

**SECONDARY IMPERFECTIVES AND W-EPENTHESIS IN RUSSIAN**  
**Formal Descriptions of Slavic Languages (FDSL) 14, Leipzig, June 2-4, 2021**

## 1. BACKGROUND

Russian has two glides: [w] (surface [v]) and [j], which seem to alternate intervocalically in a number of environments:

- secondary imperfectives of glide-final verbs
- the genitive plural augment *-ov-/-ej-* (Halle 1994, Halle and Nevins 2004, Bailyn and Nevins 2008)
- several verbal stems with the alternation *-uj-/-ov.a-* (Lightner 1965:36)
- the verbalizing suffix *-uj-/-ov.a-* (Melvold 1990:258-265)
- some deverbal derivation (Flier 1974a, b)

Are any of these glides underlying?

**This talk:** pushing the hypothesis that [w] is not underlying as far as it can go

Structure of the talk:

1. the final glide of vowel-final athematic verbs
2. [w]-glides in secondary imperfectives
3. *-uj-/-ov.a-* verbs
4. [w]-insertion after [i̯]-roots
5. secondary imperfective formation and the status of the theme
6. secondary imperfective quirks

## 2. [W]-FINAL ATHEMATIC STEMS

Russian verbal stems may appear longer in the present (1), (2) or in the past (3):

(1) a.	<b>gnij</b> -ó-t rot-PRES-3SG <i>rots</i>	(2) a.	<b>živ</b> -ó-t live-PRES-3SG <i>lives</i>	(3) a.	<b>táj</b> -e-t melt-PRES-3SG <i>melts</i>
b.	<b>gni</b> -l-á rot-PAST-F <i>[she] rotted</i>	b.	<b>ži</b> -l-á live-PAST-F <i>[she]lived</i>	b.	<b>táj-a</b> -l-a melt-TH-PAST-F <i>[she] melted</i>

Jakobson 1948 (also Lightner 1965, 1967, Flier 1974a, b, etc.): the longer of the two stems is always the underlying one:

- stem-final vowels are deleted before vocalic suffixes (present: *-ě-I, -i-II*)
- stem-final consonants are deleted before consonantal suffixes (past: *-l-*)

Alternative (DeArmond 1975, Gladney 2013): the glides are epenthetic and verbal roots like those in (1) are vowel-final (Gladney 1985 argues that roots like (2) are glide-final)

Argumentation for Jakobson's view:

- the choice between [w] (surface [v]) and [j] in glide-final roots is unpredictable
- verbs with an [a]-theme in the past may (fail to) give rise to a stem-final glide in the present (section 5:  $\emptyset$  vs. [j] vs. [aj] in the present tense)

Evidence against this view:

- the choice is actually predictable
- Matushansky 2017: [a]-thematic verbs need to have [a]-final stems (evidence from passive past participles and secondary imperfectives)

There are **only 3 verbs that are [w]-final in the present tense**

There are several verbs surfacing with [i̯] in the past, but they all undergo ablaut (lowering) in the present tense: *-voj-/-vi-* 'howl', *-kroj-/-kri-* 'cover', *-moj-/-mi-* 'wash', *-noj-/-ni-* 'whine', *-roj-/-ri-* 'dig'

(4) Zaliznjak's (1980) class 16:

- a. жить: *-živ-/-žĭ-* 'live'
- b. плыть: *-pliv-/-plĭ-* 'swim'
- c. слыть: *-sliv-/-slĭ-* 'be known as'

The crucial case is (4a): standard orthography forbids the use of the grapheme ы ([ĭ]) after [š] and [ž] because neither can be contrastively palatalized in Russian

Hypothesis: **the root vowel in (4a) is the surface [ĭ]** rather than the [i] indicated by standard orthography (grapheme и)

Beyond those in (4), no glide-final athematic verb in Russian has [ĭ] as an underlying root vowel (or at least, as the surface vowel in the present tense) and all have [j] in the present:

(5) Zaliznjak's (1980) class 11

- a. 5 stems in -j- (before vowels) or -i- (before consonants): *-bj-/-bi-* 'beat', *-šj-/-ši-* 'sow', *-vj-/-vi-* 'weave', *-pj-/-pi-* 'drink', *-lj-/-li-* 'pour'
- b. all stems in *-ej-*, e.g., *-grej-/-gre-* 'warm up', *-smej-/-sme-* 'dare', *-u.mej-/-u.me-* 'know how', etc.

(6) Zaliznjak's (1980) class 12

- a. 2 stems in -uj- alternating with -u-: *-duj-/-du-* 'blow', *-ob.uj-/-ob.u-* 'put shoes on' (and *-raz.uj-/-raz.u-* 'take shoes off')
- b. 2 stems in -ij- alternating with -i-: *-po.čij-/-po.či-* 'go to rest', *-gnij-/-gni-* 'rot'
- c. 5 stems in -ĭ- alternating with -oj-: *voj-/-vi-* 'howl', *-kroj-/-kri-* 'cover', *-moj-/-mi-* 'wash', *-noj-/-ni-* 'whine', *-roj-/-ri-* 'dig'
- d. 1 stem in -i- alternating with -ej-: *-brej-/-bri-* 'shave'
- e. 1 stem in -e- alternating with -oj-: *-poj-/-pe-* 'sing'.

/w/ appears after /ĭ/ (if before -ě-), /j/ elsewhere (alternatively, /j/ is underlying)

How come?

Proposal: appeal to more general mechanisms of hiatus resolution in Russian; specifically, in secondary imperfectives

### 3. [W]-GLIDES IN DERIVED ENVIRONMENTS

Flier 1972, Coats 1974, Worth 1978, Swan 2015, etc.: the final [j] in stems like (1) and (3) is **underlying and alternates with [w]** in secondary imperfectives:

- |  |  |
|--|--|
| <p>(7) a. do.gnij-ó-t<br/>                 PFX.rotting-PRES-3SG<br/> <i>s/he will finish to rot</i></p> <p>b. za-bolĕj-e-t<br/>                 PFX-ail-PRES-3SG<br/> <i>[s/he] will get sick, ail</i></p> | <p>(8) a. do.gni-v-áj-e-t<br/>                 PFX.rotting-IMPF-TH-PRES-3SG<br/> <i>s/he is finishing to rot</i></p> <p>b. za-bole-v-áj-e-t<br/>                 PFX-ail-IMPF-TH-PRES-3SG<br/> <i>[s/he] is getting sick, ailing</i></p> |
|--|--|

Gladney 2013:634: [w] is hiatus-filling. This is problematic because [w] is not the fragment inserted with [e]-final verbs, like *leléjati* 'to cherish'

Matushansky 2009: this is not j/w alternation (pace Flier 1972, Coats 1974, Worth 1978): the underlying representation of the secondary imperfective suffix is *-ŭ-*

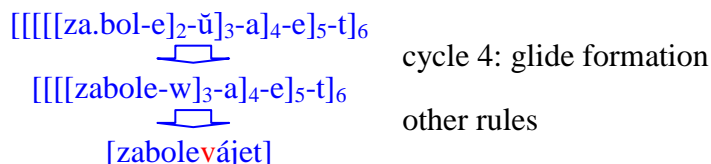
/ŭ/ gives rise to [w] intervocalically, and this is what happens in [e]-final roots:

- (9) [ŭ] → [-syll] / V \_\_ V [w]-glide formation

Assuming that the stem to which the secondary imperfective suffix attaches is *-bol.e-*, adding *-ǔ-* would yield a vowel cluster, which is resolved by glide-formation:

In Matushansky 2009 this rule applies only if another rule, the W-INSERTION rule (12) introduced below, fails. It therefore applies at the cycle that follows the insertion of *-ǔ-*

(10) secondary imperfective [v], past: *zabolevátì* ‘to be getting sick’



The rule explains (7) and (8), but is not helpful for the three verbs in (4): no underlying [ǔ]

We need glide-insertion, not glide-formation

### 3.1. [w]-insertion in secondary imperfectives

The secondary imperfective suffix in Russian has one more allomorph: the Elsewhere *-ǐv-*:

The choice between these allomorphs is lexically conditioned by the prefix-stem combination

- (11) root *-pis-* ‘write’ *-ǐv-*
- a. *pis-á-tì* ‘to write’
  - b. *pod-pis-á-tì* ‘to sign-PRF’
  - c. *pod-pís-ǐv-a-tì* ‘to sign-IMPRF’

Assuming the underlying *-ǔ-*, how do we get to the surface [ǐv]?

Matushansky 2009: in the default scenario operative with most verbs:

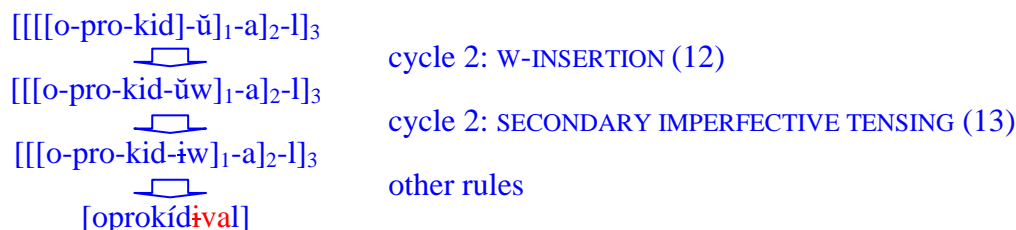
- (i) *-ǔ-* triggers W-INSERTION before the thematic suffix, and then
- (ii) the SECONDARY IMPERFECTIVE TENSING rule (13) is hypothesized to apply first to the suffix and then maybe to the verbal stem

(12)  $\emptyset \rightarrow [-\text{syll}, -\text{cons}, +\text{back}] / \text{ǔ} \_ \_ \text{V}$  w-insertion

(13)  $\text{V} \rightarrow [+ \text{ATR}]$  in secondary imperfectives secondary imperfective tensing

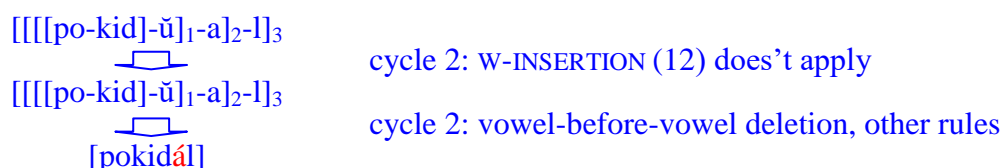
Unlike in my prior work, here W-INSERTION applies **intervocally** and the node is cyclic  
Evidence: no [w] word-finally after masculine (nominative) singular (*-ǔ*) or genitive plural (*-ǔ*) endings; ✓TS

(14) secondary imperfective [ǐv], past: *oprokídǐvatì* ‘to toss over’



The other two allomorphs of the secondary imperfective suffix (*-∅-* and *-w-*) arise with stems that are lexically marked to bypass W-INSERTION:

(15) secondary imperfective  $\emptyset$ , past: *pokidátì* ‘to abandon’



Objections and alternatives: Ø (traditionally, *-a-*) is distinct from *-iw-* and should be given a different analysis:

- Zaliznjak 1985:148: at least historically, the suffix is *-ǫw-*
- Gladney 2013:635: this is a separate allomorph *-i-* and [w] is hiatus-filling
- Swan 2015:44: the suffix is underlyingly *-oǫ-*

Problem: the Ø allomorph of the secondary imperfective can be located closer to the root than the *-iv-* allomorph (Tatevosov 2013; more in section 5):

- (16) a. [[do- [reš- Ø]] a-] t̪  
 COMPL [SOLVE<sub>PRF</sub> IMPF] TH INF  
*to finish solving* PRF
- b. [[[do- da-] v-] a-] t̪  
 [COMPL give<sub>PRF</sub>] IMPF TH INF  
*to finish solving* IMPRF

No such ambiguity can be achieved with *-iw-*

Puzzle: no 2<sup>nd</sup> conjugation i-verb gives rise to a secondary imperfective in *-v-*  
 Is this because the [iũ] sequence must be resolved into [jũ]?

### 3.2. [w]-insertion in *-uj-/ov.a-* verbalization

The **alternation *-uj-/ov.a-*** occurs with several verbal stems (Lightner 1965:36) and one very productive denominal verbalizing suffix (see Melvold 1990:258-265):

(17) *-uj-/ov.a-*: present vs. past

- |    |   |   |   |
|----|---|---|---|
| a. | kuj-ó-t<br>forge-PRES-3SG<br>'[s/he] forges'              | kov-á-l-a<br>forge-TH-PAST-F<br>'[she] forged'              |   |
| b. | plʉj-ó-t<br>spit-PRES-3SG<br>'[s/he] spits'               | plev-á-l-a<br>spit-TH-PAST-F<br>'[she] spat'                | plʉ-n-u-l-a<br>spit-SMLF-TH-PAST-F<br>'[she] spat' (once) |
| c. | kritik-új-e-t<br>critic-V-PRES-3SG<br>'[s/he] criticizes' | kritik-ov-á-l-a<br>critic-V-TH-PAST-F<br>'[she] criticized' |   |

Here [w] occurs after the surface [o], should the W-INSERTION rule be extended (12) to apply also after [o]?

Most likely not: underived [o]-final stems (e.g., *kolóti* 'to stab') do not lead to [w]-insertion  
 Though independent reasons can be given as to why this doesn't happen: these are transitive softening verbs (so the theme [o] might be replaced in the present tense), and in the past [o] is followed by a consonant

Historically, the secondary imperfective suffix *-iw-* appears to be the same as the verbalizing suffix *-ow-* (Schuyt 1990:401ff)

Proposal: the same underlying form (segmentally), different syntax, semantics and morpho-phonology:

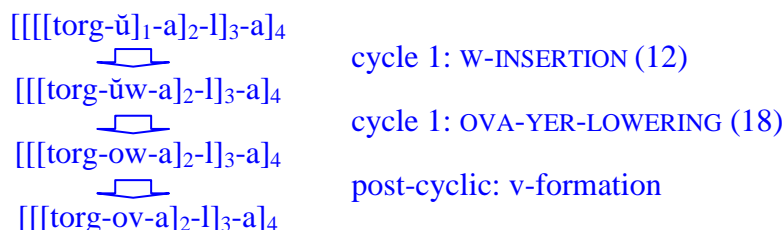
- *-iw-* is Asp (though see Tatevosov 2011, 2015, Milosavljević et al. 2021), *-ow-* is *v*
- *-iw-* selects the glide-inserting theme *-a-* (i.e., the thematic [a] is followed by [j] in the present tense), and *-ow-*, the transitive softening theme *-a-* (i.e., the thematic [a] is replaced with [j] in the present tense)
- *-iw-* is pre-accenting, *-ow-* is accented

Both are subject to [w]-insertion, but **the verbalizer undergoes lowering instead of tensing:**

- (18) V<sub>[+hi, --ATR]</sub> → [-high]/\_\_ ]<sub>v-ov</sub> ova-yer lowering [R]

Past-tense forms are derived very similarly to secondary imperfectives:

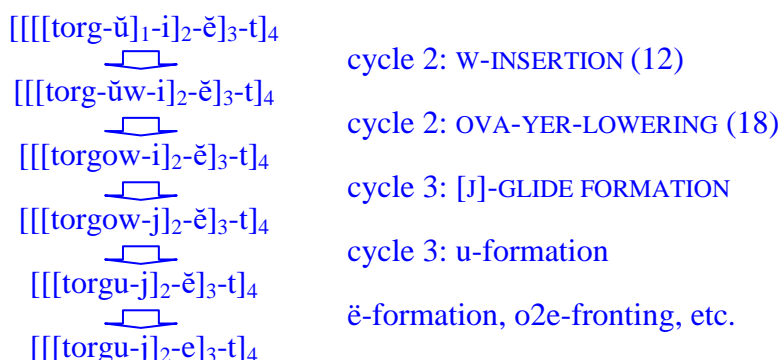
(19) *-uj-/-ov.a-* stem, past



In the present tense the theme vowel [a] disappears and in its place arises the glide [j]. This is an independently established property for a class of Russian verbs exhibiting what is known as **transitive softening** (a special kind of consonant mutation)

Melvold 1990:258-265, hypothesizing that the verbalizer is underlyingly *-ow-*, suggests that its [a] theme turns into [i] in the present tense and the [ow] sequence gets reanalyzed as [u] (see also Lightner 1967):

(20) *-uj-/-ov.a-* stem, present



Notice that here vowel sequences are resolved not by deletion but by glide-formation

This theme alternation and subsequent j-glide formation is independently needed for Russian **transitive softening** verbs (Jakobson 1929, Meillet 1934, Kortlandt 1994, Townsend and Janda 1996, *inter alii*; see Halle 1963, Lightner 1967, 1972, Coats and Lightner 1975, Bethin 1992, Brown 1998 and Matushansky 2021 for generativist analyses of the phenomenon)

Potential problem for unification and intervocalic [w]-insertion: the **7 underived -ova-/-uj-verbs** (from Garde 1998:359), which exhibit the same alternation:

(21)		PRES-3SG	PAST-F
a.	<i>-kuj-/-kov.a-</i> ‘forge’	kuj-ó-t	kov-á-l-a
b.	<i>-žuj-/-žev-</i> ‘chew’	žuj-ó-t	žev-á-l-a
c.	<i>-blʲuj-/-blev-</i> ‘throw up’	blʲuj-ó-t	blev-á-l-a
d.	<i>-snuj-/-snov-</i> ‘scurry about’	snuj-ó-t	snov-á-l-a
e.	<i>-klʲuj-/-klev-</i> ‘peck’	klʲuj-ó-t	klev-á-l-a
g.	<i>-plʲuj-/-plev.a-</i> ‘spit’	plʲuj-ó-t	plev-á-l-a
h.	<i>-suj-/-sov-</i> ‘shove’	suj-ó-t	sov-á-l-a

For three of these verbs (21f-h) in their aspectual pairs derived with the semelfactive suffix *-nu-* (perhaps, the semelfactive suffix *-n-* + the theme *-u-*) **the glide is present before [n]**:

(22) f.	<i>-klʲuj-/-klev-</i> ‘peck’:	klʲu-n-et/klʲu-nu-l ‘peck once.PRES.3SG/PAST.M’
g.	<i>-plʲuj-/-plev.a-</i> ‘spit’	plʲu-n-et/plʲu-nu-l ‘throw up once.PRES.3SG/PAST.M’
h.	<i>-suj-/-sov-</i> ‘shove’	su-n-et/su-nu-l ‘shove once.PRES.3SG/PAST.M’

Issue 2: **different accentuation**: in underived *-uj-/-ov.a-* verbs (23) stress systematically falls on the syllable after the alternating sequence, whereas derived *-uj-/-ov.a-* verbs (that are not stressed on the stem throughout) have stress on the thematic suffix ([a] in the past and on the suffix (on [u]) in the present

Conclusion: the verbs in (23) contain the [ow] sequence underlyingly

Possibility: [w]-insertion does not depend on the next segment, but it is the next segment that determines its realization (*-ov-* before vowels, *-u-* before sonorants). Most likely, no:

Problem: if [w]-insertion applies post-vocally, don't we expect [w] to appear word-finally after the masculine (nominative) singular (-ǔ) and genitive plural (-ǔ) endings?

Possible solution: [w]-insertion does not happen everywhere where its structural description is met even in secondary imperfectives

And no: the genitive plural *-ov-/-ej-* allomorphs are different, see section 5.4

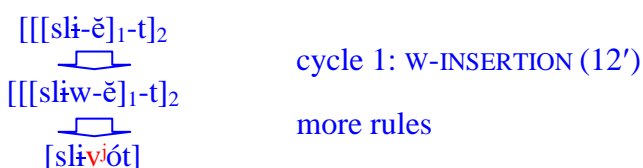
### 3.3. [w]-insertion in class 16 verbs

It is easy to modify W-INSERTION (12) so as to include the three verbs in (4):

(12')  $\emptyset \rightarrow [-\text{syll}, -\text{cons}, +\text{back}] / \check{u}, \dot{\text{z}} \_ \_ \text{V}$  w-insertion

NB: it is unlikely that the root vowel in class 16 verbs is underlyingly [ǔ]: other such roots are subject to ablauts (e.g., *mytj/moju* 'wash.INF/1SG'); but nominal derivation points towards this

(23) class 16 stem *-sliv-/-slĭ-* 'be known as', present



Gladney 1985 argues that /w/ is underlying on the basis of derived forms containing the glide: *plovéc* 'swimmer' and *preslovútyj* 'famed', to which I add *živéc* 'live bait'. This could be hiatus resolution, but why [w]?

Nothing happens in the past tense because there no hiatus arises

The only evidence that [w] is not underlying here comes from its predictability: after  
 $\text{V}_{[+\text{hi}][+\text{back}][-\text{round}]}$

The empirical gain is minimal

Problem: what about [u]? It is also [+hi][+back], and like [ǔ] (actually [o]), [+round]

## 4. INTERMEDIATE SUMMARY AND DISCUSSION

[w]-insertion is invoked for:

- the secondary imperfective suffix *-ǔ-*
- the verbalizing suffix *-ǔ-* (but not for the ǔ-final stems in (21))
- maybe: [w]-final athematic stems (Zaliznjak's (1980) class 16)

Sometimes the surface [v] is underlying (from [ǔ]), sometimes it is inserted intervocally (after [ǔ] and maybe [ĭ])

The hypothesis that the secondary imperfective suffix and the verbalizing suffix share segmental content (*-ǔ-*) is historically motivated and has some support across Slavic

The underlying form *-ǔ-* derives all three secondary imperfective allomorphs (although there are some issues, see Tatevosov 2013 and the discussion below)

The secondary imperfective tensing rule is independently motivated (Matushansky 2009)

The secondary imperfective lowering rule (18) has no independent support (and it is not clear whether it can fail like the tensing rule does)

However, there is some independent evidence that it can apply to the secondary imperfective suffix as well: the pairs *-povedati/-povedovati* ‘to let know’ and *minuti/minovati* ‘to bypass’, where the second member is imperfective, yet derived with the *-uj-/-ov.a-* suffix:

- (24) a. is.po-ved-**ov-a-l-a**  
 PFX.PFX.know-V-TH-PAST-FSG  
*confessed*<sub>FSG</sub>
- b. is.po-ved-**u-j-e-t**  
 PFX.PFX.know-V-TH-pres-3SG  
*confesses*

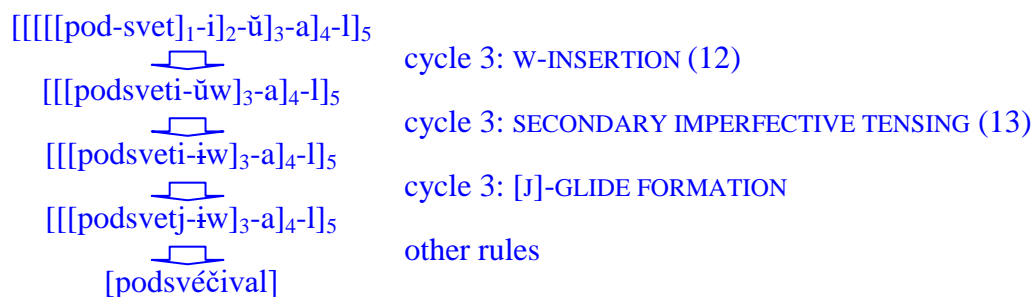
The correlation between v/Asp and the choice of the [a]-theme breaks down here (and it is not the only such case, [ava]-verbs (section 5.2.1) do it too)

## 5. VERBAL THEMES IN SECONDARY IMPERFECTIVES

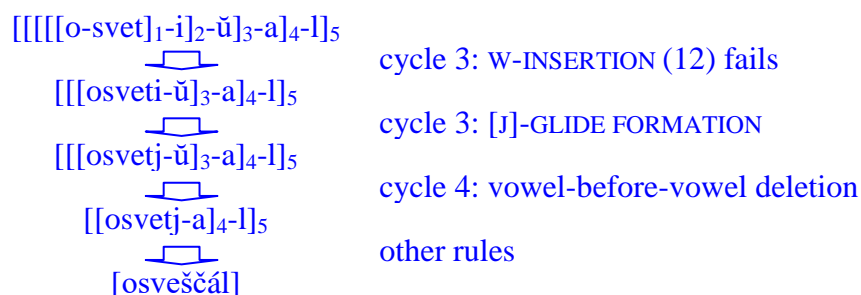
### 5.1. Second conjugation verbs and transitive softening

Transitive softening in derived imperfectives based on second conjugation verbs shows that the secondary imperfective suffix attaches outside the “theme”:

- (25) Second conjugation, default *-iv-* allomorph



- (26) Second conjugation, zero allomorph



For the open-class [i]-verbs there are **13 exceptional roots** that are perfective without a prefix or a suffix and form the secondary imperfective **without transitive softening**

5 verbs that have the zero allomorph only, for non-motion verbs the a-imperfective stem is a bound one (available only with a prefix):

- (27) a. *-kup-*: *kupítj* (*-kupájut*) ‘to buy’  
 b. *-nřz-* ‘pierce’: *-nřzítj* (*-nřzájut*)  
 c. *-rub-*: *rubítj* (*-rubájut*) ‘to chop’





- 6 verbs clearly show transitive softening: обидеть (Ø), вертеть (-iv-), сидеть (-iv-), and смотреть (-iv-); гнать (Ø) involves unexpected yer-lowering in the secondary imperfective stem (гонять, which is also pluractional), while болеть (-iv-) may involve an inherently palatalized root (*bolj* ‘pain’)
- 25 verbs clearly don’t show transitive softening: Ø: видеть, висеть, гореть, зреть, кипеть, лететь, спать; -iv-: брэнчать, визжать, глядеть, дрожать, кричать, кряхтеть, молчать, пищать, рычать, свистеть, скрипеть, сопеть, стучать, трещать, храпеть, хрустеть, зависеть, слышать; and блестеть has an archaic Ø-variant (блистать+) and stem allomorphy in the SI form (-блескивать)
- 4 stems are amenable to either analysis: бояться, держать, лежать, стоять
- others have no relevant forms

Apparent generalization: e-verbs that fail to show transitive softening are mostly sound verbs (which all form their secondary imperfective with -iv- and form deverbal nouns by a special type of null-derivation (Itkin 2013))

The remainder seem to have issues with proper aspectual pairs for quite a few stems (зреть has презирать, призирать (also призрывать) and взирать, but nothing for прозреть, узреть while озирать and надзирать have no perfective forms; зависеть ≠ зависать; видеть doesn’t have видать, except with the prefix u-, cf. завидеть, провидеть, предвидеть...) but not all of them do)

The two 2<sup>nd</sup> conjugation “themes” are not uniform

[i] mostly corresponds to *v*, and [e] is more likely to be a theme

## 5.2. First conjugation [a]-themes

1<sup>st</sup> conjugation verbs with the suffix [a] in the past tense fall into three different classes in function of its behavior in the past tense: (a) glide-insertion, (b) replacement and (c) deletion:

(35)	a. ‘read’ (productive):	PAST-FSG čita-l-a	PRES-3SG čitaj-e-t
	b. ‘write’ (60 stems + suffix -ov.a-/-uj-):	pisa-l-a	piš-e-t (< pisj-e-t)
	c. ‘suck’ (15 verbs):	sosa-l-a	sos-ë-t

(35a) has [aj] instead of [a] in the present, (35b) has [j] instead of [a]

Lightner 1965: For verbs like (35a), the stem-final [j] is deleted before the past-tense suffix:

(36)	[[[čit-aj] <sub>1</sub> -l] <sub>2</sub> -a] <sub>3</sub>	cycle 2: glide-before-consonant deletion
	[[[čita-l] <sub>2</sub> -a] <sub>3</sub>	some more rules
	[čitála]	

The same analysis is appealed to for [ej]/[e] verbs, both underived and inchoative

Lightner 1965: For verbs like (35b), a tense vowel ([a]) turns into [j] if followed by a lax one (for him, the present-tense suffix is -jo-):

(37)	[[[pis-a] <sub>1</sub> -jo] <sub>2</sub> -u] <sub>3</sub>	cycle 2: glide formation
	[[[pisj-o] <sub>2</sub> -t] <sub>3</sub>	some more rules
	[pʲišet]	

The same process takes place with the productive -uj-/-ov.a- verb class discussed above

The vast majority of [a]-verbs take the longer secondary imperfective allomorph (-*iv*-), irrespective of the properties of the theme vowel:

- (38) stem -*čit*- ‘read’+ -*aj*- present-tense -*aj*-  
 a. *čit-á-tʲ* ‘to read’  
 b. *do-čit-á-tʲ* ‘to finish reading.PRF’  
 c. *do-čit-iv-a-tʲ* ‘to finish reading.IMPRF’
- (11) root -*pis*- ‘write’ + -*a/j*- present-tense -*a/j*-  
 a. *pis-á-tʲ* ‘to write’  
 b. *pod-pis-á-tʲ* ‘to sign-PRF’  
 c. *pod-pis-iv-a-tʲ* ‘to sign-IMPRF’
- (39) stem -*sos*- ‘suck’+ -*a*- present-tense - $\emptyset$ -  
 a. *sos-á-tʲ* ‘to suck’  
 b. *ot-sos-á-tʲ* ‘to suck off.PRF’  
 c. *ot-sás-iv-a-tʲ* ‘to suck off.IMPRF’

The crucial case is (31a): if the glide before the present-tense inflection is underlying (i.e., if the suffix is -*aj*-), this surface representation is unexpected. Similar issues with PPPs

But then we need a proper theory of glide-insertion (and it is made a lot more complicated by assuming that [w] can be inserted in environments other than the secondary imperfective and the verbalizer -*uj*-/-*ov.a*-)

### 5.2.1. Three -*aj*-/-*av.a*- verbs

Three Russian verbs form their secondary imperfective with the suffix -*v*- that alternates with [j] in the present tense:

- |         |                            |        |             |        |                |
|---------|----------------------------|--------|-------------|--------|----------------|
| (40) a. | - <i>da</i> [d]- ‘give’:   | da-    | j-ó-t       | da-    | w-á-l-a        |
| b.      | - <i>sta</i> [n]- ‘stand’: | v.sta- | j-ó-t       | v.sta- | w-á-l-a        |
| c.      | - <i>zna</i> [j]- ‘give’:  | u.zna- | j-ó-t       | u.zna- | w-á-l-a        |
|         |                            |        | TH-PRES-3SG |        | IMPF-TH-PAST-F |

This would seem to be the -*uj*-/-*ov.a*- secondary imperfective that has not undergone the W-INSERTION rule

The correlation between v/Asp and the choice of the [a]-theme breaks down again

But none of these exceptional -*uj*-/-*ov.a*- secondary imperfectives trigger stem ablaut. Is this a coincidence?

### 5.2.2. Three -*aj*-/-*aj*- verbs

**Three [aj]-verbs** appear with the zero allomorph (Levin 1977:240): *klikatʲ* ‘to call’, *sipatʲ* ‘to pour’ and *rezatʲ* ‘to cut’ (though the last one also allows -*iv*-)

The only difference is in the position of the stress: *klíkati* ‘to call<sub>IMPF</sub>’ – *klikátʲ* ‘to call<sub>PRF</sub>’

## 5.3. Unexpected [w] in secondary imperfectives

Two second conjugation [i]-verbs appear with [e] in secondary imperfectives:

- (41) a. *prodlítʲ* ‘to lengthen’ – *prodlevátʲ*  
 b. *zatmítʲ* ‘to eclipse’ – *zatmevátʲ*

Possibility: this is the irregular secondary imperfective -*uj*-/-*ov.a*- suffix (detectable by stress) **that takes the unexpected [aj]-theme**

But then we would expect transitive softening in (33b)!

## 5.4. Genitive plural

The extended W-INSERTION rule (12') is specified to apply after [ǔ] and [ǐ]

Potential third environment: after [o] in the genitive plural

The **genitive plural** has three allomorphs (Halle 1994, Bailyn and Nevins 2008, Pertsova 2014, 2015): *-ov-*, *-ej-* and the phonological zero:

- (42) a. *soldát* 'soldier.M.NOM' → *soldát-∅* 'soldier.PL.GEN' ∅  
b. *komár* 'mosquito.M.NOM' → *komar-óv* 'mosquito-PL.GEN' -ov  
c. *korólj* 'king.M.NOM' → *korol-ěj* 'king-PL.GEN' -ej
- (43) a. *dél.o* 'deed.N.NOM' → *dél-∅* 'deed-PL.GEN' (coll. *delóv*) ∅  
b. *óblak.o* 'cloud.N.NOM' → *oblak-óv* 'cloud-PL.GEN' -ov  
c. *pól.e* (← *polj-o*) 'field.N.NOM' → *pol-ěj* 'field-PL.GEN' -ej
- (44) *tenj* 'shadow.F.NOM' → *ten-ěj* 'shadow-PL.GEN' -ej (obligatory in third declension)
- (45) a. *gub.a* 'lip.F.NOM' → *gub* 'lip-PL.GEN' ∅  
b. *xanž.á* 'hypocrite.F.NOM' → *xanž-ej* 'hypocrite-PL.GEN' -ej

*-ej-* is used after underlyingly palatalized consonants, *-ov-* elsewhere. The presence of the augment is lexically determined

Halle 1994: the first vowel of the suffix is actually the theme vowel of the stem, a glide is inserted after it...:

- with all Class III stems
- with class II stems: generally after masculine, sometimes after neuters
- with class I stems: after stems ending in clusters consisting of a consonant followed by a soft liquid /r, l/ or by /č, š, ž/

If [w] can be inserted after [o], we have to exclude insertion in verbs with the present tense root in [oj] (*-poj/-pe-* 'sing', *-voj/-vi-* 'howl', *-kroj/-kri-* 'cover', *-moj/-mi-* 'wash', *-noj/-ni-* 'whine', *-roj/-ri-* 'dig'): why is the glide [j]? (Alternating with [w] in derivation)

The conditions on insertion are very different and a non-trivial assumption must be made that all noun stems contain a theme

## 6. CONCLUSION AND FURTHER QUESTIONS

There seem to be four different phenomena:

- the secondary imperfective allomorphs and the verbalizer *-uj/-ov.a-*
- Zaliznjak's (1980) class 16 verbs
- underived *-uj/-ov.a-* verbs
- the genitive plural augments

Unification of the first of them with any of the others seems unlikely

Initial intuition for [j]/[w] alternation in deverbal derivation (Flier 1974a, b): the (underlying) verbal [w] does not alternate with [j], the verbal [j] does alternate with [w]

More data is needed

The most promising new research question is the secondary imperfective *-u/-ow-* suffix and its choice of the theme

**Hypothesis to evaluate:** make the secondary imperfective *-u/-ow-* suffix *-ǔ:-*

Nothing changes for the [v] allomorph: *-ǔ:-* will turn into a glide in the same way



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