikami*
ban on receipt presents.GEN workers.INSTR

'ban on the receipt of the presents by the workers'

That the recipient subject is irreducible to a variety of agent is witnessed by the fact that the recipient need not be animate or sentient and may even correspond to the goal θ-role, as shown below:

(20) **Goal in a clause (passive)**

novaya glubina bȳla obretena *gumanitarnȳm znaniem*
new depth was obtained humanitarian.INSTR knowledge.INSTR

'A new depth has been attained by the humanities.'

(21) **Goal in a nominalisation**

obretenie *gumanitarnȳm znaniem* novoĭ glubinȳ
attainment humanitarian.INSTR knowledge.INSTR new.GEN depth.GEN

'the attainment of a new depth by the humanities'

Therefore we conclude that, since the instrumental marking is used to encode the external argument without being associated with a distinct θ-role and is instead compatible with *all* external arguments irrespective of their thematic interpretation, it does not satisfy the requirements for inherent case.

3.2.2 Unergatives and unaccusatives

Having demonstrated that the instrumental marking must be dissociated from thematic roles and relations in the case of transitive predicates, we now turn to unergative intransitive predicates, whose only argument is typically associated with an agent θ-role. Before turning to nominalisations, let us note that unergatives in Russian, just like in many other languages, resist passivisation (cf. Babby 2009: 266), so examples like (22) are fairly rare, while (24) is ungrammatical.

(22) **Agent in a clause (unergative)**

Na zemle, gde   mnoju stol'ko   khozheno...
On earth   where I.INSTR so.much walked

'On the earth where I walked so much (lit. where it was walked so much by me) (A. Shatskov, *Rozhdestvenskoe*)'

(23) **Agent in a nominalisation**

khozhdenie   imi   v tonkikh kolgotakh
walking.around they.INSTR in thin   tights

'their walking around in thin tights' (Pereltsvaig et al. 2018: (10a))

We consider a verb intransitive if it does not take an accusative argument; thus transitive verbs which assign lexical cases to their internal argument can be considered intransitive. Thus, verbs like *nablyudat' za <INSTR>* 'look after, observe' can be considered unergative experiencer predicates.

(24) **Experiencer in clauses (unergative)**

Za   polem boya ?nablyudalos' / * (bȳlo) nablydeno nachal'nikom
over field   battle observe-s'   /   (was) observed   commander.INSTR

'It was observed over the field by the commander'

(25) **Experiencer in nominalisations**

preduprezhdat' ikh postoyannȳm i   sistematicheskim izucheniem
prevent   them constant   and systematic   study
obstanovki, <...> lichnȳm nablyudeniem nachal'nikom   za   polem boya.
situation   <...> personal observation   commander.INSTR over field   battle

'...to prevent them with constant and systematic study of the situation, <...> with personal observation of the commander over the battlefield.' (RNC, *Sbornik boevȳkh dokumentov Velikoĭ Otechestvennoĭ voĭnȳ*, vȳp. 8 (1941–1945))

The only argument of an unergative predicate can be marked by instrumental independent of the respective θ-role—agent in example (23) and experiencer in (25). However, that is not the case for unaccusative predicates. Since unaccusatives such as (26) do not project an external argument and only external arguments can surface as *by*-phrases, unaccusatives do not passivise, as witnessed by the unacceptability of (28). Yet, the eventive nominalization is available, albeit the sole argument of the verb can appear only in genitive and not in instrumental.

(26) Deti ischezli   iz   polya zreniya.
      kids disappeared from field   vision.GEN
      'The children have disappeared from sight.'

(27) * Det'mi   bȳlo ischeznuto iz   polya zreniya.
      kids.INSTR was disappeared from field   vision.GEN
      ('The children were disappeared from sight.')

(28) Ischeznovenie *det'mi   / deteǐ   iz   polya zreniya.
      disappearence kids.INSTR / kids.GEN from field   vision.GEN
      'the disappearence of kids from sight'

The availability of the instrumental marking for unergative and transitive predicates and its unavailability for unaccusatives boils down to the fact that the former project an external argument while the latter do not. Since only external arguments can be realised as a *by*-phrase and unaccusatives do not have an external argument, their only argument cannot be marked with the instrumental case. This further supports our argument that instrumental-marked arguments of Russian eventive nominalisations are *by*-phrases.

In this subsection, we have presented evidence in favour of treating instrumental-marked external arguments of transitive and unergative verbs in Russian as *by*-phrases by drawing on long-known similarities between passives and eventive nominalisations. We have argued, *contra* Pereltsvaig et al. (2018), that, because thematic relations play no part in licensing or prohibiting it, instrumental is not inherent case. Where we agree with Pereltsvaig et al. (2018) is in recognising the crucial role of the distinction between external and internal arguments: instrumental is impossible precisely in those situations where the external argument is not projected even semantically, *viz.* with unaccusatives. We emphasise, however, that this distinction has nothing to do with either the ICT or the DCT, since the required relations must be determined prior to either of them applying. That *by*-phrases, which are underlyingly PPs, in Russian surface as instrumental-marked NPs, then, is purely coïncidental. The next subsection presents a minimally necessary theory of Russian nominalisations that encodes the presence *vs.* absence of the external argument by appealing to the properties of a dedicated functional head, Voice.

3.3 A theory of Russian eventive nominalisations

To make the discussion of case assignment in Russian eventive nominalisations tractable, we now sketch a minimally required theory of Russian nominalisations. It formalises the similarity between passives and eventive nominalisation in terms of a selectional relation between a functional head (Pass in passives and n in nominalisations) and a non-active Voice projection that does not project an external argument in its specifier but may contain one in the form of a *by*-phrase adjoined to VoiceP (an approach inspired by Bruening 2012).

For active clauses, we take external arguments to be dissociated from the lexical content of the lexical verb and instead to be projected in the specifier of a dedicated functional head, Voice (Kratzer 1996, Alexiadou 2001). Passives, unaccusatives and eventive nominalisations, on the other hand, are all built on the basis of a variant of the Voice head which does not project a specifier.

3.3.1 Non-active Voice head

For the prototypical case involving transitive verbs such as *razrushat'* 'destroy', passivised in (29) and nominalised in (31), the relevant structures are illustrated in (30) and (32) below.

(29) gorod   bȳl razrushen vragom
      city.NOM was destroyed enemy.INSTR
      'The city was destroyed by the enemy.'

To derive the passive clause in (29), the passive head Pass selects a non-active VoiceP containing an adjunct *by*-phrase *vragom* 'by the enemy'. The verbal stem *razrush-* 'destroy' undergoes head movement to Voice, lexicalised as *-en*, and the resulting complex head spells out the passive participle *razrushen* 'destroyed'. The passive head Pass serves as the insertion site for the auxiliary.

(30)
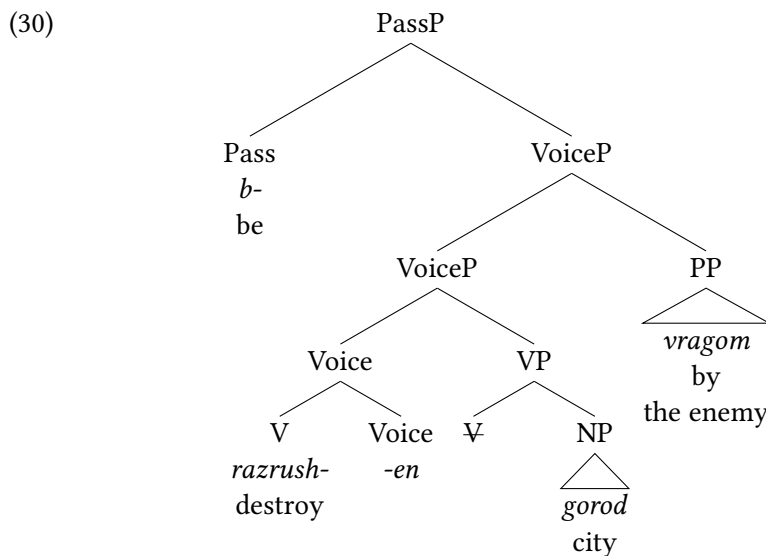
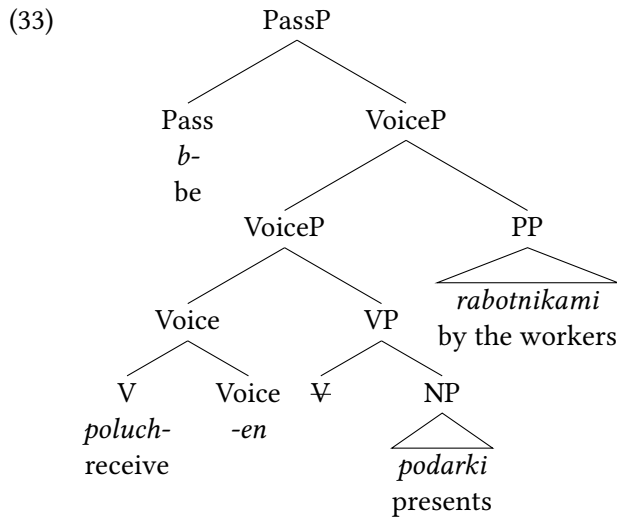The derivation of the eventive nominalisation in (31) depicted in (32) parallels that of the passive clause: the nominalising head n combines with the non-active VoiceP, and the complex head V+Voice undergoes head movement to n, to be pronounced as *razrushenie* 'destruction'.
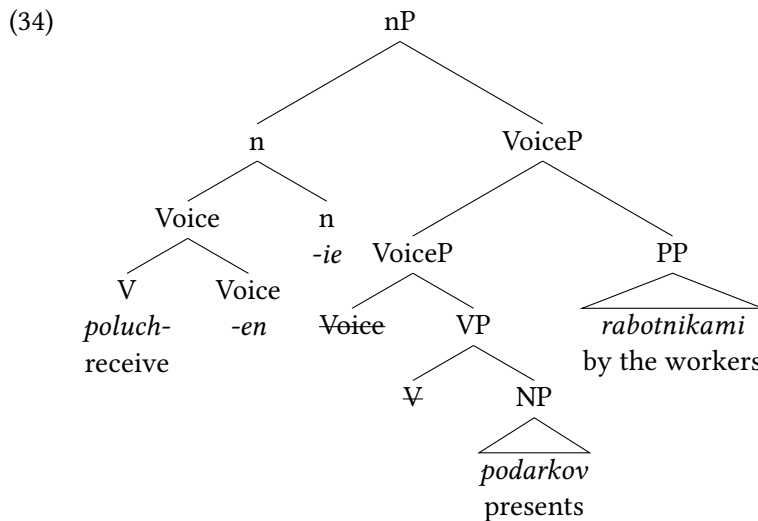
(31) razrushenie goroda   vragom
      destruction city.GEN enemy.INSTR

      'the destruction of a/the city by the enemy'

(32)

```
                               nP
                    ┌───────────┴───────────┐
                    n                      VoiceP
             ┌──────┴──────┐          ┌──────┴──────┐
           Voice          n        VoiceP           PP
        ┌────┴────┐      -ie     ┌────┴────┐        ╱╲
        V        Voice        Voice       VP     vragom
    razrush-      -en                   ┌───┴───┐    by
    destroy                             V      NP  the enemy
                                              ╱╲
                                           goroda
                                            city
```
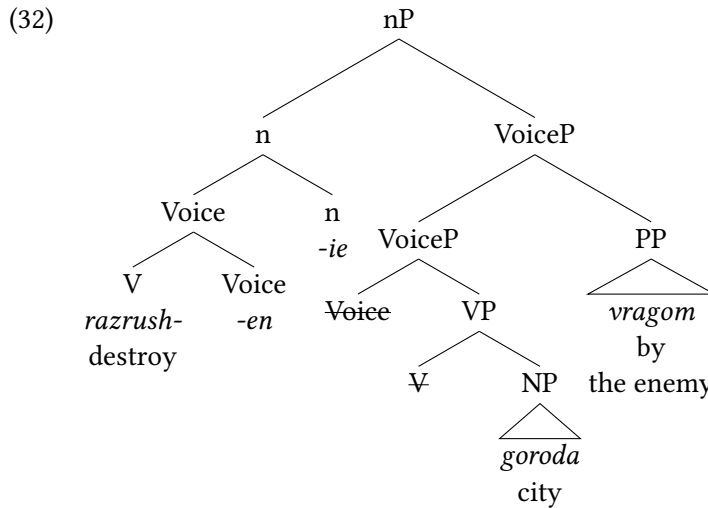
Predicates with non-agent external arguments such as *poluchat'* 'receive', which projects a recipient external argument, or *znat'/oshchushchat'/slȳshat'* 'know/sense/hear', which project an experiencer external argument, pattern with agentive transitives with regards to both passivisation and nominalisation. For reasons of space, we limit ourselves to the recipient case. The passive sentence in (18) above will have the structure in (33), ignoring agreement, whereas the nominalisation in (19) will be analysed as in (34).

(33)

```
                    PassP
                  /       \
               Pass       VoiceP
                b-       /       \
                be   VoiceP       PP
                    /    \       /    \
               Voice     VP   rabotnikami
              /    \    /  \   by the workers
             V   Voice V    NP
          poluch-  -en      / \
          receive       podarki
                         presents
```

Just as in the transitive agentive case, the passive head Pass and the nominalising head n combine with the non-active VoiceP (i.e. the one that does not project a specifier). The external argument may optionally be present as a *by*-phrase adjoining to VoiceP, and the verbal root *poluch-* head-moves to Voice, resulting in *poluchen*, whereupon the complex head V+Voice undergoes head movement to n, lexicalised as *-ie*, in nominalisations and stays in Voice in passives.

(34)

```
                      nP
                    /     \
                   n       VoiceP
                  / \     /       \
             Voice   n  VoiceP      PP
            /    \  -ie /    \     /    \
           V   Voice Voice   VP  rabotnikami
        poluch-  -en        /  \  by the workers
        receive            V    NP
                               / \
                           podarkov
                           presents
```

The adjunction theory of *by*-phrases in passives and nominals as proposed by Bruening (2012) and adapted for Russian in this paper, therefore, enables a uniform analysis of instrumental marking on the external arguments in passives and eventive nominalisations without analysing it in two distinct ways depending on the construction while viewing the identity of form as effectively coïncidental. We should also note that our

view of instrumental marking as the marking on *by*-phrases entails its being incompatible with simultaneous alternative realisations of the external argument such as active-voice environments or nominals with a genitive external argument, to which we now turn.[3]

3.3.2 A note on possessors

As is well-documented for various Indo-European languages, the external argument in an eventive nominalisation can appear as a possessor. This is in fact the analysis Pereltsvaig et al. (2018) propose for what they call 'small', i.e. root-based, nominalisations that do not project the customary argument structure and can therefore only surface with one argument in the genitive, as in (35).

(35) plavanie   dedushki
      swimming grandad.GEN
      'grandad's swimming'

It is clear, however, that the nominalisation in (35) cannot be a 'small' nominalisation in the sense of Pereltsvaig et al. (2018), since it can be modified by external argument-oriented adverbs such as *namerenno* 'deliberately' in (36) and purposive infinitival clauses in (37):

(36) plavanie   dedushki   namerenno
      swimming grandad.GEN deliberately
      'grandad's swimming deliberately'

(37) plavanie   dedushki   s   tsel'yu [∅ ukrepit' zdorov'e]
      swimming grandad.GEN with purpose   boost.INF health
      'grandad's swimming in order to boost his health'

We interpret the compatibility of unergative-base nominalisations whose only argument carries genitive-marking with external argument-oriented adverbs and purposive adjuncts as the presence of a (non-active) Voice head in the structure of such nominalisations, and place their GEN-marked external argument in the specifier of the nominalising head n. In this scenario, there can be no *by*-phrase adjoining to VoiceP.

3.3.3 INSTR or GEN?

Our theory also predicts that instrumental marking will be restricted to exactly those classes of predicates which project an external argument, regardless of their transitivity.

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[3]We would like to clarify that our proposal regarding the structure of Russian eventive nominalisations as projecting a non-active VoiceP does not entail that the Voice head involved in the construction of an eventive nominalisation may never project a specifier. In particular, some ergative languages have been argued to project a full argument structure, including case marking and agreement licensing (see Polinsky et al. 2017 for Archi, Longenbaugh & Polinsky 2018 for Niuean, Rudnev 2019 for Avar). Case Competition will be able to apply to two caseless NPs in an asymmetric c-command relation and the higher NP will be assigned dependent case.

We first discuss unergatives, and then turn to explicating why instrumental marking does not occur in eventive nominalisations formed from unaccusatives.

As mentioned in Section 2, the empirical studies carried out by Pereltsvaig et al. (2018) reveal that eventive nominalisations with an unergative base do not behave uniformly with respect to allowing the instrumental marking on their arguments. Unergatives containing a PP, such as (38), display a higher acceptability rate of instrumental than 'unadorned' unergative nominalisations such as (39), which score almost as low as unaccusatives (1.41 vs. 1.29). Because our theory treats all unergatives uniformly, it predicts that, since both (38) and (39) project an implicit external argument, there is no *a priori* reason for either of them to disprefer that argument being realised as a *by*-phrase.

(38) khozhdenie   *imi*   v ezhednevno stirannȳkh zhenoĭ   noskakh
      walking.around they.INSTR in daily   laundered   wife.INSTR socks
      'their walking around in socks daily washed by the wife' (Pereltsvaig et al. 2018: ex. (9))

(39) ? khozhdenie   *imi*
      walking.around they.INSTR
      'their walking around'

Pereltsvaig et al. (2018) argue that this difference in acceptability rates displayed by essentially the same types of nominalisation cannot be straightforwardly accounted for by either the ICT or the DCT. We disagree. We would like to emphasise that, in our opinion, the split in acceptability has little to do with case assignment and is due to factors independent of it.

In the cases where instrumental is degraded, the acceptability rate improves if the instrumental is followed by a PP, cf. (38). As Pereltsvaig et al. (2018) put it, 'Intriguingly, virtually all examples of unergatives that appeared with the INSTR external argument contained a PP of some sort.' In Russian, the instrumental case is often used to mark instruments. We believe that this confounding factor creates an ambiguity of a garden path kind and deteriorates the acceptability of instrumental. In the presence of a disambiguating context, the acceptability of instrumental improves, cf. the contrast between (40) and (41), where contrasting children and adults makes instrumental more acceptable without any additional PPs.

(40) ? risovanie det'mi
      drawing   child.PL.INSTR
      'drawing by children'

(41) Progress v risovanii det'mi   zametnee,   chem v risovanii
      progress in drawing child.PL.INSTR more.obvious then   in drawing
      vzroslymi.
      adult.PL.INSTR
      'The progress in drawing by children is more obvious than in drawing by adults.'

Furthermore, Ingason et al. (2016) in their analysis of 'by'-phrases in the Icelandic impersonal passive argue that it is acceptable to use them when there are agent-specific pressures to realise the agent on the linear right (i.e., when the agent expresses new information or when it is phonologically heavy). It seems that this line of research can be fruitful for Russian as well.

Choosing between two grammatically available options—the genitive and instrumental encoding of the external argument of unergative predicates—is not strictly speaking a grammatical matter. The factors responsible for the contrast between 'unadorned' unergatives and unergatives with a PP, as highlighted by example (41), appear to be external to the syntax proper and, thus, go beyond the scope of the present paper.

Recall from the foregoing discussion that we analyse the nominalising head n as selecting a projection of non-active Voice. We have also seen in Section 3.2.2 that Russian unaccusatives are incompatible with *by*-phrases, just like their counterparts in English. Nominalisations formed from Russian unaccusatives display all the hallmarks of eventive nominalisations such as the ability to coöccur with manner adverbs, which suggests that they cannot be treated as root-based nominalisations.

(42) padenie knigi   povtorno
     falling   book.GEN again
     'the book falling again'

That unaccusative eventive nominalisations with the instrumental marking would have a very low acceptability rate follows straightforwardly from our analysis of the instrumental marking as encoding a *by*-phrase. The reason, then, for the instrumental marking to be impossible on the only arguments in eventive nominalisations formed with Russian unaccusatives is intuitively, though not formally, the same on our analysis as it is for Pereltsvaig et al. (2018): internal arguments never become *by*-phrases, be the verb unaccusative or transitive.

4 A DCT-compliant analysis of case

4.1 Eventive nominalisations and the DCT

With a basic understanding of the structure of Russian eventive nominalisations in hand, we are ready to see that the analysis of case marking in them is inevitably DCT-compliant and, contrary to Pereltsvaig et al. (2018), neither requires modification nor depends on any particular thematic relations.

Firstly, we propose, with Marantz (1991), that the unmarked case is, informally speaking, environment-specific: for Russian, it is nominative in finite clauses and genitive in nominals.

As regards the direction of the application of Case Competition in nominals, Russian is a nominative-accusative language, which means that dependent case is assigned, under Case

Competition, to the lower caseless argument in an asymmetric c-command relationship, just like accusative in finite clauses.

(43) **Dependent case in clauses**
      NP$^{\text{NOM}}$ … V … NP$^{\text{ACC}}$

Now, given the view of Russian eventive nominalisations defended in the preceding sections, each eventive nominalisation will contain at most one caseless argument, including those nominalisations which take ditransitive verbs as their base. Let us take (44), which involves an eventive nominalisation of a ditransitive predicate *darit'* 'gift', as an illustration.

(44) darenie detyam   knig   roditelyami
      gifting children.DAT books.GEN parents.INSTR
      'the gifting of books to the children by the parents'

In (44), the instrumental-marked external argument *roditelyami* 'parents' is projected as an adjunct *by*-phrase, and consequently does not participate in Case Competition. The dative-marked indirect object *detyam* 'children' is lexically case-marked by an applicative head, and is therefore also ineligible for Case Competition. The only remaining argument is the internal argument, which has not received lexical case; it is therefore caseless and receives the unmarked genitive case.

Similarly for nominalisations based on two-place predicates, at most one argument will be able to appear caseless. Two scenarios are possible, depending on the properties of the internal argument. Those transitive predicates which do not lexically case-mark their internal arguments will retain their internal arguments caseless, since the external argument, by virtue of its status as an adjoined *by*-phrase marked with instrumental case, will be unable to compete for case, and the internal argument will surface in the (unmarked) genitive case. Alternatively, if a two-place verb does assign lexical case to its internal argument (or the internal argument is a complement clause) and the external argument appears as an instrumental-marked *by*-phrase, then there will be no caseless NPs to surface with unmarked case.

One-place predicates without an external argument (i.e. unaccusatives) will be nominalised by encoding their sole argument with the unmarked genitive case.

One-place predicates projecting an external argument (i.e. unergatives) will pattern with transitives and ditransitives by realising their external argument in the instrumental case if it is a *by*-phrase, or in the genitive case if it occupies the specifier of n.

For Pereltsvaig et al. (2018), the double-genitive prohibition is an additional constraint that is in principle independent of the postulated mechanisms of case assignment that itself requires an explanation. Given the theory of nominalisations sketched in the preceding section, Babby's (1997) double-genitive prohibition receives a natural account. Because the nominalising head selects for a projection of Voice without a specifier, the nominalisation will never contain a suitable number of caseless NPs that would be able to compete for dependent case: if the external argument is projected, it takes the form of a *by*-phrase

incapable of competing for case. Whilst our analysis disqualifies, as it were, all eventive nominalisations from being able to assign dependent case, the question arises whether the DCT is applicable to any domain in Russian besides the clausal domain. We believe there are strong indications that this question should be answered in the positive. The next section contains a tentative attempt at applying the DCT in the realm of eventive nominals that are not nominalisations.

4.2 Possible extensions: case in eventive nominals

As we have shown in the foregoing discussion, Russian eventive nominalisations, by virtue of never projecting an external argument due to being formed on the basis of a non-active VoiceP, are in principle incapable of disproving the DCT. We have also adopted the view of Russian as instantiating the nominative-accusative alignment across the board, which means that, whenever two caseless NPs appear inside a domain relevant for case assignment, case competition will apply downwards and assign dependent case to the lower NP. A prototypical case is illustrated in (45), containing a transitive clause with two NPs—a subject and a direct object.

(45) deti lyubyat zhivotnȳkh
      kids love.PRS animals.GEN
      'Children love animals.'

Since the subject NP in (45) c-commands the object NP and neither of them is lexically case-marked, case competition will apply and assign dependent accusative case to the internal argument *zhivotnȳkh* 'animals'. The relevant portion of the syntactic structure is represented in (46) below.

(46)
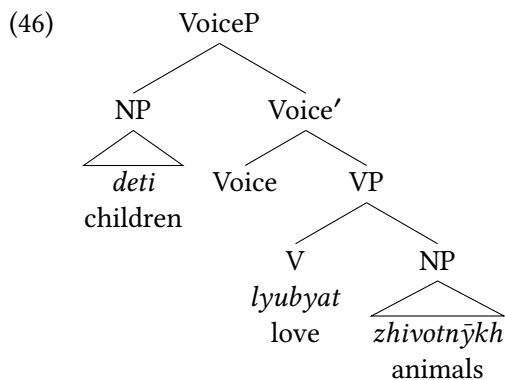
As noted by Timberlake (2004), however, the Russian noun *lyubov'* 'love' can also be eventive (Timberlake 2004: 216). Being an eventive noun, it projects the same argument structure as the corresponding verb, as shown in (47).

(47) lyubov' deteĭ   k zhivotnȳm (*sil'no)
     love.NOM kids.GEN to animals.DAT strongly

     'the kids' love of animals (*strongly)'

Despite sharing its argument structure with the verb, however, *lyubov'* 'love' is at the same time decidedly non-verbal, as are other eventive nominals. The relevant test here is compatibility with adverbs. Eventive nominalisations are, as we have seen above, compatible with various VP-level adverbs:

(48) Garantiruem poluchenie litsenzii   bȳstro
     we.guarantee receipt   licence.GEN quickly

     'We guarantee the receipt of the licence quickly.'

(49) zapolnenie anketȳ   povtorno
     filling.in questionnaire.GEN again
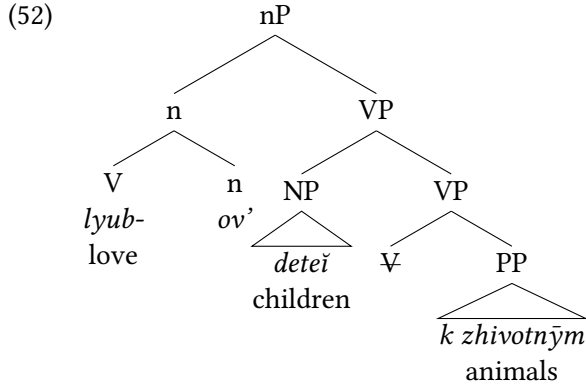
     'filling in the questionnaire again'

Adverbs, however, are impossible with eventive nominals like *lyubov'* 'love' and *prikaz* 'order':

(50) * lyubov' k zhivotnȳm sil'no
        love   to animals   potently

        'strong love of animals (lit. love to animals potently)'

(51) * prikaz komandira   povtorno
        order commander.GEN again

        'repeated order of the commander (lit. order of the commander again)'

We conclude, therefore, that eventive nominals such as *lyubov'* 'love' or *prikaz* 'order' are not nominalisations and consequently do not project the (non-active) Voice head.[4]

The eventive noun *lyubov'* 'love', then, will be formed in the syntax without any verbal projections; the lexical root undergoes head movement to attach to the nominalising head n that is spelled out as *-ov'*, as shown in (52).

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[4]Though see Comrie (1980) for an opposing view treating *lyubov'* 'love' and *nenavist'* 'hatred' as a nominalisation. Analysing eventive nominals like *lyubov'* 'love' as an eventive nominalisation, however, raises the issue of their absolute incompatibility with the instrumental marking, which cannot be accounted for in terms of θ-roles, since, as we have shown in this paper, experiencers have no problem appearing as instrumental-marked *by*-phrases.

(52)

nP
- n
  - V *lyub-* 'love'
  - n *ov'*
- VP
  - NP *deteĭ* 'children'
  - VP
    - ~~V~~
    - PP *k zhivotnȳm* 'animals'

As regards the case marking on the arguments, two caseless noun phrases—*deti* 'children' and *zhivotnȳe* 'animals'—now appear within the same domain, which means Case Competition can now apply downwards. GEN being the unmarked case in the nominal domain, Case Competition will identify the two arguments of the noun *lyubov'* 'love' and assign dependent case to the lower argument. The higher NP, *deti* 'children', will receive the unmarked genitive case, whereas *zhivotnȳe* 'animals' is predicted to receive a non-genitive dependent case. What *is* this dependent case? We contend that, unlike the accusative in clauses, dependent case in nominals must be oblique and is realised, in Russian eventive nouns, as a prepositional phrase. The preposition is therefore a mere morphological reflex, whereas the argument is underlyingly an NP.

5 Conclusions

In this paper, we have identified a number of challenges for the analysis of case marking in Russian eventive nominalisations within the framework of the Inherent Case Theory as formulated by Pereltsvaig et al. (2018). We have shown that, contrary to their claims, the instrumental case on the external argument of Russian eventive nominalisations cannot be inherent since it is not associated with a dedicated θ-role.

We have shown that, rather than being analysed as instantiating ergative alignment, Russian eventive nominalisations should instead be treated, on a par with passives, as involving a non-active Voice head. The external argument is then projected only semantically but is syntactically realised either as an adjunct *by*-phrase or as a possessor. On this view, instrumental case encodes *by*-phrases, whereas the possessor is marked with the usual genitive.

The claim that case marking patterns in Russian eventive nominalisations favour the ICT over the DCT, then, cannot be maintained, since their syntactic structure disqualifies them from being able to do so. To be able to disprove the DCT, a configuration is required in which two caseless NPs in an asymmetric c-command relation can compete for case. Because their external arguments, by virtue of being *by*-phrases or possessors, are never caseless,

the structural condition for assigning dependent case is not satisfied, and dependent case is never assigned.

Finally, we have demonstrated that, in an environment without a non-active Voice head where two caseless NPs can appear in a c-command relation (e.g. active transitive clauses and eventive nominals that are not nominalisations), the DCT makes the right predictions. Exploring those predictions in detail, however, must be left for future work.

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