

# The rise of a productive retracting stress pattern in athematic verbs in Belarusian

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## 1. Introduction

- Many morphophonological phenomena in Belarusian are **poorly documented** and/or **underexplored** from a theoretical perspective.
- The stress properties of the language, including their diachronic and dialectal dimensions, are firmly in this category.
- In this paper, I analyze the stress properties of **athematic verbs** in Belarusian, compare them to the better studied corresponding facts in Russian (Kiparsky & Halle 1977; Zaliznjak, 1985; Matushansky 2022; Matushansky to appear), and sketch out some components of an analysis of their **historical development** and **synchronic properties**:
  - **Mobile (retracting) stress pattern** has been productive in athematic verbs in Belarusian, in that it **attracts verbs from other classes** (typically, post-accenting & unaccented ones).
  - For infinitives, this behavior is, in fact, **predicted**, based on the Basic Accentuation Principle (BAP);
  - But, I show that the rise of the retracting pattern in infinitives is part of a larger tendency for infinitives to adhere to a **C(C)VC(C)-ci template**, which
    - renders the BAP-based explanation irrelevant;
    - advocates for the need of the **notion of a template in morphophonology**.

## 2. Background: Russian

### 2.1 Verb classes

- Russian verbs comprise two classes: **thematic** (large, open) and **athematic** (small, closed, ca. 75-90 verbs) ones.
  - thematic verbs contain a **thematic vowel** (1), athematic verbs do not (2).

- |     |  |  |
|-----|--|--|
| (1) | a. <i>čit-a-t'</i><br>read-TH-INF<br>'to read'   | b. <i>čit-a-l-a</i><br>read-TH-PST-F.SG<br>'read (f.)'   |
|     | c. <i>khran-i-t'</i><br>keep-TH-INF<br>'to keep' | d. <i>khran-i-l-a</i><br>keep-TH-PST-F.SG<br>'kept (f.)' |
| (2) | a. <i>kras-t'</i><br>steal-INF<br>'to steal'     | b. <i>kra-l-a</i><br>steal-PST-F.SG<br>'stole (f.)'      |

### 2.2 Accentual properties of morphemes

- According to a widely accepted analysis of Slavic accentuation, morphemes are specified for **accent-bearing properties** (Zaliznjak, 1985; Halle 1973; Melvold 1990) and form the following categories:
  - accented (carries accent),
  - pre-/post-accenting (assigns stress to the preceding/following morpheme),
  - unaccented (unspecified for accent)
- The location of stress is determined by the **Basic Accent Principle** (BAP) (Kiparsky & Halle 1977):
  - (3) Assign stress to the **leftmost accented vowel**;  
if there is no accented vowel, assign stress to the **leftmost vowel**.

- In Russian, the verbal affixes that are relevant for the analysis are:
  - pre-accenting: INF
  - accented: PST-F.SG, PRS.3SG
  - unaccented: PST-PL

**2.2 Accentual properties of athematic verbs**

- Athematic verbal stems can also be **accented**, **unaccented**, and **post-accenting**.
- Additionally, some athematic stems are **retracting** (acting like unaccented/post-accenting in PRS.3SG and like accented in the infinitive or infinitive & past tense). This is illustrated in (4).

(4) *Accentual properties of athematic verbs in Russian*

(*accent = underscore, retracting accent = squiggly underscore, stress = acute*)

	morpheme	pre-accenting INF	accented PRS.3SG	accented PST-F.SG	<b>unaccented</b> PST-PL
a.	accented: -lez- ‘climb’	<i>lěz-<u>t</u></i>	<i>lěz-<u>et</u></i>	<i>lěz-l-<u>a</u></i>	<i>lěz-l-i</i>
b.	unaccented: -ži(v)- ‘live’	<i>ži-<u>t</u></i>	<i>živ<sup>j</sup>-<u>ót</u></i>	<i>ži-l-<u>á</u></i>	<i>ži-l-i</i>
c.	post-accenting: -nes- ‘carry’	<i>nes-<u>ti</u><sup>l</sup></i>	<i>nes<sup>j</sup>-<u>ót</u></i>	<i>nes-l-<u>á</u></i>	<i>nes-l-i</i>
d.	retracting: -kra(d)- ‘steal’	<i>krás-<u>t</u></i>	<i>krad-<u>ót</u></i>	<i>krá-l-<u>a</u></i>	<i>krá-l-i</i>

**3. Belarusian: the facts**

**3.1 General info**

- East Slavic, ca. 3.5 million of active speakers (*Ethnologue*);
- Three main dialect groups: North-Eastern (NE), South-Western (SW, includes the Palesse varieties), and Central;
- The Central dialects present a mixture of NE and SW dialect properties;
- Literary Belarusian is based on the Central dialects.

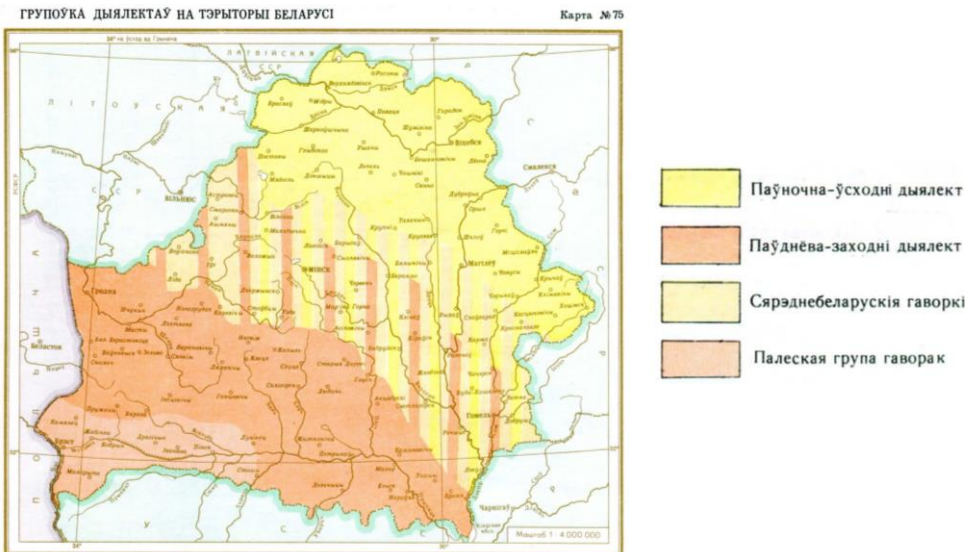


Figure 1. Main dialect groups of Belarusian: NE (darker yellow), Central (lighter yellow + stripes), SW (orange + light orange) (Avanesaŭ, Krapiva & Matskevich 1969)

<sup>1</sup> This unexpected stress assignment & BAP violation is discussed in Matushansky (to appear) and will be important for the discussion to follow.

### 3.2 Accentual properties of athematic verbs in Belarusian

- The same typology of the accentual properties of verbal morphemes can be applied to Belarusian,
- The accentual properties of verbal affixes are slightly different from those in Russian though:
  - pre-accenting: INF
  - accented: PST-F.SG, PRS.3SG, **PST-PL**
- **Accented** athematic stems behave identically to Russian: they have fixed stem stress, (5a).
- The PST-PL form of **unaccented stems** reveals that **(PST-)PL is accented** in Belarusian, (5b).
- In fact, in contrast with Russian, all overt PST morphemes (PST-PL, PST-F/M/N.SG) in Belarusian are **accented**, providing a strong example of *paradigm uniformity*.
- From this, it follows that the finite forms of unaccented and post-accenting stems have **identical stress patterns** in Belarusian, (5b-c);
  - in Russian, athematic verbs with unaccented and post-accenting stems differ only in the PST-PL form, (4b-c).
  - the shape of the infinitive, with the truncated/full form of the infinitival suffix (-c'/-ci), still allows for differentiating unaccented and post-accenting stems.

#### (5) *Accentual properties of athematic verbs in Belarusian*

(*accent = underscore, retracting accent = squiggly underscore, stress = acute*)

	morpheme	pre-accenting INF	accented PRS.3SG	accented PST-F.SG	<b>accented</b> PST-PL
a.	accented: -lez- 'climb'	l <sup>é</sup> z- <u>ci</u>	l <sup>é</sup> z- <u>e</u>	l <sup>é</sup> z-l- <u>a</u>	l <sup>é</sup> z-l- <u>i</u>
b.	unaccented: -žy(v)- 'live'	žy' <u>-c</u> '	žy <sup>l</sup> - <u>é</u>	žy-l- <u>á</u>	žy-l- <u>í</u>
c.	post-accenting: -bry(d)- 'wander'	brys- <u>-c</u> <sup>l</sup>	brydz- <u>-é</u>	bry-l- <u>á</u>	bry-l- <u>í</u>
d.	retracting: -nes- 'carry'	n <sup>é</sup> s- <u>ci</u>	nias <sup>l</sup> - <u>é</u>	n <sup>é</sup> s-l- <u>a</u>	n <sup>é</sup> s-l- <u>i</u>

### 3.3 Retracting athematic verbs

- Strikingly, a number of the **post-accenting** and some **unaccented** athematic verbs in Russian systematically correspond to **retracting** ones in Belarusian (mainly Central/standard): cf. (4b) vs. (5d).<sup>2</sup>
- If dialectal Belarusian facts are taken into account, many of these verbs have both a post-accenting and a retracting pattern (both in the infinitive and person forms), as shown in (6).

#### (6) *Belarusian retracting verbs corresponding to the Russian post-accenting/unaccented ones; forms listed in the dictionary (Kapyloŭ 2016) are **boldfaced**.*

	meaning	Belarusian (INF/PST-F.SG/PST-PL)		Russian (INF/PST-F.SG/PST-PL) post-accenting
		standard /Central INF+PST retracting	dialects (mainly SW) post-accenting	
a.	'carry'	<b>n<sup>é</sup>s-ci</b> <b>n<sup>é</sup>s-l-a</b> n <sup>é</sup> s-l-i	nias-ci <b>nias-l-á</b> nias-l-í	nes-tí nes-l-á nes-l-í
b.	'transport'	<b>v<sup>é</sup>z-ci</b> <b>v<sup>é</sup>z-l-a</b> v <sup>é</sup> z-l-i	viaz-ci viaz-l-á viaz-l-í	vez-tí vez-l-á vez-l-í

<sup>2</sup> The data used here comes from native speaker judgements, including my own, and grammars/dictionaries (Biryła & Shuba 1985; Kolas, Krapiva & Hlebka 2002; Kapyloŭ 2016).

c.	‘scoop’	<i>hréb-ci</i> <b><i>hréb-l-a</i></b> <i>hréb-l-i</i>	<i>hrab-cí</i> <i>hrab-l-á</i> <i>hrab-l-í</i>	<i>gres-tí</i> <i>greb-l-á</i> <i>greb-l-í</i>
d.	‘shake’	<b><i>trés-ci</i></b> <b><i>trés-l-a</i></b> <i>trés-l-i</i>	<i>tras-cí</i> <i>tras-l-á</i> <i>tras-l-í</i>	<i>trias-tí</i> <i>trias-l-á</i> <i>trias-l-í</i>
e.	‘scratch’	<b><i>skréb-ci</i></b> <b><i>skréb-l-a</i></b> <i>skréb-l-i</i>	<i>skrabcí/ škrab-cí</i> <i>skrab-l-á/ škrab-l-á</i> <i>skrab-l-í/ škrab-l-í</i>	<i>skres-tí</i> <i>skreb-l-á</i> <i>skreb-l-í</i>
f.	‘pluck, nip, nibble’	<b><i>skúb-ci</i></b> <i>skúb-l-a</i> <i>skúb-l-i</i>	? <i>skub-l-á</i> <i>skub-l-í</i>	<i>skub-tí</i> (dial.) <i>skub-l-á</i> <i>skub-l-í</i>
g.	‘talk nonsense’	<i>vérz-ci</i> <i>vérz-l-a</i> <i>vérz-l-i</i>	<b><i>viarz-cí</i></b> <b><i>viarz-l-á</i></b> <i>viarz-l-í</i>	– – –
h.	‘spin (wool)’	<b><i>prás-ci</i></b> <b><i>prá-l-a</i></b> <i>prá-l-i</i>	– – –	<i>priás-t’</i> (unaccented/retracting) <i>priá-l-a/ pria-l-á</i> <i>priá-l-í</i>
i.	‘curse’	<i>kliás-ci</i> <i>kliá-l-a</i> <i>kliá-l-i</i>	<b><i>klias-cí</i></b> <b><i>klia-l-á</i></b> <i>klia-l-í</i>	<i>kliás-t’</i> (unaccented) <i>klia-l-á</i> <i>klia-l-í</i>
j.	‘tear, shred’	<b><i>dzér-ci</i></b> <b><i>dzér-l-a</i></b> <i>dzér-l-i</i>	– – –	<i>drá-t’</i> (unaccented) <i>dra-l-á</i> <i>drá-l-í</i>
k.	‘die’	<b><i>pamér-ci</i></b> <b><i>pamér-l-a</i></b> <i>pamér-l-i</i>	– – –	<i>umeré-t’</i> (unaccented) <i>umer-l-á</i> <i>úmer-l-í</i>
l.	‘take’	<b><i>uziá-c’</i></b> <i>uziá-l-a</i> <i>? uziá-l-i</i>	– <b><i>uzia-l-á</i></b> <i>uzia-l-í</i>	<i>vziá-t’</i> (unaccented) <i>vzia-l-á</i> <i>vziá-l-í</i>

- A similar picture is presented by verbs that correspond to the Russian post-accenting ones in -č.
- In Belarusian, the retractive character of accentuation is evident, given the unstressed **full infinitival suffix -čy**.
- Not all retracted PST-PL versions are fully acceptable in standard language: cf. (6l), (7b, c).
- Roots in -h do not drop it and seem to be particularly adamantly retracting (7d-f).

(7) *Belarusian retracting verbs corresponding to the Russian post-accenting ones -č; forms listed in the dictionary (Kapyloŭ 2016) are **boldfaced**.*

	meaning	Belarusian (INF/PST-F.SG/PST-PL)		Russian (INF/PST-F.SG/PST-PL) post-accenting
		standard /Central INF+PST retracting	dialects (mainly SW) post-accenting	
a.	‘cut, chop’	<b><i>sék-čy</i></b> <b><i>sék-l-a</i></b> <i>sék-l-i</i>	<b><i>sia-čy</i></b> <i>siak-l-á</i> <i>siak-l-í</i>	<i>sé-č</i> <i>sek-l-á</i> <i>sek-l-í</i>
b.	‘bake’	<b><i>pék-čy</i></b> <b><i>pék-l-a</i></b> <i>?pék-l-i</i>	<b><i>pia-čy</i></b> <b><i>piak-l-á</i></b> <i>piak-l-í</i>	<i>pé-č</i> <i>pek-l-á</i> <i>pek-l-í</i>

c.	‘flow’	<i>cék-čy</i> <i>cék-l-a</i> <i>?cék-l-i</i>	<i>cia-čy</i> <i>ciak-l-á</i> <i>ciak-l-í</i>	<i>té-č</i> <i>tek-l-á</i> <i>tek-l-í</i>
d.	‘lie down’	<i>léh-čy</i> <i>léh-l-a</i> <i>léh-l-i</i>	– <i>liah-l-á</i> <i>liah-l-í</i>	<i>lé-č</i> <i>leg-l-á</i> <i>leg-l-í</i>
e.	‘harness’	<i>zapréh-čy</i> <i>zapréh-l-a</i> <i>zapréh-l-i</i>	– – –	<i>zapria-č</i> <i>zapreg-l-á</i> <i>zapreg-l-í</i>
f.	‘run’	<i>béh-čy</i> <i>béh-l-a</i> <i>béh-l-i</i>	– – –	<i>bežá-t’</i> (thematic) <i>bežá-l-a</i> <i>bežá-l-i</i>

- Additionally, several post-accenting stems have retraction in the infinitive only:

(8) *Belarusian INF-retracting verbs corresponding to the Russian post-accenting ones*

	meaning	Belarusian (INF/PST-F.SG/PST-PL)		Russian (INF/PST-F.SG/PST-PL) post-accenting
		standard /Central INF-retracting	dialects (NE & SW) post-accenting	
a.	‘weigh down’	<i>hnés-ci</i> – –	<i>hnias-cí</i> <i>hnia-l-á</i> <i>hnia-l-í</i>	<i>gnes-tí</i> <i>gne-l-á</i> <i>gne-l-í</i>
b.	‘lead’	<i>vés-ci</i> – –	<i>vias-cí</i> <i>via-l-á</i> <i>via-l-í</i>	<i>ves-tí</i> <i>ve-l-á</i> <i>ve-l-í</i>
c.	‘sweep’	<i>més-ci</i> – –	<i>mias-cí</i> <i>mia-l-á</i> <i>mia-l-í</i>	<i>mes-tí</i> <i>me-l-á</i> <i>me-l-í</i>
d.	‘braid’	<i>plés-ci</i> – –	<i>plias-cí</i> <i>plia-l-á</i> <i>plia-l-í</i>	<i>ples-tí</i> <i>ple-l-á</i> <i>ple-l-í</i>

- To recap, numerous post-accenting and unaccented athematic verbs in Russian correspond to retracting ones in Belarusian, where the retraction may apply to the infinitive and past tense forms or the infinitive only.

#### 4. Belarusian: further dialectal and diachronic facts

##### 4.1 Dialectal distribution of retracted forms

- The data in (8) suggests that the shift of post-accenting stems into the retracting category **starts with the infinitive**, and spreads to past tense forms later.
- Distributional evidence in Belarusian dialects also supports the idea that retraction first applies to the infinitive, and later spread to the past tense forms, given that INF-retracting has a wider dialectal distribution than PST-retracting:

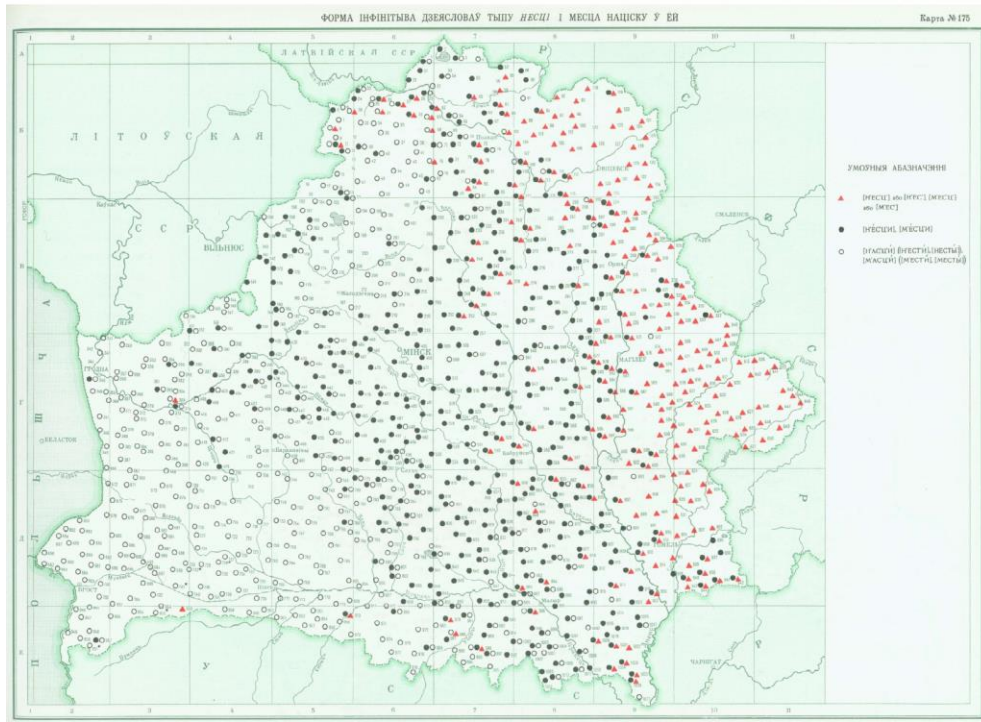


Figure 2. The distribution of retracted infinitives of the *nesci* type (black circles) vs. suffix-stressed infinitives of the *niasci* type (white circles) (Avanesaŭ, Krapiva & Matskevich 1963).

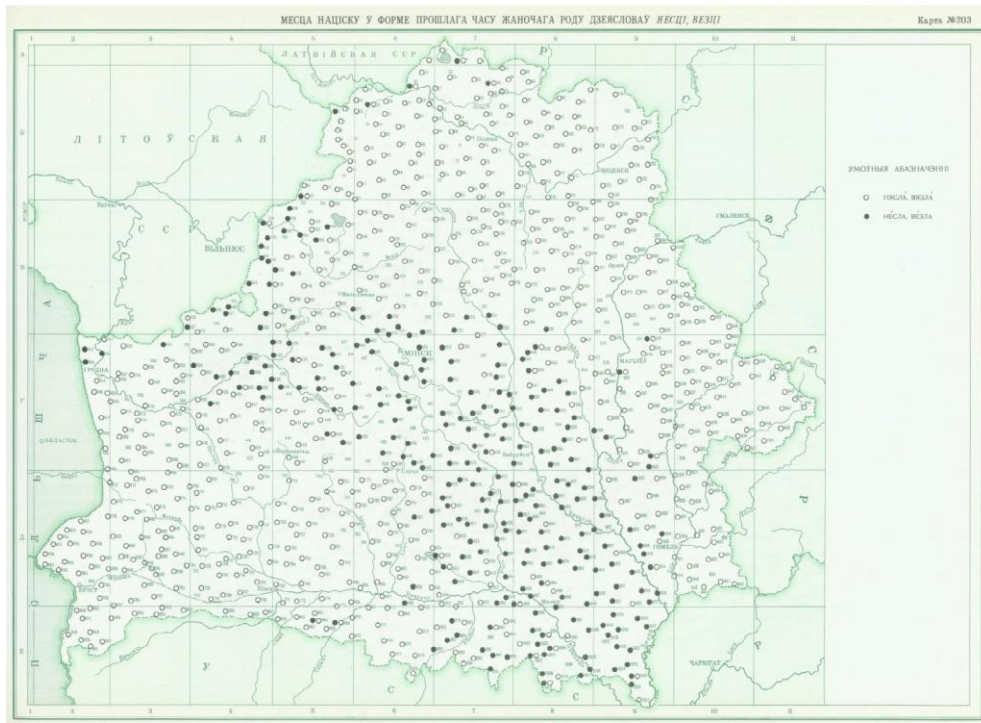


Figure 3. The distribution of retracted past tense forms of the *nésła* type (black circles) vs. suffix-stressed past tense forms of the *niasłá* type (white circles) (Avanesaŭ, Krapiva & Matskevich 1963).

**4.2 Diachronic evidence**

- Evidence from [e]->[o] change, which applied in Belarusian later than in Russian (in the 16<sup>th</sup> century), suggests that the stress retraction occurred after the [e]->[o] change ceased to be active (cf. *pamérła*, \**pamiórla* ‘die-PST-F.SG’) (Tomchyk 2010: 72).
- The evidence from 16<sup>th</sup> & 17<sup>th</sup> century sources, some of which include stress marking, is not conclusive due to limited discussion in the existing literature.
- E.g., Zhuraŭski (1967: 286) reports that some printed 17<sup>th</sup> century editions contain forms like *былі, прынялі* (cf. today’s Belarusian *bylí* ‘be-PST-PL’, *prynialí* ‘accept-PST-PL’), which suggests that the **accented status of PST-PL is not a recent innovation** in Belarusian.
- The 16<sup>th</sup> century Belarusian translation of the Polish *Kronika Polska, Litewska, Żmudzka i wszystkiej Rusi* contains forms like *выходіць, подносіць, прыходіць, прыводіць* (Zhuraŭski 1967: 272) (cf. today’s Belarusian *vykhódzic* ‘come.out-INF’, *padnósic* ‘bring.out-INF’, *prykhódzic* ‘come.in-INF’, *pryvódzic* ‘bring-INF’), which suggests that **similar stress retraction in thematic verbs had not yet taken place**.

**5. Towards an analysis**

**5.1 Retraction in infinitives is predicted by the BAP**

- Let’s look at the Russian and Belarusian facts side-by-side again:

(9) *Accentual properties of the verb ‘to carry’ in Russian & Belarusian*

(*accent = underscore, retracting accent = squiggly underscore, stress = acute*)

	morpheme	pre-accenting INF	accented PRS.3SG	accented PST-F.SG	(un)accented PST-PL
Ru.	post-accenting: <i>-nes-</i> ‘carry’	<i>nes_ -_tí</i>	<i>nes<sup>ˈ</sup> -_ót</i>	<i>nes_ -l-á</i>	<i>nes_ -l-í</i>
Bel.	retracting: <i>-nes-</i> ‘carry’	<i>nĕs- _ci</i>	<i>nias<sup>ˈ</sup> -ĕ</i>	<i>nĕs-l-á</i>	<i>nĕs-l-í</i>

- The form of the INF in Russian poses a problem for the BAP: according to it, the **leftmost accent** should be assigned stress, but, instead, stress is assigned to the **second/non-leftmost accent** and realized on the INF suffix.
- This problem has been noticed before and received different treatments: e.g., these infinitives have been approached as carrying a **special diacritic** (Halle 1973: 328) or as being inherently **unaccentable** (Matushansky to appear); under either approach, this property is **lexically specified**.
- From this perspective, the rise of the retracting pattern in Belarusian infinitives is **expected**: this would be a **regularization** of the irregular, lexically specified pattern.
- The retraction in the **finite forms** follows and is easy to model via **analogy** with the infinitive, since all finite suffixes in Belarusian have the same accentual profile (accented).
- This would make the Belarusian facts an expected/well-behaved (read: boring) version of Russian, and we could leave it at that 😊
- But there seems to be more to this pattern...

**5.2 The C(C)VC(C)-ci template for infinitives**

**5.2.1 The syllabic INF marker -ci as independent of stress – but dependent on root shape**

- Belarusian has retained the full, syllabic infinitival ending *-ci* **in unstressed positions** in athematic verbs – but only **with consonant-final/C(C)VC(C) stems** (Svistunova & Tsivanova 2018), (10a,b):

- This is in contrast with Russian, where unstressed *-ti* got reduced to *-t'* **unless stressed**, (11):

- (10) a. *klás-ci* \**klás-c'* 'put-INF' Belarusian  
 b. *žý-c'* †*žý-ci* (arch.) 'live-INF'  
 c. *ras-cí* 'grow-INF'
- (11) a. *klás-t'* \**klás-ti* 'put-INF' Russian  
 b. *žy-t'* †*žý-ti* (arch.) 'live-INF'  
 c. *ras-tí* 'grow-INF'

- This means that the C(C)ŮC(C)-*ci* template is available in Belarusian **independently of stress retraction** – and can serve as a model for the spread of INF-retracting forms (cf. *nés-ci* 'carry-INF').

### 5.2.2 -*nu*-drop in dialects

- Some Belarusian dialects – e.g., Červen' (Central), Khojniki (SW) – **drop the suffix -*nu*-** in infinitives, which results in a C(C)ŮC(C)-*ci* pattern (Matskevich 1959: 13). This is found both in imperfective verbs, (12a-c), and in prefixed perfective verbs, (12d,e); in both cases, *-nu-* seems to encode to the gradual increase in the effect of the action but is systematically dropped:

- (12) a. St.Bel. *sókh-nu-c'* → dial. *sókh-ci* 'dry(-NU)-INF'  
 b. St.Bel. *mók-nu-c'* → dial. *mók-ci* 'get.wet(-NU)-INF'  
 c. St.Bel. *kís-nu-c'* → dial. *kís-ci* 'sour(-NU)-INF'  
 d. St.Bel. *pry-výk-nu-c'* → dial. *pry-výk-ci* 'get.used.to(-NU)-INF'  
 e. St.Bel. *a-hlúkh-nu-c'* → dial. *a-hlúkh-ci* 'become.deaf(-NU)-INF'

### 5.2.3 Addition of -*s*- & syllabic -*ci* as an innovation

- Some non-retracting athematic verbs have an **innovative form of the infinitive**, which adheres to the C(C)ŮC(C)-*ci* pattern. This is the case both for some dialects – e.g., Stoŭbcy (Central), Glusk (SW/Central) (Matskevich 1959: 12) – and the standard language, in which both forms are accepted:

- (13) a. St.Bel. *plý-c'* → St.Bel., dial. *plýs-ci* 'swim-INF'  
 b. St.Bel. *hni-c'* → St.Bel., dial. *hnís-ci* 'rot-INF'

- the stem-final **-s** is **not motivated etymologically** and does not show up in any of the finite forms;
- reminiscent of the *\*dt* → *st* change in Slavic infinitives, which seems to have been particularly productive in Belarusian (cf. Bel *iscí* 'to go'; Ru. *idtí*) (Shevelov 1964: 183).

### 5.2.4 Velar-final stems and syllable count

- Already in Old East Slavic, the infinitives of velar-final stems dropped the velar and acquired the infinitive suffix *-čĭ* instead of *-ti*, (14) (the velar would still appear in the finite forms):

- (14) a. PSl. *\*sěk-ti* → OESl. *sě-čĭ* 'cut-INF'  
 b. PSl. *\*strig-ti* → OESl. *stri-čĭ* 'cut.hair-INF'



- In Belarusian, the velar got reintroduced in many of the infinitives but the *-či* (*-čy*) suffix has been kept:

- (15) a. PSl. *\*sěk-ti* → OESl. *sě-či* → Bel. *sék-čy* ‘cut-INF’  
 b. PSl. *\*strig-ti* → OESl. *stri-či* → Bel. *strýh-čy* ‘cut.hair-INF’

- Stress-wise, the **monosyllabic velar-stem verbs** are either retracting or have retracting variants, as was shown in (7) – which, again, instantiate the C(C)ŮC(C)-*ci*/*-čy* pattern (except for *mah-čý* ‘be.able-INF’).
- **Polysyllabic** stems, which do not instantiate C(C)ŮC(C)-*ci*/*-čy*, are systematically **non-retracting**:

- (16) a. *berah-čý* ‘keep.safe-INF’  
 b. *scerah-čý* ‘guard-INF’  
 c. *vala-čý* ‘drag-INF’

### 5.2.5 Velar-final stems and *-ci*

- In the eastern varieties of the SW dialects, the *-čy* infinitives have also been shown to adopt the C(C)ŮC(C)-*ci* pattern, with the *-ci* variant of the suffix (Matskevich 1959: 13):

- (17) a. dial. *sék-ci* ‘cut-INF’ (cf. St.Bel. *sék-čy*)  
 b. dial. *pék-ci* ‘bake-INF’ (cf. St.Bel. *pék-čy*)

- Among these new *-ci* infinitives, stress duplicates are also attested: *pék-ci/piak-ci* ‘bake-INF’, *cék-ci/ciak-ci* ‘flow-INF’ (Matskevich 1959: 22).
- This may point to another way of arriving at a C(C)ŮC(C)-*ci* infinitival pattern: *piačý* → *piak-ci* → *pék-ci*.

\*\*\*

⇒ To recap, we have seen that, in addition to retraction in athematic verbs, numerous **other phenomena** lead to the emergence of infinitives of the **C(C)ŮC(C)-*ci* shape**.

⇒ The BAP **cannot** account for these phenomena, since they are not due to stress reassignment.

### 5.3 OT account: possible alternative?

⇒ Maybe the morphological template can be broken down into individual OT-constraints?

- (18) a. STEMSTRESS  
 A (monosyllabic) stem should carry stress.
- b. \*OPENSTEM  
 A (monosyllabic) stem should not be an open syllable
- c. \*C-*c*’#  
 A consonant-final stem should not be followed by a non-syllabic INF marker.
- d. \*-*c*/čV  
 An INF marker should be non-syllabic.

**5.3.1 Supporting evidence: stem-faithfulness of Belarusian stress**

- In general, there is a strong preference for **stem stress** in Belarusian – stronger than the corresponding tendency in e.g. Russian (Crosswhite et al. 2003).
  - E.g., **nominal and adjectival** stress is more faithful to the root in Belarusian:

- (19) a. Bel. *spína* – Ru. *spiná* ‘back.NOM’  
 b. Bel. *kíška* – Ru. *kišká* ‘intestine.NOM’  
 c. Bel. *prósty* – Ru. *prostój* ‘simple.M’

- So is stress in adverbs:

- (20) Bel. *naspékh* – Ru. *náspekh* ‘hastily’

- **Thematic verbs** in Belarusian are also commonly stressed on the root:

- (21) a. Bel. *vúdzic’* – Ru. *udit’* ‘fish.INF’  
 b. Bel. *dýxac’* – Ru. *dyšát’* ‘breath.INF’  
 c. Bel. *l’ótac’* (colloq.) – Ru. *letát’* ‘fly.INF’  
 d. Bel. *zaprúdzic’* – Ru. *zaprudit’* ‘flood.INF’

- These examples point to the **pressure for stem stress** being operative in Belarusian.

**5.3.1 Illustrating the OT solution**

(22) Retraction:

	STEMSTRESS	*C-c’#	*OPENSTEM	*-c/čV
☞ a. <i>nés-ci</i>				*
b. <i>nias-cí</i>	*			*
c. <i>nés-c’</i>		*		

(23) Retraction with a velar stem:

	STEMSTRESS	*C-c’#	*OPENSTEM	*-c/čV
☞ a. <i>pék-čy</i>				*
c. <i>piáčý</i>	*		*	*
d. <i>piak-čý</i>	*			*
e. <i>pék-č</i>		*		

(24) Addition of -s- & syllabic -ci as an innovation

	STEMSTRESS	*C-c’#	*OPENSTEM	*-cV
☞ a. <i>plý-c’</i>			*	
b. <i>plýs-ci</i>				*

(25) Accented stems (for comparison)

	STEMSTRESS	*C-c’#	*OPENSTEM	*-cV
☞ a. <i>žý-c’</i>			*	
b. <i>žý-ci</i>			*	*

⇒ However, like the BAP, the OT approach (without additional provisions) would not offer any account for other instances of the **C(C)ŲC(C)-ci** pattern arising, which are **not stress-based** (e.g., -nu- drop); plus, limiting the STEMSTRESS and \*OPENSTEM to monosyllabic stems is necessary.

⇒ On the other hand, if the notion of the **morphophonological template**, as instantiated by  $C(C)\acute{V}C(C)-ci$ , is taken to be meaningful, it would allow for accounting **both** for the rise of retracting athematic verbs and the phenomena listed in 5.2.

## 6. Conclusions

- The **retracting stress pattern** is productive in athematic verbs in Belarusian and **attracts verbs from other classes** (typically, post-accenting ones);
- This process **starts in the infinitives** and proceeds to the finite forms (likely via analogy);
- In infinitives, the retraction is actually predicted to be favored, since it **obeys the BAP**;
- However, numerous other phenomena in Belarusian verbs tend to favor the  $C(C)\acute{V}C(C)-ci$  pattern;
- The BAP or stem-faithfulness could account for the retracting pattern but not these other phenomena;
- Within the bounds of a particular language, then, the notion of a morphophonological template  $C(C)\acute{V}C(C)-ci$  seems meaningful.

Дзякуй ~ Thank you

## Appendix. Further issues: preverbs and reflexives

- Adding **preverbs** to athematic stems that allow for both retracting and post-accenting patterns results in a **stronger preference for a retracting pattern**:
- (26) a. *nésla/niaslá* ‘carry-PST-F.SG’  
 b. *pry-nésla/za-nésla/ad-nésla* ‘PV-carry-PST-F.SG’  
 c. *pry-niaslá/za-niaslá/ad-niaslá* ‘PV-carry-PST-F.SG’
- Preverbs in general (i.e., even in thematic roots) attract stress to the root:
    - the fact that both options in (26b) are allowed, though, does not allow for analyzing preverbs as being uniformly post-accenting.
- (27) a. *siadz-é-c’/ \*sédz-e-c’* ‘sit-TH-INF’  
 b. *pryasiadz-é-c’/ perasédz-e-c’* ‘PV-sit-TH-INF’
- (28) a. *hliadz-é-c’/ \*hlédz-e-c’* ‘look-TH-INF’  
 b. *prahliazdz-é-c’/ prahlédz-e-c’* ‘PV-look-TH-INF’
- These facts are reminiscent of the phenomenon of *poluotmetnost’* (Dybo, Zamiatina & Nikolaev 1993: 32; see also Jasanoff 2017: 212), whereby certain prefixed verbs in Ukrainian (and some South Slavic dialects) are stressed one syllable further to the left than their non-prefixed counterparts, as in (29).
  - Note, though, that the sets of verbs that this applies to in Ukrainian and Belarusian are only partially overlapping, as far as I can tell. The Belarusian facts have not been described in the literature.
- (29) a. *movč-á-ti* ‘be.silent-TH-INF’      c. *za-móvč-a-ti* ‘PV-be.silent-TH-INF’  
 b. *movč-ú* ‘be.silent-1SG’      d. *za-móvč-u* ‘PV-be.silent-1SG’
- A similar, though somewhat weaker, effect may be induced by the reflexive suffix *-sia*:
- (30) a. *hréb-ci/ hrab-ci* ‘scoop-INF’  
 b. *hréb-ci-sia/ hrab-ci-sia* ‘scoop-INF-REFL’

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