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ON PLURAL AUGMENTS AND COMPLEX SUFFIXES IN RUSSIAN

Slavistics in Verona (Sliv@), April 4, 2024

1. ONE PUZZLE OF RUSSIAN PLURALS

Russian nominative plural has two productive allomorphs:

And two non-productive ones, [e] (e.g., *cigán/cigáne* ‘Gypsy.SG/PL’) and [i] (e.g., *číórt/čéerti* ‘devil.SG/PL’)

(1) [i] (= non-palatalizing [i]): unaccented, combines with non-neuter stems

a.	<i>zavód</i> ‘plant’	<i>zavódi</i> ‘plants’	<i>zavódami</i> ‘plants.INS’	accented stem
b.	<i>lébedi</i> ‘swan’	<i>lébedi</i> ‘swans’	<i>lebedíami</i> ‘swans.INS’	unaccented stem

(2) [a]: accented (the original IE neuter plural)

a.	<i>ognívo</i> ‘(fire) steel’	<i>ogníva</i> ‘steels’	<i>ognívami</i> ‘steels.INS’	accented stem
b.	<i>móre</i> ‘sea’	<i>morjá</i> ‘seas’	<i>morjámi</i> ‘seas.INS’	unaccented stem

Historically, [a] is the neuter plural nominative ending, [i] is the elsewhere case

Oblique plural forms are accented and all except genitive begin with [a]: PL.DAT -*ám-*, PL.LOC -*áx-*, PL.INS -*ámi-*

Modern Russian has exceptions in both directions (and exceptions have exceptions):

- *a*- plurals of non-neuter nouns (including **augmented plurals**, the topic of this talk)
- non-*a*- plurals of neuter nouns (see Appendix 3)

This talk is about stress interaction of plural augments with the plural ending -*a*:

(3)

a.	<i>brat/bráta</i> ‘brother.M.NOM/GEN’	→ <i>brátija</i> ‘brother.PL’
b.	<i>kn’az/kn’áz’a</i> ‘prince.M.NOM/GEN’	→ <i>kn’azjá</i> ‘prince.PL’
c.	<i>kriló/krilá</i> ‘wing.N.NOM/GEN’	→ <i>krílja</i> ‘wing.PL’

General intuition: semantic/syntactic features like animacy should not affect stress placement, so when they seem to, the reason must be elsewhere (here: constituency)

The reason for an augment is a formal specification making it impossible for a root to combine with a plural suffix directly

Roadmap:

- accentual dominance in Russian plural endings (not to be analyzed here)
- accentual interaction in a language with lexical stress
- stress patterns of augmented plurals: stem-final and inflectional stress
- inanimate plurals: the augment is accented
- the role of animacy in augmented plurals: for [+human] augmented nouns the plural ending is non-dominant
- implementation: stress assignment in complex affixation

2. NON-NEUTER PLURAL -A AND THE PLURAL AUGMENT -*ĭj-*

2.1. Accentual dominance of non-neuter *a*-plurals

Standard Russian: only [–feminine] nouns can have plurals in -*a*-

Zaliznjak 1967a:2331 notes substandard [a]-plurals for 3decl nouns, e.g., *krovjá* ‘blood.PL’

Bromley and Bulatova 1972:102-103, Iordanidi 2020: dialectally, all classes of nouns may have plurals in -*a*

The transcriptions below closely follow Russian orthography and do not indicate: (a) palatalization before front vowels (/Ci/ → [Ci], /Ce/ → [Ce]), (b) various vowel reduction phenomena in unstressed syllables, (c) voicing assimilation and final devoicing. Stress is marked by an acute accent on the vowel. The yers (abstract high lax unrounded vowels) are represented as /i/ (front) and /ǔ/ (back). The letters *ч* (IPA [tɕ]), *ш* (IPA [ʂ]), *ж* (IPA [ʒ]), *щ* (IPA [ɕɕ]), and *ц* (IPA [tɕ]) are traditionally rendered as *č*, *š*, *ž*, *šč*, and *c*.

The non-neuter plural suffix *-a-* is accented and dominant:

- (4) a. *proféssor* ‘professor.NOM’ *professorá* ‘**professor.PL.NOM**’
 proféssora ‘**professor.GEN**’ *professorámi* ‘professor.PL.INS’
 b. *flígeli* ‘(house) wing.NOM’ *fligeliá* ‘**(house) wing.PL.NOM**’
 fligelia ‘**(house) wing.GEN**’ *fligeliámi* ‘(house) wing.PL.INS’

There exist no non-neuter *a*-plurals that have stress on the stem

Two exceptions: **augmented plurals in *-ěj-*** (the topic of this talk) and the suppletive “baby-diminutive” suffix *-inŭk-* ([iɔnok], plural *-int-* [jat], see Gouskova and Bobaljik 2022)

2.2. Augmented plurals in *-ěj-*

The augment *-ěj-* combines with nouns of (apparently) all genders and all declensions classes: Zaliznjak 2010 lists 55 nouns with this augment, 12 of which have no corresponding singular

- (5) a. *grózdi/grózdi* ‘cluster.F.NOM/GEN’ → *grózdja* ‘cluster.PL’ feminine (unique)
 b. *brat/bráta* ‘brother.M.NOM/GEN’ → *brátijsa* ‘brother.PL’ masculine
 c. *kriló/krilá* ‘wing.N.NOM/GEN’ → *krilija* ‘wing.PL’ neuter
- (6) a. *díadija/diadjá* ‘uncle.SG/PL’ a-declension (unique)
 b. *grózdi/grózdja* ‘cluster.SG/PL’ ĭ-declension (unique)
 c. *kriló/krilija* ‘wing.SG/PL’ o-declension
 d. *kn’azi/kn’azjá* ‘prince.SG/PL’ C-declension

In practice, only two augmentable nouns belong to the [+ feminine] *a-* and *ĭ-*declensions

The front yer in the underlying representation of the suffix surfaces when it is followed by the zero allomorph of the genitive plural suffix:

- (7) *kn’azi/kn’ázia* ‘prince.M.NOM/GEN’ → *kn’azjá/kn’azéj* ‘prince.PL.NOM/GEN’

The position of stress in the plural will be shown to be predictable

3. RUSSIAN LEXICAL STRESS

Garde 1968a, b, 1998, Halle 1973, Zaliznjak 1985, Melvold 1989, etc.: the position of Russian lexical stress is primarily determined by the underlying accentuation of various morphemes

- **Accented morphemes** carry an accent on themselves (open class)
- **Post-accenting** and **pre-accenting morphemes** set accent on the next or previous syllable correspondingly: while there are no pre-accenting roots, the class of post-accenting roots is large (Halle 1973:316 asserts that there are more than 2000 of them) but closed
- **Unaccented morphemes** have no accentual specification of their own (closed class estimated to contain more than 400 roots)

If none of the morphemes is dominant:

- (8) **The Basic Accentuation Principle** (Kiparsky and Halle 1977):
Assign stress to the leftmost accented vowel; if there is no accented vowel, assign stress to the initial vowel.

Setting aside the phenomenon of plural retraction (Zaliznjak 1963, 1967b, 1977a, Halle 1973, 1975, Melvold 1989, Brown et al. 1996, etc.); it will not be relevant here

3.1. Nominative plural and nominal stress

An accented stem will bear stress for all endings, an unaccented stem exhibits variance between initial and inflectional stress:

- (9) a. *zavód* ‘plant’ *zavódi* ‘plants’ *zavódami* ‘plants.INS’ accented stem
 b. *lébedi* ‘swan’ *lébedi* ‘swans’ *lebedíami* ‘swans.INS’ unaccented stem

Russian has six universally recognized cases, whose **exponents in non-feminine declension classes are all unaccented in the singular** (Garde 1968a, b, 1998, Halle 1973, Melvold 1989, etc.)

The same is true for the vocative and the partitive; the second-locative exponents are accented and dominant

Plural oblique endings are all accented

Unaccented non-feminine stems exhibit initial stress in the singular (alternating with post-stem stress in the plural oblique cases)

Plural nominative *-i-* is unaccented (9b), plural nominative *-a-* is accented:

- (10) a. *ognívo* ‘(fire) steel’ *ogníva* ‘steels’ *ognívami* ‘steels.INS’ accented stem
 b. *móre* ‘sea’ *moriá* ‘seas’ *moriámi* ‘seas.INS’ unaccented stem

The non-neuter plural nominative *-a-* is accented and dominant:

- (11) a. *proféssor* ‘professor.NOM’ b. *professorá* ‘professor.PL.NOM’
proféssora ‘professor.GEN’ *professorámi* ‘professor.PL.INS’

Stress in (11a) is neither final (as expected from a post-accenting stem) nor initial (as expected from an unaccented stem), which means that the stem is accented (see also Worth 1983)

Stress in (11b) is inflectional

The non-neuter *-a* therefore has to be **accented and dominant** (see also Coats 1976, Zaliznjak 1963, 1967a, b, 1985, Worth 1983, Alderete 1999:166, Timberlake 2004:136, Munteanu 2021)

Accentual dominance is usually implemented as the deletion of all accents from the base stem

3.2. Augmented plural stress patterns

Augmented plurals in *-ěj-* exhibit two stress patterns:

- stem-final stress for all inanimate nouns irrespective of their gender or the position of the stress in the singular (e.g., *kólos/kolós’ja* ‘ear (of a cereal).SG/PL’) and one animate noun (*brat/brát’ja* ‘brother.SG/PL’)
- inflectional stress for all remaining animate nouns (e.g., *déver’i/dever’já* ‘husband’s brother.SG/PL’)

While the dominance of the accented nominative plural *-a* depends on gender, the accentuation of the plural augment *-ěj-* depends on animacy

It seems highly unlikely that the plural augment *-ěj-* can be pre-accenting or post-accenting in function of animacy

Proposal: augmentation involves two different structures in function of animacy

4. INANIMATE AUGMENTED PLURALS

The *-ěj-* augment is pre-accenting: stress surfaces before the augment irrespective of the position of the stress in the singular:

- (12) a. *kop'íl, kop'ílá* 'wooden hoe.NOM/GEN' → *kop'ílja* 'wooden hoes'
 b. *kólos, kólosa* 'ear (of a cereal).NOM/GEN' → *kolósja* 'ears (of a cereal)'
- (13) a. *dérevo* 'tree' → *derévja* 'trees'
 b. *pomeló* 'broom' → *pomélja* 'brooms'
 c. *koléno* 'elbow, joint' → *kolénja* 'elbows, joints'

To ensure the distinction between accented and unaccented stems, use only disyllabic stems (5 masculines, 4 neuters)

Nouns with medial stress (neither initial, not final) must have accented stems

Puzzle: no masculine-triggered dominance (12a): **even though the nominative plural ending is -a, stress needs not be inflectional with masculine nouns**

All nouns in (55) have pre-augment stress in the plural

It might seem that *-ǐj-* does something to circumvent the accentual dominance associated with the masculine (which we still don't know the source of)

The answer comes from morphosyntax: what is the augment for?

4.1. Accentual obviation

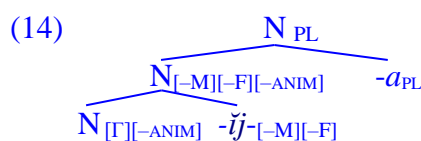
Suppose stems requiring augmentation in the plural cannot take regular plural morphology

The augment *-ǐj-* is introduced to enable plural marking, and, like most suffixes of Russian, it is specified for phi-features

If the augment *-ǐj-* is lexically specified [-M][-F] (i.e., as neuter), *-ǐj-* augmented stems would not be masculine

4.1.1. Morphosyntax

Like any derivational suffix specified for gender, *-ǐj-* overrides the gender specification of the nominal stem:



The gender of the nominal stem (Γ) does not matter

The nominative plural suffix is not accentually dominant because the stem it combines with is not masculine

4.1.2. Morphophonology

Because **the *-ǐj-* augmented nominal stem (14) is neuter**, the plural suffix *-a* is non-dominant and can never be stressed if preceded by another accent

This other accent is introduced by the augment *-ǐj-*:

- (15) a. *pomeló, pomelá* 'broom.N.NOM/GEN' → *pomélja* 'brooms' post-accenting stem
 b. *dérevo, déreva* 'tree.N.NOM/GEN' → *derévja* 'trees' can be an unaccented stem
 c. *koléno, koléna* 'elbow, joint.N.NOM/GEN' → *kolénja* 'elbows, joints' accented stem

Hypothesis: *-ŷj-* is underlyingly accented:

- Halle 1973, 1975, 1997, Melvold 1989, etc.: stress assigned to an unvocalized yer is shifted one syllable to the left
- The augment *-ŷj-* contains a yer (which can surface in the genitive plural, and then it is stressed, e.g., *mužéj* ‘husband.PL.GEN’)

If initial stress in the singular indicates that the stem is unaccented, stress is determined by the augment:

- (16) a. *dérevo, déreva* ‘tree.N.NOM/GEN’ unaccented stem
b. *derev + ŷj → derev + ŷj → derévŷj* accented yer-containing suffix
c. *derévŷj + a → derévja* ‘trees’ accented ending

Stem-final stress indicates that the stem is an accented one, stress remains on the same syllable:

- (17) a. *koléno, koléna* ‘elbow, joint.N.NOM/GEN’ accented stem
b. *kolen + ŷj → kolén + ŷj → kolénŷj* accented yer-containing suffix
c. *kolénŷj + a → kolénja* ‘elbows, joints’ accented ending

Post-stem stress: the stem is post-accenting and assigns an accent to the augment, but as the yer-containing augment cannot bear stress, it is moved to the stem-final syllable:

- (18) a. *pomeló, pomelá* ‘broom.N.NOM/GEN’ post-accenting stem
b. *pomel + ŷj → pomel' + ŷj → pomélŷj*
c. *pomélŷj + a → pomélja* ‘brooms’

The same outcome would be achieved if the augment *-ŷj-* were treated as simply pre-accenting: its accent would precede the accent of the stem (see Garde 1998:125 for other cases of a post-accenting stem followed by a pre-accenting suffix)

There is no need to treat the suffix *-ŷj-* as dominant, but it must bear an accent

But there is a class of masculine *-ŷj-*augmented nouns with **inflectional stress in the plural**

4.2. The role of animacy

Nine *-ŷj-*augmented nouns surface with **inflectional stress in the plural** (and stem stress in the singular):

- All are kinship nouns (i.e., animate; animacy is a grammatical feature in Russian)
- All have monosyllabic stems
- Only one noun belongs to the *a*-declension, the rest belong to the C-declension

One animate noun does not have inflectional stress in the plural:

- (19) a. *z'ati/z'atjá* ‘daughter’s husband.SG/PL’ regular animate augmented
b. *d'ádia/d'adjá* ‘uncle.SG/PL’ *a*-declension augmented
c. *brat/brátja* ‘brother.SG/PL’ stem-stress animate augmented

All *pluralia tantum* in *-ŷj-* (e.g., *xlópija* ‘flakes’) are inanimate and none have inflectional stress in the plural

4.3. Intermediate summary

Assuming that the augment *-ŷj-* yields neuter stems explains why augmented masculine nouns do not take the dominant plural ending

The hypothesis that *-ŷj-* is accented accounts for the obligatory stem-final stress for all types of singular stems

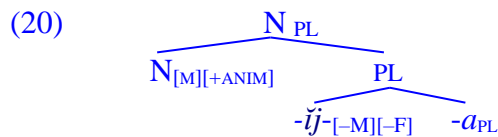
Inflectional stress in nine out of the ten animate augmented plurals requires an explanation:

- (i) if the ending *-a-* is dominant in augmented animate plurals, why is the plural *brátja* ‘brothers’ an exception?
- (ii) if it is not, what happens to the accent introduced by the augment *-ǐj-*?

A principled question: independent evidence for the gender of the augment *-ǐj-* (Appendix 2)

5. ANIMATE AUGMENTED PLURALS

Proposal: complex suffix formation:



The plural suffix combines with a non-masculine node, so it is not dominant (but still accented)

5.1. Morphophonology

The complex PL node is a phonological cycle

Both suffixes are underlyingly accented, but a yer cannot bear stress, so the accent shifts to the case ending:

(21) $\underline{\text{ǐj}} + \underline{\text{a}} \rightarrow \text{ǐj}\acute{\text{a}}$

The accent of the augment is either deleted or coalesces with the plural accent

An unaccented stem would yield inflectional stress in the plural:

- (22) a. *z'atj/z'atjǎ* ‘daughter’s husband.SG/PL’ unaccented stem
 b. *z'atj + ǐjǎ* → *z'atjǎ*

Stem stress in the plural can arise from either an accented or a post-accenting specification:

- (23) a. *brat/brátja* ‘brother.SG/PL’
 b. *brat + ǐjǎ* → *brátja* accented stem
 c. *brat_ + ǐjǎ* → *brat' + ǐjǎ* → *brátja* post-accenting stem

Since a yer cannot bear stress, the accent assigned by a post-accenting stem is shifted to the left (cf. (18))

Most animate augmented plurals have unaccented stems

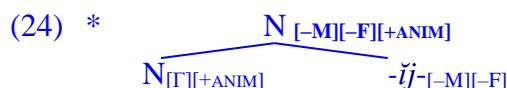
Actually, a post-accenting stem could lead to inflectional stress (if the yer is deleted in the complex suffix), and this might explain something about stress in genitive plurals

Caveat: one animate augmentable noun, *diádja* ‘uncle’, has an accented stem in the singular. See Appendix 1 for a discussion

5.2. Morphosyntax

Why must such a complex suffix be formed?
 And why only with animates?

Proposal: the suffix *-ǐj-* is incompatible with animate stems:



The neuter specification of *-ŷj-* overrides the gender specification of the nominal stem (cf. the German diminutive suffix *-chen*)

But **neuter animates are not allowed in Russian** (e.g., *čudóvišče* ‘monster’ is grammatically inanimate (in the singular; in the plural it can be animate))

The formation of the complex suffix enables pluralization of animate *singularia tantum* stems without creating an animate neuter:

- Stankiewicz 1968:39, Timberlake 2004:130, Wiese 2004:352, Pertsova 2015:231, etc.: Russian has no gender distinctions in the plural
- Gender features are impoverished in the context of [+ plural], so the complex PL node is not specified for gender and **there is no conflict with animacy any more**

The complex suffix *-ŷj-a-* can combine with an animate stem

The masculine stem is will not render the plural suffix *-a* dominant because they are not local enough with respect to each other

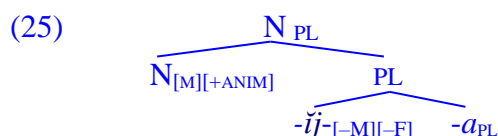
6. CONCLUSION AND POSSIBLE ALTERNATIVES

Plural augmentation in Russian involves:

- a nominal stem that is incompatible with plural morphology (see Appendix 2)
- a neuter suffix *-ŷj-* that creates a pluralizable stem; the suffix is accented but cannot bear stress
- the plural suffix *-a*, which does not become dominant because all augmented stems are specified as neuter (even when the base stem is masculine)

This combination entails **obligatory stem-final stress for inanimate augmentable nouns**

The incompatibility of the neuter suffix with an animate stem forces the formation of a complex plural suffix:



The unstressability of the augment yer forces stress in the complex plural suffix to surface on the inflection (unless the stem is accented)

Open question: **why is *-a* dominant in masculine plurals?**

6.1. Viable alternative: stress retraction

The so-called Pattern D (Zaliznjak 1963, 1967b, 1977a, Halle 1973, 1975, Brown et al. 1996, and Dubina 2012, among others; Melvold’s B’, Osadcha’s Pattern 4): stem-final stress in the plural, but not in the singular:

Table 1: Retraction in the plural, Zaliznjak’s patterns *d* and *d'*

suffix/accent singular stress	accented SG.NOM	unaccented SG.ACC	unaccented PL.NOM	accented PL.INS	Zaliznjak- class
post-stem: <i>zmej-</i> ‘snake’	<i>zmej-á</i>	<i>zmej-ú</i>	<i>zméj-i</i>	<i>zméj-ami</i>	d’ (230)
variant: <i>zim-</i> ‘winter’	<i>zim-á</i>	<i>zim-u</i>	<i>zím-i</i>	<i>zím-ami</i>	d (14)

Retraction can apply to both unaccented and post-accenting stems

The augment *-ĭj-* can be unaccented, with the stem-final stress in inanimates due to retraction:



No retraction in animate stems, hence final stress in the augmented plural

The stem in *brat/brátja* ‘brother.SG/PL’ is accented, so retains stem stress

No complex suffixes needed?

But then why is retraction triggered only in inanimates?

Complex suffix formation provides both the mechanism and the trigger

Furthermore, there exists no proper theory of stress retraction

Alderete 1999, Butska 2002, Feldstein 2006, 2017, Dubina 2012, Yanovich and Steriade 2010, Osadcha 2019: the choice of the appropriate plural form is driven by the contrast between the singular and the plural forms. Since the juxtaposition of the singular and the plural is limited to a finite number of nominal stems, the question is what property characterizes these particular stems to derive all these patterns

6.2. Could the plural ending *-a* be dominant for animate augmented plurals?

Final stress in animate augmented plurals could be due to the fact that masculine is the default for animate nouns (cf. Magomedova and Slioussar 2023)

A dominant nominative plural ending entails obligatory inflectional stress

Problem: the stem-stressed noun *brat* ‘brother’ cannot be accounted for

There is no self-evident way for obtaining stem stress with a dominant ending

Alderete 1999, 2001: there are no dominant roots

7. APPENDIX 1: THE CHOICE OF THE EXCEPTION

Animate augmentable nouns are actually not uniform in the singular or in the plural:

- *d’ádja/d’adjá* ‘uncle.SG/PL’ behaves like it has an accented stem in the singular, which suggests that the ending is dominant
- *brat/brátja* ‘brother.SG/PL’ has stem stress in the plural, which argues against the accentual dominance of the ending

Two potential resolutions: either *brat* ‘brother’ or *d’ádja* ‘uncle’ should be an exception

7.1. Stem stress in the animate *a*-declension stem

All C-declension singular endings are unaccented, so unaccented and accented stems cannot be distinguished in the singular

In the *a*-declension singular endings are accented except for accusative (Garde 1968a, b, 1998, Halle 1973, Melvold 1989, etc.):

		SG.NOM	SG.ACC	PL.NOM	PL.INS	TRANSLATION	ENDING ACCENT
(27)	a.	<i>ruká</i>	<i>rúku</i>	<i>rúki</i>	<i>rukámi</i>	'hand'	unaccented
	b.	<i>máma</i>	<i>mámu</i>	<i>mámi</i>	<i>mámami</i>	'Mommy'	accented
	c.	<i>d'ád'a</i>	<i>d'ád'u</i>	<i>d'adjá</i>	<i>d'adjámi</i>	'brother of a parent'	accented

If the stem of *d'ád'a* 'uncle' were...:

- post-accenting, systematic final stress would wrongly be expected: **d'ad'á*/**d'ad'ú*
- unaccented, the accented nominative singular ending would wrongly be predicted to inflectional stress: **d'ad'á*/✓*d'ád'u*

The singular *d'ád'a* 'uncle' behaves like it has an accented stem, so **stem stress is expected in the plural** (cf. (22b))

This suggests that the plural nominative ending *-a* is dominant for animate augmented plurals, but then *brat/brátja* 'brother.SG/PL' in (22b) would not be expected

The dialectal *bratjá* is in fact attested (reported by two of my informants)

7.2. Plural collectives

Some augmented plurals in *-j-* are **fake mass pluralia tantum** nouns (like *clothes*; no singular):

- (28) a. *otrébja* '(human) rabble.PL' (cf. *otrébje* 'rabble, trash.N')
b. *loxmótja* 'rags', *xlópja* 'flakes'

Like other *pluralia tantum* nouns, such collectives cannot combine with cardinals

The noun *d'ád'a* 'uncle' has both a plural collective and a regular plural:

- (29) a. *d'adjá* 'brothers of a parent'
b. *d'ádi* 'uncles'

Only the latter is compatible with a cardinal:

- (30) *semi* *d'ad-ej*/**d'adi-j-ev*
seven uncle-PL.GEN/AUG-PL.GEN
seven uncles

No instances of *d'adjá* with a cardinal in the Russian National Corpus (RNC). Occurrences are attested with (seemingly non-restrictive) collective cardinals (i.e., *my two uncles*)

The morphologically regular *d'ádi* 'uncles' has the same broader interpretation as the singular, unlike *d'adjá* 'brothers of a parent'

7.3. Other augmented/regular plural doublets

Some apparent doublets involve different semantics:

- (31) a. *koléno/koléni* 'knee.SG/PL' -i plural
b. *koléno/koléna* 'dance move.SG.NOM/PL.NOM' -a plural
c. *koléno/kolénja* 'joint, elbow.SG.NOM/PL.NOM' augmented plural

The regular form may be non-default:

- (32) a. *sin/sinovjá* 'son.SG/PL' doubly augmented plural
b. *sin/siní* 'descendant (of an abstract entity).SG/PL' -i plural

In some doublets the augmented form is a *pluralia tantum* fake mass noun:

Diagnosed by the lack of appearance with a cardinal in the [Russian National Corpus](#) (RNC)

- (33) a. *loskút/loskutí* ‘shred.M.SG/PL’ plural
b. *loskútja* ‘shreds’ fake mass

This explains *grozdi* ‘bunch’, the only feminine/third-declension noun that appears to take the plural augment (the regular form *grózdi* ‘bunches.PL’ also exists):

- (34) a. *grozdi/grózdi* ‘bunch.SG/PL’ plural
b. *grózdija* ‘bunches’ (cf. archaic masculine singular *grozd* ‘bunch’) fake mass

The augmented plural noun *grózdija* ‘bunches’ is a fake mass noun:

Out of the 5 people I checked none accepted the augmented plural in the context of a numeral, three disallowed it also under negation (while accepting the non-augmented plural), and one exhibited ineffability

- (35) a. *semj list-ji-ev*
seven leaf-AUG-PL.GEN
seven leaves
b. *semj ?grozdej/*grozdjev*
seven bunches
seven bunches
c. U nas net ?grozdej/?grozdjev.
at/by us NEG bunches
We have no bunches.

Since the regular plural is difficult too, the evidence that it is a *plurale tantum* is weak

On the general phenomenon of ineffability of certain genitive plurals in Russian see Sims 2006, Bailyn and Nevins 2008, Pertsova 2014, 2015, etc.

Others are simply stylistic variants:

- (36) a. *kámeni/kámni* ‘stone.SG/PL’ plural
b. *kámeni/kaménja* ‘(precious) stone.SG/PL’

As the same suffix *-ŷj-* can create plurals as well as singular and plural fake mass nouns (28b), its versatility should be subject to separate investigation (Appendix 2)

8. APPENDIX 2: THE ROLE OF THE AUGMENT

Hypothesis: stems requiring augmentation in the plural cannot take regular plural morphology because **they are underlyingly specified as singular**

Distinguish two number features:

- the morphosyntactic feature [α plural]: can be set as [+plural] by agreement with a higher head (either Link’s (1983) *-operator or a cardinal), an underlying [+ plural] yields *pluralia tantum* nouns, like *časí* ‘watch’)
- the morphosemantic feature [α aggregate]: an underlying [+ aggregate] correlates with fake mass nouns (*singularia tantum*)
- the combination of an underlying [+ aggregate] with [+ plural] correlates with *pluralia tantum* fake mass nouns

The combination [–aggregate][+plural] is ruled out:

- either because [+ plural] semantically entails [+ aggregate]
- or because the [plural] node is a dependent of the [aggregate] node in the feature geometry

The role of the augment is to override the [– aggregate] feature of the nominal stem

8.1. Why [α aggregate]?

Ionin and Matushansky 2004, 2006, 2018: cardinals combine with atomic (singular) nouns

The nominal feature [α plural] cannot be semantic (see also Matushansky and Ruys 2015a, b, Ruys 2017)

Assuming that augmentable nouns are specified as [– plural] does not explain why they cannot be used as-is in plural contexts

The distinction between aggregates and plurals is semantic (and also permits the differentiation between count and mass *pluralia tantum* nouns)

8.2. Vocabulary insertion for -*ĭj*-

The suffix -*ĭj*- forms occasional neuter fake mass counterparts of *pluralia tantum* (e.g., *otrĕbje* ‘rabble, trash.N’, cf. *otrĕbja* ‘(human) rabble.PL’), but also genuine neuter collectives:

- (37) a. *duračjŏ* ‘fools’ (cf. *durák* ‘fool’) neuter mass
b. *višĕnjje* ‘cherries, cherry trees’ (cf. *višnja* ‘cherry’)

Important: in (37) the suffix -*ĭj*- is derivational, meaningful and introduces aggregation that does not translate into syntactic plurality

So the exponent -*ĭj*- is used (minimally) in three contexts:

- (i) to create augmented plurals
- (ii) to create fake mass *singularia tantum*
- (iii) to create fake mass *pluralia tantum*

In the first case the feature [+ aggregate] is not interpretable (semantically, *listj*- in (35a) should be atomic and acquire the plural feature from the cardinal)

In the other two cases the feature [+ aggregate] corresponds to the lexical semantics of a fake mass noun

Underspecification:

- (38) -*ĭj*- \leftrightarrow [+aggregate][–M][–F]

The augment and the suffix correspond to different underlying structures:

- The augment is just a feature bundle, [–M][–F][α plural][α aggregate]. The unvalued plural feature is valued in the context of the higher semantic plurality (either Link’s (1983) *-operator or a cardinal). Assuming that [+plural] entails [+aggregate], once the augment’s plural feature has been valued, (38) can be used as its exponent
- The meaningful suffix contains the interpretable feature [+aggregate] by virtue of its semantics, and since its formal [α plural] feature is not valued (and not entailed by [+aggregate]), further pluralization is possible

Semantically, the augment is null (or corresponds to an identity function: $\lambda x . x$)

One way of achieving this would be via **allosemy** (see Marantz 2013; on semantic deletion in complex suffixes see Matushansky 2023a, b)

9. APPENDIX 3: SOME OTHER ATYPICAL PLURALS

9.1. Other augmented plurals

Two types of augmented plurals (setting aside stem suppletion): plural only and derivational
Up to five nouns form their plural with the augment *-es-*, which is also used in other derivation:

- (39) a. *nébo/nebesá* ‘sky’, cf. *nebésnij* ‘celestial’
b. *čúdo/čudesá* ‘miracle’, cf. *čudésnij* ‘miraculous’, but also *čúdnij* ‘wonderful’
c. *drévo/drevesá* ‘tree’ (obsolete, the normal form is *dérevo*), cf. *drevésnij* ‘wood’
d. *slóvo/slovesá* ‘word’ (obs., the normal plural is *slová*), cf. *slovésnij* ‘oral, verbal’
e. *télo/telesá* ‘body’ (obs., the normal plural is *telá*), cf. *telésnij* ‘corporal’

Nouns derived with the **baby-diminutive** suffix *-ňuk-* (Gouškova and Bobaljik 2022; surface [jɔnɔk] in the nominative, [jɔnɔk] in obliques) form their plural with the suffix *-ňnt-* [jat]), which takes the nominative in [a] (and this -a- is non-dominant, indicating that the suffix *-ňnt-* [jat] is also neuter):

- (40) a. *riši*
lynx III.NOM_{FSG}
lynx
b. *riši-onok*
lynx-ONOK.NOM_{MSG}
baby lynx
c. *riši-ata*
lynx-ONOK.NOM_{PL}
baby lynxes

Derivation can be only based on the plural stem (*jagnjáčij* ‘baby lamb_A’, *telátina* ‘calf meat’), sometimes without the baby diminutive semantics (e.g., *medvežátina* ‘bear meat’)

Singulatives in *-in-* (Geist and Kagan 2023) have plurals in *-e-*:

The plural suffix *-e-* is not attested anywhere else in nouns but is present in the functional adjectives *te* ‘those’, *vse* ‘all.PL’ and *obe* ‘both.F.PL’. The former two also exhibit [e] in the instrumental singular (*tem* ‘that.SG.INS’, *vsem* ‘all.SG.INS’). The [e] in (41) could be purely orthographic, as in unstressed syllables /e/ is neutralized to [i].

- (41) a. *graždanin* ‘citizen’ *gráždane* ‘citizens’
b. *krestjānin* ‘peasant’ *krestjāne* ‘peasants’

The suffix *-in-* can exceptionally form regular plurals (e.g., *osetín/osetīni* ‘Ossetian.SG/PL’)

9.2. Neuter non-a-plurals

Two types of exceptions: systematic ones (k-final) and lexical ones (5 nouns)

Diminutive neuters in [k] have *i*-plurals:

The change to the surface [i] is obligatory after velars

- (42) a. *plátje/plátja* ‘dress_N.SG/PL’ → *plátjiško/plátjiški* ‘dress_N.DIM.SG/PL’ -išik-
b. *ózero/zióra* ‘lake_N.SG/PL’ → *ozerkó/ozerki* ‘lake_N.DIM.SG/PL’ -ík-
c. *kolesó/koliósa* ‘wheel_N.SG/PL’ → *koliósiko/koliósiki* ‘wheel_N.DIM.SG/PL’ -ik-

- (43) historically derived: *očkó/očki* ‘(sports) point.SG/PL’, *drévko/drévki* ‘staff.SG/PL’,
uškó/uški ‘eye of a needle.SG/PL’

And in general, **k-final neuters have i-plurals** unless the ending is stressed (see Dvoryankova 2023 for a discussion):

- (44) *jábloko/jábloki* ‘apple.SG/PL’, *líko/líki* ‘bast.SG/PL’, *véko/véki* ‘eyelid.SG/PL’

In fact, the opposite generalization makes more sense: **k-final neuters have i-plurals** except:

- (45) *óblako/oblaká* ‘cloud.SG/PL’, *vójsko/vojská* ‘army.SG/PL’

There is one non-k neuter with a plural in *-i-*:

- (46) a. *br'úxo/br'úxi* 'belly.SG/PL' (vs. *líxo/líxa* 'trouble', *éxo/éxa* 'echo')
b. *ígo/íga* 'yoke.SG/PL', *blágo/blágá* 'welfare.SG/PL'

And four more neuters with plurals in [i], diagnosed by palatalization:

- (47) a. regular: *koléno/koléni* 'knee.SG/PL'
b. velar: *plečó/pléči* 'shoulder.SG/PL', *uxo/úši* 'ear.SG/PL', *óko/óči* 'eye.SG/PL'

All in all, there are very few neuters with non-*a*-plurals that are not diminutives

10. APPENDIX 4: GENITIVE PLURAL

Two genitive plural allomorphs in augmented plurals: *-ŭ-* and *-ov-* (never *-ej-* because [j] is underlyingly non-palatalized)

All inanimate augmented plurals (stem-final stress) take genitive plural in *-ov-*, as does the only clearly accented animate stem (49):

	SG.NOM	SG.GEN	PL.NOM	PL.GEN	
(48) a.	<i>dévevo</i>	<i>déveva</i>	<i>derévja</i>	<i>derévjev</i>	'tree'
b.	<i>koléno</i>	<i>koléna</i>	<i>kolénja</i>	<i>kolénjev</i>	'elbow, joint'
(49)	<i>brat</i>	<i>bráta</i>	<i>brátja</i>	<i>brátjev</i>	'tree'

For other animates: the choice of an allomorph is not determined either by stress or by the final consonant of the stem:

	SG.NOM	SG.GEN	PL.NOM	PL.GEN	
(50) a.	<i>z'at'</i>	<i>z'át'a</i>	<i>z'atj'á</i>	<i>z'atj'óv</i>	'daughter's husband'
b.	<i>kn'azi</i>	<i>kn'áz'a</i>	<i>kn'azj'á</i>	<i>kn'az'éj</i>	'prince'

With doubly augmented stems, same augment, same stress patterns:

	SG.NOM	SG.GEN	PL.NOM	PL.GEN	
(51) a.	<i>sín</i>	<i>sína</i>	<i>sínovj'á</i>	<i>sínov'éj</i>	'son'
b.	<i>kum</i>	<i>kúma</i>	<i>kumovj'á</i>	<i>kumovj'óv</i>	'fellow godparent'

Hypothesis: not all nouns that are stem-stressed in the singular have the same accentuation

11. APPENDIX 5: FULL LISTS OF ANIMATE AND DISYLLABIC STEMS

11.1. Ten animate nouns requiring an augment in the plural

Nine of them have inflectional stress in the plural:

	SG.NOM	SG.GEN	PL.NOM	PL.GEN	
(52) a.	<i>z'at'</i>	<i>z'át'a</i>	<i>z'atj'á</i>	<i>z'atj'óv</i>	'daughter's husband'
b.	<i>š'úrin</i>	<i>š'úrina</i>	<i>š'urj'á</i>	<i>š'urj'óv</i>	'wife's brother'
c.	<i>déver'</i>	<i>dévera</i>	<i>deverj'á</i>	<i>deverj'óv</i>	'prince'
d.	<i>kn'azi</i>	<i>kn'áz'a</i>	<i>kn'azj'á</i>	<i>kn'az'éj</i>	'husband's brother'
e.	<i>muž</i>	<i>múža</i>	<i>mužj'á</i>	<i>muž'éj</i>	'husband'
f.	<i>drug</i>	<i>drúga</i>	<i>druzj'á</i>	<i>druz'éj</i>	'friend'
g.	<i>d'ád'a</i>	<i>d'ád'i</i>	<i>d'adj'á</i>	<i>d'adj'óv</i>	'brother of a parent'
(53) a.	<i>sín</i>	<i>sína</i>	<i>sínovj'á</i>	<i>sínov'éj</i>	'son'
b.	<i>kum</i>	<i>kúma</i>	<i>kumovj'á</i>	<i>kumovj'óv</i>	'fellow godparent'
(54)	<i>brat</i>	<i>bráta</i>	<i>brátja</i>	<i>brát'ev</i>	'brother'

All these nouns are animate (or more precisely, human):

- All are kinship nouns
- All have monosyllabic stems: the root in (52b) is *-šur-*, *-in-* is a singulative suffix (see Geist and Kagan 2023), the root in (52f) can be regarded as pseudo-pleophonic (see Worth 1983)
- One noun (52g) belongs to the *a*-declension. The alternative plural form *díadi* has a broader distribution (can be used with numerals and for non-kin adult males) and is preferred
- Two of them have a derivational augment in addition to the plural one (53)

One animate noun does not have inflectional stress in the plural (54)

The realization of the **genitive plural** does not seem to correlate with the position of the stress

However, as **animate augmented plurals have monosyllabic stems**, accented and unaccented stems cannot be distinguished in the singular; maybe this is where the solution lies

Furthermore, Russian has a class of monosyllabic masculine stems that are post-accenting in the plural and bear stem stress in the singular (Zaliznjak 1977b)

11.2. Nine disyllabic inanimate nouns requiring an augment in the plural

Stem-initial stress is regarded as lack of stem accentuation:

- (55) a. *kopíl, kopilá* ‘wooden hoe.M.NOM/GEN’ post-accenting stem
budíli, budiljá ‘dry stem or stalk.M.NOM/GEN’
- b. *póvod, pívoda* ‘rein.M.NOM/GEN’ can be an unaccented stem
kólos, kólota ‘ear (of a cereal).M.NOM/GEN’
póloz, póloza ‘runner (of a sleigh).M.NOM/GEN’
- (56) a. *pomeló, pomelá* ‘broom.N.NOM/GEN’ post-accenting stem
b. *dévevo, déveva* ‘tree.N.NOM/GEN’ can be an unaccented stem
c. *koléno, koléna* ‘elbow, joint.N.NOM/GEN’ accented stem
poléno, poléna ‘log.N.NOM/GEN’

21 more inanimate augmentable nouns are monosyllabic

12 *pluralia tantum* inanimate stems in Zaliznjak 2010 + 3 identified here

12. REFERENCES

- Alderete, John D. 1999. Morphologically Governed Accent in Optimality Theory. Doctoral dissertation, Rutgers University.
- Alderete, John D. 2001. Dominance effects as transderivational anti-faithfulness. *Phonology* 18(2), 201-253. doi:10.1017/S0952675701004067.
- Bailyn, John, and Andrew Ira Nevins. 2008. Russian genitive plurals are impostors. In *Inflectional Identity*, ed. by Asaf Bachrach and Andrew Ira Nevins, 237–270. Oxford: Oxford University Press.
- Bromley, Sofia V., and Lydia N. Bulatova. 1972. *Очерки морфологии русских говоров [Essays on the Morphology of Russian dialects]*. Moscow: Nauka.
- Brown, Dunstan, Greville Corbett, Norman M. Fraser, Andrew Hippisley, and Alan Timberlake. 1996. Russian noun stress and network morphology. *Linguistics* 34, 53–107.
- Butska, Luba. 2002. Faithful stress in paradigms: nominal inflection in Ukrainian and Russian. Doctoral dissertation, Rutgers University.
- Coats, Herbert S. 1976. *Stress Assignment in Russian I: Inflection*. Current Language and Linguistics 9. Edmonton: Linguistic Research.

- Dubina, Andrei. 2012. Towards a Tonal Analysis of Free Stress. Doctoral dissertation, Radboud University Nijmegen.
- Dvoryankova, Y.V. 2023. Формы именительного падежа множественного числа имён существительных [Forms of the nominative plural of nouns]. *Русская филология и национальная культура [Russian philology and national culture]* 1(6), 17–29. doi:10.37724/m6319-0631-7945-c.
- Feldstein, Ronald F. 2006. Accentual base forms of Russian nouns and their relation to nominative and genitive endings. In *Studia Caroliensia: Papers in Linguistics and Folklore in Honor of Charles E. Gribble*, ed. by Robert A. Rothstein, Ernest A. Scatton and Charles E. Townsend, 1–11. Bloomington, Indiana: Slavica.
- Feldstein, Ronald F. 2017. On binary oppositions and distributions in the Russian stress system. *Glossos* 13, 1–18.
- Garde, Paul. 1968a. *L'accent*. Paris: Presses Universitaires de France.
- Garde, Paul. 1968b. Les propriétés accentuelles des morphèmes dans les langues slaves. *Revue des Études Slaves*, 29–37, https://www.persee.fr/doc/slave_0080-2557_1968_num_47_1_1954.
- Garde, Paul. 1998. *Grammaire russe: phonologie et morphologie* [2nd edition]. Paris: Institut d'études slaves. [First published in 1980].
- Geist, Ljudmila, and Olga Kagan. 2023. Deriving members of social groups with *-in-* in Russian Paper presented at *SinFonJA 16: Workshop on systems of nominal classification*, Masaryk University in Brno, September 21-23, 2023
- Gouskova, Maria, and Jonathan David Bobaljik. 2022. The lexical core of a complex functional affix: Russian baby diminutive *-onok*. *Natural Language & Linguistic Theory* 40(4), 1075–1115. doi:10.1007/s11049-021-09530-1.
- Halle, Morris. 1973. The accentuation of Russian words. *Language* 49, 312–348.
- Halle, Morris. 1975. On Russian accentuation. *The Slavic and East European Journal* 19(1), 104–111. doi:10.2307/306217.
- Halle, Morris. 1997. On stress and accent in Indo-European. *Language* 73, 275–313.
- Ionin, Tania, and Ora Matushansky. 2004. A singular plural. In *WCCFL 23: Proceedings of the 23rd West Coast Conference on Formal Linguistics*, ed. by Benjamin Schmeiser, Vineeta Chand, Ann Kelleher and Angelo Rodriguez, 399–412. Stanford: CSLI.
- Ionin, Tania, and Ora Matushansky. 2006. The composition of complex cardinals. *Journal of Semantics* 23(4), 315–360. doi:10.1093/jos/ffl006.
- Ionin, Tania, and Ora Matushansky. 2018. *Cardinals: The Syntax and Semantics of Cardinal-containing Expressions*. Cambridge, Massachusetts: MIT Press.
- Iordanidi, Sofia I. 2020. К истории именительного множественного на *-á* в именах несреднего род [On the history of the nom. pl. inflexion in *-á* of non-neuter nouns]. *Труды Института русского языка им. В.В. Виноградова [Working Papers of the V.V. Vinogradov Russian Language Institute]* 1(23), 106-123. doi:10.31912/pvrl-2020.1.6.
- Kiparsky, Paul, and Morris Halle. 1977. Towards a reconstruction of the Indo-European accent. In *Studies in Stress and Accent*, ed. by Larry M. Hyman, 209–238. Los Angeles: University of Southern California.
- Link, Godehard. 1983. The logical analysis of plurals and mass terms: A lattice theoretical approach. In *Meaning, use, and the interpretation of language*, ed. by Rainer Bauerle, Christoph Schwarze and Arnim von Stechow, 302–323. Berlin: de Gruyter.
- Magomedova, Varvara, and Natalia Slioussar. 2023. Gender variation and gender markedness in Russian nouns. *Вопросы языкознания [Questions of linguistics]* 2023(2), 7–28. doi:10.31857/0373-658X.2023.2.7-28.
- Marantz, Alec. 2013. Locality domains for contextual allomorphy across the interfaces. In *Distributed Morphology Today: Morphemes for Morris Halle*, ed. by Ora Matushansky and Alec Marantz, 95–115. Cambridge, Massachusetts: MIT Press.
- Matushansky, Ora. 2023a. Allosemy and suffixal complexes. Paper presented at *NYU Linguistics department*, September 11, 2023
- Matushansky, Ora. 2023b. Suffixal complexes and semantic deletion. Paper presented at *MorrisHalle@100, MIT*, September 8-10, 2023

- Matushansky, Ora, and E.G. Ruys. 2015a. 4000 measure NPs: another pass through the *шлюз*. In *Proceedings of FASL 23*, ed. by Małgorzata Szajbel-Keck, Roslyn Burns and Darya Kavitskaya, 184–205. Ann Arbor, Michigan: Michigan Slavic Publications.
- Matushansky, Ora, and E.G. Ruys. 2015b. Measure for measure. In *Slavic Grammar from a Formal Perspective: The 10th Anniversary FDSL Conference*, ed. by Gerhild Zybatow, Petr Biskup, Marcel Guhl, Claudia Hurtig, Olav Mueller-Reichau and Maria Yastrebova, 317–330. Frankfurt: Peter Lang.
- Melvold, Janis. 1989. Structure and stress in the phonology of Russian. Doctoral dissertation, MIT.
- Munteanu, Andrei. 2021. Homophony avoidance in the grammar: Russian nominal allomorphy. *Phonology* 38(3), 401–435. doi:10.1017/S0952675721000257.
- Osadcha, Iryna. 2019. Lexical stress in East Slavic: variation in space and time. Doctoral dissertation, University of Toronto.
- Pertsova, Katya. 2014. Morphological markedness in an OT-Grammar: zeros and syncretism. In *Proceedings of the 2013 Annual Meeting on Phonology*, ed. by John Kingston, Claire Moore-Cantwell, Joe Pater and Robert Staubs: LSA, <https://journals.linguisticsociety.org/proceedings/index.php/amphonology/article/view/33/27>.
- Pertsova, Katya. 2015. Interaction of morphological and phonological markedness in Russian genitive plural allomorphy. *Morphology* 25(2), 229–266. doi:10.1007/s11525-015-9256-1.
- Ruys, E.G. 2017. Two Dutch *many*'s and the structure of pseudo-partitives. *Glossa* 2(1), 7–33.
- Sims, Andrea D. 2006. Minding the Gaps: Inflectional Defectiveness in a Paradigmatic Theory. Doctoral dissertation, Ohio State University.
- Stankiewicz, Edward. 1968. *Declension and Gradation of Russian Substantives in Contemporary Standard Russian*. The Hague/Paris: Mouton.
- Timberlake, Alan. 2004. *A Reference Grammar of Russian*. Cambridge: Cambridge University Press.
- Wiese, Bernd. 2004. Categories and paradigms. On underspecification in Russian declension. In *Explorations in Nominal Inflection*, ed. by Gereon Müller, Lutz Gunkel and Gisela Zifonun, 321–372. Berlin: Mouton de Gruyter.
- Worth, Dean S. 1983. Conditions on á-plural formation in Russian. In *Wiener slawistischer Almanach*, 257–262.
- Yanovich, Igor, and Donca Steriade. 2010. Uniformity, subparadigm precedence and contrast derive stress patterns in Ukrainian nominal paradigms. Paper presented at *Old World Conference in Phonology 7*, Nice, January 28–30, 2010.
- Zaliznjak, Andrey A. 1963. Ударение в современном русском склонении [Stress in contemporary Russian declension]. *Русский язык в национальной школе* 1963(2), 7–23.
- Zaliznjak, Andrey A. 1967a. О показателях множественного числа в русском склонении [On the markers of plurality in Russian declension]. In *To Honor Roman Jakobson III: Essays on the Occasion of his 70th Birthday, 11. October 1966*, vol. 3, 1183–1187. The Hague: Mouton.
- Zaliznjak, Andrey A. 1967b. *Русское именное словоизменение [Russian Nominal Inflection]*. Moscow: Nauka.
- Zaliznjak, Andrey A. 1977a. *Грамматический словарь русского языка [Grammatical Dictionary of Russian Language]*. Moscow: Izdatel'stvo Russkij Jazyk.
- Zaliznjak, Andrey A. 1977b. Закономерности акцентуации русских односложных существительных мужского рода [Generalizations in the accentuation of Russian monosyllabic masculine nouns]. In *Проблемы теоретической и экспериментальной лингвистики [Issues of Theoretical and Applied Linguistics]*, vol. 8, ed. by Vladimir A. Zvegincev, 71–119. Moscow: Moscow State University.
- Zaliznjak, Andrey A. 1985. *От праславянской акцентуации к русской [From Proto-Slavic accentuation to Russian one]*. Moscow: Nauka.
- Zaliznjak, Andrey A. 2010. *Грамматический словарь русского языка [Grammatical Dictionary of Russian Language]*. Moscow: AST.