

# Feature Incompatibility in Russian: The Rise of the Genitive of Negation

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This paper shows that the genitive of negation is a special construction which is derived from the negation of the verb, as opposed to the VP. Under V-negation, the verb merges first with the negation morpheme and its root node mutates into  $\omega$ , becoming incompatible with the accusative morphology of the direct object, which has a  $\varphi$ -specified root node in Russian. These features are mutually exclusive and cannot be adjacent on the root node tier, which prevents the morphological features from pairing up. To circumvent this problem, the argument must take the genitive morphology, which is  $\omega$ -specified and devoid of any thematic node. Under VP negation, the verb being merged first with the  $\varphi$ -marked direct object, the root node tier of the VP cannot be aligned with the  $\omega$ -root-node of the negation morpheme. This state of affairs gives rise to the generation of a neutral feature ( $\emptyset$ ) acting as a buffer between  $\varphi$  and  $\omega$ , and thus all root nodes can be aligned. It is shown that this analysis is strongly supported by the interaction of the compound anaphor *drug druga* with its antecedent.

**Keywords:** Syntactic features, feature tree, verb mutation, buffer, negation, anaphor, coreference, nonlinear syntax.

## 1. Introduction

As is well known, the direct object in Russian transitive verbs and the subject of unaccusative verbs may take the genitive case under negation, a phenomenon referred to as the genitive of negation (Gen-Neg). Given the feature-based theory of syntax, this case alternation is straightforwardly accounted for. It is shown that under the negation of the verb head, or V-negation, the verb mutates, becoming a vector ( $\omega$ -specified) in order to merge with the negative morpheme. In so doing, it becomes incompatible with accusative-marked NPs, which have a  $\varphi$ -specified root node. To circumvent this problem, the direct object takes the genitive case, which is a vector. Under VP-negation, the verb being merged first with the  $\varphi$ -marked direct object, it has a  $\varphi$ -root node which prevents it from further mutating into a vector in order to accommodate negation. Then to rescue the derivation, I show that the

negative morpheme is enhanced with an additional neutral root node acting as a buffer between its  $\omega$ -node and the  $\varphi$ -node of the verb. Assuming a slightly modified version of the linking theory discussed in Desouvrey (2013), I show that under V-negation the argument of unaccusative verbs can surface either as nominative or genitive under the same condition. Given the assumption that genitive has no thematic node, hence its floating agreement node, the verb cannot agree with it and must take its default agreement morphology, neuter and singular. I proceed as follows. In the next section, I present some basic pieces of data in order to introduce the proposal on features in section 3, as well as the basic tenets of the theory I build on. In section 4, I discuss the conditions under which the case alternation takes place. In section 5 the analysis is extended to intransitive verbs, including passive verbs, and in section 6, I present an important piece of evidence, namely the binding of the object-oriented anaphor *drug druga*. Finally in section 7 I briefly summarize the paper and highlight the generalizations it points to.

## 2. The basic facts

The genitive of negation is the appearance of the genitive case, instead of the normal accusative case, on the direct object of negated verbs. This alternation is optional, as shown in (1a-b) (cf. Harves 2013); in the absence of negation, this alternation is impossible (1c).

- (1) a. Anna ne kupila žurnal.  
 Anna.NOM not bought magazine.ACC  
 ‘Anna did not buy the magazine.’
- b. Anna ne kupila žurnala.  
 Anna.NOM not bought magazine.GEN  
 ‘Anna did not buy (a/any) magazine.’
- c. Anna kupila žurnal / \* žurnala.  
 Anna.NOM bought magazine.ACC/\*magazine-GEN  
 ‘Anna bought (a/the) magazine.’

Gen-Neg is in essence a direct object phenomenon, as it occurs with unaccusative verbs but not with unergative verbs in the environment of negation. With such intransitive verbs, the alternation is nominative-genitive, as shown in (2a-b) (adapted from Harves 2013, after Babby 1980), and it is impossible in a non-negated environment (2c).

- (2) a. Otvét iz polka ne prišel.  
 answer.NOM.MASC.SG from regiment not arrived.MASC.SG  
 ‘The answer from the regiment did not arrive.’
- b. Otveta iz polka ne prišlo /\*prišel.  
 answer.GEN.MASC.SG from regiment not arrived.NEUT.SG  
 ‘No answer from the regiment arrived.’
- c. Otvét iz polka prišel. /\*Otveta iz polka prišlo.  
 answer.NOM from regiment arrived.MASC.SG  
 ‘An answer/the answer from the regiment arrived.’

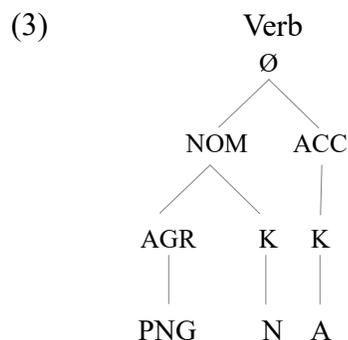
These data are very much clear. Since the only argument of unaccusative verbs is underlyingly a direct object, one can say that Gen-Neg does not occur with real subject arguments. In addition, the verb cannot agree with the genitive subject (2b), surfacing with what seems to be its default agreement features, namely neuter and singular. Thus, the task in hand is to explain why Gen-Neg is concomitant with negation, and in the case of unaccusative verbs, why there is no agreement with the genitive subject.

### 3. Theoretical assumptions

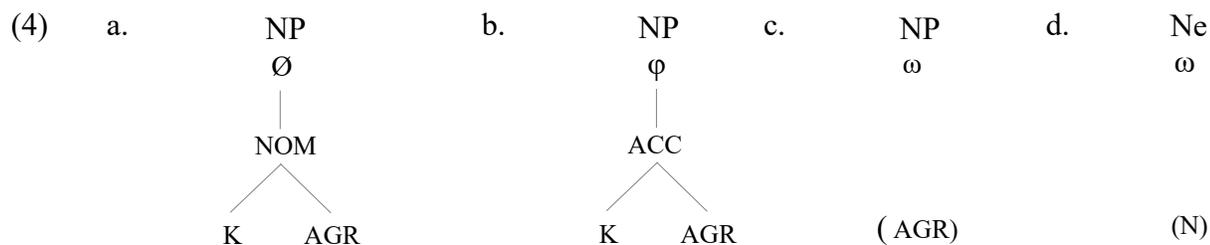
#### 3.1 Feature analysis

In the above data, agreement and case are obvious constituent elements of any Russian sentence. In the theory presented in Desouvrey (2000), which draws on nonlinear phonology, these elements can be seen as classes (or subclasses) of features. The agreement class in Russian includes gender (masculine [M], feminine [F], and neutral [Nt]), number (singular [Sg], plural [Pl]), and person (irrelevant here). As for cases, Russian morphologically distinguishes nominative, accusative, dative, instrumental, genitive, and prepositional (which is not discussed here). Consistent with Desouvrey (2010, 2013, etc.), I take them to be actually thematic markers, appearing as a node in the feature tree, where they are noted as NOM, ACC, DAT, INS. However, subsequent observation leads to the assumption that genitive does not have a thematic node on its own; instead it acquires the thematic nodes of the element it depends on. The thematic nodes expand to a case node (K), which holds the following abstract case features: N (nominative), A (accusative), and O (oblique), the latter being associated with DAT and INS. From this perspective, a simple Russian transitive verb has the following nonlinear feature tree. It includes a root node ( $\emptyset$ ), expanding to two thematic nodes: (i) a NOM branch holding

an AGR node expanding to person, number and gender features (PNG), and a K-node with the terminal case feature N; (ii) an ACC branch holding a K-node expanding to the terminal case A. The placement of the AGR as a dependent of NOM reflects the fact that the verb agrees with the subject, but not with the object. In addition, I assume that Russian verbs are mutable, meaning that their root node, whose default value is neutral ( $\emptyset$ ), can change into either  $\varphi$  or  $\omega$ , two non-morphological features.



As for NPs, their feature tree mostly parallels that of the verb, with which they have to pair up, as shown in (4). I assume that nominative-marked NPs have a neutral root node, (4a). On the other hand, accusative morphology confers to the NP a  $\varphi$ -specified root node, (4b). NPs have a K-node through which they are assigned case by the verb. Genitive-marked NPs do not have a thematic node (4c), hence their AGR node is floating, meaning it is not attached to the root node, and it must get the thematic node of the element it depends on. As for negation, a universal vector, its features vary across languages. I assume that in Russian it lacks the AGR node, and therefore its floating N case must attach to the relevant node of the verb selecting it, (4d). Thus the negative morpheme in Russian is a nominative adverb (cf. Desouvrey 2002) and, given its floating N case, a weak clitic which must still stick to the verb by virtue of the Obligatory Contour Principle, as discussed in Desouvrey (2000) and various subsequent work (e.g. Desouvrey (2018, 2019, etc.)).<sup>1</sup>



<sup>1</sup> In Spanish, negation is nominative-specified and therefore is a clitic. Since the verb cannot assign N case to the subject across negation, given the line crossing effect, the subject must be dropped, as discussed in Desouvrey (2000). Russian may not be a perfect pro-drop language like Spanish, since its negation is a weak nominative clitic, which does not trigger a line crossing effect.

The proposed feature specification will be shown to be correct to the extent it accounts for the fact in a highly principled way.

### 3.2 Feature pairing

In this feature-based theory, the input for any syntactic structure consists of a series of binary sub-trees built dynamically by successively merging inflected elements. On this view, lexical elements are processed in the morphological component, where they get their inflectional features, before entering the syntactic derivation. The core of this theory is that two elements can merge if they have compatible features, meaning their features are identical or one of the elements has a neutral feature. This is referred to as the Constraint on Merge in Desouvrey (2000) and earlier work:

(5) **Constraints on Merge (COM)** (adapted from Desouvrey 2000)

A head  $H$  and its complement  $C$  can merge under either (a), (b) or (c), where  $f$  and  $t$  are features and  $\emptyset$  the absence of a relevant feature, which is reanalyzed as a neutral feature.

- a) Both the head and the complement have the same feature:  $H [f]$  vs.  $C [f]$
- b) The complement is neutral:  $H [f]$  vs.  $C [\emptyset]$
- c) Both the head and its complement are neutral:  $H [\emptyset]$  vs.  $C [\emptyset]$

The merger of  $H$  and  $C$  cannot take place if:

- d) The head is neutral while the complement has a feature:  $*H [\emptyset]$  vs.  $C [f]$
- e) The head and the complement have different features:  $*H [f]$  vs.  $C [t]$

A head and its complement need not have the same number of features. Irrelevant features of either element are ignored as stray. However, both elements cannot have stray features. In effect, these features would try to pair up, causing a mismatch consistent with (5e). In addition, the combinations in (5) are hierarchically ranked so that the grammar always favors the best match (5a) whenever there are multiple choices, by virtue of the Blocking Principle (adapted from Aronoff 1976, Lumsden 1987, Desouvrey 2000).

(6) **Blocking Principle**

Merging of elements specified for relevant features must take place to the exclusion of others.

Given that each element is defined by its feature specification, compatible features of two merged elements must pair up and thereby they make up a plane under the condition defined in (7). A key

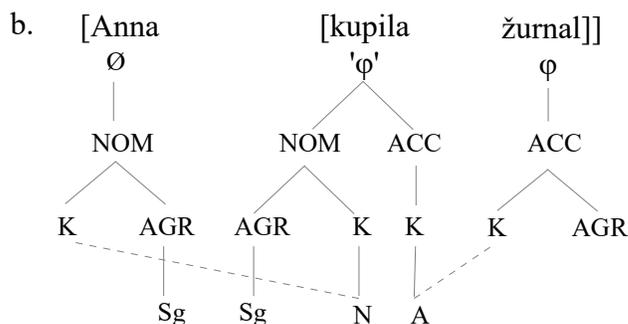
operation like feature spreading thus occurs within a plane and may be blocked by another feature in the same plane, given the ban on line crossing in the representations. Further elements introduced in the structure can have their relevant features aligned with an existing tier or left as stray as long as it does not interact with other different stray features.

(7) **Plane Formation Condition**

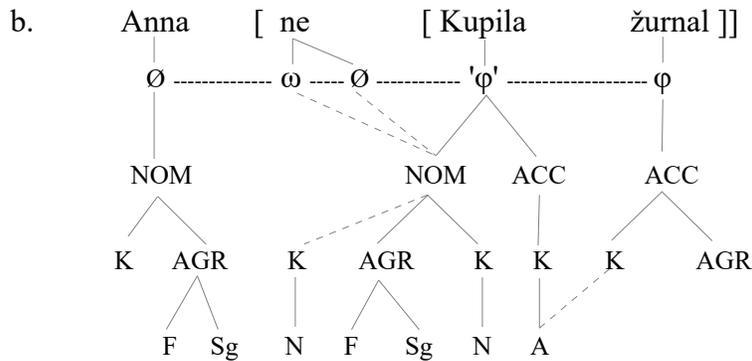
- a) All root nodes must be aligned on the same tier so that their dependents can pair up.
- b) Pairing of two features makes up a plane defined by their tier and that of their respective host.

In the light of what precedes, consider the derivation of a simple sentence like (1c), repeated as (8a). The derivation runs as follows. The verb assesses the argument and is inflected accordingly: its root node mutates into  $\phi$ , and it takes the appropriate AGR morphology. Then it fetches its complement which it merges with to make up the first stage of the derivation, assuming that Russian is an SVO language, a standard assumption in the literature. The VP is well-formed since the relevant features of the verb and the argument correctly pair up, as shown in (8b) (the quotation marks indicate the mutation in the root node). The AGR node of the object is left as stray since the verb does not have this node under its object thematic node. Then the subject enters the derivation, aligning its neutral root node with the  $\phi$ -tier. The verb agrees with the subject since their AGR features correctly pair up. In addition, each K-node of the verb pairs up with the relevant argument, making two planes where case is assigned by spreading. Thus, the ban on line crossing is not violated.

- (8) a. Anna kupila žurnal /\*žurnala.  
 Anna.NOM bought magazine.ACC /\*magazine.GEN  
 ‘Anna bought (a/the) magazine.’







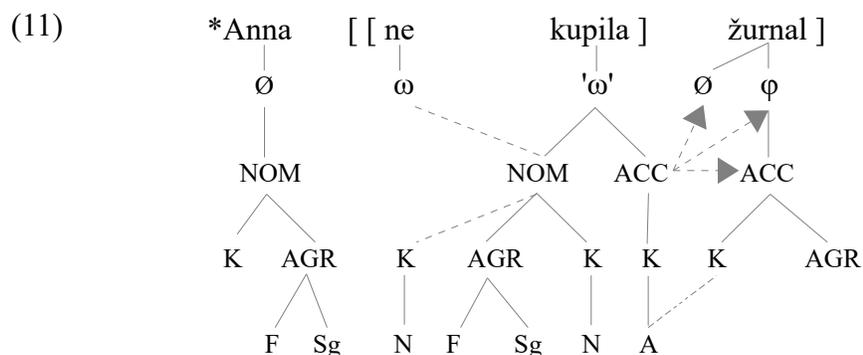
Then the nominative-marked subject enters the derivation and, thanks to its neutral root node, it normally aligns with the negative morpheme, allowing the features of the argument to pair up with those of the verb. Finally, the verb assigns nominative and accusative case to the arguments by spreading. It is important to recall that this figure is three dimensional. Except the root nodes which must be aligned on a single tier, different pairs of lower nodes appear on different planes; thus the ACC nodes and their dependents are not aligned with the NOM node.

It is impossible for the direct object to be genitive-marked, just like in (9). In effect, the verb must pick out its best match, i.e. the NP with accusative morphology, as opposed to a genitive NP, which does not have a thematic node. In the next section, I show that the genitive of negation arises from another structure in which the verb, as opposed to the VP, is negated.

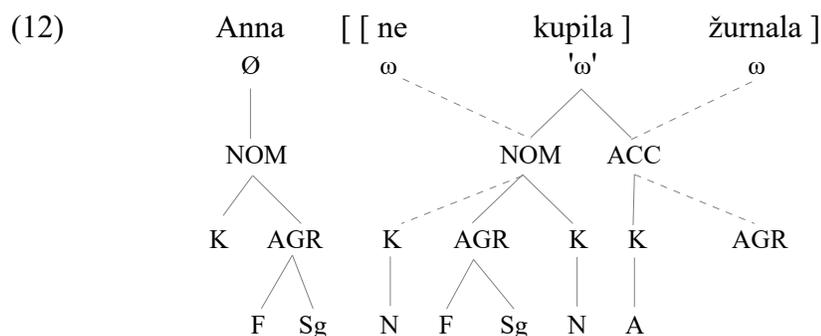
#### 4. Mutation of the verb under V-negation

I will show that the genitive of negation can only arise under V-negation, as opposed to the VP-negation discussed in (10).<sup>3</sup> In the first stage of the derivation, the verb must merge with negation instead of the direct object. In order to do so, it mutates by enhancing itself with the feature  $\omega$ , and therefore it becomes a vector like negation. Then the negated verb proceeds to pick out its complement. If the complement is accusative-marked it may not align with the verb-negation  $\omega$ -tier, preventing its accusative node from pairing up with that of the verb. In addition,  $\omega$  is an invasive feature which confers its aversion for  $\phi$  to all of its dependent nodes so that a buffer to the argument in this context is useless, under the assumption that the ACC node of the verb irradiates to every node in its plane, as shown in (11) with the arrowed lines.

<sup>3</sup> As the semantics of Gen-Neg is not discussed in this paper, I avoid using the terms *sentential negation* and *constituent negation*.



In such a case, the argument can only appear in its genitive form, which has a  $\omega$ -specified root node and no thematic node, as suggested above in (4c). As shown in (12), the floating AGR node of the argument is attached to the accusative node of the verb, which then spreads to the bare genitive. Any other combination would yield a feature clash: \*V-ACC vs. NP-DAT/INS/NOM. Finally, the verb normally selects the nominative subject, which has a neutral root node, and agrees with it in gender and number, as both AGR nodes and their dependents correctly pair up.



If the  $\phi$ -feature is found only in the accusative morphology, this analysis predicts that Gen-Neg may not be possible with oblique verbs, which require a dative or an instrumental complement (cf. Pesetsky 1982). Whether dative and instrumental morphology come with a  $\emptyset$ - or an  $\omega$ -root node, there may not be any clash between the verb and the argument, and therefore genitive will never be an alternative under either type of negation. This prediction is borne out, as shown in (13) and (14) (Pesetsky's (53) and (54) p. 65) with the verbs *pomogaju* 'to help' and *upravljaju* 'to manage', which take respectively a dative and an instrumental complement.

- (13) a. Ja ne pomagaju nikakim devuškam.  
           I NEG help no.FEM.DAT.PL girls.FEM.DAT.PL  
       b. \*Ja ne pomagaju nikakix devušek.

I NEG help no.FEM.GEN.PL girls.FEM.GEN.PL

(14) a. Ja ne upravljaju ni odnin zavodom.

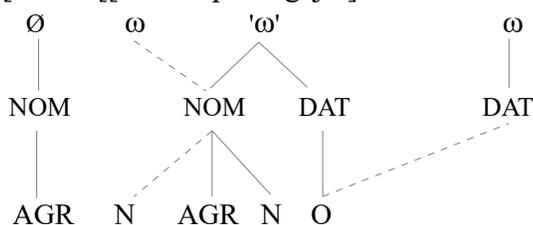
I NEG manage not one.MASC.INSTR.SG factory.MASC.INSTR.SG

b. \*Ja ne upravljaju ni odnogo zavoda.

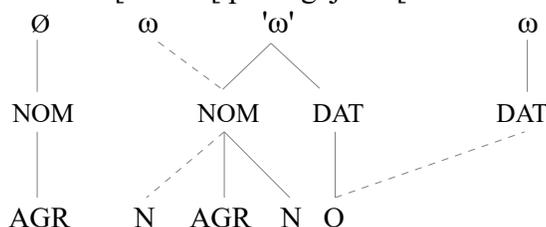
I NEG manage not one.MASC.GEN.SG factory.MASC.GEN.SG

Consider for instance the derivation of (13a). Let us assume that oblique NPs have an  $\omega$ -root-node. Under either type of negation, the verb mutates into  $\omega$  so that all the root nodes but that of the subject are  $\omega$ -specified, as shown in (15). Still, the neutral root node of the subject aligns itself with the  $\omega$  nodes. The dative complement gets the oblique case from the verb by spreading (the K-nodes are conveniently omitted), assuming that the identical nodes of the argument and its modifier are fused into a single node. A genitive-marked NP is not a better match, and hence it may not be used as a substitute in these structures.

(15) a. [Anna [[ ne pomagaju ] nikakim devuškam]] (V-negation)



b. Anna [ ne [ pomagaju [ nikakim devuškam]]] (VP-negation)



Summing up, under our assumptions the structure is built sequentially. If the verb merges first with the direct object, its neutral root node must mutate into  $\phi$ , and it cannot further mutate to handle the negation word, which forces the grammar to use a buffer. On the other hand, if it merges first with negation, it mutates into a vector, and therefore becomes incompatible with the accusative morphology of the direct object. This state of affairs favors the use of the genitive which presumably has an  $\omega$ -specified root node. The subject does not take part in the alternation, for its neutral root node is compatible with any feature of the verb. The same principle and mechanism are at work with

intransitive verbs, which I turn to in the next section.

### 5. Gen-Neg and intransitive verbs

In the linking theory discussed in Desouvrey (2013), the single argument of intransitive verbs is stacked with two cases, nominative and accusative, which is then deleted, (16a-b). As a result, the argument surfaces with nominative case, consistent with a harmonization principle that uniformizes the case of all intransitive verbs by excluding (16c). I will slightly modify this analysis.

- (16) a. NP – ACC – NOM → NP – NOM (unaccusatives)  
 b. NP – NOM – ACC → NP – NOM (unergatives)  
 c. NP – ~~NOM~~ – ACC → \*NP – ACC  
 d. [NP – NOM [V(unergative)  $\emptyset$  – ACC ]]

This theory assumes that there are no vacuous operations in syntax and morphology, meaning any operation must alter the original structural description in a tangible way. It appears that the deletion that takes place in (16b) runs afoul of this assumption. In effect, the accusative case is added and is then deleted without modifying the original string NP – NOM. I propose instead that the derivation of unergative verbs implies a null complement instead of the case-stacking process. This null complement that links the accusative case is likely a bare skeletal slot, i.e. without a melody, as in (16d).<sup>4</sup> On this view, unergative verbs do not have a derived subject, and therefore Gen-Neg is irrelevant.

In addition, the assumption under (16) is that the NP must be linked first to the case of its grammatical relation before stacking the stray case, nominative for unaccusatives and accusative for unergatives. However, under V-negation the original accusative case is barred, so that the NP comes to interact with two cases unrelated to its grammatical relation. In this context, I assume that the cases can be stacked in any order, which yields the two possibilities shown in (17), where the inner case is deleted, consistent with the ban on vacuous operations.

- (17) a. NP – ~~NOM~~ – GEN → NP – GEN  
 b. NP – ~~GEN~~ – NOM → NP – NOM

The configurations in (17) concern both unaccusative verbs and passive verbs, which will be discussed in turn.

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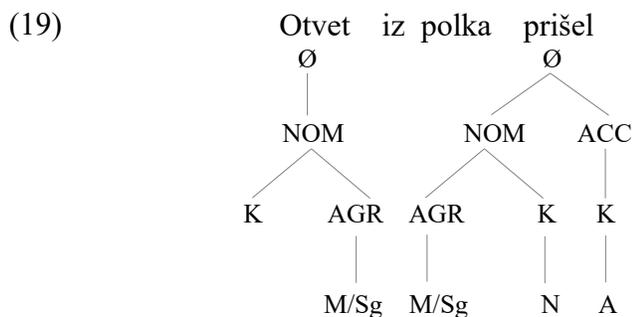
4 For the relevance of the skeletal theory in syntax, see Desouvrey (2020, 2021).

### 5.1 Unaccusative verbs

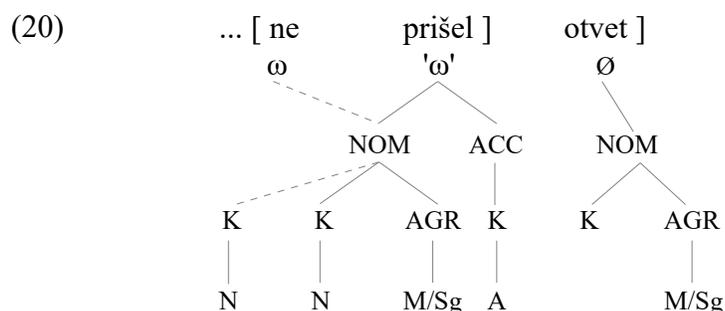
Consider the sentences in (2), repeated in (18). In the affirmative (18c), where genitive is not possible, the verb agrees in gender and number with the nominative-marked subject, while in the negated one it cannot agree with the genitive subject (18b); instead it surfaces with its default AGR features, neuter and singular. (18a) shows that Gen-Neg is optional with unaccusative verbs, too.

- (18) a.    Otv<sup>et</sup> iz polka ne priš<sup>el</sup>.  
 answer.NOM.MASC.Sg from regiment NEG arrived.MASC.Sg  
 ‘The answer from the regiment did not arrive.’
- b.    Otv<sup>eta</sup> iz polka ne priš<sup>lo</sup>/\*priš<sup>el</sup>.  
 answer.GEN.MASC.Sg from regiment NEG arrived.NEUT.Sg  
 ‘No answer from the regiment arrived.’
- c.    Otv<sup>et</sup> iz polka priš<sup>el</sup>. /\*Otv<sup>eta</sup> iz polka priš<sup>lo</sup>.  
 answer.NOM from regiment arrived.MASC.Sg  
 ‘An answer/the answer from the regiment arrived.’

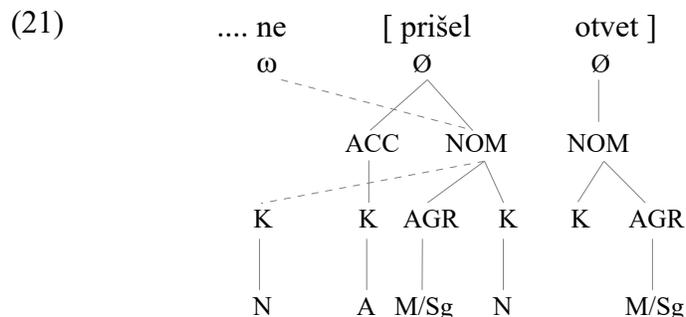
Under the present proposal, the derivation of (18c) proceeds as follows. The argument is processed according to the linking mechanism discussed above, and it merges with the verb, which takes the appropriate morphology. The verb may not mutate, as the accusative morphology of the argument is deleted and replaced by the nominative morphology, which has a neutral root node, as shown in (19). This sentence is well-formed because every node of the argument pairs up with its counterpart in the verb tree, and the nominative subject is the best match. In addition, they agree in gender (masculine) and number (singular), as these features perfectly pair up. As for the nominative case of the verb, it is assigned to the argument by spreading, given their respective K-node pair up. The stray accusative branch in the verb tree does not interfere with any feature and therefore has no incidence on the structure.



If the sentence is negated, there are two possibilities: either the argument surfaces as nominative (cf. 18a), agreeing with the verb, or it surfaces as genitive (18b), in which case the verb shows its default agreement morphology (neuter, singular). Since the verb has a single argument slot, both possibilities can be derived under either type of negation. Thus, in the derivation of (18a) (the PP is conveniently set aside as it presumably has no bearing on the discussion), the verb merges first with negation and then with the nominative argument, as shown in (20), where the argument is conveniently placed after the verb. Negation gets the thematic node of the verb, which supports its case as well. As for the argument, its NOM node pairs up with that of the verb, and their dependent nodes pair up as well, and therefore both agree in gender and number. Similarly the nominative K-node of the argument pairs up with the nominative K-node of the verb, which then case-marked it by spreading. The stray accusative branch of the verb is ignored.

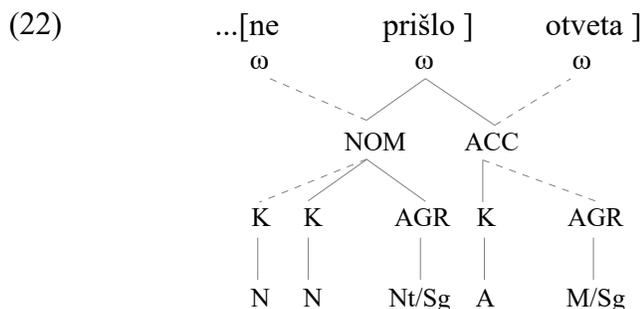


Similarly, under VP-negation every element in the argument tree pairs up with an element of the nominative branch of the verb. Then, when negation is merged with the VP, it does not affect this state of affairs, as shown in (21). The stray accusative branch of the verb is not aligned with the NOM tier, and thus there is no line crossing in the representation.



Let us turn now to the derivation of (18b), which occurs according to (17a). As shown in (22), the genitive argument gets the ACC thematic node of the verb, to which its floating AGR is attached. As a result, the AGR node of the argument becomes part of the verb. Since the verb cannot agree with an

element within itself, it takes its default agreement morphology, neuter and singular.



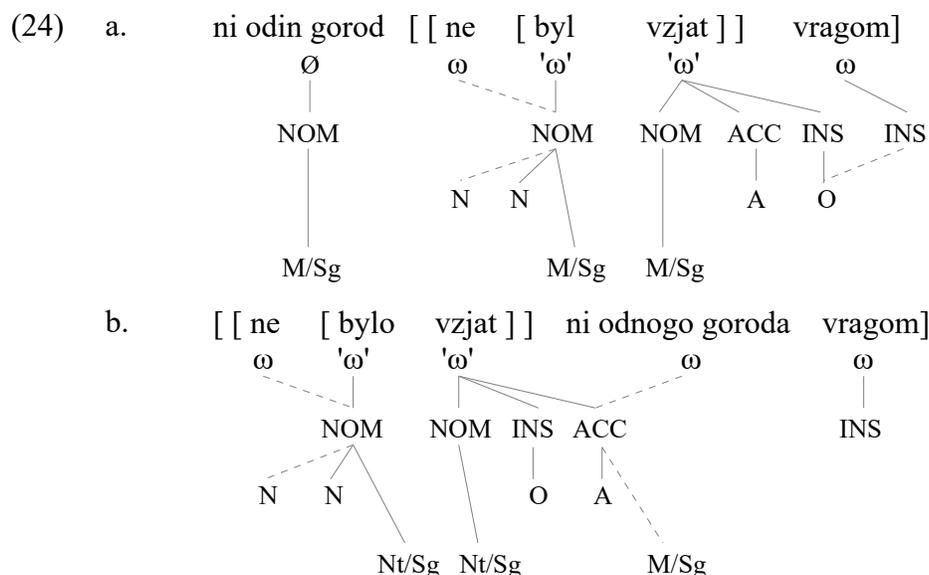
## 5.2 Passive verbs

It is noted in the literature that subject of passives may undergo the genitive alternation under negation as seen in (23) (After Pesetsky 1982: 42, referring to Chvany 1975). Passives differ from unaccusatives in that they require an auxiliary with the verb in its participle form. Since participles bear agreement morphology, it must be the case that they have the same feature tree as conjugated verb forms, except presumably they do not have a K-node under the nominative thematic node, and thus they cannot assign nominative case. As for the auxiliary, I assume that when used in passives, it has only a nominative branch in its feature tree.

- (23) a. ni odin gorod ne byl vzjat vragom  
 not one city.M.NOM.Sg NEG was.M.Sg taken.M.Sg enemy.INSTR  
 'not one city was taken by the enemy'
- b. ni odnogo goroda ne bylo vzjato vragom  
 not one city.M.GEN.Sg NEG was.Nt.Sg taken.Nt.Sg enemy.INSTR

For instance, consider the sentence (23a). I assume that the auxiliary is merged with the participle verb and then the complex thus formed is merged with the negative morpheme, which forces both the auxiliary and the participle to mutate their root node into  $\omega$ . Thus the argument can enter the structure either as nominative (NP – ~~GEN~~ – NOM) or genitive (NP – ~~NOM~~ – GEN), as suggested above. In the first alternative shown in (24a), the argument is aligned with the pair auxiliary-verb, which agrees with it. If either the participle or the auxiliary had the default AGR feature (singular, neuter), a fatal feature clash would result in. The verb assigns oblique case to the instrumental NP, assuming its enhancement with an instrumental node (INS), while the accusative node of the verb remains as stray. In (24b), where the genitive-marked phrase is conveniently represented with a single  $\omega$ -node, the complex auxiliary-

participle does not have an external element to agree with and therefore takes its default AGR morphology, neutral and singular.



To conclude this section, this representation makes it possible to account for Gen-Neg, as well as the absence of agreement with genitive-marked subject, with a high degree of precision. What counts is the particular set of features of the language, among which  $\phi$  and  $\omega$  are crucial. The lack of agreement with genitive subjects follows from the assumption, which is warranted by the representation, that genitive does not have its own thematic node. If this analysis is correct, it must be the case that the opposite features  $\phi$  and  $\omega$  interact elsewhere in Russian grammar, giving rise to some surprising peculiarities. In the next section I show that this is the case.

### 6. Evidence for the proposed feature specification

Under this analysis, Gen-Neg arises because Russian accusative morphology is specified for a rare feature,  $\phi$ , which cannot interact with  $\omega$ -specified elements. This feature was first found in complementizers, and it accounts for the fact that such elements in French and English are incompatible with interrogative clauses (cf. Desouvrey 2008). In my view, the complementizer is a relative anaphor, and as such it cannot be bound to a vector *wh*-operator in the embedded clause. This is an opposition between vector ( $\omega$ -specified) and scalar elements ( $\phi$ -specified). I show that the same problem exists with Russian object oriented anaphor *drug druga* ‘each other’, which supports the main point of the present analysis of Gen-Neg.

The following data is taken from Dyakonova (2009: 38), referring to Bailyn (1995). Dyakonova

disagrees with Bailyn with respect to the grammaticality of (25b-c), as she finds (25b) marginal and (25c) fully acceptable; see Table 1. I will show that the variation in their judgment is unrelated to word order considerations, which are their principal concerns. Rather, it can be explained by the interaction of the buffer with the features  $\varphi$  and  $\omega$ , which define the root node of the direct object and the indirect object respectively, whatever their relative order.

- (25) a. Maria predstavljajet [svoih družej]<sub>i</sub> drug drugu<sub>i</sub>.  
 Maria.NOM introduce.PRS.3Sg REFL friends.ACC each other.DAT
- b. Maria predstavljajet drug drugu<sub>i</sub> [svoih družej]<sub>i</sub>.  
 Maria.NOM introduce.PRS.3Sg each other.DAT REFL friends.ACC
- c. ? Maria predstavljajet [svoim druž'jam]<sub>i</sub> drug drugu<sub>i</sub>.  
 Maria.NOM introduce.PRS.3Sg REFL friends.DAT each other.ACC
- d. \*Maria predstavljajet drug drugu<sub>i</sub> [svoim druž'jam]<sub>i</sub>.  
 Maria.NOM introduce.PRS.3Sg each other.ACC REFL friends.DAT

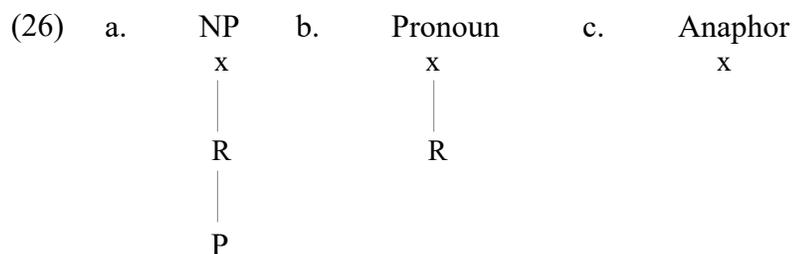
Table 1 Bailyn vs. Dyakonova judgment on (25)

(25)	a	b	c	d
Bailyn	✓	✓	?	*
Dyakonova	✓	?	✓	*

In the theory of coreference proposed in Desouvrey (2003), NPs are fully referential in that they bear a feature that directly relates them to a real world entity. Such features, represented as a capital letter, for instance P, are linked to an intermediate node referred to as R-node, which is itself dependent of the root node x (standing for either  $\emptyset$ ,  $\varphi$ , or  $\omega$ ), as shown in (26a).<sup>5</sup> Third person pronouns, which are not directly related to a real world entity, do not have their own referential feature, (26b). On the other hand, anaphors have neither a referential feature nor an R-node, and therefore they must depend upon an NP or a pronoun (25c). Thus, coreference is realized by spreading of the terminal feature P or its parent R to the relevant element: a pronoun gets its referential feature from an NP in the discourse, while an anaphor gets an R-node from an NP or a pronoun. To use a common parlance, an NP is free in the discourse, while a pronoun and an anaphor must be bound. Unlike the terminal feature P, the R-

<sup>5</sup> For clarity, irrelevant features will not be shown in the coreference structure, even though the R-node may actually be the thematic node.

nodes are aligned in a tier, and therefore a line-crossing effect may block coreference of an anaphor with its intended antecedent in certain contexts not discussed here.



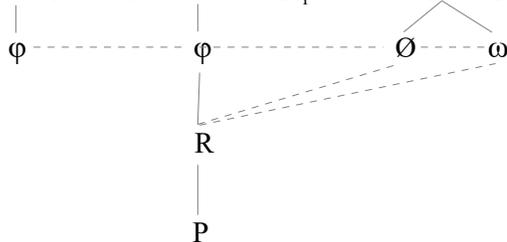
In addition, I assume that double object verbs in a free word order language like Russian can merge first with either complement, yielding either  $[[V \text{ DO}] \text{ IO}]$  or  $[[V \text{ IO}] \text{ DO}]$ , which does not exclude the existence of a basic word order preference (cf. Desouvrey 2020). In the first alternative, the verb mutates into  $\varphi$  and pairs up with the  $\varphi$ -specified direct object, while in the second alternative it mutates into  $\omega$  in order to pair up with the indirect object, assuming that dative morphology is  $\omega$ -specified. In both types of structure, the second argument cannot align itself with the pair it merges with, since  $\varphi$  and  $\omega$  are mutually exclusive. As seen above, the grammar has recourse to a neutral node generated to the second argument, whether it is the DO or the IO, so that both arguments can be aligned on the same tier. In fact, as I will show, the variation in the judgment depends on the way this root node is analyzed. In effect, it appears that for certain speakers (Bailyn type) this new node acts as a buffer between the first argument and the second argument, resulting in all the root nodes being aligned in the same tier. For others (Dyakonova type) the new node is a substitute to the offending original root node, which is left as stray (not aligned with the other root nodes).<sup>6</sup>

Given these assumptions, one can see exactly why Bailyn and Dyakonova agree or disagree in their judgment on the sentences in (25). (25a) arises either from (27a), where the four root nodes are aligned (Bailyn) or (27b) (Dyakonova), where the offended root node is left as stray. Thus, for Dyakonova, spreading of R is normally one to one, since the  $\omega$ -node is not aligned with the antecedent. The anaphor is thus properly linked to its antecedent, resulting in a perfect sentence. For Bailyn, on the other hand, the R-node spreads normally to the buffer and to the offending  $\omega$  as well, since they are all aligned. Still, the sentence is perfect since a  $\varphi$ -dependent R-node is compatible with  $\omega$ , as discussed above. (Notice that in the present theory the indexes are purely descriptive and nothing hinges on them.)

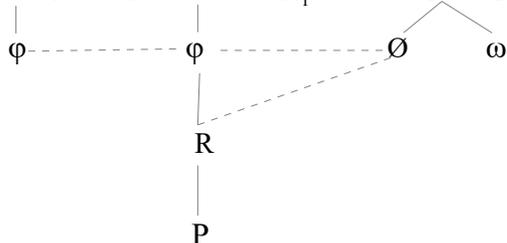
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<sup>6</sup> Kallestinova (2007) discusses similar constructions and her judgment is the same as Bailyn's. Since normally all root nodes must be aligned, it might be that Dyakonova is in the minority.

(27) a. Maria [[predstavljajet [svoih družej]<sub>i</sub>] drug drugu<sub>i</sub>.] (Bailyn)

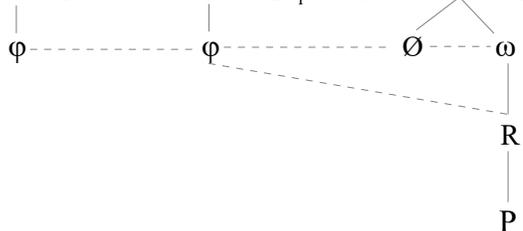


b. Maria [[predstavljajet [svoih družej]<sub>i</sub>] drug drugu<sub>i</sub>.] (Dya konova)

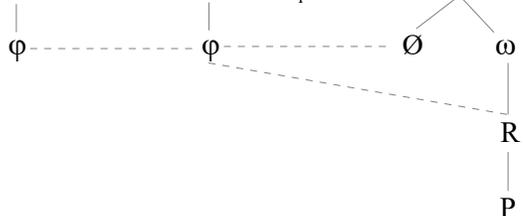


Consider (25d), which is rejected by both types of speakers. The reason is that a dependent of  $\omega$  inherits all of its properties (vector) and cannot spread to a  $\phi$ -node, (28a). In addition, for Dyakonova coreference is impossible anyway, since the antecedent is not aligned with the anaphor (28b). If the R-node tries to reach the  $\phi$ -node by a side-effect, the ungrammaticality on the sentence can only worsen.

(28) a. \*Maria predstavljajet drug druga<sub>i</sub> [svoim druž'jam]<sub>i</sub>. (Bailyn)



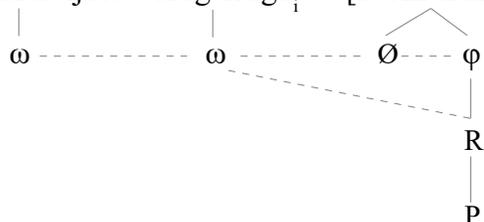
b. \*Maria predstavljajet drug druga<sub>i</sub> [svoim druž'jam]<sub>i</sub>. (Dyakonova)



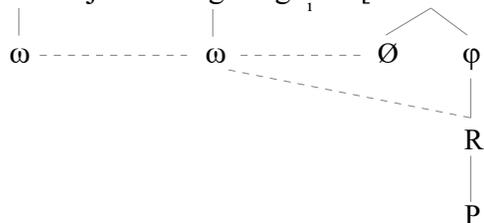
One can see that a side-effect can affect the judgment on a sentence. (25b) is perfect for Bailyn, as shown in (29a), while for Dyakonova it is marginal, (29b). In effect, for Bailyn spreading in this case is one to one, and thus there is no possibility to have a side-effect. For Dyakonova, the sentence may not be grammatical, since the antecedent and the anaphor are not aligned. However, spreading

takes place as a side-effect triggered by the necessity for the anaphor to have an antecedent, and as a result the ill-formedness is mitigated, unlike (28b).

(29) a. Maria predstavljajet drug drugu<sub>i</sub> [svoih družej]<sub>i</sub>. (Bailyn)

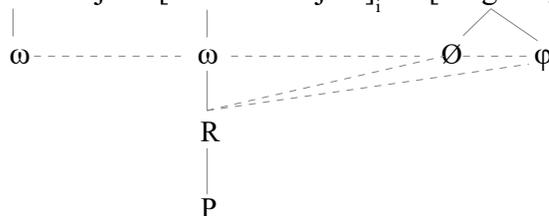


b. ?Maria predstavljajet drug drugu<sub>i</sub> [svoih družej]<sub>i</sub>. (Dyakonova)

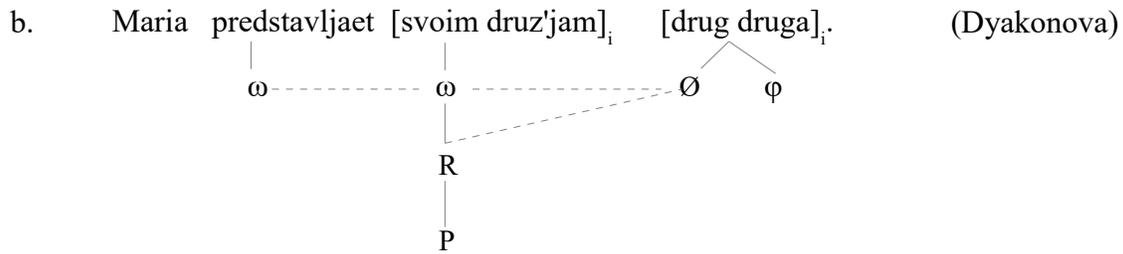


On the other hand, in (30a) (cf. 25c), the R-node correctly spreads to the buffer, but also it spreads normally to the aligned  $\phi$ -node, which is a bad side-effect, hence the acceptability of the sentence is degraded for Bailyn. In (30b), however, there is no bad side-effect since the offending  $\phi$  is not aligned with the substitute and therefore spreading is one to one. It is important to note that the side-effects in (28b) and (29b) are induced by the quest for an antecedent in order for the sentence to be meaningful. Quite contrary in (30b) the antecedent is duly found, just like in (27b), and therefore there is no need to force the spreading out of the tier.<sup>7</sup>

(30) a. ?Maria predstavljajet [svoim druž'jam]<sub>i</sub> [drug druga]<sub>i</sub>. (Bailyn)



<sup>7</sup> In earlier work on French and related languages, which have less morphology, the root nodes was not taken into consideration, leading to overlook the requirement that they must be aligned on a single tier and, failing that, the use of a buffer. In the light of this research, it appears that the buffer must be used in English complementation structures given that lexical verbs are vectors ( $\omega$ -marked root node). Interestingly, the fact that the complementizer is omissible in English may be due to a bad side-effect, as the accusative thematic node of the verb spreads on both the buffer and the  $\phi$ -node.



To conclude, the direct object and the indirect object do not bear the same feature in their root node. Just as in the case of Gen-Neg discussed above, the generation of a neutral root node, or buffer, which is reanalyzed as a substitute for certain speakers, makes it possible to circumvent the feature conflict.

## 7. Concluding remarks

I have argued that the genitive of negation results from the interaction of the opposite features  $\omega$  and  $\varphi$ . Under V-negation, the verb mutates into a vector ( $\omega$ -specified), and it becomes incompatible with the  $\varphi$ -specified accusative morphology. There must be no adjacency on the root node tier between  $\varphi$  and  $\omega$ , which are mutually exclusive. In addition, any feature dependent of an  $\omega$ -root node cannot spread to a  $\varphi$ -root node, although a  $\varphi$ -dependent feature can spread to an  $\omega$ -root node. The grammar offers two solutions to this problem: the use of a neutral feature buffering between  $\varphi$  and  $\omega$ , and the selection of the genitive case instead of the accusative case, which bears the  $\varphi$ -feature. I have shown, as supporting evidence, that the buffer plays a crucial role in the interaction of the reciprocal anaphor *drug druga* with its antecedent.

This analysis leads to the view that the genitive of negation is not merely another case option for the direct object under negation. In effect, it arises from V-negation, unlike the normal accusative of VP-negation, which is saved by a buffer. As often reported in the literature, the genitive of negation makes it possible to compensate the lack of indefinite articles in Russian, hence the various semantic restrictions attached to this construction, which are not discussed in this paper (cf. Harves 2013 for a summary and references therein).

Under the view taken here, genitive is the only possible case under V-negation. Any other case would clash with the accusative thematic node of the negated verb. Given its lack of thematic node, genitive appears to be universally an all-purpose case; in an agglutinative language like Japanese the genitive marker is an all-purpose morpheme (cf. Desouvrey 2022). It should be noted that in Russian genitive is used in other constructions unrelated to Gen-Neg, namely partitive genitive and genitive of

quantification. The latter occurs because nominative and accusative numerals presumably have an  $\omega$ -specified root node as well as a neutral thematic node (Desouvrey, in preparation).

This paper highlights the notions of verb mutation and feature buffer, which are expected to be available universally. The root node, which is not related to any morphology, may mutate into different features, allowing the verb to properly handle a dependent. On the other hand, other elements like NPs are not mutable. If their root node is inappropriate, a buffer is generated as a sister to their normal root node. The buffer is normally a neutral feature; but in the cases of lower features, it may be a morpheme. For instance, a clitic is used as a buffer doubling an argument in a dialect of Argentinian Spanish (cf. Desouvrey 2000).

To complete this analysis, Gen-Neg must be accounted for in the context of every type of copular sentences. This will be done at later point if relevant data can be found.

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