

RUSSIAN ABLAUT AND THE SECOND CONJUGATION

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1. INTRODUCTION: RUSSIAN CONJUGATION CLASSES

Two conjugation classes, by the vowel appearing before the agreement suffixes in the present tense: [e] ([jo] under stress) vs. [i]:

[e] and [i] are neutralized to [i] in unstressed syllables, but the two classes can still be distinguished by [a] and [u] in the 3pl

Table 1: Surface forms, first conjugation: *nestí* ‘to carry’

		singular-M/F/N	plural
present	1	<i>nes-ú</i>	<i>nes^j-ó-m</i>
	2	<i>nes^j-ó-š</i>	<i>nes^j-ó-te</i>
	3	<i>nes^j-ó-t</i>	<i>nes-ú-t</i>
past		<i>n’ós (nes-l-á/nes-l-ó)</i>	<i>nes-l-í</i>

Table 2: Surface forms, second conjugation: *carítí* ‘to reign’ vs. *goréti* ‘to burn’

		singular-M(F/N)		plural	
present	1	<i>car-^j-ú</i>	<i>gor-^j-ú</i>	<i>car-í-m</i>	<i>gor-í-m</i>
	2	<i>car-í-š</i>	<i>gor-í-š</i>	<i>car-í-te</i>	<i>gor-í-te</i>
	3	<i>car-í-t</i>	<i>gor-í-t</i>	<i>car-í-át</i>	<i>gor-í-át</i>
past		<i>car-í-l(a/o)</i>	<i>gor-é-l(a/o)</i>	<i>car-í-l-i</i>	<i>gor-é-l-i</i>

The two vowels appearing before the past-tense suffix in Table 2 ([e] vs. [i]) show that **second-conjugation verbs do not form a uniform class**

The same is true for the first conjugation, of course, and there are several heteroclite verbs that do not fit in either class

Basic facts about e-verbs:

- [e] turns into [a] after alveopalatals
- **in the present-tense paradigm the stem is followed by [i]**
- 80+ (unprefixed) verbs

Itkin 2013 points out that this class, while usually viewed as closed, has some limited productivity where it comes to the domain of sound verbs

Melvold 1990 (following Jakobson 1948): the thematic vowel [e] is deleted before the present-tense suffix *-i-* by the general hiatus resolution rule:

$$(1) \quad \begin{array}{c} [[[\text{gor-e}]_2\text{-i}]_3\text{-t}]_4 \\ \quad \downarrow \\ [\text{gorít}] \end{array} \quad \text{cycle 3: VOWEL BEFORE VOWEL DELETION}$$

Micklesen 1973, Coats and Lightner 1975, Itkin 2007:129-130: the second conjugation present-tense suffix is null, and **the thematic vowel [e] is changed to [i] in the present tense**

Itkin argues for an underlying [j] as the representation of the 2nd conjugation thematic suffix

- $$(2) \quad \begin{array}{ll} \text{a.} & [[[\text{gor-e}]_2\text{-i}]_3\text{-t}]_4 \rightarrow [[[\text{gor-}\text{Ø}]_2\text{-i}]_3\text{-t}]_4 \rightarrow [\text{gorit}] & \text{vowel deletion} \\ \text{b.} & [[[\text{gor-e}]_2\text{-}\text{Ø}]_3\text{-t}]_4 \rightarrow [[[\text{gor-i}]_2\text{-}\text{Ø}]_3\text{-t}]_4 \rightarrow [\text{gorit}] & \text{vowel change} \end{array}$$

While hiatus resolution by the deletion of the first vowel is independently motivated (Jakobson 1948), vowel change is not

This talk: evidence for the change hypothesis

Novelty: (a) independent motivation for the change (ablaut), (b) independent motivation for a derivational view, (c) derivation of additional data

2. RUSSIAN ABLAUT: STEM AND THEMATIC SUFFIX

Matushansky [to appear]: ablaut in Russian can target thematic vowels as well as roots

2.1. Attested stem ablauts

Domain: 22 verbs (see Matushansky [to appear])

Features involved: mostly [α high] and [α ATR], separately (7 roots and 5 roots, respectively) or in combination (5 roots)

[α back]: 2 roots (in two opposite directions), n-infixation: 3 roots




Contrast: present vs. past

2.2. Suggested theme ablaut

Fronting ablaut: [- back] in the present (yielding the hypothetical [e] in the theme):

- (3) a. stem: *molótʲ* ‘to grind’ (e/o): *mólét* PRES.3SG / *mólól* PAST.MSG
b. theme: *pisátʲ* ‘to write’ (e/a): *píšet* PRES.3SG / *pisál* PAST.MSG

The stem ablaut motivates the rule for the change in the thematic vowel:

- (4) $[[[pis-a]_1-jo]_2-t]_3$
 FRONTING ABLAUT
 $[[[pis-e]_1-jo]_2-t]_3$
 glide formation
 $[[[pis-j]_1-jo]_2-t]_3$
 transitive softening (a.k.a. iotation (Bethin 1992))
[píšet]

This hypothetical theme ablaut affects ca. 100 verbs (+ all verbs derived with the suffix -ow-)


For details see Matushansky [to appear]

3. SECOND-CONJUGATION E-VERBS AS ABLAUT

Domain: ca. 80 verbs with the present-tense paradigm (present tense and imperative) in [i] and the past paradigm in [e] ([a] before alveopalatals):

- (5) a. *smótrʲt/smotrél* ‘look’ PRES.3SG/PAST.MSG
b. *déržit/deržál* ‘hold’ PRES.3SG/PAST.MSG

Proposal: a raising ablaut ([+ high] in the present tense) and consequently, no need for an overt present-tense suffix:

- (6) $[[[gor-e]_2-\emptyset]_3-t]_4$
 RAISING ABLAUT
[gorít]

Independent evidence for a zero present-tense suffix: the heteroclite verbs *estʲ* ‘to eat’ and *datʲ* ‘to give’ (see Appendix 3)

Important: both theories need a zero present-tense suffix!

Yet **there is no verb stem with a [- high] vowel in the past and its [+ high] counterpart in the present**, i.e.,

We need independent motivation for this particular ablaut

Independent evidence for ablaut: other environments where the same change happens:

- a verb with an [a]/[i] change
- **agentive nominalizations**
- **secondary imperfectives** (I won't have the time)

To be presented in the order of increasing complexity

3.1. Evidence for a zero present-tense suffix: the verb *ssatʲ* 'to piss'

Unique pattern: with [i] in the present tense (the same for its dialectal variant *scatʲ*):

This verb can also be conjugated in another class, with the thematic vowel deleted before the present-tense suffix (like in the verb *sosátʲ* 'to suck')

Table 3: Special verb *ssatʲ* 'to piss'

		singular.M (F/N)	plural
present	1	<i>ss-ú</i>	<i>ss-í-m</i>
	2	<i>ss-í-š</i>	<i>ss-í-te</i>
	3	<i>ss-í-t</i>	<i>ss-ú-t</i>
past		<i>ss-á-l (a/o)</i>	<i>ss-á-l-i</i>

Proposal: underlying [a] (be it a thematic suffix or part of the root) and the same raising ablaut as postulated above: the [+back][−round] [i] and [a] differ only in the feature [α high]

I'm not aware of any prior attempts to account for this verb

Besides, the heteroclite verbs *datʲ* 'to give' and *estʲ* 'to eat' require a null present-tense suffix

This rules out that treating the second-conjugation present-tense suffix as a floating [+ high], because these verbs are not subject to ablaut (see Appendix 3)

The deletion hypothesis can assimilate *ssatʲ* 'to piss' to the two second-conjugation verbs with [i]/[a] alternation (13) and stipulate that this root forces the backing of the tense suffix, but then there is no gain

3.2. Agentive nominalization as evidence for the underlying [e]

The agentive (actor) suffix *-telʲ-* preserves the thematic stem:

- (7)
- | | | |
|----|--|-------------------------|
| a. | <i>vladéet</i> PRES.3SG/ <i>vladél</i> PAST.MSG 'own' → <i>vladételʲ</i> 'owner' | <i>-ej-/e-</i> , I conj |
| b. | <i>čítaét</i> PRES.3SG/ <i>čitál</i> PAST.MSG 'read' → <i>čitátelʲ</i> 'reader' | <i>-aj-/a-</i> , I conj |
| c. | <i>píšet</i> PRES.3SG/ <i>pisál</i> PAST.MSG 'write' → <i>pisátelʲ</i> 'writer' | <i>-j-/a-</i> , I conj |
| d. | <i>lʹúbít</i> PRES.3SG/ <i>lʹubil</i> PAST.MSG 'love' → <i>lʹubítelʲ</i> 'amateur' | <i>-i-/i-</i> , II conj |

(7c) shows that the base for the suffix *-telʲ-* is the past-tense stem

Non-i verbs of the second conjugation fall into two classes:

- (i) palatal verbs: the suffixal vowel [e] **changes into** [a] if the stem ends in a palatal ([č], [š], [ž], or [šč]), see Appendix 1
- (ii) non-palatal verbs: the suffixal vowel **remains** [e]

Agentive nouns formed from **palatal a-verbs** surface with [a]:

The suffix is non-productive with the thematic suffix *-e-* (for both conjugations). Dictionary forms indicated with S, novel ones, with N

- (8) a. *déržit/deržál* ‘hold’_{PRES.3SG/PAST.MSG} → ^S*deržátelʹ* ‘holder’
 b. *díšit/díšál* ‘breathe’_{PRES.3SG/PAST.MSG} → ^N*díšátelʹnica vaginój* ‘vagina breather’
 c. *zvučít/zvučál* ‘sound’_{PRES.3SG/PAST.MSG} → ^N*obertonnyj zvučátelʹ* ‘obertone sounder’

Further support for the underlying [e]: suppose the underlying representation was [i]. Then the ablaut to [e] with the suffix *-telʹ-* would have to happen only to palatal-final verbs

This would be counterintuitive, so **the past-tense stem (the *e*-stem) must be underlying**

3.3. Agentive nominalization as evidence for the raising ablaut

Agentive nouns formed from **e-verbs of the second conjugation** surface with [e] or [i]:

- (9) a. *smotrítelʹ* ‘custodian’ ← *smótrit/smotrél* ‘look (after)’_{PRES.3SG/PAST.MSG}
 b. *povelítelʹ* ‘sovereign ruler’ ← *povelít/povelél* ‘enjoin’_{PRES.3SG/PAST.MSG}
 c. *zrítelʹ* ‘spectator’ ← *zrít/zrél* ‘behold’_{PRES.3SG/PAST.MSG}

- (10) *svidételʹ* ‘witness’ (cf. *videti* ‘to see’, *svídetʹsia* ‘to see each other again’)

Second-conjugation e-verbs differ from first-conjugation e-verbs, which never derive agentive nouns with [i]:

Two caveats: (1) since the suffix *-e-* generally derives stative verbs, the paucity *-telʹ-* nouns may be semantically motivated, and (2) it is an open question whether the underlying representation of the suffix in (7a) is *-ej-* or *-e-*

- (11) a. *vladéet* _{PRES.3SG/vladél} _{PAST.MSG} ‘own’ → *vladételʹ* ‘owner’
 b. *radéet* _{PRES.3SG/radél} _{PAST.MSG} ‘care for’ → *radételʹ* ‘caregiver (arch.)’
 c. *veščáet* _{PRES.3SG/veščál} _{PAST.MSG} ‘broadcast’ → *veščátelʹ* ‘broadcaster’

Only verbs that are subject to the raising ablaut in the present tense can undergo it in agentive nominalization:

- (12) a. *gonítelʹ* ‘oppressor’: *gónit/gnal* ‘chase’_{PRES.3SG/PAST.MSG} -a/i-, II conj
 b. *dvízetelʹ* ‘mover’: *dvízet/dvígal* ‘move’_{PRES.3SG/PAST.MSG} -a/i-, I conj
 c. *skazítelʹ* ‘storyteller’: *skázet/skazál* ‘tell’_{PRES.3SG/PAST.MSG} -a/i-, I conj

Some additional discussion of non-deverbal *-telʹ-* nouns can be found in Appendix 2

4. INTERMEDIATE CONCLUSIONS

The unique verb *ssatʹ* ‘to piss’ can be derived by assuming (a) that the present-tense suffix can be null and (b) the null present-tense suffix can raise the preceding vowel

Agentive *-telʹ-* nominalizations show that **the thematic suffix is underlyingly *-e-*** (rather than [i]) and that **a raising ablaut is independently motivated**

A raising approach is preferred over the lowering approach because the trigger is simpler

More than just raising will be needed to account for the two second-conjugation **a-verbs**:

- (13) a. *gónit/gnal* ‘chase’_{PRES.3SG/PAST.MSG}
 b. *spit/spal* ‘sleep’_{PRES.3SG/PAST.MSG}

Assuming *-a-* as the underlying representation of this suffix raises the question of why these verbs belong to the second conjugation

However, the existence of two types of e-verbs already suggests the non-phonological basis of conjugation classes

In addition, (13a) involves lowering ablaut in the root ([– high] in the present tense)

5. SECONDARY IMPERFECTIVES

Proposal: transitive softening in the secondary imperfective argues for another environment for ablaut

5.1. Intro: secondary imperfective allomorphy and transitive softening

The secondary imperfective suffix has three allomorphs: *-iw-*, surface [iv], *-w-* (surface [v]), or zero, all followed by the thematic suffix *-a-*:

- (14) root *-pis-* ‘write’ + *-aj-* -iv-
 a. *pis-á-ti* ‘to write’
 b. *pod-pis-á-ti* ‘to sign.PFV’
 c. *pod-pis-[iv]-a-ti* ‘to sign.IMPFV’
- (15) root *-boli-* ‘pain’ + *-e-* (I conj) -v-
 a. *bol-é-ti* ‘to be sick’
 b. *za-bol-é-ti* ‘to become sick.PFV’
 c. *za-bol-e-[v]-á-ti* ‘to become sick.IMPFV’
- (16) root *-sip-* ‘pour’ + *-a-* -Ø-
 a. *sip-a-ti* ‘to pour (a non-liquid)’
 b. *ras-sip-a-ti* ‘to strew.PFV’
 c. *ras-sip-[Ø]-á-ti* ‘to strew.IMPFV’ (note the stress shift)

The distribution of the three allomorphs is non-straightforward

5.1.1. The *-w-* allomorph (underlyingly [v])

Flier 1972, Feinberg 1980: an allophonic variant of the zero allomorph in intervocalic positions

Motivation: secondary imperfectives of first-conjugation verbs in *-ej-*/*-e-* (7a) and of athematic verbs ending in a vowel in the past tense:

- (17) a. *ovladéti/ovladevátí* ‘to gain possession PFV/IMPFV’ (root *-vlad-*, theme *-e[j]-*)
 b. *dogníti/dognivátí* ‘to finish rotting PFV/IMPFV’ (root *-gni[j]-*)
 c. *sogrétí/sogrevátí* ‘to warm up PFV/IMPFV’ (root *-gre[j]-*)
 d. *razdúti/razduvátí* ‘to blow up PFV/IMPFV’ (root *-du[j]-*)
 e. *dáti/davátí* ‘to give PFV/IMPFV’ (root *-da[d]-*)

Matushansky 2009: assuming that the underlying representation of the secondary imperfective suffix is *-ǔ-* (the back yer), it can be argued to turn into a glide between vowels

Addendum: not all vowels behave the same! **The *-w-* allomorph is only systematically found (a) after vocalic roots, (b) after e-stems**

These are also the environments where the zero allomorph is not found

Three *-aj-* verbs take the zero allomorph (Levin 1977:240): *naklikati/naklikátí* ‘to bring upon oneself (a disaster) PFV/IMPFV’, *razrézati/razrezátí* ‘to cut up PFV/IMPFV’ (also allows *-iv-*), and *rassipati/rassipátí* ‘to spill PFV/IMPFV’

The choice between the *-w-* allomorph and the zero allomorph is only *mostly* phonological

5.1.2. The *-iw-* allomorph

The choice between the [iv] vs. Ø/[v] allomorphs cannot be attributed to any of the self-evident factors (Harrington 1967): the same stem can combine with either in function of the prefix, the

prefix does not determine the choice, nor does compositionality (though the *-iw-* allomorph is more frequent and hence more likely to appear with semantically transparent prefixed verbs).

Matushansky 2009: the same underlying representation (*-ǔ-*) and a cyclicity-based account: the realization as *-iw-* vs. $\emptyset/[v]$ is determined by whether the prefix-root combination is lexically marked as cyclic or post-cyclic

See Tatevosov 2013:65-72 for arguments that undermine this proposal; Sadler, Spencer and Zaretskaya 1997:193 point out that secondary imperfectives derived from i-verbs by the zero allomorph do not form action nominals

Our story does not depend on this part of the analysis. We only care about the fact that both the *[iv]* and the zero allomorph (followed by the thematic suffix *-a-*) are vocalic

5.1.3. Secondary imperfective transitive softening

The second-conjugation thematic *-i-* turns into a glide before another vowel. The presence of *[j]* is detectable from transitive softening/iotation (Lightner 1965, Coats and Lightner 1975, cf. also Bethin 1992, Rubach and Booij 2001, etc.):

- | | |
|--|---|
| <p>(18) root <i>-korm-</i> ‘feed’, thematic suffix <i>-i-</i></p> <p>a. <i>korm-í-tj</i> ‘to feed’</p> <p>b. <i>ot-korm-í-tj</i> ‘to fatten.PFV’</p> <p>c. <i>ot-kár[ml]-iv-a-tj</i> ‘to fatten.IMPFV’</p> | <p>(19) root <i>-gruz-</i> ‘freight’, thematic suffix <i>-i-</i></p> <p>a. <i>gruz-í-tj</i> ‘to load’</p> <p>b. <i>raz-gruz-í-tj</i> ‘to offload.PFV’</p> <p>c. <i>raz-gru[ž]-á-tj</i> ‘to offload.IMPFV’</p> |
|--|---|

Transitive softening in the secondary imperfective is the default for i-verbs, for both zero and *[iv]* allomorphs (14 exceptions in a productive class, see Appendix 3)

The number of i-roots with a zero secondary imperfective is unknown (see Harrington 1967 for a partial list)

There are no secondary imperfectives derived from second-conjugation verbs with the surface *[ivá]*, i.e., **the [v] allomorph does not combine with the thematic [i]** (but see section 6.1)

The pre-accenting *[iva]*, like in (18), arises from transitive softening and the *[iv]* allomorph

What happens to e-verbs?

5.2. Transitive softening: the underlying representation

We know that *[i]* turns into a glide before other vowels, giving rise to transitive softening

Halle 1963, Lightner 1965, Flier 1972: *[e]* is like *[i]* in this respect

Most e-verbs do not trigger transitive softening:

- | | |
|--|--|
| <p>(20) a. <i>poveléti/poveleváti</i> ‘to command/rule PFV/IMPFV’</p> <p>b. <i>pogl’adéti/pogl’ádivati</i> ‘to take a glance PFV/IMPFV’</p> <p>c. <i>dogoréti/dogoráti</i> ‘to finish burning PFV/IMPFV’</p> | <p>e, <i>[v]</i> allomorph (3 roots)</p> <p>no TS, <i>[iv]</i> allomorph (17 roots)</p> <p>no TS, \emptyset allomorph (3 roots)</p> |
| <p>(21) a. <i>posidéti/posíživati</i> ‘to sit for a bit PFV/IMPFV’</p> <p>b. <i>obídeti/obi[ž]áti</i> ‘to offend PFV/IMPFV’</p> | <p>TS, <i>[iv]</i> allomorph (4 roots)</p> <p>TS, \emptyset allomorph (1 root)</p> |
| <p>(22) <i>pobojátis’ia/pobáivatis’ia</i> ‘to fear PFV/IMPFV’</p> | <p>unclear, <i>[iv]</i> allomorph (5 roots)</p> |

The remainder do not form secondary imperfectives at all

If *[e]* is no different from *[i]*, why are the defaults different?

If (*contra* my own earlier assumptions, too) *[e]* does not change into a glide:

- the lack of transitive softening is the default
- the cases when it does can be accounted for by the same ablaut

Proposal: e-verbs with transitive softening in the secondary imperfective are subject to the same raising ablaut changing *[e]* to *[i]*

It is a subset of [e] verbs, obviously

Evidence for an ablaut raising the thematic [e] in the secondary imperfective comes from two **first-conjugation e-verbs with transitive softening in the secondary imperfective**:

- (23) a. *razgovéetsja/razgovélsja* ‘break fast_{FUT.3SG/PAST.MSG}’ → *razgovl’át’sja*
b. *vīzdoroveet/vīzdorovel* ‘recover/heal_{FUT.3SG/PAST.MSG}’ → *vīzdorávlivat’*

For determining whether this process also applies to a-verbs we only have *zaderžát/zadérživat’* ‘to delay_{PFV/IMPV}’. While historically the root here is *-derg-*, it is impossible to tell whether the observed transitive softening is due to the process in (25) or [ž] has become underlying

5.2.1. e-verbs with the *-iw-* allomorph

Assuming that [j] can only arise from [i], we do not expect transitive softening



Setting aside (for the sake of simplicity) the choice between the *-iw-* vs. \emptyset allomorphs in (21), suppose *-iw-* is the underlying representation (17 roots):

- (24) [[[[po.gliad-e]_{2-iw IMPFV}]_{3-a-l}]₄ take a glance.IMPV.PAST.MSG

 pogl’ádival VOWEL DELETION

This is the most productive pattern, as expected from the combination of the most productive secondary imperfective allomorph and the underlying representation

4 roots are assumed to be subject to ablaut: the thematic vowel changes to [i], and the resulting [i] turns into [j] before the vowel of the secondary imperfective suffix:

- (25) [[[[po.sid-e]_{2-iw IMPFV}]_{3-a-l}]₄ sit for a bit.IMPV.PAST.MSG

 ABLAUT
 [[[[po.sid-i]_{2-iw IMPFV}]_{3-a-l}]₄

 posíživál TRANSITIVE SOFTENING

While in unstressed syllables the difference between [e] and [i] is neutralized, the suffix in (25) is known to be *-iw-* because of the stress pattern: this allomorph is pre-accenting

5.2.2. e-verbs with the zero allomorph

Usual take: the underlying representation of the secondary imperfective is *- \emptyset -*, the vowel [a] is its thematic suffix

The choice for the zero allomorph is a property of the stem (see Matushansky 2009)

The vowel cluster resulting from the verbal thematic vowel and the thematic vowel [a] of the zero secondary imperfective suffix is resolved by **Jakobson’s vowel deletion rule**:

- (26) [[[[do.gor-e]_{2- \emptyset IMPFV}]_{3-a-l}]₄ finish burning.IMPV.PAST.MSG

 dogorál VOWEL DELETION

The zero allomorph is selected by 3 otherwise regular roots

And one more root not only selects the zero allomorph but also undergoes ablaut:

- (27) [[[[obid-e]_{2- \emptyset IMPFV}]_{3-a-l}]₄ offend.IMPV.PAST.MSG

 ABLAUT
 [[[[obid-i]_{2- \emptyset IMPFV}]_{3-a-l}]₄

 obížál TRANSITIVE SOFTENING

The [v] allomorph in (20c) is not accounted for

5.2.3. Intermediate conclusions

The behavior of e-verbs with respect to transitive softening can be explained by the assumption that the thematic suffix [e] can sometimes be raised to [i]

This is a rare and lexically determined process that is also attested for first-conjugation e-verbs

Problem for all accounts: the existence of both (20a) and (20c) is unexpected

6. THE -w- ALLOMORPH

General view: the -w- allomorph is an allophonic variant of the zero allomorph: it is **obligatory with first-conjugation e-verbs and with vocalic roots**

Roots in -a[j]- (e.g., *ottájati/ottajivati* ‘to thaw out_{PFV/IMPFV}’) require a thematic suffix (generally [a], one exception *otdráiti/otdráivati* ‘to scrub off_{PFV/IMPFV}’) and hence the secondary imperfective in -iw-

Flier 1972, Coats 1974, Worth 1978, Swan 2015, etc.: the final [j] in such verbs is **underlying and alternates with [v]** in secondary imperfectives

- the -w- allomorph is not expected with second-conjugation e-verbs (there cannot be an underlying glide there)
- the -iw- allomorph would be expected to also be preceded by [v] when combined with first-conjugation e-verbs and vocalic roots

Gladney 2013:634: [v] is **hiatus-filling**

- the zero allomorph is not expected with e-verbs (the hiatus should be filled)
- the -iw- allomorph would be expected to also be preceded by [v] when combined with first-conjugation e-verbs and vocalic roots

Matushansky 2009: **the underlying -ǔ- (the back yer) turns into a glide** intervocalically (with some additional constraints)

- Both options are not expected to be available simultaneously!

Reiterating the facts:

- non-complementary distribution of -w- and -Ø- allomorphs is attested only with e-verbs
- the -w- allomorph is the default with first-conjugation e-verbs
- with second-conjugation e-verbs the -iw- allomorph is the default (17 roots), while the -w- allomorph and the -Ø- allomorph have the same frequency (3 roots each)

Two options:

- 1) assuming the underlying -ǔ-, resolve it in two different ways (besides into -iw-)
- 2) the -Ø- allomorph is not a secondary imperfective (cf. Tatevosov 2013)

Intuition: the [Vǔ] vowel cluster can be resolved in one of two ways: by deleting the first vowel (yielding [ǔ], which will later be deleted) or by turning the second vowel into a glide (yielding [Vw])

The verbs in (28) belong to more archaic vocabulary

Only one of these roots, (28c), has more than one prefixal derivative: *obozréti/obozreváti* ‘to survey’, *podozreváti* ‘to suspect’ (no base perfective), *prizréti/prizreváti* ‘to support by charity’, *prozréti/prozreváti* ‘to recover one’s sight’, one of which has a non-[v] secondary imperfective: *prezréti/preziráti* ‘to despise’

- (28) a. *zretʲ* ‘to behold’ (*prozretʲ/prozrevátʲ* ‘to recover one’s sight’) 3 e-roots: -w-
b. *povelétʲ/povelevátʲ* ‘to command/rule’
c. *terpétʲ* ‘to tolerate’ (*preterpevátʲ* ‘to suffer’)
- (29) a. *zakupétʲ/zakupátʲ* ‘to come to boil’ 3 e-roots: -Ø-
b. *letétʲ* (*letátʲ*) ‘to fly’
c. *dogorétʲ/dogorátʲ* ‘to finish burning PFV/IMPFV’

But there is nothing archaic about first-conjugation e-verbs! And it must be noted that there are 14 i-verbs that have non-TS secondary imperfectives (Appendix 3)

6.1. [e] secondary imperfectives with i-verbs

5 i-verbs surface with [e] in the secondary imperfective:

- (30) s. *zatmítʲ/zatmevátʲ* ‘to eclipse’ 5 i-roots
b. *prodlítʲ/prodlevátʲ* ‘to extend’ (also *prodlíátʲ*)
c. *rastlítʲ/rastlevátʲ* ‘to deprave’
d. *upokoítʲ/upokoevátʲ* ‘to lay to final rest’ (all from Zaliznjak 1980)
e. *upoítʲ/upoevátʲ* ‘to intoxicate’ (Levin 1977:240)

The authoritative 1980 edition of *Russian Grammar* (Švedova 1980-I:349) suggests that the surface *e* in these verbs is used conventionally and conceals an underlying [i] (Russian vowel neutralization does not allow one to distinguish the two phonemes in unstressed syllables).

Support: one more verb showing up with an unexpected [e] in the secondary imperfective, *zastřátʲ/zastrevátʲ* ‘to get stuck’, has an underlying [ja] (from an *n*-verb, Dal’ 1863-1866 (2001) gives the dialectal variant *zastřétʲ*), which would also neutralize with [i].

Given (17b), we would expect an underlying -i- to be compatible with the -w- allomorph

If so, we have the same issue for i-verbs as for e-verbs: how come both Ø and [v] allomorphs are possible?

For the synchronically unpaired verbs *namerevátʲ/sja* ‘to intend’, *nedoumevátʲ* ‘to puzzle (over)’, *oburevátʲ* ‘to overwhelm’, and *uveščevátʲ* ‘to admonish’ it is impossible to determine what a primary imperfective is

Otherwise the question arises where the surface [e] comes from

6.2. A structural distinction?

The -w- allomorph is near-obligatory with vocalic athematic verbs (roots) and with e-verbs of the first conjugation

It never occurs with a-verbs and almost never, with second-conjugation verbs

Hypothesis: the -w- allomorph does not occur with thematic suffixes

If true, this would constitute further support for the hypothesis that ablaut does not distinguish between stems and thematic suffixes. And the -w- allomorph does

Appendix 1 VELAR PALATALIZATION AND [A] FORMATION

Palatalized velars turn into alveopalatals (Halle 1959, Lightner 1965, Plapp 1999, etc.):

- (31) a. *ribák* ‘a fisher’ → *ribáčitʲ* ‘to fish’
b. *grex* ‘sin’ → *grešítʲ* ‘to sin’

Both thematic suffixes surfacing as [e] in the past tense (both the first-conjugation -e[j]- and the second-conjugation -e/-i-) turn into [a] if the stems ends in a palatal [č], [š], [ž], or [šč]:

The behavior of the first-conjugation verbalizer *-e[j]-* is mixed: when combining with a stem ending in a velar, it changes the velar into a palatal and changes into [a]. However, when the palatal is underlying (and presumably non-palatalized), e.g., with the root *-svez-* ‘fresh’, or with phrasal bases (e.g., *obezdénéžetʹ* ‘to become penniless’), no change occurs. Lightner 1965:70-73 discusses the former case as the default and Lightner 1967, the latter.

(32) first-conjugation verbalizer *-e[j]-*

- a. *-krasn-* ‘red’ + *-e-* → *krasnéet/krasnél* ‘be/become red’ PRES.3SG/PAST.MSG
- b. *-nišč-* ‘beggarly’ + *-e-* → *niščáet/niščá* ‘become a beggar’ PRES.3SG/PAST.MSG

(33) second-conjugation verbalizer *-e-*

- a. *-vis-* ‘hang’ + *-e-* → *visít/visél* ‘hang’ PRES.3SG/PAST.MSG
- b. *-vizg-* ‘squeal’ + *-e-* → *vizžít/vizžá* ‘squeal’ PRES.3SG/PAST.MSG

The same process characterizes the elative suffix *-ejš-*:

- (34) a. *-krasn-* ‘red’ + *-ejš-* → *krasnějšij* ‘the reddest’
- b. *-gorʹk-* ‘bitter’ + *-ejš-* → *gorčájšij* ‘the bitterest’

The only second-conjugation exception to this generalization is the verb *kíšétʹ* ‘to swarm’

Lightner 1967 also lists the verb *obezmátočevʹ* ‘to lose the beehive’s queen’, but it belongs to the first conjugation

Appendix 2 NON-DEVERBAL *-TELʹ-*

One of the two second-conjugation verbs that surface with [a] in the past tense goes the same way (the other does not form an agentive noun):

- (35) a. *gónit/gnal* ‘chase’ PRES.3SG/PAST.MSG → *gonítelʹ* ‘oppressor’
- b. *spit/spal* ‘sleep’ PRES.3SG/PAST.MSG

An informal check for neologisms shows that both options are possible (albeit marginally):

Morris Halle would have pointed out that *Aleksei Kruchenykh* has created the neologism *zudítelʹ* (from *zudétʹ* ‘to itch’), yet it has not caught up at all

- (36) a. *ʔterpítelʹ/ʔterpételʹ* ‘sufferer’
- b. *ʔvertítelʹ/ʔvertételʹ* ‘turner’
- c. *ʔʔdudítelʹ/ʔʔdudételʹ* ‘turner’

However, there is evidence for derivation in [itelʹ] that is non-deverbal:

- (37) a. *pokrovítelʹ* ‘protector’: **krovítʹ*, cf. *kritʹ* (1sg: *króju*) ‘to cover’ Ø class
- b. *dvížitelʹ* ‘mover’: **dvižítʹ*, cf. *dvígati* (-a/-i-) ‘to move’ -a/i- class
- c. *skazítelʹ* ‘storyteller’: **skazítʹ*, cf. *skazátʹ* (-a/-i-) ‘to tell’ -a/i- class
- d. *revnítelʹ* ‘zealot’: **revnítʹ*, cf. *revnovátʹ* (-ov/-u-) ‘to be jealous’ -ow- class
- e. *voítelʹ* ‘warrior’: **vojítʹ*, cf. *voevátʹ* (-ov/-u-) ‘to wage war’ -ow- class
- f. *vlastítelʹ* ‘sovereign’: **vlastítʹ*, cf. *vlastʹ* ‘power’, *vladétʹ* ‘to own’ -e- class
- g. *račítelʹ* ‘zealot’: **račítʹ* (attested in some dialects) missing -i- class
- h. *popečítelʹ* ‘warden’: *(po)pečítʹ, cf. *pečísʹa* ‘to care for’ Ø class

In DM terms, *-itelʹ-* involves derivation from the root, some support from:

- (38) a. *deržátelʹ* ‘holder’ ← *deržátʹ* ‘to hold’
- b. *Spas-Vsederžátelʹ* ‘Christ Pantocrator, lit. All-Holder’ (cf. *deržáva* ‘state’)

There is one [atelʹ] noun that is formed from the lexical root rather than the verbal stem:

- (39) *znamenátelʹ* ‘denominator’: *znamenovátʹ* ‘to signify’

Appendix 3 I-VERBS WITH NO TRANSITIVE SOFTENING IN THE SECONDARY IMPERFECTIVE

In addition to the exceptional e-verbs in (20) there are 14 i-verbs with no transitive softening in the secondary imperfective

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

- (40) a. *-kup-: kupítʲ (-kupájut)* ‘to buy’
 b. *-nřz-: nřzítʲ (-nřzájut)* ‘to pierce’
 c. *-rub-: rubítʲ (-rubájut)* ‘to chop’
 d. *-log-: lořzítʲ (-lagájut)* ‘to put’ (with a suppletive imperfective for some prefixes)
 e. *-pusk-: pustítʲ (puskájut)* ‘to let’ (with stem allomorphy)
 f. *-stup-: stupítʲ (stupájut)* ‘to step’ (underived forms both a bit archaic/formal)

For 8 more unprefixated perfectives the existence of the *-iv-* secondary imperfective coincides with the availability of an unprefixated imperfective counterpart with pluractional meaning (indicated by +)

For four motion verbs i-stems are perfective, while *aj-*stems are pluractional:

- (41) a. *brósitʲ* ‘to throw’ *brosájut* ‘they throw+’ *-brásivati*
 b. *katítʲ* ‘to roll’ *katájut* ‘they roll+’ *-kátivati*
 c. *taščítʲ* ‘to pull’ *taskájut* ‘they pull+’ *-táskivajut*
 d. *-xvatítʲ* ‘to grab’ *xvatájut* ‘they grab+’ *-xvátivajut*

One bound motion root with ablaut and the uncharacteristic transitive softening theme *-a/j-* in the pluractional stem:

- (42) *-skok-* ‘jump’ *-skočítʲ* ‘to jump’ *skáčut* ‘they jump+, inf: *skakátʲ*’ *-skák-iv-aj-ut*

Three **bound roots** that (a) have non-bound unprefixated imperfective counterparts in *-aj-*, (b) for some prefix-stem combinations also have transitive softening in secondary imperfectives uniformly formed with the Ø allomorph, (c) are not motion verbs:

- (43) *-glot-* ‘swallow’
 a. *poglotítʲ* ‘to absorb’ *pogloščátʲ* TS
 b. *proglotítʲ* ‘to swallow’ *proglátivati* no TS
- (44) *-kus-* ‘bite’
 a. *vkusítʲ* ‘to partake’ *vkušátʲ* TS
 b. *iskusítʲ* ‘to tempt’ *iskušátʲ* TS
 c. *zakusítʲ* ‘to eat an appetizer’ *zakúsivati* no TS
- (45) *-lom-* ‘break’
 a. *prelomítʲ* ‘to refract’ *preloml’átʲ* TS
 b. *prolomítʲ* ‘to break through’ *prolámivati* no TS

Suggestions that these are not true aspectual pairs and the *a*-variants are not derived from the *i*-variants can be found in Gribanova 2013 and Tatevosov 2013, but this approach cannot account for the lack of transitive softening in *-iv-* secondary imperfectives for, e.g., *za-xvat-ítʲ/za-xvát-iv-a-tʲ* ‘to conquer’.

Appendix 4 THE HETEROCLITE VERBS *JESTʲ* ‘TO EAT’, *XOTÉʲ* ‘TO WANT’ AND *DATʲ* ‘TO GIVE’

The heteroclite verb *xotétʲ* ‘to want’ behaves as a second-conjugation verb in the plural and as a TS first-conjugation verb in the singular:

Table 4: Heteroclite verb *xotéti* ‘to want’

		singular.M (F/N)	plural
present	1	xoč-ú	xot-í-m
	2	xóč-e-š	xot-í-te
	3	xóč-e-t	xot-i-át
past		xot-é-l (a/o)	xot-é-l-i

The singular forms (with the consonant mutation known as transitive softening) indicate the presence of a glide (i.e., [č] ← [tj] is independently motivated)

Proposal: the very same second-conjugation thematic suffix **-e-** undergoes the same ablaut to **[i]** in the present as other e-verbs

The difference is that the stem *xot-é-* takes **the first-conjugation present-tense suffix (-i-)** in the singular and **the second-conjugation present-tense suffix (-Ø-)** in the plural

The difference from Melvold’s view would be the change in the vowel; Melvold’s view would hypothesize [ē] → [je] in the singular and [ei] → [i] in the plural. Much depends on whether [e] can turn into [j] before a vowel

The heteroclite athematic verb *jesti* ‘to eat’ behaves as a second-conjugation verb in the plural and has a unique conjugation pattern (no tense suffix) in the singular:

Table 5: Heteroclite verb *jesti* ‘to eat’

		singular.M (F/N)	plural
present	1	je-m	jed-í-m
	2	je-š	jed-í-te
	3	jes-t	jed-i-át
past		jé-l (a/o)	jé-l-i

Standard view: zero present-tense suffix for the singular, second-conjugation present-tense [i] suffix for the plural

The final [d] of the stem is deleted or changes to [s] before consonantal suffixes (due to an independently attested process)

Notice, everyone needs a zero present-tense suffix!

My view: zero second-conjugation present-tense tense throughout, **[i] augment for the plural**
Incidentally, it ends up being a regular post-accenting verb with retraction in the past (just like *péti* ‘to sing’)

Unsolved problem: the heteroclite verb *dati* ‘to give’ behaves like *jesti* ‘to eat’ in the singular and has mixed conjugation in the plural:

Table 6: Heteroclite verb *dati* ‘to give’

		singular.M (F/N)	plural
present	1	da-m	dad-í-m
	2	da-š	dad-í-te
	3	das-t	dad-út
past		dá-l (a/o)	dá-l-i

No one has a nice explanation

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