

# Some Remarks on Agreement in Animacy in Russian\*

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## 1. Introduction

In Russian, modifiers such as demonstratives, possessives, and adjectives agree with their head nouns in number, gender, and case, as shown in (1-2).<sup>1, 2</sup>

- (1) a. ètot interesnyj žurnal  
this-nom.sg.m interesting-nom.sg.m journal-nom.sg.m  
“this interesting book”
- b. ètogo interesnogo žurnala / ètomu interesnomu žurnalu /  
-gen.sg.m -gen.sg.m -gen.sg.m -dat.sg.m -dat.sg.m -dat.sg.m  
ètim interesnym žurnalom...  
-ins.sg.m -ins.sg.m -ins.sg.m
- (2) a. èta krasivaja tetrad'  
this-nom.sg.f beautiful-nom.sg.f notebook-nom.sg.f  
“this beautiful notebook”
- b. èto dlinnoe pis'mo  
this-nom.sg.n long-nom.sg.n letter-nom.sg.n  
“this long letter”
- c. èti russkie knigi  
this-nom.pl Russian-nom.pl book-nom.pl  
“these Russian books”

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<sup>1</sup> Transliteration: A=A, B=B, B=V, G=G, D=D, E=E, È=E, Ž=Ž, Z=Z, I=I, J=J, K=K, L=L, M=M, H=N, O=O, P=P, P=R, C=S, T=T, Y=U, F=F, X=X, Ц=C, Ч=Č, Ш=Š, Щ=Šč, Ъ=”, Ь=’, Ъ=Y, Э=È, Ю=Ju, Я=Ja, а=а, б=b, в=v, г=g, д=d, е=e, ё=e, ж=ž, з=z, и=i, й=j, к=k, л=l, м=m, н=n, о=o, п=p, р=r, с=s, т=t, у=u, ф=f, х=x, ц=c, ч=č, ш=š, щ=šč, ъ=”, ь=’, ы=y, э=è, ю=ju, я=ja.

Abbreviations: nom=nominative, gen=genitive, genq=genitive of quantification, dat=dative, acc=accusative, ins=instrumental, loc=locative, sg=singular, pa=paucal, pl=plural, m=masculine, f=feminine, n=neuter, an=animate, in=inanimate, I=1st declension, II=2nd declension, III=3rd declension. Glosses are indicated only when necessary for discussion.

In this paper, I use the term “nominal phrase(s)” when the maximal projection of the phrase is not relevant for discussion. On the other hand, when I discuss the specific syntactic category of the phrase, I use the label such as DP and NP.

<sup>2</sup> Nominal phrases following a head noun are also used for modifying the head noun. However, they do not agree with their head noun nor the head noun agrees with the nominal phrase following it as the example (i) shows:

- (i) kniga Ivana  
book-nom-sg.f Ivan-gen.sg.m  
“Ivan’s book”

In (1a), the demonstrative *ètot* ‘this’ and the adjective *interesnyj* ‘interesting’ agree with the noun *žurnal* ‘journal’ in number, gender, and case. Moreover, as shown in (1b), if a noun is inflected for case, then agreeing modifiers are also inflected for case (i.e., agree in case). In (2a, b), the head nouns are feminine and neuter, respectively. The agreeing modifiers agree with them and are inflected according to their head noun’s gender. In (2c), the agreeing modifier agrees with the head noun *knigi* ‘book’ and is realized as plural as a result of the plural number agreement.

In addition, when a nominal phrase is assigned the accusative case, agreeing modifiers show overt agreement in animacy. There are three patterns of accusative case marking on a head noun and its agreeing modifiers: (i) syncretic with nominative; (ii) syncretic with genitive; and (iii) distinct from all other cases.

- (3) a. My videli *ètot krasivyj stol.* [syncretic with nominative]  
 we saw this-acc.sg.m.in beautiful-acc.sg.m.in desk-acc.sg.m.in  
 “We saw this beautiful desk.” (Pesetsky 2013: 64)
- b. My videli *ètogo molodogo otca.* [syncretic with genitive]  
 we saw this-acc.sg.m.an young-acc.sg.m.an father-acc.sg.m.an  
 “We saw this young father.” (Pesetsky 2013: 68)
- c. My videli *ètu moloduju ženščinu.* [distinct from all other cases]  
 we saw this-acc.sg.f.an young-acc.sg.f.an woman-acc.sg.f.an  
 “We saw this young woman.” (Pesetsky 2013: 64)

The verb *videli* ‘saw’ assigns an accusative case to its complement. In (3a), the case marking of the phrase *ètot krasivyj stol* ‘this beautiful desk’ is syncretic with a nominative case. In contrast, the case marking of the phrase *ètogo molodogo otca* ‘this young father’ in (3b) is syncretic with a genitive case. Finally, the case marking of the phrase *ètu moloduju ženščinu* ‘this young woman’ is distinct from all other cases.

If a nominal phrase, however, contains cardinal numerals, more complex patterns appear, depending on their cardinality.

- (4) a. Ja videl *ètix dvux mal’čikov.*  
 I saw this-acc.pl.an two-acc.an boy-acc.pl.an  
 “I saw these two boys.”
- b. Ja videl *ètix pjat’ mal’čikov.*  
 I saw this-acc.pl.an five-acc boy-acc.pl.an  
 “I saw these five boys.”

In (4a), the case marking of all the elements in the object nominal phrase is syncretic with the genitive case. On the other hand, in the object nominal phrase in (4b), only the numeral *pjat’* ‘5’ is syncretic with the nominative and all the other elements are syncretic with the genitive.

Assuming that a maximal projection of Russian nominal phrases is NP, Hikita (2015, 2017,

2018) examines the animacy agreement in Russian and proposes a case rewriting rule that changes an accusative case to a genitive. Hereafter, this rule is referred to as *the GEN rule*. As shown in section 2, Hikita's proposal successfully generates the correct case marking patterns of nominal phrases and also covers broad empirical facts.

Traditionally, a maximal projection of nominal phrases, such as *the book*, is NP as in (5a). However, since Abney (1987), it has been assumed that a maximal projection of nominal phrases is a DP headed by D, as in (5b).<sup>3</sup>



The structure of nominal phrases has been one of the hottest topics in generative linguistics since the advent of the DP hypothesis. Specifically, there is an on-going debate about whether all languages have a DP or not. For example, Bošković (2005, 2009, *inter alia*) argues that only languages with articles have a DP projection whereas languages without overt articles do not. On the other hand, Pereltsvaig (2007) argues that all languages have a DP layer. The former approach is called the Parameterized DP hypothesis and the latter is called the Universal DP hypothesis. Some researchers have argued that Russian, a language lacking overt articles, has a DP projection (Franks 1994, 1995, Pereltsvaig 2006, 2007, Bailyn 2012, Pesetsky 2013). Given this, is the GEN rule truly incompatible with the DP analysis of Russian although Hikita (2015: 59) notes that his analysis is not compatible with the DP analysis? If this rule is correct, then the following questions arise: if we assume that demonstratives and possessives are merged in a DP layer, then where exactly are they situated? Namely, are they heads (Bailyn 2012) or specifiers of DP (Pesetsky 2013)? Furthermore, what features do DP level elements possess from the point of view of the animacy agreement?

This paper demonstrates that the GEN rule actually works with a DP analysis of Russian under the assumption that D(P) in Russian lacks the animacy feature. In addition, following the proposal of Goto (2019), the GEN rule is also compatible under the DP analysis when nominal phrases contain the cardinal numeral. Goto (2019) argues that cardinal numerals in Russian do not assign a case to their complement and proposes a case rewriting rule that changes the structural case (i.e., nominative and accusative) to the so-called genitive of quantification (Babby 1980, 1984a, b, 1985, 1986, 1987, Freidin and Babby 1984) at NumP level. This is hereafter referred to as *the GEN<sub>Q</sub> rule*. Crucially, Goto (2019) shows that Russian nominal phrases must project a DP to derive correct case marking patterns. If both rewriting rules are correct, this raises

<sup>3</sup> Bruening (2020) argues that a maximal projection of nominal phrases is NP in all languages. See Bruening (2020) for discussion and references therein.

<sup>4</sup> In this paper, I omit X' and X<sup>0</sup> elements in tree representations when they are unnecessary for discussion.

a problem, namely, the two rules can apply at the same node because both of them refer to an *accusative case*. Therefore, this paper proposes that the GEN rule applies prior to the GNEQ rule.

The remainder of this article is structured as follows: Section 2 reviews Hikita's (2015, 2017, 2018) proposal. In section 3, the DP analysis is applied to the animacy agreement in Russian. Section 4 deals with nominal phrases that contain numerals. Section 5 concludes the paper.

## 2. Review on Hikita (2015, 2017, 2018)

This section reviews Hikita's (2015, 2017, 2018) proposal. It begins with some theoretical background that Hikita (2015, 2017, 2018) assumes.

### 2.1. Some theoretical background on Hikita (2015, 2017, 2018)

Following Halle (1994a, b), Hikita (2015, 2017, 2018) assumes that agreeing modifiers copy values of agreement features from a head noun, and then the values are realized morphologically.

- (6) In an NP the gender, animacy, number and case of the head noun are copied onto the specifiers and adjectives that are in the head noun's domain. (Halle 1994b: 40)

In addition, Hikita (2015, 2017, 2018) essentially follows Franks (1995) in positing that the values of the features of a head are identical with the ones that a maximal projection has.

- (7) Everything being equal, the values of the features of a node X and its phrasal projection XP are equivalent. (Franks 1995: 22)

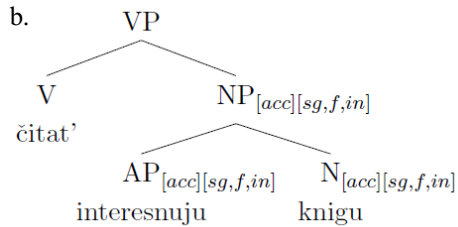
As for case, Hikita (2015, 2017, 2018) adopts the case theory proposed by Babby (1980, 1984a, b, 1985, 1986, 1987) and Freidin and Babby (1984). Babby argues that a case value is assigned to the whole NP by a case assigner and then percolates down to each constituent that the NP dominates.<sup>5</sup> According to this theory of case, agreeing modifiers do not actually agree with a head noun in case; instead, they get a case value by percolation.<sup>6</sup> To illustrate how his case theory works, consider the following example and its syntactic structure.

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<sup>5</sup> To be more precise, Babby argues that "a case feature" is assigned. However, I follow Chomsky (2000, 2001) that a "value" of the case feature is assigned, not feature itself. This is because under the Minimalist syntax, lexical items have features from numeration, but some features lack their "values". If values are not assigned until Spell-out, then derivation crashes.

<sup>6</sup> Two anonymous reviewers ask whether case assignment and case percolation are different or not. In particular, one anonymous reviewer notes that case assignment is a relation between a head and a maximal projection while case percolation is a relation between a maximal projection and its constituents which it dominates. This author agrees with the concept that the former relation is case assignment. However, whether case percolation is also case assignment or not is a difficult but interesting problem. This is an issue for future research and, here, these terms are used interchangeably in the latter relation.

- (8) a. *čítat'*    *interesnuju*    *knigu*  
 read    interesting-acc.sg.f.in    book-acc.sg.f.in  
 “read the interesting book”



V *čítat'* ‘read’ assigns an accusative case to NP, and it percolates down to AP *interesnuju* ‘interesting’ and N *knigu* ‘book’. On the other hand, AP agrees with N only in number, gender and animacy. Although agreeing modifiers are superficially seen to agree with their head noun in case, Babby’s case theory holds that they actually do not.

## 2.2. Analysis of the agreement in animacy in Hikita (2015, 2017, 2018)

Hikita (2015, 2017, 2018) proposes the following case rewriting rule:

- (9) [acc] → [gen], if gender, declension type, animacy features do not have values other than [m], [I], [an]. (Hikita 2018: 50)

What the above rule says is that an accusative case is changed to a genitive on the condition that a constituent has the value [m, I, an]. In other words, values such as [feminine/neuter], [II/III], and [inanimate] at some node prevent the rule from applying, and, as a result, the value [acc] is assigned to any such constituent. Crucially, the declension type feature is not only the feature of a head noun, but also the one of its maximal projection because the values of the head and its maximal projection must be identical under Franks’s (1995) proposal, as cited above.

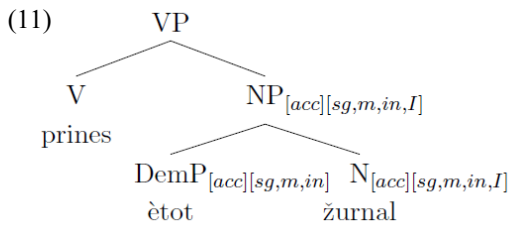
As shown below, according to Hikita (2015, 2017, 2018), the value [acc] never percolates down to singular nouns with the values [m, I, an] or plural nouns with the values [an]. What this means is that the accusative case is never morphologically syncretic with the genitive case in Russian, despite its surface morphology, and that such nominals do not entirely have the accusative case form.<sup>7</sup>

<sup>7</sup> For this reason, in what follows, the value “acc” is written as “gen” in glosses of examples when the accusative case is changed to a genitive due to the GEN rule.

To illustrate the GEN rule, let us consider the following examples.

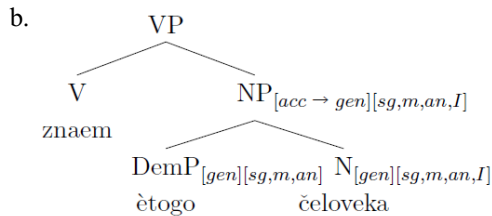
- (10) [...] *prines ètot žurnal* [...]   
 brought this-acc.sg.m.in.I journal-acc.sg.m.in.I   
 “brought this journal” (RNC 2017.10.19)<sup>8</sup>

In (10), the noun *žurnal* ‘journal’ is masculine, inanimate, and a declension type I, and the demonstrative *ètot* ‘this’ agrees with it.<sup>9</sup> Therefore, as shown in (11), the GEN rule does not apply to any nodes because each node bears the animacy feature [in]. As a result, the accusative case percolates to Dem(onstrative)P<sup>10</sup> and N.<sup>11</sup>



In contrast to (10), the GEN rule applies in (12). As the noun *čeloveka* ‘person’ is valued as [m, an, I], the case value [acc] is changed to [gen] at the NP node because the rule’s condition is met there. The value [gen] then percolates down to DemP and NP as shown in (12b)

- (12) a. [...] *znaem ètogo čeloveka* [...]   
 know this-gen.sg.m.an.I person-gen.sg.m.an.I   
 “know this person” (RNC 2017.10.19)



<sup>8</sup> When the example is cited from RNC (Russian National Corpus: <https://ruscorpora.ru/new/>), the date I checked is also given.

<sup>9</sup> Note that as Hikita (2015: 56) mentions, a value of the declension type feature is not copied onto agreeing modifiers because they have their own declension types.

<sup>10</sup> I assume that a demonstrative heads DemP.

<sup>11</sup> In (10), the case marking of the demonstrative *ètot* and the noun *žurnal* is syncretic with the nominative. To account for this pattern, Hikita (2015) proposes another case rewriting rule that changes an accusative case to a nominative.

(ii) [acc]→[nom] if an lexical item does not have an accusative case form.

Hikita suggests that although the GEN rule is relevant with syntax, the nominativizing rule is a morphological rule. I assume this suggestion. However, this paper does not deal with the nominativizing rule. Hence, even when the case marking pattern is syncretic with a nominative, the case value is written as [acc].

Next, let us consider a phrase with a feminine head.

- (13) [...] znaju ètu { knigu / ženščinu} [...]  
 know this-acc.sg.f.in/an book-acc.sg.f.in.II woman-acc.sg.f.an.II  
 “know this book/woman” (RNC 2017.10.19)

In (13), the nouns *knigu* and *ženščinu* have the values [f, in/an, II], and the demonstrative has the values [f, in/an], so the condition of the GEN rule is not met because of the values [f, in, II]. As a result, the GEN rule does not apply at all nodes and an accusative case percolates down to all the elements within NP.

- (14) a.
- ```

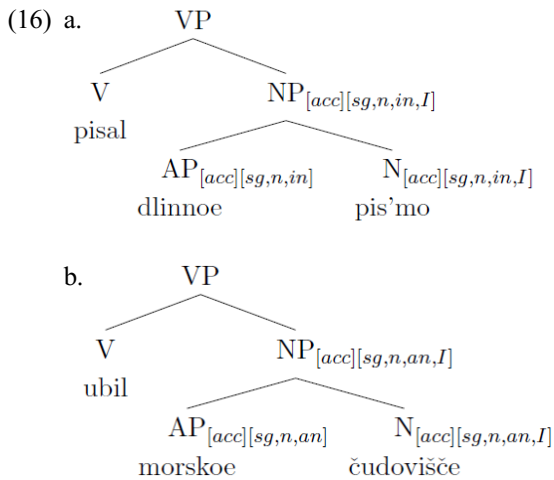
    graph TD
      VP --> V1[V]
      VP --> NP1[NP[acc][sg,f,in,II]]
      V1 --> znaju1[znaju]
      NP1 --> DemP1[DemP[acc][sg,f,in]]
      NP1 --> N1[N[acc][sg,f,in,II]]
      DemP1 --> ètu[ètu]
      N1 --> knigu[knigu]
    
```
- b.
- ```

    graph TD
      VP --> V2[V]
      VP --> NP2[NP[acc][sg,f,an,II]]
      V2 --> znaju2[znaju]
      NP2 --> DemP2[DemP[acc][sg,f,an]]
      NP2 --> N2[N[acc][sg,f,an,II]]
      DemP2 --> ètu2[ètu]
      N2 --> ženščinu[ženščinu]
    
```

In a similar way, an accusative case percolates down to the neuter nouns and their modifiers, as in the examples (15), which have the feature [n].<sup>12</sup>

- (15) a. On pisal dlinnoe pis'mo.  
 he wrote long-acc.sg.n.in letter-acc.sg.n.in.I  
 “He wrote the long letter.”
- b. Geroj ubil morskoe čudovišče.  
 hero killed sea-acc.sg.n.an monster-acc.sg.n.an.I  
 “The hero killed the sea monster.” (Halle 1994a: 202)

<sup>12</sup> Halle (1994a) and Rappaport (2003) also examine the animacy agreement in Russian. However, their proposal cannot generate the neuter animate pattern.



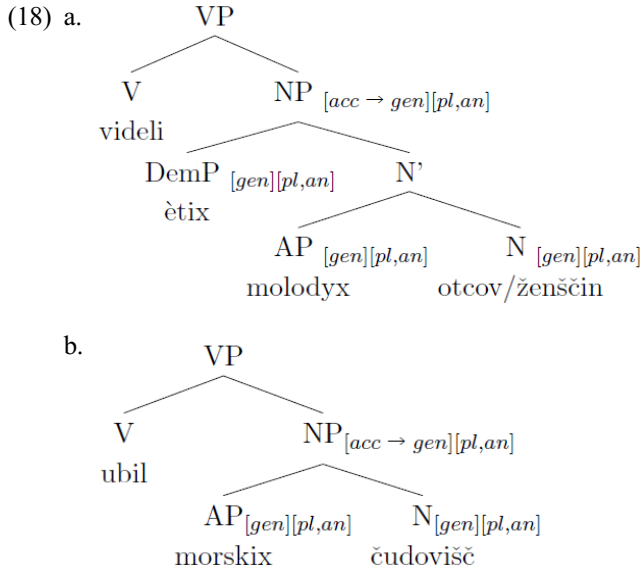
So far, we have examined the phrases in singular. However, all plural animate nominal phrases get a genitive case, *irrespective of their gender and declension type*, as the following examples (17) show.

- (17) a. My videli ètix molodyx { otcov / ženščin}.  
 we saw this-gen.pl.an young-gen.pl.an father-gen.pl.m.an.I / woman-gen.pl.f.an.II  
 “We saw these young fathers/women.” (Pesetsky 2013: 68)
- b. Geroj ubil morskix čudovišč.  
 hero killed sea-gen.pl.an monster-gen.pl.n.an.I  
 “The hero killed the sea monsters.” (Halle 1994a: 202)

How is this case marking pattern accounted for? To derive such a pattern, Hikita (2015, 2017, 2018) assumes that there is no gender and declension type features in plural nominals, as many researchers have argued (on gender distinction, see Isačenko 1954, Švedova et. al. 1980, Corbett 1991, 2006, Bailyn and Nevins 2008 and on declension type distinction, see Levine 1978, Pesetsky 2013).<sup>13</sup> With this assumption, the GEN rule is considered to apply in plural nominals only when they have the value [an]. Therefore, the case marking pattern in the examples (17) are successfully generated by the GEN rule, as shown below.

<sup>13</sup> However, some researchers argue that gender distinction is actually present even in plural nouns. See Zaliznjak (1964), Pereltsvaig (2010), and Goto (2015, 2017) for details.





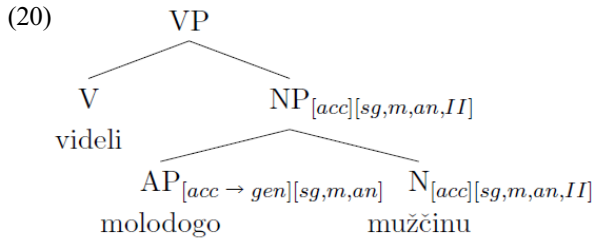
Incidentally, one may wonder whether the declension type feature is actually required for the application of the GEN rule, inasmuch as only the masculine animate nominal phrase is assigned a genitive case in the above examples. However, if the condition of the GEN rule did not include the declension type feature, then the following pattern is incorrectly predicted to be ungrammatical.

- (19) My videli molodogo mužčinu.  
 we saw young-gen.sg.m.an man-acc.sg.m.an.II  
 “We saw the young man.”

(Pesetsky 2013: 68)

The noun *mužčinu* ‘man’ is actually a masculine animate noun, but it *is* of the declension type II, not the declension type I. In addition, it gets an accusative case, not a genitive. However, the adjective *molodogo* stands in the genitive case, which means that the GEN rule must apply somewhere. Where, then, does it actually apply? The answer is that it applies at the node AP. AP has the values [m, an], and the declension type feature of AP is not relevant for the application of the rule for AP because it has its own declension type. On the other hand, the N(P) node has the value [m, an, II]. The declension type feature [II] thus prevents the GEN rule from applying to N(P).<sup>14</sup>

<sup>14</sup> This analysis implies that a head noun and its agreeing modifiers can have different case values in the same nominal phrase.



In sum, the declension type feature is essential in predicting all the possible patterns.

In this section, we have reviewed Hikita (2015, 2017, 2018) and demonstrated how the GEN rule successfully predicts the grammatical case marking pattern. However, as mentioned above, Hikita (2015) assumes that the maximal projection of nominal phrases in Russian is NP. Does the GEN rule work under the DP analysis? In the next section, we test the rule under the DP analysis of Russian.

### 3. Animacy agreement under the DP analysis

#### 3.1. Theoretical background

Before proceeding to the DP analysis of the animacy agreement, some theoretical background is required. As in Hikita (2015, 2017, 2018), the first assumption, following Babby (1980, 1984a, b, 1985, 1986, 1987) and Freidin and Babby (1984), is that a case value is assigned to a maximal projection of a nominal phrase, and it percolates down to each element (e.g., the agreeing modifiers and a head noun). The second assumption—from Franks (1995)—is that a head and its maximal projection have the same value(s),

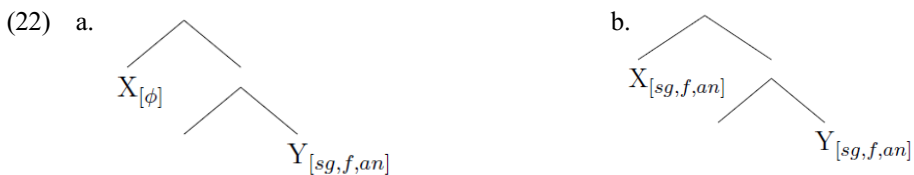
The third assumption, taken from Chomsky (2000, 2001), is that nouns enter derivation with the features of number, gender, animacy, and declension type; these features are valued in the lexicon. This contrasts with agreeing modifiers, which also have the features of number, gender, and animacy, but are unvalued. Thus, they become valued via agreement with valued counterparts. As for case, it is unvalued both for nouns and agreeing modifiers, which means that they must receive case values during the course of the derivation. For the specific values of each feature, Hikita's (2018, 2019) proposal is followed, as shown in the following table.<sup>15</sup>

<sup>15</sup> [ $\varphi$ ] denotes that it needs a value. In addition, as mentioned in fn. 9, since agreeing modifiers have their own declension types and they never agree in the declension type with nouns, an oblique line is drawn in a cell of the declension type of agreeing modifier in (21).

(21) The features and values on nouns and agreeing modifiers

	Number	Gender	Animacy	Declension type	Case
Nouns	[sg/pa/pl]	[m],[f],[n]	[an],[in]	[I],[II],[III]	[φ]
Agreeing modifiers	[φ]	[φ]	[φ]		[φ]

The final assumption is from Chomsky (2000, 2001),<sup>16</sup> which postulates that the operation Agree takes place between a probe and a goal under the closest c-command relationship.<sup>17</sup> While a probe has unvalued features, a goal has corresponding valued features.<sup>18</sup> To illustrate how Agree takes place between a probe and a goal, consider the following structure.



Suppose that X bears the unvalued number, gender, and animacy feature and Y has valued counterparts. This means that X would count as a probe and Y as a goal. While the structure of (22a) represents a point of derivation before Agree takes place, the structure of (22b) shows that the features on X have Agreed with the valued ones on Y in number, gender, and animacy.

### 3.2. Where are demonstratives and possessives merged in a DP projection?

If we assume that demonstratives and possessives are DP-internal elements, then in what position are they situated? Moreover, what features do DP level elements bear from a point of view of an animacy agreement? In what follows, two positions are considered: (i) a head D and (ii) a specifier of DP, with the latter being taken as the correct analysis.

#### 3.2.1. Demonstratives and possessives as D

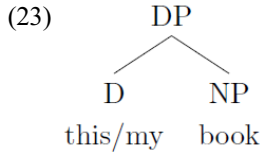
Suppose that demonstratives and possessives in Russian are merged in a D position (Bailyn 2012) as in the following structure. Call this the demonstratives/possessives-as-D analysis.

<sup>16</sup> To avoid confusion, I use “agree(ment)” as the merely descriptive term and “Agree” as the operation.

<sup>17</sup> C-command is defined as follows:

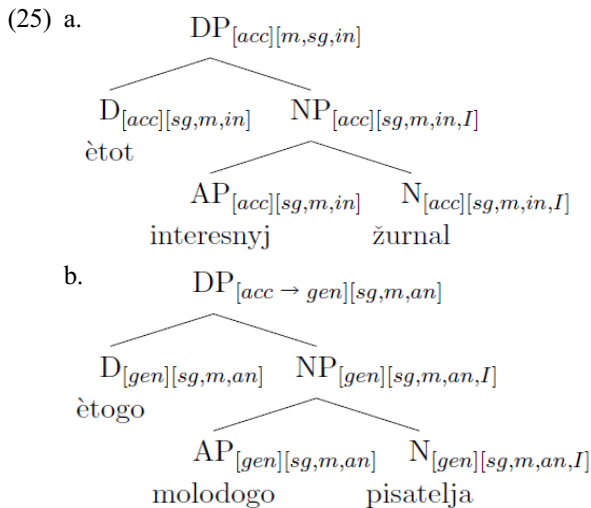
(iii) Node A c(onstituent)-commands node B if neither A nor B dominates the other and first branching node which dominates A dominates B. (Reinhart 1976: 32)

<sup>18</sup> To be more precise, Chomsky (2000, 2001) suggests that a probe has an uninterpretable unvalued feature and a goal bears an interpretable valued counterpart. However, the interpretability of features raises problems such as what feature is (un)interpretable for what category. Therefore, I adopt Pesetsky and Torrego’s (2007)’s proposal that an unvalued feature, not an uninterpretable one, serves as a probe and a valued feature counts as a goal. For a detailed discussion of feature interpretability, see Pesetsky and Torrego (2007) and Citko (2014).



First, consider the masculine inanimate and animate nouns.

- (24) a. On čital ètot interesnyj žurnal.  
 he read this-acc.sg.m.in interesting-acc.sg.m.in journal-acc.sg.m.in.I  
 “He read the interesting journal.”
- b. On znaet ètogo molodogo pisatelja.  
 he knows this-gen.sg.m.an young-gen.sg.m.an writer-gen.sg.m.an.I  
 “He knows this young writer.”



In (25a), the unvalued features on AP c-command the valued counterparts on N and Agrees with it in number, gender, and animacy.<sup>19</sup> Consequently, they receive the values [sg, m, in]. Then, the unvalued features on D search in its c-command domain a goal with the corresponding valued features and locates it on NP, which is the closest c-commandee. Agree takes place between them and the unvalued features on D get valued as [sg, m, in]. At every node, the condition of the GEN rule is not satisfied because the value [in] prevents it from applying. Hence, the value [acc] percolates down to all the elements. On the other hand, in (25b), the unvalued features on D get valued as [sg, m, an] via Agree with the valued features on NP and then DP gets these values. Unlike (25a), at the DP level, the GEN rule applies because the condition of the rule is met, so the case value [gen] percolates down to the elements which the DP dominates.

<sup>19</sup> I assume that attributive adjectives are merged in [Spec, NP]. On discussion of structural positions of attributive adjectives, see Scott (2002) and Cinque (2004).

Second, consider feminine nouns.

- (26) a. On čítal ètu interesnuju knigu.  
 he read this-acc.sg.f.in interesting-acc.sg.f.in book-acc.sg.f.in.II  
 “He read the interesting book.”
- b. On videl ètu krasivuju ženščinu.  
 he saw this-acc.sg.f.an beautiful-acc.sg.f.an woman-acc.sg.f.an.II  
 “He saw this beautiful woman.”

- (27) a.
- 
- ```

    graph TD
      DP1["DP[acc][sg,f,in]"] --- D1["D[acc][sg,f,in]"]
      DP1 --- NP1["NP[acc][sg,f,in,II]"]
      D1 --- etu["ètu"]
      NP1 --- AP1["AP[acc][sg,f,in]"]
      NP1 --- N1["N[acc][sg,f,in,II]"]
      AP1 --- interesnuju["interesnuju"]
      N1 --- knigu["knigu"]
    
```
- b.
- 
- ```

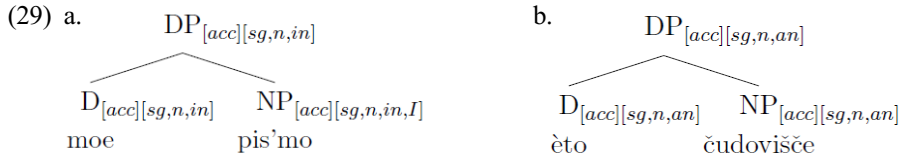
    graph TD
      DP2["DP[acc][sg,f,an]"] --- D2["D[acc][sg,f,an]"]
      DP2 --- NP2["NP[acc][sg,f,an,II]"]
      D2 --- etu2["ètu"]
      NP2 --- AP2["AP[acc][sg,f,an]"]
      NP2 --- N2["N[acc][sg,f,an,II]"]
      AP2 --- krasivuju["krasivuju"]
      N2 --- zenščinu["ženščinu"]
    
```

The structure of (27a, b) shows that irrespective of animacy of the head nouns, the GEN rule does not apply. In (27a), the unvalued features on AP Agree with the valued ones on N. As a result, they are valued as [sg, f, in]. Similarly, the unvalued features on D probe a goal with the valued counterparts and locates it on NP. Then, Agree takes place between them and the unvalued features on D get valued as [sg, f, in]. Likewise, in (27b), the unvalued features on AP and D get valued as [sg, f, an] as a result of the Agree relation with the valued ones on N and NP, respectively. Since all the constituents in (27a, b) bear, at least, the value [f], the case value [acc] percolates down to all the elements due to the inapplicability of the GEN rule.

Turning to neuter nouns, the GEN rule successfully generates the correct case marking patterns under the demonstratives/possessives-as-D analysis. The relevant structures of (28) are shown in (29)

- (28) a. [...] polučil moe pis'mo [...]  
 got my-acc.sg.n.in letter-acc.sg.n.in.I  
 “got my letter” (RNC 2020.08.20)

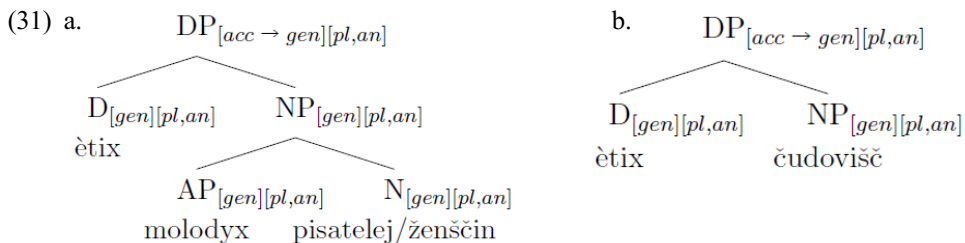
- b. On ubil èto čudovišče.  
 he-nom killed this-acc.sg.n.an monster-acc.sg.n.an.I  
 “He killed this monster”



In (29a), the unvalued features on D enter an Agree relation with the valued counterparts on NP and receive the values [sg, n, in]. Hence, the values [n, in] in all the elements block the application of the GEN rule. Likewise, in (29b), the unvalued features on D act as a probe and seek the valued features. As a result, they get valued as [sg, n, an] via the Agree relation with the valued features on NP. Since all the elements have the values [n], the GEN rule cannot be applicable and the case value [acc] percolates down to all the elements.

The case marking patterns in plural nominals are also correctly derived as illustrated in the following structures.

- (30) a. On znaet ètix molodyx { pisatelej / ženščin }.  
 he knows this-gen.pl.an young-gen.pl.an writer-gen.pl.an woman-gen.pl.an  
 “He knows these young writers/women.”
- b. On ubil ètix čudovišč.  
 he killed this-acc.pl.an monster-acc.pl.an  
 “He killed these monsters.”

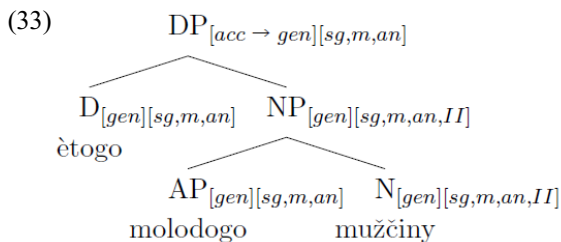


In (31a), the nouns *pisatelej/ ženščin* ‘writer/woman’ are plural and animate. The unvalued features of AP and D get valued as [pl, an] as a result of the Agree relation, and these values are copied onto the DP from the D. At the DP level, the condition of the GEN rule is satisfied, and the value [acc] is changed to [gen]. The value [gen] then percolates down to all the elements. In a similar fashion, in (31b), the unvalued features on D find its goal on the NP and are valued as [pl, an] via the Agree relation. As the value [an] is present at the DP, the GEN rule applies, and the value [gen] is assigned to the elements that the DP dominates.

Thus far, it seems that the demonstratives/possessives-as-D analysis generate all the grammatically correct patterns. On the contrary, this analysis incorrectly generates (32b), which is an ungrammatical example, and wrongly predicts example (32a) as ungrammatical.

- (32) a. On znaet ètogo molodogo mužčinu.  
 he knows this-gen.sg.m.an young-gen.sg.m.an man-acc.sg.m.an.II
- b. \*On znaet ètogo molodogo mužčiny.  
 he knows this-gen.sg.m.an. young-gen.sg.m.an man-gen.sg.m.an.II  
 “He knows this young man.”

The following structure illustrates how the GEN rule is wrongly applied.



In (33), the unvalued features on AP and D receive the values [sg, m, an] from the valued ones on N and NP via Agree, respectively. Crucially, the *now-valued features* [sg, m, an] on D are copied onto the DP. This means that the GEN rule applies at the DP level. As a result, the value [gen] is not only assigned to the D and AP, but also to NP and N. Incidentally, the value [II], which is one of the blocking values for the application of the GEN rule, is present at the NP. However, since there is no rule that changes the genitive case to the accusative, the value [gen] is not changed to [acc] at the NP even if the NP has the value [II].

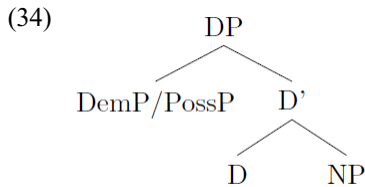
The demonstratives/possessives-as-D analysis is successful for most of the case marking patterns but it incorrectly predicts the pattern with a masculine noun of the declension type II. Why does this problem occur? Unlike the NP analysis, the declension type feature [II] is not present at the maximal projection of nominal phrases under the DP analysis. This means that whenever a head noun is masculine animate, the GEN rule always applies to the DP. As a result, contrary to the facts, all agreeing modifiers and the head noun always receive a genitive case.

For this reason, the demonstratives/possessives-as-D analysis is rejected. To derive all the correct case marking patterns, the next subsection proposes that demonstratives and possessives are merged in the [Spec, DP] position.

### 3.2.2. Demonstratives and possessives as [Spec, DP] elements

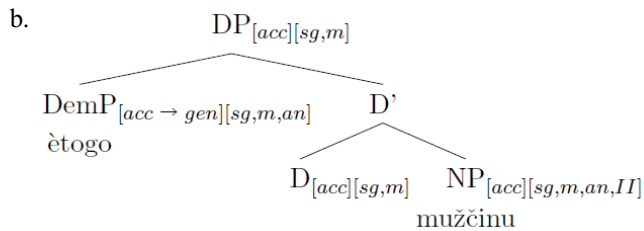
If demonstratives and possessives are merged in [Spec, DP], the following structure is obtained.

This study refers to this structure as the [Spec, DP] analysis.<sup>20</sup>



The proposal here is that in Russian, D is phonetically null and has an unvalued case, number, and gender features, but not an unvalued animacy feature. To illustrate how the [Spec, DP] analysis works, let us first consider the masculine animate type-II noun.

- (35) a. On znaet ètogo molodogo mužčinu.  
 he knows this-gen.sg.m.an young-gen.sg.m.an man-acc.sg.m.an.II  
 “He knows this young man.”



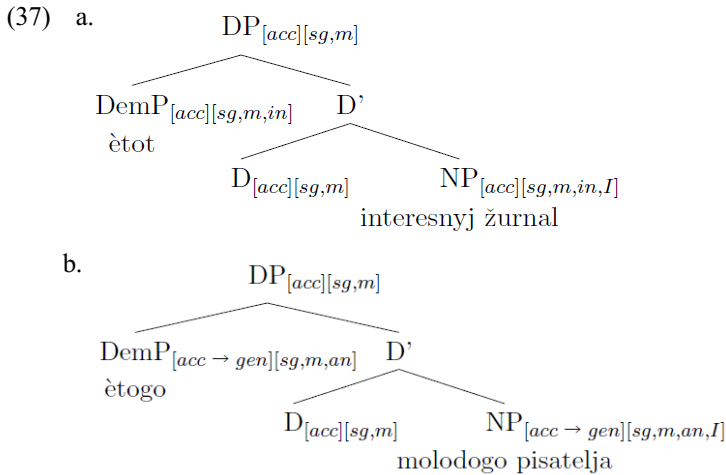
In (35b), the unvalued features on D act as a probe and Agrees with the valued ones on NP in *number and gender*. As a result, they get valued as [sg, m], and these values are copied onto DP. Then, the unvalued features on DemP probe down to their valued counterparts on D, as a result, they Agree. However, while the probe on DemP gets the values [sg, m] from the valued ones on D, it cannot receive the value of the animacy feature. Therefore, it needs to search within its c-command domain to find the valued animacy feature on NP. As a result of this, the probe on DemP has got all the values, save for the case value. After the accusative case assignment to DP, the GEN rule does not apply at the DP level, because the animacy feature is absent. Hence, the case value [acc] percolates down to D. Likewise, at the NP level, the rule is not applicable, because the valued feature [II] on NP prevents it from applying. As a result, the accusative case percolates down to NP. On the other hand, the rule applies at DemP, because no values can block the application of the rule. This means that the unvalued case feature on DemP is assigned [gen]. In this way, the case marking pattern with the masculine animate type-II noun is correctly derived contrary to what was witnessed with the demonstratives/possessives-as-D analysis.

Does this analysis also generate other case marking patterns? The answer is, of course, yes. For the masculine nouns, the correct patterns are derived as follows.

<sup>20</sup> I assume that a possessive heads Poss(essor)P.



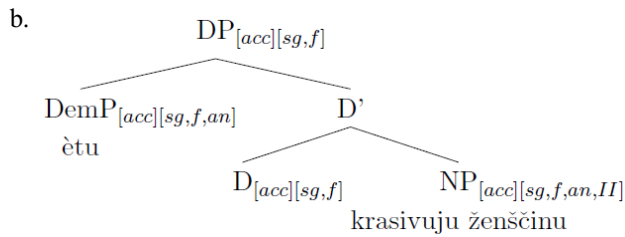
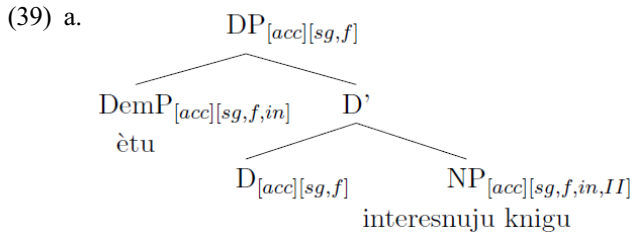
- (36) a. On čítal ètot interesnyj žurnal.  
 he read this-acc.sg.m.in interesting-acc.sg.m.in journal-acc.sg.m.in.I  
 “He read the interesting journal.”
- b. On znaet ètogo molodogo pisatelja.  
 he knows this-gen.sg.m.an young-gen.sg.m.an writer-gen.sg.m.an.I  
 “He knows this young writer.”



In (37a), while the unvalued features on D probe the valued ones on NP and get valued as [sg, m], the unvalued features on DemP first probe down to the valued ones on D. At this point, the animacy feature on DemP is not valued. Therefore, it seeks the valued animacy feature in its c-command domain and finds the valued animacy feature on NP, acquiring the value [in]. Finally, the accusative case is assigned to DP. Since the nominal phrase lacks a valued animacy feature [an], the case value [acc] percolates down to all the elements. When it comes to the structure (37b), almost the same results are obtained at the point when the accusative case is assigned to the DP. However, the animacy feature on DemP is valued as [an]. This means that the GEN rule applies at DemP, and DemP is assigned the genitive case. Moreover, when the case value [acc] percolates down to NP, the rule again applies because NP has the features [m, an, I]. For this reason, the NP is also assigned the genitive case.

For the feminine nouns, irrespective of their animacy, the GEN rule does not apply in the expected manner.

- (38) a. On čítal ètu interesnuju knigu.  
 he read this-acc.sg.f.in interesting-acc.sg.f.in book-acc.sg.f.in.II  
 “He read the interesting book.”
- b. On videl ètu krasivuju ženščinu.  
 he saw this-acc.sg.f.an beautiful-acc.sg.f.an woman-acc.sg.f.an.II  
 “He saw this beautiful woman.”



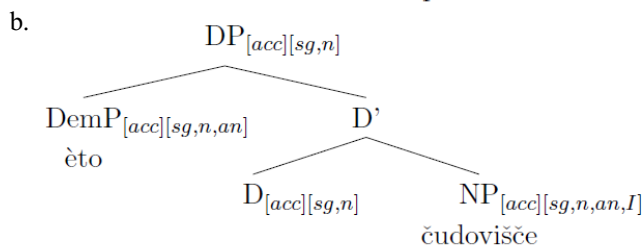
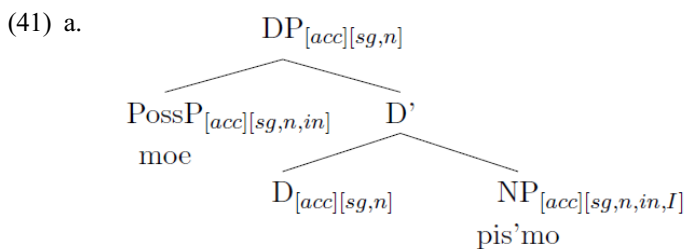
In (39a, b), since all the features have the value [f], the GEN rule cannot be applied.

When it comes to neuter nouns, the gender feature [n] blocks the application of the GEN rule in all the elements, just like the gender value [f] does in the above examples.

- (40) a. [...] polučil moe pis'mo [...]  
 got my-acc.sg.n.in letter-acc.sg.n.in.I  
 “got my letter”

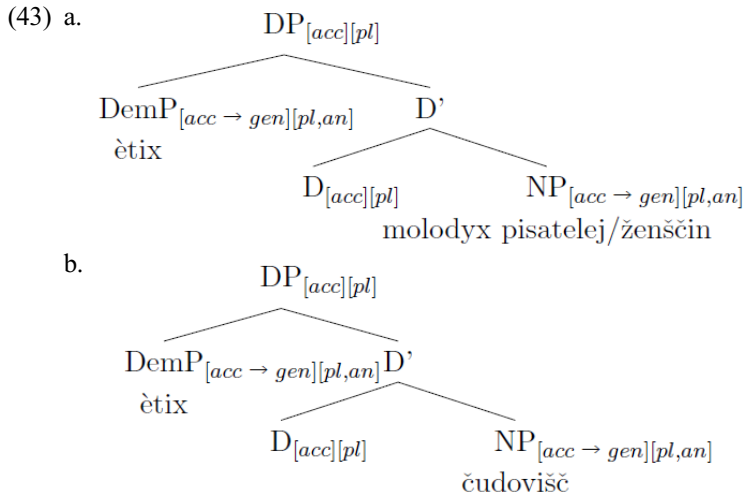
(RNC 2020.08.20)

- b. On ubil èto čudovišče.  
 he killed this-acc.sg.n.an monster-acc.sg.n.an.I  
 “He killed this monster.”



Finally, when nouns are valued as [pl, an], the grammatical case marking patterns are derived by the GEN rule. This time, as in the masculine animate nouns, the rule applies twice at [Spec, DP] and at NP, because they have the animacy feature [an].

- (42) a. On znaet ètix molodyx { pisatelej / ženščin }.  
 he knows this-gen.pl.an young-gen.pl.an writer-gen.pl.an woman-gen.pl.an  
 “He knows these young writers/women.”
- b. On ubil ètix čudovišč.  
 he killed this-acc.pl.an monster-acc.pl.an  
 “He killed these monsters.”



As is illustrated in the above examples and the structures, the case marking patterns regarding the animacy agreement are captured even under the DP analysis, more precisely, the [Spec, DP] analysis. So far, the analysis has covered nominal phrases without numerals. The next section considers nominal phrases with numerals.

#### 4. Numeral phrases and the animacy agreement

##### 4.1. The background of numeral phrases in Russian

There has been a raging debate on numeral phrases, which consist of numerals and NP, among Russian linguistics (Mel'čuk 1980, Pesetsky 1982, 2013, Babby 1987, Franks 1994, 1995, Bailyn 2012, Pereltsvaig 2006, *inter alia*).<sup>21</sup> Some of the problems posed by numeral phrases include case marking and case assignment. As an illustration, consider the following examples.

- (44) a. pjat' stolov  
 five-nom/acc desk-gen.pl.in  
 “five desks”
- b. s pjat'ju stolami  
 with five-ins desk-ins.pl.in  
 “with five desks”

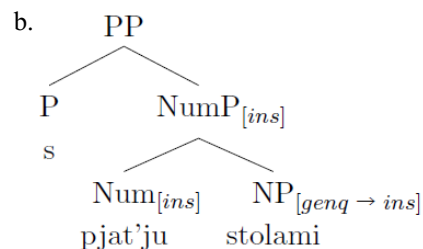
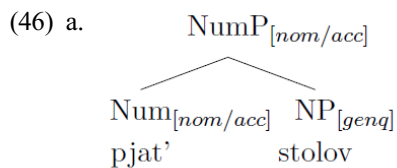
<sup>21</sup> This paper deals with only cardinal numerals from 2 to 100 and I leave for future research an analysis for the compound numerals and the complex numerals.

In (44a), while the numeral *pjat* ‘5’ stands in a nominative/accusative case,<sup>22</sup> the noun *stolov* ‘desk’ stands in a genitive case. On the other hand, in (44b), both the numeral and the noun stand in an instrumental case. Babby (1980) calls the former a *heterogeneous pattern* and the latter a *homogeneous pattern*. While the heterogeneous pattern occurs when the entire nominal phrase is in a position where the structural case is assigned, the homogeneous pattern emerges when the entire nominal phrase is assigned a lexical case.<sup>23</sup> In addition, Babby (1980, 1984a, b, 1985, 1986, 1987) and Freidin and Babby (1984) argue that a genitive case assigned by a numeral is not a lexical case, but a special “genitive of quantification.”

To derive these two case marking patterns, two main proposals regarding the structure of numeral phrases have been proposed: (i) the syntactic structure differs depending on the case assigned to nominal phrases (Franks 1994, 1995, Pereltsvaig 2006, Bailyn 2012) and (ii) regardless of the case to which nominal phrases are assigned, the syntactic structure is always the same (Babby 1987, Rappaport 2002, Pesetsky 2013). Although these two proposals have their own advantages and disadvantages, which cannot be reviewed due to space limitations, they have one common point. In a structural case environment, numerals and nouns stand in different cases (i.e., the nominative/accusative case and the genitive of quantification, respectively), while their cases are the same in a lexical case environment.

Goto (2019) notes that in a Minimalist syntax, if numerals assign a case to their complement, case overwriting appears because it is assumed that derivation proceeds step by step in a bottom up fashion by an operation Merge. To illustrate how case overwriting appears, consider the following examples.<sup>24</sup>

- (45) a. *pjat*’ *stolov*  
 five-nom/acc desk-genq.pl.in  
 “five desks”  
 b. *s pjat*’*ju stolami*  
 with five-ins desk-ins.pl.in  
 “with five desks”



<sup>22</sup> Franks (1995) and Bošković (2006) propose that they are caseless forms. In addition, Rappaport (2002) argues that they are quantitative case. For details, see these references.

<sup>23</sup> In Russian, a structural case is assumed to be nominative and accusative, while a lexical case is assumed to be genitive, dative, locative, and instrumental.

<sup>24</sup> I assume that a numeral heads Num(ral)P and takes NP as its complement.

In (46a), NP is assigned a genitive of quantification by Num when Num and NP merge. Then, after the nominative/accusative case assignment to NumP, the value [nom/acc] percolates down to Num. Since the NP has been assigned the genitive of quantification, the value [nom/acc] seems not to percolate down to NP. In (46b), the derivation at the point when NumP is constructed is the same as the one in (46a). After P merges, *s* ‘with’ assigns an instrumental case (i.e., the lexical case) to NumP. A problem then arises. Although the value [ins] successfully percolates down to Num, it must percolate down to NP to derive the correct case marking pattern. However, as in (46a), NP already has the case value [genq]. To resolve this problem, the value [genq] must be changed to [ins].

It is possible that Num may or may not assign the genitive of quantification. However, this approach faces the so-called look-ahead problem; for Num not to assign the genitive of quantification, it must be able to *see* a higher case assigner. However, structures above NumP are not constructed when Num is about to assign a case.

To eliminate the case overwriting and the look-ahead problems, Goto (2019) proposes that numerals should never assign case and word forms such as *dva* ‘2’ and *pjat* ‘5’, which are traditionally regarded as the nominative/accusative case, are actually the genitive of quantification. Furthermore, Goto (2019) proposes the following case rewriting rule (the GENQ rule).

(47) Str. Case  $\Rightarrow$  genq/  $_{+}$ [category feature *num*]

The GENQ rule holds that when a structural case is assigned to NumP, a category feature *num* changes the case value [Structural Case] to [genq] and this case value percolates down to elements that NumP dominates. As a result of the GENQ rule, numerals and nouns always receive the same case value [genq]. On the other hand, since the GENQ rule refers only to the structural case, when the lexical case is assigned to the NumP, it percolates down to all the elements, which means that case overwriting does not occur, as shown in the structure below.

(48) a. b.

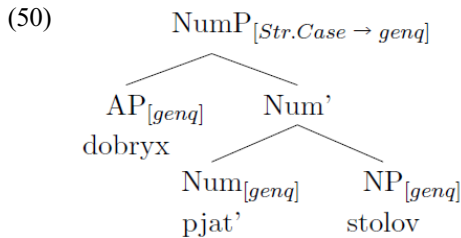
Crucially, this analysis eliminates the distinction between the heterogeneous and homogeneous patterns in NumP, which means that case marking of numerals and nouns in NumP is always the same.<sup>25</sup> In addition, the syntactic structure for NumP is also always the same, as demonstrated in Babby (1987), Rappaport (2002), and Pesetsky (2013).

<sup>25</sup> Hereafter, the value “nom/acc” is written as “genq” in glosses of examples where the structural case feature is changed to the genitive of quantification due to the GENQ rule.

The empirical advantage of this analysis is that it enables us to account for the peculiar case marking that a certain class of adjective shows without ad hoc stipulations. Adjectives such as *dobryj* ‘good’, *polnyj* ‘full’, and *celyj* ‘whole’ precede numerals and stand in the genitive of quantification. Babby (1987) refers to this type of adjective as the *dobryx*-type adjective.

- (49) *dobryx*    *pjat’*    *krasivyx*    *stolov*  
 good-genq.pl    five-genq    beautiful-genq-pl    desk-genq-pl  
 “good five beautiful desks” (Pesetsky 2013: 57)

Assuming that the *dobryx*-type adjective is base-generated in the specifier of NumP, the genitive of quantification percolates to AP, Num, and NP from NumP.



Corbett (1979) and Pesetsky (2013) propose that the *dobryx*-type adjective moves from the NP-internal position to the left position of a numeral. Criticizing the movement approach proposed by Corbett (1979) for its ad hoc nature, Babby (1987) posits a ternary branching structure for the *dobryx*-type adjective. However, his approach should also be rejected because it is standardly assumed that Merge always creates binary branching structures. However, if the proposal of this paper is on the right track, no special movement rule or ternary branching structure is required for this type of adjective.

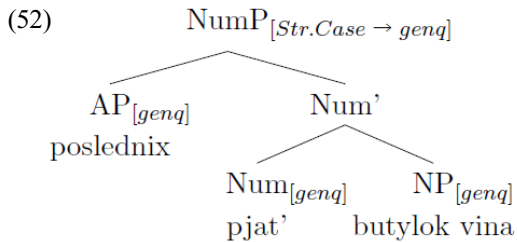
If the top-most phrase of a nominal phrase is NumP, i.e., the entire nominal phrase is headed by Num, the ungrammatical patterns in the following examples are then predicted to be grammatical and the grammatical patterns cannot be derived.

- (51) a. Ja    vypil    { poslednie / \*poslednix }    pjat’    butylok    vina.  
 I    drank    last-acc.pl/-genq-pl    five-genq    bottle-genq-pl    wine-gen.sg.m  
 “I drank the last five bottles of wine.” (Babby 1987: 118)
- b. Ja    uvidel    { èti / \*ètix }    pjat’    butylok.  
 I    saw    this-acc.pl/-genq.pl    five-genq    bottle-genq-pl  
 “I saw these five bottles.” (Babby 1987: 109)

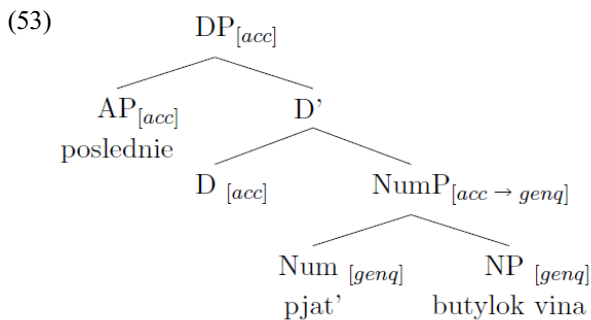
Demonstratives, possessives, and some adjectives behave differently from the *dobryx*-type

adjectives. Babby (1987) refers to these as the *poslednij*-type adjectives.<sup>26</sup> The *poslednij*-type adjectives precede a numeral and unlike the *dobryx*-type adjectives, they stand in the nominative/accusative case, not the genitive of quantification.

If the *poslednij*-type adjective is merged as the specifier of NumP, as the *dobryx*-type adjective is, it is then incorrectly assigned the genitive of quantification, as the following structure shows.



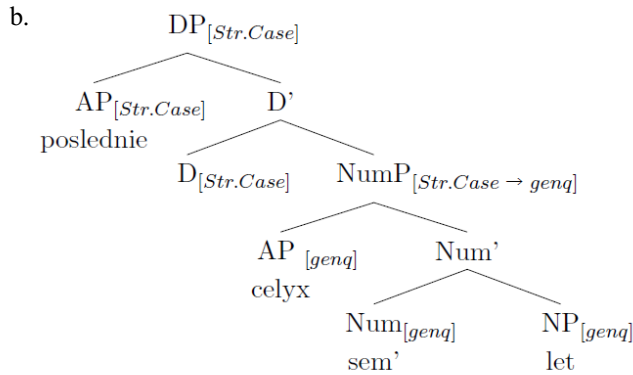
To solve this problem, Goto (2019) assumes that Russian has the DP projection above NumP and the *poslednij*-type adjective is merged in the specifier of DP. Goto further assumes that a constituent does not agree with another element in *category*. For example, adjectives agree with nouns in gender, number and animacy, but not in category. Therefore, DP-internal elements do not agree with NumP in category. This means that they do not have the category feature [*num*] as a result of Agree and the GENQ rule does not apply in a DP layer. As a result, DP-internal elements receive a structural case by percolation from the DP. However, when the structural case value percolates down to the NumP, the GENQ rule applies, as shown in the structure (53) below.



This analysis also correctly generates the following example where both the *poslednij*-type adjective and *dobryx*-type adjective are present in the same nominal phrase.

<sup>26</sup> Although I assume that the demonstrative and the possessive head DemP and PossP, respectively, I follow the terminology of Babby (1987).

- (54) a. poslednie      dobryx      sem'      let  
 last-nom/acc.pl    good-genq.pl    seven-genq.pl    year-genq.pl  
 “the whole last seven years” (Pesetsky 2013: 58)



In (54b), the DP is assigned a structural case, and it percolates down to a higher AP and D because there is no category feature *[num]* in both elements. However, at the point when it percolates down to NumP, the GENQ rule applies and the case value *[genq]* is assigned to all the elements that NumP dominates.

This derives the peculiar case marking patterns that numeral phrases display *except when a head noun is animate*.

#### 4.2. The animacy agreement and the GEN/GENQ rule

In a situation where a head noun is animate and a nominal phrase contains a numeral, the following case marking patterns appear.

- (55) a. Ja    videl    ètix      dvux    mal'čikov.  
 I    saw    this-gen.pa.an    two-gen.an    boy-gen.pa.an  
 “I saw these two boys.”
- b. Ja    videl    ètix      pjat'    mal'čikov.  
 I    saw    this-gen.pl.an    five-genq    boy-genq.pl.an  
 “I saw these five boys.”

As shown in (55), the case marking patterns are different depending on the cardinality of numerals. When numerals from 2 to 4 are present, the entire nominal phrase stands in the genitive case. On the other hand, only demonstratives stand in the genitive case when numerals from 5 and above are present in a nominal phrase.<sup>27</sup>

<sup>27</sup> Note that in the traditional analysis of numeral phrases like (55b), while demonstratives stand in the genitive case, numerals from 5 and above are assumed to be assigned the nominative/accusative case. Nouns are assigned the genitive of quantification both in the traditional analysis and the analysis of this paper. The reason why animate nouns get the genitive of quantification, even when they merge with numerals from 5 and above, will be shown below.

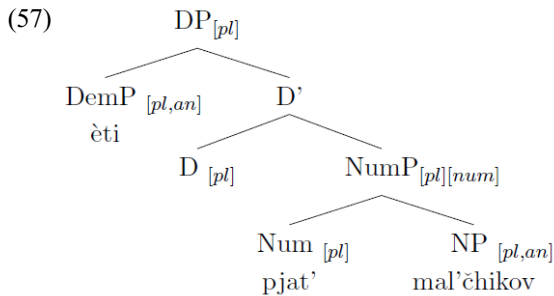


Building on Hikita's (2017, 2018, 2019) proposal, the values of the features on numerals are proposed as shown below.<sup>28</sup>

(56) The values of the features on numerals

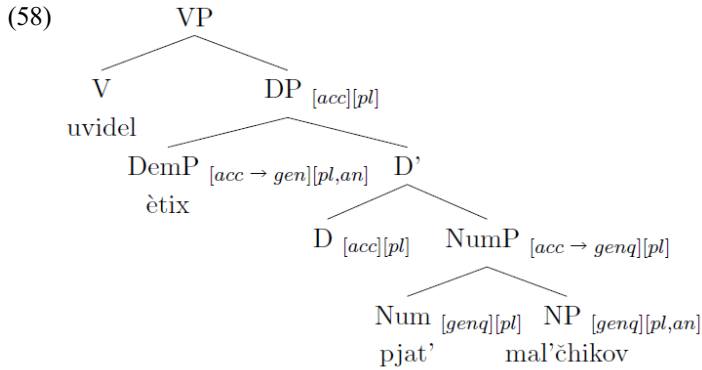
	Number	Gender	Animacy	Case
2	[pa]	[φ]	[φ]	[φ]
3, 4	[pa]	/	[φ]	[φ]
5	[pl]	/	/	[φ]
100	[pl]	/	/	[φ]

Let us first consider the example (55b). If the above values on numerals are correct, the numeral *pjat'* has the unvalued case feature and the valued number feature. Consider the following structures.



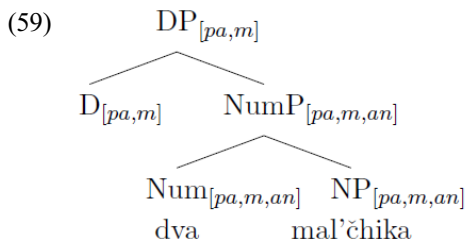
Structure (57) represents a point of derivation when the DP is constructed. The valued number feature [pl] on Num is copied onto NumP and the unvalued number feature on D gets valued as [pl] as a result of the Agree relation with the valued counterpart on NumP. Then, the unvalued number and animacy feature on DemP enters in an Agree relation with the *now-valued* feature on D. However, since D does not have the valued animacy feature as proposed in section 3, the unvalued animacy feature on DemP again searches its c-command domain and finds the valued animacy feature on NP. As a result of this, the unvalued feature on DemP is valued [pl, an] by D and NP.

<sup>28</sup> To be more precise, Hikita proposes the values of the features not only on numerals, but also other quantifiers. However, since this article does not deal with other quantifiers, I only include the feature values of numerals.

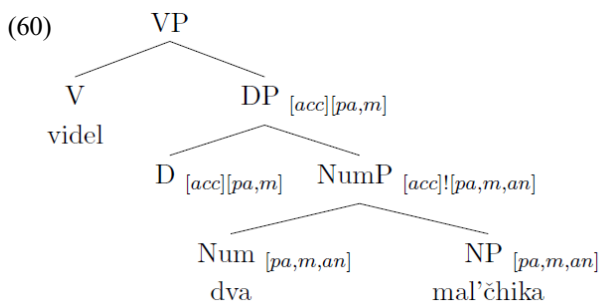


After Agree has finished in DP, V merges with the DP and assigns an accusative case to it. The case value [acc] percolates down to the elements that DP dominates. When the case value [acc] percolates to NumP, the GENQ rule applies and this case value is changed to the genitive of quantification. As a result, both Num and NP are assigned the genitive of quantification. However, since DemP in the specifier of DP has the valued animacy feature [an], the GEN rule applies and DemP receives the case valued [gen].

Next, we analyze the example (55a).



Unlike the derivation of (55b), Num not only has the valued number feature, but also the valued animacy and gender features as a result of Agree with NP. These values are copied onto NumP.



However, when V merges and assigns an accusative case to DP, as in the derivation of (55b), a problem arises. At the NumP level, the conditions of both the GEN rule and the GENQ rule are satisfied because NumP contains the valued gender and animacy features [m, an] (i.e., the

triggers for the GEN rule) and the category feature [*num*] (i.e., the trigger for the GENQ rule).

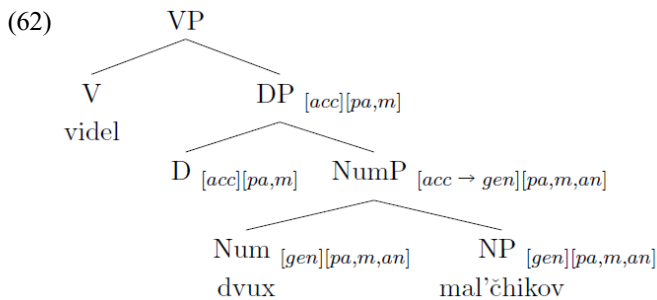
To circumvent this problem, this paper proposes that the GEN rule applies prior to the GENQ rule. This proposal derives the case marking pattern of (55a). At first glance, this rule ordering appears to be an ad hoc stipulation. However, this rule ordering is derived from the following case hierarchy proposed by Babby (1984a, b, 1985, 1986, 1987) and Freidin and Babby (1984).<sup>29</sup>

(61) Syntactic Case Hierarchy in Russian

Lexical case > Genitive of quantification > Nom/Acc (Babby 1987: 116)

The above hierarchy posits that a lexical case assignment takes precedence over an assignment of the genitive of quantification, which, in turn, takes precedence over a nominative/accusative case assignment. Although Babby originally proposes that this hierarchy accounts for the heterogeneous and homogeneous case patterns, it is adopted in this paper to derive the rule ordering.

Consider the following structure at the point when V assigns the case value [*acc*] to DP.<sup>30</sup>



This time, at the NumP level, only the GEN rule applies and the genitive case is assigned to Num and NP.

In this way, under the DP analysis of Russian nominal phrases, the different case marking patterns for numeral phrases with animate nouns are successfully derived.

## 5. Concluding remarks

This paper argued that the GEN rule proposed by Hikita (2015, 2017, 2018) is actually compatible with the DP analysis of Russian. Section 2 reviewed Hikita's (2015, 2017, 2018)

<sup>29</sup> To be more precise, Babby (1987: 116) classifies the genitive of quantification into a configurational case (i.e., the structural case) and proposes a two-way hierarchy.

(iv) Lexical case > Configurational case

Although the two-way hierarchy is more economical than the three-way one, I assume the latter because, in my analysis, both nominative and accusative cases are changed to the genitive of quantification. If these three cases were actually all configurational cases, then the GENQ rule could not apply anywhere.

<sup>30</sup> Tentatively, I assume that nouns have a full case paradigm even in paucal number. However, nothing changes with the assumption that paucal nouns have only the genitive of quantification as proposed by Hikita (2015, 2017, 2018, 2019).

proposals while section 3 examined the two possibilities under the DP hypothesis, i.e., the demonstratives/possessives-as-D analysis and the [Spec, DP] analysis. The conclusion is that the latter analysis better accounts for the case marking patterns assuming that D in Russian does not have the animacy feature. In section 4, following Goto (2019), the paper posits that the numeral from 2 to 100 does not assign a case to its complement and that the structural case is changed to the genitive of quantification by the GENQ rule.

In addition, building on Hikita’s (2017, 2018, 2019) proposal, the following feature values on numerals are made:

(63) The values of the features on numerals

	Number	Gender	Animacy	Case
2	[pa]	[φ]	[φ]	[φ]
3, 4	[pa]	/	[φ]	[φ]
5	[pl]	/	/	[φ]
100	[pl]	/	/	[φ]

These proposals successfully obtained the grammatical case marking patterns with animate nouns. However, for numerals from 2 to 4, a problem arises at the NumP level because both the GEN rule and the GENQ rule are applicable there. To solve this problem, this paper proposes that the GEN rule be applied prior to the GENQ rule.

Of course, many unresolved problems remain. First, as Franks (1995) reports, when numerals from 2 to 4 merge with animate nouns, genitivization is not always required. The GEN rule cannot generate the non-genitivized version because the GEN rule applies prior to the GENQ rule.

- (64) a. Ja videl četyre soldata.  
 I saw four-genq soldier-genq-pa.m.an  
 b. Ja videl četyrex soldat.  
 I saw four-gen soldier-gen-pa.m.an

“I saw the four soldiers” (Franks 1995: 156)

Interestingly, these two patterns are related to the (im)possibility of the so-called approximative inversion.

- (65) a. Ja videl sodata četyre.  
 I saw soldier-genq-pa.m.an four-genq  
 b. Ja videl soldat četyrex.  
 I saw soldier-gen-pa.m.an four-gen  
 “I saw approximately four soldiers.”

(Franks 1995: 167)

Second, the tentative assumption in this paper is that in numeral phrases such as *dvux studentov* ‘two students (gen)’, the number feature of the nouns is paucal, although their morphological forms are seen in plural nouns. The issue is deciding the number features that the nouns have. In addition, if such nouns are actually plural, then it is important to ascertain how the number feature can be changed from paucal to plural in a satisfactory manner?

Finally, there is a fundamental question: Why is it that only singular masculine animate type-I nouns and all plural animate nouns (not singular feminine and neuter nouns) are assigned the genitive case by the GEN rule and not vice versa? What does this imply for Russian morphosyntax?

Although there are still many questions that future research on Russian nominal morphosyntax needs to answer, this paper hopefully sheds some light on the nature of nominal phrases in Russian.

## References

- Abney, Steven. 1987. The English noun phrase in its sentential aspect. Doctoral Dissertation, MIT.
- Babby, Leonard. 1980. The syntax of surface case marking. *Cornell working papers in linguistics* 1:1-32.
- Babby, Leonard. 1984a. Case conflicts and their resolution. *Cornell working papers in linguistics* 6:1-21.
- Babby, Leonard. 1984b. Prepositional quantifiers and the direct case condition in Russian. In *Issues in Russian morphosyntax*, ed. Michael Flier and Brecht Richard, 91-117. Columbus, Ohio: Slavica publishers.
- Babby, Leonard. 1985. Noun phrase internal case agreement in Russian. *Russian linguistics* 9:1-15.
- Babby, Leonard. 1986. The locus of case assignment and the direction of percolation: Case theory and Russian. In *Case in Slavic*, ed. Richard Brecht and James Levine, 170-219. Slavica publishers.
- Babby, Leonard. 1987. Case, prequantifiers, and discontinuous agreement in Russian. *Natural language and linguistic theory* 5:91-138.
- Bailyn, John. 2012. *The syntax of Russian*. Cambridge: Cambridge University Press.
- Bailyn, John and Andrew Nevins. 2008. Russian genitive plurals are imposters. In *Inflectional identity*, ed. Asaf Bachrach and Andrew Nevins, 237-270. Oxford: Oxford University Press.
- Bošković, Željko. 2005. On the locality of left branch extraction and the structure of NP. *Studia linguistica* 59:1-45.
- Bošković, Željko. 2006. Case and agreement with genitive of quantification in Russian. In *Agreement systems*, ed. Cedric Boeckx, 99-120. Amsterdam: John Benjamins publishing company.

- Bošković, Željko. 2009. More on the no-DP analysis of article-less languages. *Studia linguistica* 63:187-203.
- Bruening, Benjamin. 2020. The head of the nominal is N, not D: N-to-D movement, hybrid agreement, and conventionalized expressions. *Glossa: A journal of general linguistics* 5(1), 15:1-19.
- Corbett, Greville G. 1979. Adjective movement. *Nottingham linguistic circular* 8: 1-10.
- Corbett, Greville G. 1991. *Gender*. Cambridge: Cambridge University Press.
- Corbett, Greville G. 2006. *Agreement*. Cambridge: Cambridge University Press.
- Chomsky, Noam. 2000. Minimalist inquiries: The framework. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89-155. Cambridge: MIT press.
- Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1-52. Cambridge: MIT Press.
- Cinque, Guglielmo. 2010. *The syntax of adjectives: A comparative study*. Cambridge: MIT Press.
- Citko, Barbara. 2014. *Phase theory: An introduction*. Cambridge: Cambridge University Press.
- Franks, Steven. 1994. Parametric properties of numeral phrases in Slavic. *Natural language and linguistic theory* 12: 597-674.
- Franks, Steven. 1995. *Parameters of Slavic morphosyntax*. Oxford: Oxford University Press.
- Freidin, Robert, and Leonard Babby. 1984. On the interaction of lexical and syntactic properties: Case structure in Russian. *Cornell working papers in linguistics* 6:71-103.
- Halle, Morris. 1994a. The morphology of numeral phrases. In *Annual workshop of formal approaches to Slavic linguistics: The MIT meeting*, ed. Sergey Avrutin, Steven Franks, and Ljiljana Progovac, 178-215. Ann arbor: Michigan Slavic Publications.
- Halle, Morris. 1994b. The Russian declension: An illustration of the theory of distributed morphology. In *Perspectives in phonology*. 29-60. Stanford: CSLI publications.
- Hikita, Go. 2015. Roshiego no yuseisei no itti ni tuite [On animacy agreement in Russian]. *Roshiago Kenkyu [Issues in Russian linguistics]* 25: 43-82.
- Hikita, Go. 2017. Roshiego no meishiku no kouzou to bunpousosei ni tuite [The structure of Russian nominal phrases and their grammatical features]. *Roshiago Kenkyu [Issues in Russian linguistics]* 27: 33-66.
- Hikita, Go. 2018. Roshiego no sei sosei to hoka no sosei no soukan kankei [Russian gender features and their correlations with other features]. *Roshiago Kenkyu [Issues in Russian linguistics]* 28: 41-76.
- Hikita, Go. 2019. Roshiego no shousu suryoushi wo megutte [Some remarks on Russian paucal quantifiers]. *Roshiago Kenkyu [Issues in Russian linguistics]* 29: 91-128.
- Isačenko, Aleksandr. 1954. *Grammaticeskij stroj russkogo jazyka v sopostavlennii s slovackim*. Bratislava: Izdatel'stvo slovackoj akademii nauk.
- Levine, Maurice. 1978. *Russian declension and conjugation: A structural description with*

- exercises*, Columbus: Slavica Publishers.
- Mel'chuk, Igor'. 1980. O padeže čislovogo vyraženiija v russkix slovosočetanijax tipa (*bol'she*) *na dva mal'čika ili po troe bol'nyx*, *Russian linguistics* 5: 55-74.
- Goto, Yusuke. 2015. Roshiago ni okeru sei no tairitu ni tuite-itti no kanten kara– [Some remarks on the gender distinction of nouns in Russian – A view from agreement –]. *Slaviana* 7(29):49-60.
- Goto, Yusuke. 2017. Roshiago ni okeru yuseisei ni kansuru itti to seino tairitu ni tuite [Animacy agreement and the gender distinction in Russian]. *Slavic culture studies* 15:119-135.
- Goto, Yusuke. 2019. Numeral phrases in Russian and case assignment [Roshiago ni okeru suushiku to kakuhuyo ni tuite]. *Proceedings of the 159th meeting of the Linguistic society of Japan*. (available at: [http://www.ls-japan.org/modules/documents/LSJpapers/meeting/159/159\\_contents.html](http://www.ls-japan.org/modules/documents/LSJpapers/meeting/159/159_contents.html))
- Pereltsvaig, Asya. 2006. Small nominals. *Natural language and linguistic theory* 24:433-500
- Pereltsvaig, Asya. 2007. The universality of DP: A view from Russian. *Studia linguistica* 61:59-94.
- Pereltsvaig, Asya. 2010. As easy as two, three, four? In *Annual workshop of formal approaches to Slavic linguistics 18: The Cornell Meeting*, ed. Browne, Adam Cooper, Alison Fisher, Esra Kesici, Nikola Predolac and Draga Zec, 418-435. Ann arbor: Michigan Slavic Publications.
- Pesetsky, David. 1982. Paths and categories. Doctoral Dissertation, MIT.
- Pesetsky, David. 2013. *Russian case morphology and the syntactic categories*. Cambridge: MIT Press.
- Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture: syntactic derivation and interpretation*, ed. Simin Karimi, Vida Samiian and Wendy K. Wilkins, 262-294. Amsterdam: John Benjamin Publishing Company.
- Rappaport, Gilbert. 2002. Numeral phrases in Russian: A minimalist approach. *Journal of Slavic linguistics* 10: 327-340.
- Rappaport, Gilbert. 2003. The grammatical role of animacy in a formal model of Slavic morphology. In *American contribution to the 13<sup>th</sup> international congress of Slavists*, ed. Robert, A. Maguire, Alan Timberlake, 149-166, 1: Linguistics, Bloomington: Slavica.
- Reinhart, Tanya. 1976. The syntactic domain of anaphora. Doctoral Dissertation, MIT.
- Scott, Gary-John. 2002. Stacked adjectival modification and the structure of nominal phrases. In *Functional structure in DP and IP*, ed. Guglielmo Cinque, 91-120. Oxford: Oxford University Press.
- Švedova, Natalija et al. 1980. *Russkaja grammatika*. Moscow: Nauka.
- Zaliznjak, Andrej. 1964. K voprosu o grammatičeskix kategorijax roda i oduševlennosti v sovremennom russkom jazyke. *Voprosy jazykoznanija* 4. 25-40.