

## STEM-FINAL DEFAULT IN RUSSIAN VARIABLE STRESS

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### 1. INTRODUCTION: RECEIVED WISDOM

Garde 1968a, b, 1998, Halle 1973, Zaliznjak 1985, Melvold 1989, etc.: the position of Russian lexical stress is primary 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:

#### (1) **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.

To check the accentual properties of a suffix one needs to start with an unaccented stem. For *a*-declension nouns it is easy: compare nominative and accusative singular:

Number of *a*-declension words in each class given by Zaliznjak 2010, excluding compounds and negations

**Table 1: Accentual interaction in the *a*-declension (basic patterns)**

suffix/accent stress position	accented SG.NOM	unaccented SG.ACC	unaccented PL.NOM	accented PL.INS	Zaliznjak- class
stem: <i>lúž-</i> ‘puddle’	<i>lúž-a</i>	<i>lúž-u</i>	<i>lúž-i</i>	<i>lúž-ami</i>	a (∞)
post-stem: <i>čert-</i> ‘line’	<i>čert-á</i>	<i>čert-ú</i>	<i>čert-í</i>	<i>čert-ámi</i>	b (435)
variant: <i>nog-</i> ‘leg’	<i>nog-á</i>	<i>nóg-u</i>	<i>nóg-i</i>	<i>nog-ámi</i>	f’ (21)

Expected picture therefore: variable stress varies between stem-initial and suffixal positions

Zaliznjak 1963, 1967, 1977, Halle 1973, 1975, 1997, Mustajoki 1981, Melvold 1989, Brown et al. 1996, etc.: up to 9 nominal accentual classes

#### 1.1. Lexically triggered retraction

The so-called Pattern D (Zaliznjak 1963, 1967, 1977, 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 2: 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>změj-i</i>	<i>změj-ami</i>	d’ (230)
variant: <i>zim-</i> ‘winter’	<i>zim-á</i>	<i>zim-u</i>	<i>zim-i</i>	<i>zim-ami</i>	d (14)

**Melvold 1989: some stems can trigger retraction in the plural**

To deal with the pattern d, where the singular gives no evidence for an accent that could be retracted in the plural, she additionally postulates an accented allomorph of the (generally unaccented) nominative plural ending *-i-* (in conjunction with plural retraction). I see no empirical (and very minor theoretical) gain here over the postulation of a pre-accenting null plural suffix

**Osadcha 2019: some stems are subject to stress shift in the plural**

The pattern d, where the singular provides evidence for an unaccented stem, is not discussed

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

**1.2. Adjectival post-stem variable pattern**

Russian past-tense verbs and short-form adjectives agree for number and gender

On the syntactic and semantic distinctions between short-form (SF; predicative) and long-form (LF) adjectives see Babby 1973, 1975, 2010, Siegel 1976a, b, Bailyn 1994, Geist 2010, Borik 2014, among many others

- (2) a. *bílá, bíl, bílo, bíli* ‘was.F/M/N/PL’; *nemá, ném, némo, némi* ‘mute.F/M/N/PL’;  
 b. *belá, bél, beló, belí* ‘white.SF.F/M/N/PL’

The variable stress pattern in (2a) shows that the feminine ending is accented, and all others are unaccented

Independent evidence: nominative singular nominal endings for the *a-* (feminine), *o-* (neuter), *C-* (masculine), and the *i-* (plural) declensions

The nominative singular ending *-a-* is accented, all other nominative endings are unaccented (just like the number/gender endings above)

Variable past-tense verbs all have monosyllabic stems

Some are prefixed and for a few of those initial stress surfaces on the prefix rather than on the root, in conformity with the BAP (1)

Some variable short-form adjectives have disyllabic stems:

- (3) a. *veselá, véssel, véselo, véseli* ‘merry.F/M/N/PL’ (Zaliznjak’s pattern c)  
 b. *žestoká, žestók, žestóko, žestóki* ‘cruel.F/M/N/PL’ (Zaliznjak’s pattern a’)

(3a) behaves as expected: final stress with an accented ending, stem-initial stress otherwise

(3b) is unexpected: final stress with an accented ending, stem-final stress otherwise

Most disyllabic adjectives with this stress pattern are derived with the suffix *-ok-*

With monosyllabic adjectives the two patterns make no difference, but there is indirect evidence that it is present there too

How does the suffix *-ok-* cause retraction before unaccented endings?

**1.3. Verbal 1sg pattern**

The present tense of Russian verbs gives rise to three accentual patterns (Halle 1973, Zaliznjak 1985, 2019, Feldstein 1986, 2015, 2017, Melvold 1989, Garde 1998, etc.):

The fourth, stem-final pattern replaces the post-stem one for the thematic suffix *-a-/i-* (Matushansky [to appear])

**Table 3: Accentual patterns of thematic verbs (suffix -i-)**

		PRES-1SG	PRES-3SG	PAST-FSG	PAST-PL
a.	stem stress: -žal- ‘sting’	žá <i>l</i> -u	žá <i>l</i> -i-t	žá <i>l</i> -i-l-a	žá <i>l</i> -i-l-i
b.	post-stem: -govor- ‘speak’	govor <i>i</i> -ú	govor- <i>i</i> -t	govor- <i>i</i> -l-a	govor- <i>i</i> -l-i
c.	1sg: -l <i>ub</i> - ‘love’	l <i>ub</i> l-i-ú	l <i>ub</i> -i-t	l <i>ub</i> -i-l-a	l <i>ub</i> -i-l-i

Halle 1973:328, Melvold 1989:291, Idsardi 1992:124, Gladney 1995:114-117, among others: lexically triggered retraction in the present tense, except in the 1sg

Feldstein 2015: two more forms with the same final stress as in the 1SG: the imperative (surface [i]) and the present tense gerund (surface [ja])

Matushansky 2023, [to appear]: induced unstressability of the present-tense suffix, forcing its accent onto the stem in the absence of a vocalic ending (i.e., except with the 1sg -u-)

Surface representation: final stress with the 1sg ending, stem-final stress otherwise

However, here we cannot be dealing with an unaccented stem: thematic suffixes (all but one) introduce an accent

#### 1.4. Intermediate summary

Retraction in the plural: stem-final stress instead of the expected post-stem or unaccented one

Short-form adjectives in -ok-: final stress with an accented ending, stem-final stress otherwise

Verbal 1sg pattern: final stress with the 1sg ending, stem-final stress otherwise

The 1sg pattern cannot involve unaccented stems

Nominal stress was dealt with by assuming the singular-plural juxtaposition (cf. Paradigmatic Contrast in Kenstowicz 2005)

**Paradigmatic contrasts between feminine and everything else** (for adjectives) and **between 1sg and everything else** are not independently motivated

And stem-final stress in short-form adjectives would still require an explanation

## 2. STRESS AND HIATUS RESOLUTION IN THE VERBAL DOMAIN

Jakobson 1948, Lightner 1965, Halle 1973, Melvold 1989, etc.: verbal conjugation provides evidence for vowel-before-vowel deletion (Table 4)

**Table 4: Hiatus resolution in thematic verbs (suffix -nu-)**

		PRES-1SG	PRES-3SG	PAST-F/M/N/PL
a.	stem: -top- ‘stomp’	tóp-n <i>u</i> -é-u	tóp-n <i>u</i> -e-t	tóp-nu-l-a/Ø/o/i
b.	post-stem: -max- ‘wave’	max-n <i>u</i> -é-ú	max-n <i>u</i> - <i>ô</i> -t	max-nú-l-a/Ø/o/i
c.	variable: -obman- ‘cheat’	obman-n <i>u</i> -é-ú	obmá <i>n</i> -n <i>u</i> -é-t	obman-nú-l-a/Ø/o/i

Halle 1973:313, Melvold 1989:225: the accent of a deleted vowel is retracted to the preceding syllable

**Gladney 1995:103: only four stems support this conclusion**

Actually five: *kolebátʹ/kolébʹu* ‘rock.INF/1SG’, *kolíxátʹ/kolíšu* ‘sway.INF/1SG’, *alkátʹ/álču* ‘crave.INF/1SG’, the archaic variant *stradátʹ/stráždu* ‘suffer.INF/1SG’ and the two equally archaic prefixed derivatives of the cranberry root *-im-*, *vnímátʹ/vnémlu* ‘heed.INF/1SG’ and *prínímátʹ/priémʹlu* ‘accept.INF/1SG’; in modern spoken Russian the last three take the thematic suffix *-aj-*

Melvold 1989: the thematic suffix *-a-/-i-* also behaves like this

Still, it’s a very short list and very tenuous evidence

Matushansky 2023, [to appear]: induced unstressability of the present-tense suffix is caused by the deletion of the thematic vowel

No real theory: Matushansky [to appear] simply points out that accentuation should be viewed as instructions for stress assignment, Matushansky 2023 suggests a tone-based approach

**Hypothesis to explore:** stem-final defaults arise from the deletion of an accented vowel

After all, nouns may have thematic suffixes (Bailyn and Nevins 2008, Halle and Nevins 2009), and adjectives, too (Halle and Matushansky 2006)

**3. STEM-FINAL DEFAULT IN SHORT-FORM ADJECTIVES**

Five accentual patterns (Halle 1973, Zaliznjak 1985, Melvold 1989): three main ones and two supplementary ones

The numbers in parentheses reflect the number of non-monosyllabic adjectives with this pattern

**Table 5: Adjectival declension, short forms**

		FEMININE accented	NEUTER unaccented	MASCULINE unaccented	PLURAL unaccented	MEANING
a.	stem	uprúg-a	uprúg-o	uprúg-Ø	uprúg-i	‘elastic’ (∞)
b.	post-stem	gorʹač-á	gorʹač-ó	gorʹač-Ø	gorʹač-í	‘hot’ (6+PPPs)
c.	variable	dešev-á	dʹóšev-o	dʹóšev-Ø	dʹóšev-i	‘cheap’ (5)

**Puzzle:** two unexpected patterns:

- a+, b-: final stress in the feminine, stem-final stress elsewhere
- c': final stress in the feminine and in the plural, stem-initial stress elsewhere

The forms in parentheses indicate that these adjectives also have the well-behaved accented, post-accenting, and unaccented variants, respectively

**Table 6: Adjectival declension, short forms, supplementary patterns**

	FEMININE accented	NEUTER unaccented	MASCULINE unaccented	PLURAL unaccented	
a+ (a').	žestok-á (žestók-a)	žestók-o	žestók-Ø	žestók-i	‘cruel’ (3)
b- (c'').	visok-á	visók-o (visok-ó)	visók-Ø	visók-i (visok-í)	‘tall’ (4)
c' (c').	vesel-á	vésel-o	vésel-Ø	vesel-í (vésel-i)	‘merry’ (6)

These are new patterns, which is why they always have well-behaved variants

Melvold 1989 (following Zaliznjak 1977, names mine):

- b- pattern: b with optional retraction in the neuter and in the plural
- c' pattern: c, but the plural ending has an optional accented allomorph

The a' pattern is not mentioned, but it cannot be analyzed by optional retraction

My proposal: there is a basic change in the system

### 3.1. Short-form adjectives as a derived form

Standard (historical) view: the SF is basic, the LF is derived from it by the LF-suffix (-*Vj*-, see Halle and Matushansky 2006, Enguehard 2017 on its underlying representation)

On the syntactic and semantic distinctions between the two see Babby 1973, 1975, 2010, Siegel 1976a, b, Bailyn 1994, Geist 2010, Borik 2014, among many others

Historically, the long form corresponds to the combination of the short form with the definite (or specific) article

Proposal: the SF is derived from the adjectival stem:



Halle and Matushansky 2006: the LF-suffix -*Vj*- is a thematic suffix, which can also be found in nouns (e.g., *portnóĵ* ‘tailor’, *zap’atáĵa* ‘comma’)

The hypothesis that the short form is derived from the LF-stem better captures the synchronic state of the Russian adjective

#### 3.1.1. Semantic divergence

Most Russian adjectives have no short form (e.g., those formed with the suffix -*isk*-, many of those formed with the suffix -*ov*-). If SFs were the basis for LFs, this would be inexplicable  
Certain adjectives (ca. 7) have no long form

Derived adjectives containing the suffix -*enĵk*- (Zaliznjak 1977):

- LF: diminutive (caritive) semantics
- SF: attenuative (low-level) or pejorative semantics

If SF adjectives corresponded to the stem, the primary status of the LF would be inexplicable

#### 3.1.2. Phonological divergence

Halle 1973, Levin 1975, Melvold 1989, etc.: LF stress does not predict SF stress, or vice versa

Most adjectives are in the productive *a* (*a/a*) class: consistent stem stress in the SF indicates an accented stem, which trumps any suffixal accents

**Table 7: Adjectival inflection, Zaliznjak’s type *b/c***

<i>nag</i> - ‘naked’	FEMININE	NEUTER	MASCULINE	PLURAL	STRESS
SF	<i>nag-á</i>	<i>nág-o</i>	<i>nag</i>	<i>nág-i</i>	variant
LF.NOM	<i>nag-áĵa</i>	<i>nag-óĵe</i>	<i>nag-ój</i>	<i>nag-íĵe</i>	post-stem

**Table 8: Adjectival inflection, Zaliznjak’s type *b* (*b/b*)**

<i>smešn</i> - ‘funny’	FEMININE	NEUTER	MASCULINE	PLURAL	STRESS
SF	<i>smešn-á</i>	<i>smešn-ó</i>	<i>smešón</i>	<i>smešn-í</i>	post-stem
LF.NOM	<i>smešn-áĵa</i>	<i>smešn-óĵe</i>	<i>smešn-ój</i>	<i>smešn-íĵe</i>	post-stem

**Table 9: Adjectival inflection, Zaliznjak's type a/b**

<i>mal-</i> 'minor'	FEMININE	NEUTER	MASCULINE	PLURAL	STRESS
SF	mal-á	mal-ó	mal	mal-í	post-stem
LF.NOM	mál-aja	mál-oje	mál-ij	mál-ije	stem

Adding a suffix is not predicted to yield stem-final stress

Unless the suffix is pre-accenting, but then post-stem stress in LF-adjectives is not predicted

### 3.2. Stem-final default as retraction

Halle 1973, Melvold 1989:

- the LF-suffix is accented (based on the lack of accentual variability in LFs, as well as derivation from unaccented nouns)
- stem-final stress in LF adjectives results from retraction

Zaliznjak 1985:27 (see also Larsson 2006): development for a principled opposition of SFs and LFs

No evidence: no adjectives with stem stress in SF and post-stem stress in LF (all development is towards stem(-final) stress in LFs)

Proposal: stem-final stress (retraction) arises from the interaction of two accents, one of which belongs to a deleted vowel

## 4. SF STRESS AND HIATUS RESOLUTION

Halle 1973, Dubina 2012, Matushansky 2023: underlying accent as a high tone on the accented vowel

Setting aside post-accentuation, which Halle treats by a default rule, Dubina, by lexical stress on the endings, and Matushansky, by a low tone

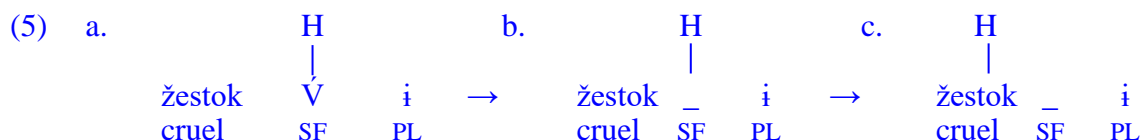
Dubina 2012: such tones can be floating

### 4.1. SF stress

Suppose the SF suffix is vocalic and accented (- $\acute{V}$ -):

- It will be deleted before vocalic endings
- There will then be no unaccented SF adjectives
- Its accent (tone) can move to the preceding syllable

For an unaccented ending the result is stem-final stress:



How to achieve post-stem stress for an accented ending?

Answer: the OCP (Leben 1973): sequences of adjacent identical tones are prohibited (and are replaced with a multiply linked tone)

- (6) a.  b.  c. 

#### 4.2. Patterns c and c' (stem-initial stress except in the feminine)

If the *b*– (*c*') pattern in (5-6) represents unaccented stems, where does the stem-initial stress in non-feminine cells of the *c* and *c'* pattern come from?

Recall, the *c'* pattern means unexpected final stress in the plural, this will be dealt with later

**Table 10: Adjectival short forms, stem-initial patterns**

	FEMININE accented	NEUTER unaccented	MASCULINE unaccented	PLURAL unaccented	
<i>c.</i>	dešev-á	díóšev-o	díóšev-Ø	díóšev-i	'cheap' (5)
<i>c' (c').</i>	vesel-á	véssel-o	véssel-Ø	vesel-í (véssel-i)	'merry' (6)

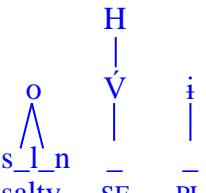
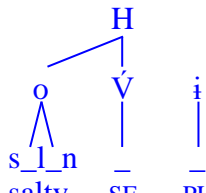
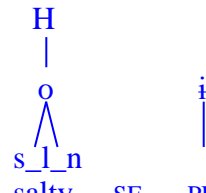
Disyllabic adjectival stems in this group are unexpectedly uniform:

The stem *razvit*- 'developed, advanced' also exhibits the *c* pattern and will not be accounted for by the explanation below. But it is actually an adjectival participle, and its root can be argued to contain a yer (-vǐ[j]-)

- (7) a. *dorog*- 'dear', *molod*- 'young', *xolost*- 'bachelor', *toropŭk*- 'hasty', *dešev*- 'cheap' *c*
- b. *solon*- 'salty', *zelen*- 'green', *vesel*- 'merry', *korotŭk*- 'short', *golodŭn*- 'hungry', *xolodŭn*- 'cold' *c'*

The overt vowels in each of these roots are identical to each other and may correspond to yers  
The LF of the adjectival root *solon*- 'salty' is *sol'ónij* (formerly the participle 'salted')

Option 1: this is a case of **pleophony** (see, e.g., Sussex and Cumberley 2006:36-37;207 for the general Slavic picture): the stem vowel is linked to two positions, as is its accent:

- (8) a.  b.  b. 

Evidence against: unmotivated for the Russian roots *dešev*- 'cheap' and *vesel*- 'merry'

Option 2 (most likely wrong): **the second vowel is a yer:**

The post-stem (thematic) yer (deleted before the vocalic ending by an independently motivated process) is added to ensure that the yer in the second syllable is lowered

- (9) a. *torŭpŭk*- 'hasty', *korŭtŭk*- 'short', *golŭdŭn*- 'hungry', *xolŭdŭn*- 'cold'
- b. *dorŭgŭ*- 'dear', *molŭdŭ*- 'young', *xolŭstŭ*- 'bachelor', *solŭnŭ*- 'salty'
- c. *zelŭnŭ*- 'green', *vesŭlŭ*- 'merry', *dešŭvŭ*- 'cheap'

Melvold 1989, Halle 1997, etc.; accented yers force the retraction of the accent to the previous syllable

Independent motivation: yer-containing adjectival stems with the *b*-pattern in the masculine: the final yer of the stem is disregarded by stress



- (10) a. *ráven/ravná/ravnó/ravní* ‘equal.M/F/N/PL’ (a/b)  
b. *bólen/bolná/bolno/bolní* ‘sick.M/F/N/PL’ (b)

Evidence against: the second vowel in (9a) is overt in other contexts (e.g., *gólod* ‘hunger’)

Option 3: the accented vowel that is deleted before the vocalic endings characterizes **only the adjectives exhibiting the stem-final default** (the *a+* pattern)

It cannot be the property of **the suffix -ok-**: the *a+* pattern also appears with two more disyllabic stems:

- (11) a. *velik/veliká/veliko/veliki* ‘great.M/F/N/PL’ (a’)  
b. *udál/udalá/událo/událi* ‘daring.M/F/N/PL’ (b/c’)

(11b) is a deverbal stem containing a prefix, which may be post-cyclic and therefore, not count, but (11a) is underived

The hypothesis that stems may end in a vowel rather than their final consonant is not new (the vowels could be thematic suffixes, cf. Bailyn and Nevins 2008, Halle and Nevins 2009)

Stem-final default can be derived from hiatus resolution

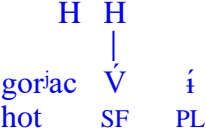
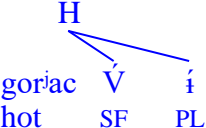
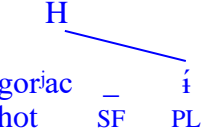
### 4.3. Pattern *b*

Dubina 2012 (cf. also Revithiadou 1999): post-accentuation corresponds to a floating tone on the stem

The tone of the SF suffix prevents the floating tone of the stem from realizing on the suffix and we don’t want it on the stem, but isn’t it what we expect?

Suppose they both attach one syllable to the right from their original positions; the OCP forces multiple linking (12b)

The deletion of the SF suffix does not affect the position of the accent (12c):

- (12) a.  b.  c. 

How kosher is this? Can it be improved by treating the SF accent as floating?

At any rate, this is not the full story: we still have LF adjectives to account for

## 5. INTERMEDIATE SUMMARY

A non-insignificant class of adjectives exhibit the stem-final default in SF (*-ok-* adjectives, the two adjectives in (11), and potentially, most of the 78 *a'* adjectives (out of 339 non-accented adjectival stems with SFs))

An additional accented post-stem vowel (hypothesized to be the SF suffix) can derive this

An SF suffix can be independently motivated, and its effect on stem-initial default adjectives (patterns c and c’), explained



## 6. UNEXPECTED FINAL STRESS IN THE PLURAL (PATTERN C')

Melvold 1989: exceptionally accented plural suffix

Alternative: the plural suffix is always accented, but some adjectives are subject to retraction in the plural (just like some nouns are, the so-called Pattern D)

If correct, this view requires an explanation for why pattern c' adjectives have stem-initial stress in the plural (section 4.2)

One possible answer: a non-overt accented plural suffix (independent of the case ending) and the same derivation as for the SF suffix above

## 7. THE ELEPHANT IN THE ROOM: LF ADJECTIVES

Two issues: (a) no obvious link between the LF stress position (stem or post-stem) and the SF stress pattern, and (b) general unpredictability of the LF stress position

### 7.1. The SF-LF relationship

Halle 1973, Levin 1975, Melvold 1989, etc.: the accentual relation between the long forms and the short forms is not obvious

Stem-stressed SF adjectives never yield LFs with stress anywhere else

Otherwise anything goes:

**Table 11: Summary of SF-LF relations**

<b>SF stress \ LF stress</b>	<b>stem (a)</b>	<b>post-stem (b)</b>	<b>variant</b>
stem (a)	productive	absent	absent
post-stem (b)	18	7	absent
variant	276	37	absent

The LF suffix *-Vj-* introduces an accent, that's all we know

### 7.2. The lexical nature of LF stress

Whether an LF-adjective has post-stem stress or stem stress is unpredictable

Minimal pairs:

- (13) a. *vrémennij* 'temporary', *vremennóĵ* 'temporary'  
cf. *vrém'ja* 'time' (plural *vremená*)
- b. *čúdnij* 'marvelous', *čudnóĵ* 'odd, strange'  
cf. *čúdo* 'marvel, miracle' (plural *čudesá*, cf. *čudésnij* 'wonderful')

Usage variations (the tendency is towards retraction):

- (14) a. *razvitóĵ/rázvitij* 'developed'
- b. *udalóĵ/událij* 'daring'
- c. *obščezavodskóĵ/obščezavódskij* 'common for factories or a factory'

The same suffix may derive different variants (here, from an accented root):

- (15) a. počtóvij ‘postal’, cf. počta/póčtu ‘post.NOM/ACC’, suffix -ov-  
 b. bombovój ‘bomb-related’, cf. bómba/bómbu ‘bomb.NOM/ACC’, suffix -ov-  
 c. róžovij ‘pink, rose’, cf. róža/róžu ‘rose.NOM/ACC’, suffix -ov-

Many post-stem LF adjectives have no SF variants

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