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RUSSIAN STRESS RETRACTION AS UNSTRESSABILITY

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1. INTRODUCTION: RUSSIAN LEXICAL ACCENT

Russian (like a typical Slavic language) has lexical stress: every root or affix is specified in one of the following four ways (Garde 1968, 1998, Halle 1973, Melvold 1989, Gladney 1995, Alderete 1999, Feldstein 2015, etc.):

- **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** carry 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.

The transliterations below closely follow Russian orthography and do not indicate: (a) palatalization before front vowels (/*Ci*/ → [*Cʲi*], /*Ce*/ → [*Cʲe*]), (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 /ĭ/ (front) and /ŭ/ (back). The letters ч (IPA t͡ɕ, see Padgett and Żygis 2007), ш (IPA ʂ), ж (IPA ʐ), щ (IPA [ɕɕ]) are traditionally rendered as č, š, ž, and šč.

2. ROADMAP

Idea: to derive surface stress from the accentuation of various morphemes

Section 3, athematic verbs: three pieces, four patterns

Section 4, thematic verbs: a pattern that is not predicted

Section 5, main intuition: the key morpheme (the present-tense suffix) is unstressable

Section 6, analysis: unstressability is caused by an accentual conflict

- stem post-accentuation bleeds the conflict
- independent motivation and evidence

3. FINITE VERB MORPHOLOGY

Four morphemes: the stem, the thematic suffix, the tense suffix, and the agreement ending:

(2)	a.	léz-		e-	t	athematic verb
		STEM: climb	THEME: none	TENSE: PRES	ϕ: 3SG	
	b.	žértv-ov-	a-	l-	a	thematic verb
		STEM: sacrifice	THEME: a/i	TENSE: PAST	ϕ: FSG	

Because the thematic suffix can be absent, accentuation can be determined without it

Key: the leftmost accented syllable (and in its absence, the leftmost syllable) gets surface stress (the Basic Accentuation Principle)

Table 1: Accentual interaction in athematic (√-T-ϕ) verbs

		accented PAST-FSG	**unaccented** PAST-PL	**accented** PRES-3SG	**pre-accenting** INF
a.	accented: -*lez-* ‘climb’	*lézlá*	*lézli*	*lézet*	*lézt^j*
b.	post-accenting: -*nes* – ‘carry’	*neslá*	*neslí*	*nes^jót*	*nest^jí*
c.	unaccented: -*klad-* ‘put’	*klalá*	*kláli*	*klad^jót*	*klás-t^j*
d.	retracting: -*gr<s>i</s>z* – ‘gnaw’	*grízlá*	*grízli*	*gr<s>i</s>z^jót*	*grízt^j*

Accented stems exhibit stem stress (row (a)):

(3) a. (*lez)(*l)(*i) b. (*lez)(*l)(*a)

Post-accenting ones exhibit final stress (row (b)):

(4) a. *(nes)(*l)(*i) → b. *(nes)(*l)(*a)

Empirically, an accented monosyllabic morpheme following a post-accenting morpheme creates the same effect as either one of them

An unbroken sequence of two accents is simplified to just one

Unaccented stems can be diagnosed by their accentual variability (row (c))

Melvold 1989: underlying accentuation of Russian finite verbal morphology:

- the present-tense suffix -*e*- and the feminine singular suffix -*a*- are accented
- the plural suffix -*i*- is unaccented (and the same is true for the masculine (-*ŭ*-) and neuter (-*o*-) suffixes, which show the same accentual behavior; for minor lexically-conditioned deviations see Marklund Sharapova 2000)
- the past-tense suffix -*l*- is unaccented

The pattern (d) is not expected: the present-tense should pattern with the feminine past tense

Melvold 1989: (d) involves **retraction**

(5) a. *(griz)(*l)(*i) → b. (*griz)(*l)(*i)

Accentuation introduces a foot edge, retraction moves it one syllable to the left

Now we add a thematic suffix, and…

One of the three accentual patterns of thematic verbs doesn’t fit into the picture

4. THE 1SG PATTERN

The thematic suffix always ends in a vowel. With the present-tense suffix (-*e*-) it creates hiatus:

(6) a. max- nu- l- a (wave THEME PAST FSG) b. max- nu- e- t (wave THEME PRES 3SG)

Hiatus resolution: a vowel is deleted before another vowel, unless it is an i before a non-i, in which case it turns into a glide:

(7) a. max- nu- e- t → max-nu̯-e-t → *maxnʲót*
wave TH PRES 3SG

b. pis- i- e- t → pis-j-e-t → *píšet*
write TH PRES 3SG

What are the accentual effects of vowel deletion?

4.1. Accentuation of thematic suffixes

Past-tense variability as a diagnostic: the FSG *-a-* is accented, the plural *-i-* is not

Thematic verbs exhibit no variant pattern in the past tense, but they may, in the present

(8) Accentual interaction in thematic verbs, illustrated for the semelfactive suffix *-nu-*

		accented PRES-3SG	**accented** PRES-1SG	**accented** PAST-FSG	**unaccented** PAST-PL
a.	stem: *-top-* ‘stomp’	*tóp-n-e-t*	*tóp-n-u*	*tóp-n-u-l-a*	*tóp-n-u-l-i*
b.	post-stem: *-max-* ‘wave’	*max-nʲ-ó-t*	*max-n-ú*	*max-n-ú-l-a*	*max-n-ú-l-i*
c.	1sg: *-obman-* ‘cheat’	*obmá-n-e-t*	*obma-n-ú*	*obma-n-ú-l-a*	*obma-n-ú-l-i*

All three patterns are productive in second-conjugation i-verbs

Thematic verbs have only two accentual patterns in the past: stress on the stem and stress on the thematic suffix
One exception: the unaccented suffix *-a-*

This means that the thematic suffix is accented and **the accentuation of tense and agreement morphemes becomes irrelevant**:

(9) a. unaccented stem

```
    *
*   (*      (*
√-  nu  l   a
    TH  PAST FSG
```

b. post-accenting stem

```
    *
*(  (*      (*
√-  nu  l   a
    TH  PAST FSG
```

Why then are there two patterns in the present tense?

(10) a. 3sg

```
*   (*  (*
√-  nu  e   t
    TH  PAST 3SG
```

b. 1sg

```
*   (*  (*      *
√-  nu  e       u
    TH  PAST    FSG
```

The accentuation of all relevant pieces is identical

4.2. Stress retraction

Halle 1973, Melvold 1989, Idsardi 1992: **retraction**

> Some verbal stems force the accent of the present-tense suffix to retract one syllable to the left

Idsardi 1992:124: as the trigger (the present-tense suffix) is deleted by hiatus resolution before the 1sg ending, there is no retraction in the 1sg

Feldstein 2015: the imperative (surface *-i* or *-ʲ*) and the present tense gerund (surface *-ʲa*), both based on the "present-tense stem", have the same stress placement as the 1SG form (e.g., *vert-í* 'spin!')

Feldstein's generalization: no retraction before a simple vowel ending of the type -V#

This looks like a phonological generalization

If morphologically triggered, retraction leaves no room for such generalizations

5. THE 1SG AS UNSTRESSABILITY

The 1sg pattern will follow if the present-tense suffix is not represented on the metrical tier

If the ending is vocalic, it will bear the accent:

(11) a. → b. → c.

If the ending is consonantal, the last syllable will be stressed:

(12) a. → b. → c.

Independent evidence for how an accent is realized when there is no syllable to bear it: nominal and adjectival declension:

(13) a. *serʲgá/serʲgámi/**serʲóg*** 'earring.SG.NOM/PL.INS/PL.GEN'
b. ***koról*ʲ***/*korolʲá/korolʲámi* 'king.SG.NOM/SG.GEN/PL.INS'

(14) a. ***zdoróv***/*zdorová/zdorovó/zdorovʲí* 'robust.M/F/N/PL'
b. ***tʲažʲól***/*tʲaželá/tʲaželó/tʲaželʲí* 'heavy.M/F/N/PL'

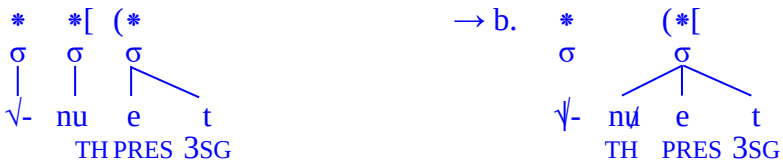
Feldstein's generalization (stress retraction in the absence of a vocalic ending) is explained

6. THE SOURCE OF UNSTRESSABILITY

Hypothesis: the present-tense suffix is removed from the metrical tier because of an accentual conflict

Stipulation: the thematic suffix is post-accenting rather than accented:
The notation with a square bracket is here for convenience, the intuition cannot be expressed in this framework

(15) a. → b.



Intuition: when the vowel of the post-accenting suffix is deleted, **post-accentuation becomes a property of an accented vowel**

As a result, **the conflicted position is deleted from the metrical tier**

6.1. Bleeding the accentual conflict

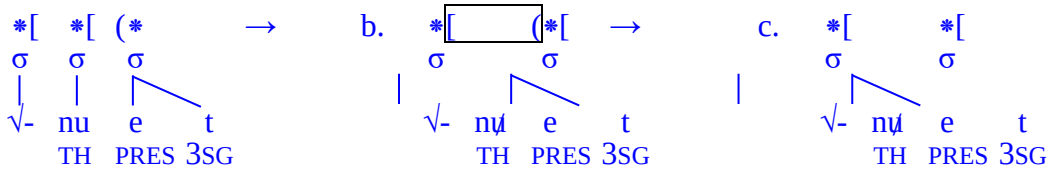
Why does the accentual conflict not happen in all verbs?

In **accented** stems it does, but the result is concealed by the stem accent

In **post-accenting** verbs the offending configuration does not arise

The deletion of the thematic suffix creates a sequence of two parentheses without any metrical elements between them:

(16) a. ⁎[⁎[(⁎ → b. ⁎[(⁎[→ c. ⁎[⁎[



We know independently (see above) that such sequences are simplified to a single parenthesis

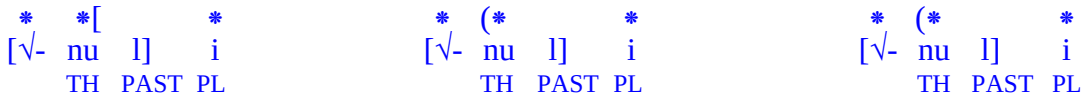
If the one deleted is the second one, no conflict arises

6.2. The past tense

If the thematic suffix is post-accenting, stress is wrongly predicted to be final in the past

Solution: the past-tense suffix is retracting:

(17) a. → b. → c.



Independent explanation: cyclicity

Independent evidence: retracting athematic verbs

Independent motivation: infinitives and passive past participles (Matushansky [to appear]-b)

6.3. Independent evidence for unstressability

Nominal and adjectival declension provides evidence for stressable (regular) and unstressable (exceptional) vocalized yers (data noted in Halle 1973, 1997):

(18) a. *serʲgá* (*-serĭg-*)/*serʲgámi*/***serʲóg*** 'earring.SG.NOM/PL.INS/PL.GEN' stressable
b. ***silʲón*** (*-sil-ĭn-*)/*silʲná*/*silʲnó*/*silʲnʲí* 'strong.M/F/N/PL'

(19) a. ***úzel*** (*-uzĭl-*)/*uzlá*/*uzlʲí* 'knot.SG.NOM/SG.GEN/PL.NOM' unstressable
b. ***bólen*** (*-bol-ĭn-*)/*bolʲná*/*bolʲnó*/*bolʲnʲí* 'sick.M/F/N/PL'

Could the unstressable ones be purely epenthetic? Unlikely, since Russian allows word-final complex codas (e.g., *mʲotl* 'broom.PL.GEN', *podl* 'villanous.SF.M.SG')

Melvold 1989: three types of yers on the basis of cyclicity and stress (segmentally unspecified, missing a metrical slot, both floating)

This is a separate matter though

Furthermore, there might even be **unstressable morphemes** (or syllables):

(20) a. *proféssor*/*profésora* 'professor.NOM/GEN'
professorá/*professorów* 'professor.PL.NOM/GEN'

b. *véčer*/*véčera* 'evening.NOM/GEN'
večerá/*večerów* 'evening.PL.NOM/GEN'

The singulars in this class are accented, the plurals are stress-final

The options:

- all plural exponents in this class are accented and dominant (coincidence?)
- the stem becomes post-accenting in the plural
- the final syllable of the stem is **accented and unstressable**

Interestingly, most such cases involve a vowel-sonorant sequence in the final syllable, which suggests that the explanation is phonological

However, lexical exceptions exist, too:

(21) a. *mučítelʲ/mučítelʲa* 'torturer.NOM/GEN' default case
mučítelʲi/mučítelej 'torturer.PL.NOM/GEN'

b. *učítelʲ/učítelʲa* 'teacher.NOM/GEN' unique exception
učitelʲá/učiteléj 'teacher.PL.NOM/GEN'

If the final syllable (morpheme) is unstressable, this becomes an issue of phonology rather than allomorphy

7. CONCLUSION AND FURTHER QUESTIONS

The 1sg pattern can be derived from the assumption that the present-tense suffix is unstressable

The cause of unstressability is accentual conflict

Post-accenting stems bleed the conflict

The 1sg pattern can be derived from independently motivated properties of morphemes

Several issues not treated above, including:

- the second conjugation (with a zero present-tense suffix)
- the 3pl and the active present participle (surface-vocalic, underlyingly nasal)
- the gerund and the imperative (with unclear segmental content)
- stem-final stress in *-a-*/*-i-* verbs

7.1. The second conjugation

The vowel appearing before the present-tense agreement in the second conjugation is [i]:

(22) Accentual interaction in thematic verbs, illustrated for the thematic suffix *-ē-*

		accented PRES-3SG	**accented** PRES-1SG	**accented** PAST-FSG	**unaccented** PAST-PL
a.	accented: *-vid-* 'see'	*víd-i-t*	*víž-u*	*víd-e-l-a*	*víd-e-l-i*
b.	post-stem: *-vel-* 'order'	*vel-í-t*	*velʲ-ú*	*vel-é-l-a*	*vel-é-l-i*
c.	1sg: *-vert-* 'spin'	*vért-i-t*	*verč-ú*	*vert-é-l-a*	*vert-é-l-i*

Melvold 1989 (following Jakobson 1948): the thematic vowel [e] is deleted before the present-tense suffix (23a)

Micklesen 1973, Coats and Lightner 1975, Itkin 2007:129-130, Matushansky [to appear]-a: the second-conjugation present-tense suffix is null, and the thematic vowel [e] is raised to [i] in the present tense (23b).

(23) a. [[[gor-e]$_2$-i]$_3$-t]$_4$ → [[[gor-ø]$_2$-i]$_3$-t]$_4$ → [gorit] vowel deletion
b. [[[gor-e]$_2$-Ø]$_3$-t]$_4$ → [[[gor-i]$_2$-Ø]$_3$-t]$_4$ → [gorit] vowel change

In the latter case the null present-tense suffix must be assumed to introduce an accent (and give rise to the same accentual conflict)

7.2. The 3pl form and the active present participle

The 1sg, the imperative and the present gerund are not the only suffixes that are vowel-initial on the surface:

Table 2: First conjugation, present-tense accentuation: *stonátʲ* 'to moan'

		singular-M(F/N)	**plural**
present	1	*ston-ú*	*stón-e-m*
	2	*stón-e-š*	*stón-e-te*
	3	*stón-e-t*	*stón-**ut***
imperative		*ston-í*	*ston-í-te*
present **gerund**		*stonʲ-á*	
active present **participle**		*stón-**ušč**-aja*	

Why are the 3pl and active present participle not stressed?

3pl: the underlying representation is non-vocalic (*-nt-*), VN-allomorphy is attested elsewhere (cf. Lightner 1965)

Active present participle: also a non-vocalic underlying representation (*-nšč-*) and retraction in the long form (Melvold 1989)

7.3. The gerund and the imperative

The historical underlying representation of the gerund suffix is *-n-*. This is incompatible with its stress behavior

Whether the underlying representation of the imperative is *-i-* or *-ǐ-*, final stress is not expected

Alternative: the gerund and the imperative do not contain the present-tense suffix

7.4. Stem-final stress in *-a-*/*-i-* verbs

In this class of verbs the present-tense suffix is never stressed:

(24) Accentual interaction with the 1st conjugation TS suffix *-a-*/*-i-*

		accented PRES-3SG	**accented** PRES-1SG	**accented** PAST-FSG	**unaccented** PAST-PL
a.	stem (accented): *-maz-* 'smear'	*máž-e-t*	*máž-u*	*máz-a-l-a*	*máz-a-l-i*
b.	post-stem: absent				
c.	1sg: *-vʲaz-* 'tie'	*vʲáž-e-t*	*vʲaž-ú*	*vʲaz-á-l-a*	*vʲaz-á-l-i*
d.	stem-final present: *-koleb-* 'rock'	*koléblʲ-e-t*	*koléblʲ-u*	*koleb-á-l-a*	*koleb-á-l-i*

While other thematic vowels are deleted, the *-a-*/*-i-* suffix turns into a glide

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