

Prominence Redistribution in the Aŭciuki Dialect of Belarusian*

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One of the South-Eastern dialects of Belarusian exhibits an unusual phonological property: in certain environments, the immediately pretonic syllable is pronounced with prominence which is equal to or greater than that of the stressed syllable. This phenomenon has been analysed, albeit tentatively, as stress retraction (Kurylo 1928; Kryvicki 1959; Belaja 1974), and also as pitch peak retraction (Bethin 2006a, 2006b). Instrumental data presented in this paper confirms that the pretonic vowel can be higher in intensity and longer in duration than the stressed one, as well as comparable to it in pitch, depending on the respective heights of the pretonic vowel and the stressed one. However, the acoustic data does not lend support to either the stress retraction or pitch peak retraction hypothesis. Instead, this paper argues that the phenomenon at hand results from redistribution of the acoustic prominence associated with stress over two syllables.

The paper is structured the following way. Section 1 lays out the basic facts of the Aŭciuki dialect, spoken in the villages of Malyja Aŭciuki and Vialikija Aŭciuki (Kalinkavičy region, Homel province) in Belarus. Section 2 presents acoustic data illustrating the Aŭciuki phenomenon, collected during fieldwork done in 2014 and 2015. Section 3 summarises an earlier investigation by Belaja (1974).

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Section 4 discusses previous accounts of the phenomenon, and introduces the current analysis. Section 5 concludes.

1 The Aŭciuki Dialect

Standard Belarusian, as well as its dialects, has stress and no tonal distinctions. Stress in Belarusian is free and mobile, and is acoustically signalled by greater intensity and duration of the stressed vowel as compared to the neighbouring ones (Sussex & Cubberly 2006:179); there is no phonemic vowel length in the language. In addition to intensity and duration, the stressed syllable is realised with high pitch (Bogorodickij 1939:48). The relative importance of these three factors — pitch, intensity and duration — for determining the position of stress in Belarusian does not seem to have been investigated instrumentally, but, like in other East Slavic languages, intensity is often taken to be the primary correlate of stress in Belarusian.

The object of study in this paper is the unusual phonological feature that the Aŭciuki dialect has: a high tone, lengthening, and an intensity peak may be introduced on the immediately pretonic syllable, depending on the height of the pretonic and stressed vowels. I will dub this phenomenon *pretonic prominence*. More specifically, pretonic prominence applies to cases in which the stressed vowel is high (i/i, u), and the pretonic vowel is mid-low or low (ɛ, ɔ, a).¹ In the examples of pretonic prominence in (1) below, the pretonic vowel is underlined, and the stressed vowel is boldfaced; in contrast, pretonic prominence does not apply to the examples in (2):

- (1) a. sestru ‘sister_{ACC}’² [sʲɛ:’stru]
 b. dvori ‘courtyard_{PL}’ [dvɔ:’ri]
 c. nasi ‘carry_{IMP}’ [na:’si]

¹ The Aŭciuki dialect has been previously analysed as having a seven-phoneme vowel system, including mid-high vowels /e/ and /o/ (e.g., Vojtovič 1972b; Kryvicki 1959). However, there is no reliable acoustic evidence for the existence of mid-high vowels in the dialect. While the matter requires further investigation, I am treating the Aŭciuki dialect as having five vowel phonemes: /i ~i/, /u/, /ɛ/, /ɔ/, /a/. I am also leaving out examples that might include mid-high vowels /e/ and /o/ when discussing pretonic prominence facts.

² Abbreviations used in the glosses: 3 — third person, ACC — accusative, GEN — genitive, IMP — imperative, INS — instrumental, LOC — locative, NOM — nominative, PL — plural, SG — singular.

- (2) a. sestra ‘sister_{NOM}’ [sʲɛˈstra]
 b. nazad ‘backwards’ [naˈzad]
 c. krušina ‘buckthorn’ [kruˈšina]

Relatively recent borrowings into the dialect have been reported to adopt the pattern too, as in (3), which means that pretonic prominence is a productive feature. The examples in (3) also show that pretonic prominence does not depend on the position of either of the two relevant syllables in the word: that is, the pretonic syllable can be initial or non-initial, and the etymologically stressed syllable can be final or non-final:

- (3) a. z brihadziram ‘with crew chief_{INS}’ [z briyaːˈdziram]
 b. scienakardzija ‘stenocardia’ [scʲenakaːˈrdzija]
 c. izasarbid ‘isosorbide’ [izasaːˈrbit]

(examples from own fieldwork)

It should be noted, however, that since mid-twentieth century the viability of the dialect has been challenged, and it is likely that younger speakers are not acquiring the phonological system of the dialect in full. Nevertheless, pretonic prominence is robust in the speech of older informants. The recent data presented in this paper comes from speakers who show pronounced pretonic prominence.

There are other East Slavic dialects that have been reported to exhibit phenomena similar to pretonic prominence. In older literature they are usually described as having a ‘special musical contour’ on the pretonic syllable, or even a shift of stress one syllable to the left. This has been reported for some Mosalsk dialects (Broch 1916), Vladimir dialects (Avanesov 1927), Tver’ dialects (Nikolaev 2009), tentatively for some north-Russian dialects (Kolesov 1964), and also for certain Černihiv dialects, known as the Upper Snov dialects, adjacent to the Aŭciuki dialectal area (Žylko 1953). However, it is only in the Aŭciuki and Upper Snov dialects that pretonic prominence is conditioned by vowel height; in other reported cases, acoustic prominence on the pretonic syllable is unconditional. This makes the Aŭciuki phenomenon even more unusual.

Belarusian and its dialects also exhibit variable degrees of vowel neutralisation. Namely, while in the standard language, mid-low vowels /ɛ/ and /ɔ/ are neutralised to /a/ unless under stress (Mayo 1993:891), the degree of vowel neutralisation in the dialects decreases from north-east to south-west (Vojtovič 1971). The Aŭciuki dialect lies on the boundary between vowel neutralising and non-vowel

neutralising dialects, and has rather irregular vowel neutralisation. It is often noted that the neutralisation facts interact with the pretonic phenomena like the one discussed here (e.g., Belaja 1974; Vojtovič 1972b). Nevertheless, the nature of this interaction is unclear at present, and neutralisation facts will not be discussed in detail here. With this background in mind, let us proceed to the instrumental data.

2 Acoustic Data

The acoustic data used here was collected in 2014 and 2015 in the villages of Malyja Aŭciuki and Vialikija Aŭciuki. The recordings were made using Panasonic RR-US570 and Zoom H4n voice recorders. Data from three informants is used in this paper: MB, female, born in 1954, a native of Vialikija Aŭciuki; LD, female, born in 1935, a native of Malyja Aŭciuki; and LB, female, born in 1938, a native of Malyja Aŭciuki.

Seventy five tokens containing conditions in which pretonic prominence is predicted to apply (a low or mid-low pretonic vowel followed by a high stressed vowel) were extracted from the recordings. Additionally, twenty five tokens with no conditions for pretonic prominence (both vowels non-high) were extracted, in order to investigate the unmarked pattern of stress realisation in the dialect. All of the examples were produced in declarative clauses with all-new intonation. They were then analysed using Praat (Boersma & Weenink 2016). A highest value for intensity, pitch, and duration were extracted for vowels in four conditioning environments: (1) pretonic, unmarked; (2) stressed, unmarked; (3) pretonic, pretonic prominence; and (4) stressed, pretonic prominence. Then, the values for each acoustic characteristic of pretonic vowels in pretonic prominence contexts were compared with those of (i) stressed vowels in pretonic prominence contexts, and (ii) pretonic vowels in unmarked contexts.

It should be pointed out that vowels of different heights vary in their intrinsic phonetic properties. That is, the lower the vowel, the higher its intrinsic intensity and duration. This factor significantly complicates comparing acoustic characteristics of vowels of different heights, as in pretonic prominence contexts. In order to avoid this methodological issue, I am also comparing pretonic vowels in pretonic prominence contexts to their counterparts in unmarked contexts, so that both vowels under comparison are non-high.

2.1 Duration

The values for vowel duration across environments are presented in Figure 1, and the mean values are given in Table 1. In the tables and figures, V_1 stands for the pretonic vowel, and V_2 for the stressed vowel.

Figure 1. Vowel duration in unmarked and pretonic prominence (PP) contexts

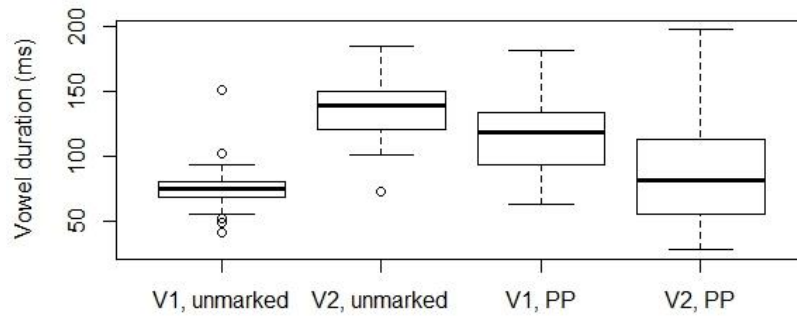


Table 1. Mean vowel duration in unmarked and pretonic prominence contexts

	V_1	V_2
Unmarked	75.23 ms	135.0 ms
Pretonic prominence	114.88 ms	86.88 ms

As expected, in the unmarked cases the stressed vowel is significantly longer than the pretonic one. In the pretonic prominence examples, however, the trend is reversed: here, V_1 is significantly longer than V_2 (Wilcoxon paired test, $p < 0.01$). Moreover, the difference between the pretonic vowels in the two environments is significant too (Wilcoxon test, $p < 0.01$).

2.2 Pitch

The values for pitch across environments are presented in Figure 2, and the mean values are given in Table 2.

Figure 2. Vowel pitch in unmarked and pretonic prominence (PP) contexts

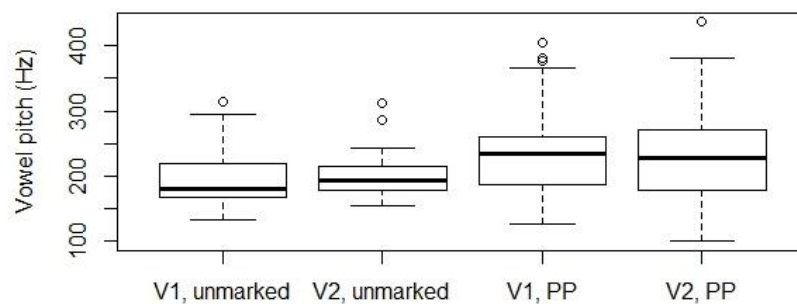


Table 2. Mean vowel pitch in unmarked and pretonic prominence contexts

	V ₁	V ₂
Unmarked	198.0 Hz	203.0 Hz
Pretonic prominence	231.8 Hz	230.0 Hz

The pattern of variability in pitch values differs from that of duration values. As Table 2 shows, V₁ and V₂ are close to each other in their values (no statistically significant difference) both in the unmarked context and in the pretonic prominence context. However, there is a notable difference in mean pitch values between the two environments, and the difference between pretonic vowels in unmarked and pretonic prominence contexts is statistically significant (Wilcoxon test, $p = 0.01$).

2.3. Intensity

The values for intensity in the two environments are presented in Figure 3, and the mean values are given in Table 3.

Figure 3. Vowel intensity in unmarked and pretonic prominence (PP) contexts

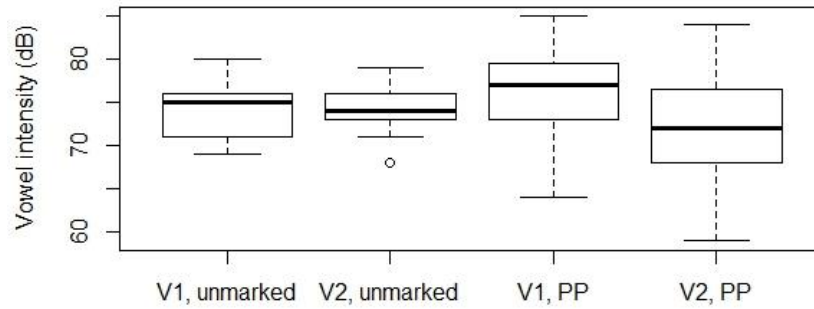


Table 3. Mean vowel intensity in unmarked and pretonic prominence contexts

	V ₁	V ₂
Unmarked	74.0 dB	74.4 dB
Pretonic prominence	76.3 dB	72.5 dB

The picture is still different for intensity values. In the unmarked contexts, the two values, V₁ and V₂, are very close to each other, exhibiting a pattern similar to the one that pitch values have in unmarked cases. In pretonic prominence contexts, however, the pretonic vowel is significantly higher in intensity than the stressed one (Wilcoxon paired test, $p < 0.01$). The difference between the pretonic vowels in the two different environments is also highly significant (Wilcoxon test, $p = 0.01$).

2.4. Discussion

To sum up, as we have seen, the distribution of acoustic prominence between V₁ and V₂ in the unmarked cases is quite different from that between V₁ and V₂ in pretonic prominence examples. Specifically, in the unmarked cases, the stressed vowel is significantly longer than the pretonic, but both vowels are close in pitch and intensity, with the stressed vowels' values only slightly higher. In the pretonic prominence contexts, the pattern is quite different. Here, the pretonic vowel is significantly longer and higher in intensity than the stressed one, while the pitch values of the two vowels are comparable. Finally, there is a significant difference when the three values are compared on pretonic vowels in unmarked and pretonic prominence contexts. The question therefore is: in the pretonic prominence examples, which

syllable bears the stress? This question will be addressed in detail in Section 4.

It should be noted that even in older speakers pretonic prominence may not be entirely consistent: sometimes it does not surface when predicted, and occasionally applies in unexpected contexts. This may be due to ongoing changes in the dialect, or even the gradual decline of pretonic prominence as a feature. However, so far this has not influenced the results significantly, and the general pattern of the pretonic prominence facts is clear.

3 Investigation by Belaja (1974)

The trends evident in the Aūciuki data discussed above are broadly consistent with the results obtained in the same dialectal area forty years ago. Belaja (1974) is an earlier instrumental investigation of vowel quality in the Upper Snov dialect. Unlike the Aūciuki dialect, Upper Snov has mid-high diphthongs $\widehat{ie}/$ and $\widehat{uo}/$, and also stronger vowel neutralisation, but the pretonic prominence facts in the two dialectal areas are very similar. Belaja (1974) reports on a number of experiments conducted in order to investigate the acoustic properties of the vowels $/a/$ and $/\varepsilon/$ when they surface pretonically, both in unmarked and pretonic prominence contexts. The paper presents measurements of duration, pitch and intensity of the pretonic and stressed vowels in declarative, interrogative and exclamative contexts, as well as word lists. No statistical analysis is offered in Belaja (1974), and consequently the data in this section is represented as measurements made for individual tokens, as in the source paper.

Belaja comes to the conclusion that pretonic $/a/$ is most prominent when followed by stressed $/i, i, u, \widehat{ie}/$, and pretonic $/\varepsilon/$ — when followed by stressed $/i, u/$. Neither $/a/$ nor $/\varepsilon/$ receives pretonic prominence when followed by stressed $/a, \text{ɔ}, \varepsilon, \widehat{uo}/$. Table 4 below contains Belaja's (1974) results for pretonic prominence examples as found in different types of clauses, and Table 5 presents results of a word-list reading task. Values unexpected in the pretonic prominence context (i.e., V_1 value higher than V_2) are underlined. Note that in Belaja's study intensity was measured as a range on an oscillogram waveform, and therefore the measuring unit is mm.

Table 4. Belaja's results for pretonic prominence in narratives

Item	Clause type	Duration, ms		Pitch, Hz		Intensity, mm	
		V ₁	V ₂	V ₁	V ₂	V ₁	V ₂
vazi carts	decl.	240	140	167	166	13.5	0
	interrog.	280	90	228	-	16.1	0
	exclam.	300	340	179	196	14.3	0
vazu cart _{LOC}	decl.	240	80	149	159	13.1	0
	interrog.	210	90	175	35	5.1	0
	exclam.	300	206	220	234	23	1.9
v ^l azi ^c _{3SG} ^j carry _{3SG}	decl.	200	170	145	175	11.3	1.2
	interrog.	220	180	191	262	18.7	2.1
	exclam.	200	176	214	157	17.2	0.6

As you can see, the results in Table 4 would be quite striking if the Upper Snov dialect didn't have pretonic prominence, but are easy to explain if pretonic prominence is taken into account. Though some details about the stimuli Belaja (1974) used — such as token number, or the position of the test word within a clause — are unclear, the general trend is evident. Consistently with the Aūciuki data, Belaja's study shows that the three characteristics that constitute acoustic prominence behave differently in pretonic prominence contexts. Specifically, the values for duration and intensity are consistently higher on the pretonic vowel, as is the case in the more recent data too. The pattern of pitch value distribution is less clear, with no reliable generalisation readily available.

The picture is slightly different for Belaja's word-list results: as Table 5 shows, in the word-list task, pitch is consistently higher on the etymologically stressed syllable. This is likely due to the fact that list intonation contributes a high tonal target to the final syllable, and not to lack of pretonic prominence as such.

Table 5. Belaja's results for the word-list task

Item	Duration, ms		Pitch, Hz		Intensity, mm	
	V ₁	V ₂	V ₁	V ₂	V ₁	V ₂
vazi 'carts'	300	310	157	179	14,4	0
vazu 'cart _{LOC} '	340	300	186	219	19,2	1,5
v ^l azi ^c _{3SG} ^j 'carry _{3SG} '	260	240	217	227	17,3	4,5
vaz'ura (non-word)	230	230	179	190	13,4	1,7

It should be noted that there is one considerable difference in the intensity results between the two studies: while in the recent Aŭciuki data, the pretonic and stressed vowels are relatively close in their intensity levels, in Belaja's data, the difference between them is nothing short of extreme, with the etymologically stressed vowel often being as low in intensity as post-tonic unstressed vowels (0 mm — that is, no detectable movement on the oscillogram). At present, there is no immediate explanation for this fact.

Overall, Belaja's results are in accord with the more recent Aŭciuki data. Both studies show that the acoustic prominence of a low pretonic vowel before a high (in the Upper Snov basin, also mid-high) stressed vowel can be greater than that of the stressed vowel. This is a striking result. In pretonic prominence contexts the pretonic vowel is systematically more acoustically prominent than the stressed one, the very nature of stress realisation in the Aŭciuki dialect is called into question. Section 4 discusses the two previous accounts of the phenomenon, and puts forward the current proposal.

4 Analysis

In this section, I will summarise the earlier approaches to the Aŭciuki phenomenon, before proceeding to the current analysis.

4.1 Earlier Analyses: Stress Retraction?

The conclusions made in the earlier analyses of pretonic prominence in the Aŭciuki dialectal area are very cautious — this is true of Kurylo (1924, 1928), Kryvicki (1959) and Belaja (1974). While they note that a naive listener perceives pretonic prominence as a shift of stress one syllable to the left, and acknowledge that the instrumental investigation also suggests stress retraction to the pretonic syllable, such a conclusion is never made explicitly. Namely, Kurylo (1924:14–15) notes that an unaccustomed ear perceives the phenomenon at hand as stress on the pretonic syllable. Kryvicki (1959:102) notes about the pretonic prominence contexts: “It might seem at first that the pretonic syllable bears stress in such cases... and in the speech of the younger generation, who don't have the feature any more, it often does”. Similarly, Belaja (1974:29) mentions that in disyllabic words with pretonic prominence “auditory analysis registers stress on the first vowel — that is, shift of stress to the pretonic syllable”. However, none of these investigations explicitly argue that stress retraction had taken place in the Aŭciuki dialect.

Similar uncertainty is also reflected in the *Dialectological Atlas of Belarusian Language* (1963). Specifically, some villages in the Aŭciuki dialectal area are reported to have stress one syllable closer to the beginning of the word: Navinki (Kalinkavičy district), Vialiki Bor (Xojniki district), Svedskaje (Rečyca district), Spiaryžža (Brahin district). However, about the Spiaryžža, Navinki and Svedskaje data it is also said that the second investigation disconfirms earlier results and suggests that the stress is in the etymologically correct place.

There are even fewer attempts at understanding the mechanism of pretonic prominence. Belaja's (1974) conclusion drawn from the experimental data is that in the Upper Snov dialect the etymologically stressed syllable in pretonic prominence contexts has grown weaker and lost its culminating position. Belaja further hypothesises that this weakening of the stressed syllable leads to the compensatory prominence that the pretonic syllable acquires. However, no explanation is offered for why the weakening of stressed vowels took place, neither why it is limited to high and mid-high stressed vowels.

Overall then, the stress shift account was one of the prominent ideas in earlier literature, but was not persuasively argued for or against. Nevertheless, there are several reasons for why the stress shift account cannot be correct. Firstly, it is evident from the hesitation with which it had been proposed that there is intuitive understanding that pretonic prominence and stress constitute two distinct phonological entities in the Aŭciuki dialect. It appears to be so for the speakers too — specifically, it was my fieldwork experience that older speakers with robust pretonic prominence, when prompted, assign stress to its etymologically correct position.

Vowel neutralisation facts also suggest that in pretonic prominence contexts stress stays in its original position. Specifically, in the infrequent cases when pretonic prominence appears before a stressed [o], there is no vowel neutralisation on the etymologically stressed syllable:

- (4) a. basožki 'sandals': [basɔ:'noški], not [ba'sɔ:naški]
 b. yodoŭ 'years_{GEN}': [ɣɔ:'dow], not ['ɣɔ:daw]

(examples from own fieldwork)

Had the stress shifted to the pretonic syllable, the etymologically stressed vowel would have become neutralised to /a/, as post-tonic non-high vowels do. Since this is not the case, there is clearly not enough evidence to argue for a stress retraction in the Aŭciuki dialect. With this in mind, let us proceed to the next account.

4.2 *An Autosegmental Account by Bethin (2006a, 2006b)*

The Aūciuki and Upper Snov data reappeared more recently in Bethin's (2006a, 2006b) work. Using Belaja's (1974) data, Bethin (2006a, b) proposes another analysis of the phenomenon, arguing that pretonic prominence results from a shift of the high tone H, associated with stress, from the stressed syllable to the pretonic one. Bethin explains the distribution of pretonic prominence by taking intrinsic phonetic length of the stressed vowel to be the crucial factor for the development of pretonic prominence. The analysis successfully accounts for pretonic prominence as a phonological phenomenon, but the instrumental data from Aūciuki discussed above poses some serious challenge for this account. Let us look at it in more detail.

Bethin (2006a, b) takes it that in the Aūciuki dialect, the stressed vowel bears a falling tonal contour (HL), whereas unstressed vowels, including the immediately pretonic one, are marked by a low tone (L). This is so in the unmarked cases with no pretonic prominence, such as when the stressed vowel is low.

The conditions for pretonic prominence, as we know, are created when the pretonic vowel is low or mid-low, and the stressed vowel is high. High vowels are known to be phonetically shorter than lower vowels. Therefore, in Bethin's analysis, a high or mid-high vowel is too short to accommodate the HL contour a stressed vowel needs to have, and the tonal peak H is forced to shift to the preceding syllable. The LHL contour over two syllables is still there, but H is now realised on the pretonic syllable, and the pretonic vowel lengthens in order to accommodate the pitch rise. Bethin therefore takes pretonic prominence to be a way of aligning the high tonal target associated with stress with respect to the position of stress. Pretonic prominence, under this account, is just a context in which the two are not realised on the same syllable.

While this is an elegant analysis of the Aūciuki facts, it runs into two problems, both of them empirical in nature. Firstly, it makes a wrong prediction for the contexts in which both pretonic and stressed vowels are high: pretonic prominence does not apply to such contexts, and yet the account at hand predicts it to apply. If phonetic shortness of a stressed high vowel is taken to be the driving force behind the shift of H to the pretonic syllable, the shift should apply regardless of the height/phonetic length of the pretonic vowel. Yet this is not the case:

- (5) a. pīli 'drank_{PL}': [pi'li], not [pi:'li]
b. vuzli 'knots': [vu'zli], not [vu:'zli]

The other problem with Bethin's account is that it is not consistent with the instrumental data. Namely, it is difficult to reconcile the following two facts: the idea that the shift of H from V₁ to V₂ is the driving force behind pretonic prominence, and the fact that in the Aūciuki data pitch is comparably high on both vowels in pretonic prominence contexts, while highest intensity and duration are found on the pretonic syllable. Therefore, the shift of the pitch peak can hardly be the driving force behind the phenomenon of pretonic prominence.

In the next subsection, I put forward an alternative account of the Aūciuki facts.

4.3 *Current Proposal*

I am proposing that in the Aūciuki dialect, the stress domain is disyllabic, as opposed to the usual monosyllabic. That is, in the dialect, the physical correlates of stress do not culminate on a single syllable, but instead are distributed across two syllables, etymologically stressed and immediately pretonic. That is not to say that both syllables bear stress, or that it can fall on either of the two vowels within the stress domain. Stress as a phonological entity, under this account, stays in its etymological position, but in certain well-defined cases its physical correlates can be manifested on the immediately preceding vowel. Specifically, I am proposing that in those instances where two vowels, pretonic and stressed, are unequal in height, the lower one of the two will attract the acoustic prominence associated with stress — that is, higher intensity and longer duration, as well as high pitch. The phenomenon of pretonic prominence therefore results from the redistribution of the acoustic prominence associated with stress over two syllables. A formal account of the process at hand is to be developed in future work.

A similar account has been proposed for Welsh (Williams 1999). In Old Welsh, stress used to be word-final, but was later retracted onto the penultimate syllable. Nevertheless, some acoustic 'residue' of former final stress is still found on the final syllable — such as high pitch, often higher than that on the currently stressed penultimate syllable. Williams (1999) therefore concludes that it is not the position but the phonetic manifestation of Welsh stress that is unusual. The same can be said about the Aūciuki dialect stress, except that in the Aūciuki case the current disyllabic stress distribution is not a result of an earlier stress shift.

Moreover, it is not a coincidence that it is the immediately pretonic syllable that is selected as the supplementary bearer of stress-associated prominence. The pretonic syllable is ‘special’ for a number of phonological processes affecting vowels in East Slavic languages. For instance, the immediately pretonic syllable in Russian has a pattern of vowel reduction different from that of all other unstressed syllables (Sussex & Cubberly 2006:161). Also, recall that the phenomena similar to pretonic prominence that have been reported for other East Slavic dialects also affect the immediately pretonic syllable. In the Aūciuki dialect then, the significance of the pretonic syllable is still higher, since it attracts some stress-associated prominence from the stressed syllable.

The mechanism of the prominence redistribution in the Aūciuki dialect is the following. I hypothesise that the shift of the intensity peak from the stressed vowel to the pretonic one is the trigger for pretonic prominence. This shift of intensity is what subsequently attracts high pitch to the pretonic vowel and causes it to lengthen.

The intensity peak shift is easy to explain in the following way. Within the disyllabic stress domain in the Aūciuki dialect, the intensity peak is attracted to the vowel with the greatest intrinsic phonetic intensity — that is, the lowest vowel. The shift of the intensity peak, in turn, causes the pretonic vowel to lengthen. As for high pitch associated with stress, in pretonic prominence contexts it spreads onto both vowels rather than shift from stressed to pretonic.

Such an analysis also does not run into the problem of both vowels being high, which is challenging for Bethin’s (2006a, b) analysis, illustrated in (5) repeated below as (6):

- (6) pīlī ‘drank_{PL}’: [pi’li], not [pi:’li]
 vūzli ‘knots’: [vu’zli], not [vu:’zli]

Recall that Bethin’s analysis wrongly predicts that pretonic prominence should apply in the contexts in which both the pretonic and the stressed vowel is high, since the high stressed vowel is too short to bear the tonal contour associated with stress. The current account makes no such prediction. Since stress-associated prominence shifts to the lower of the two vowels within the disyllabic stress domain, it does not apply to cases where both vowels are of equal height.

5 Conclusion

This paper discussed an unusual phonological phenomenon found in the Aŭciuki dialect of Belarusian — pretonic prominence. In the dialect, intensity, pitch and duration found on the immediately pretonic vowel can be greater than the corresponding values on the stressed vowel, depending on the height of the pretonic and the stressed vowel. Since these three characteristics — intensity, pitch, and duration — are also the three correlates of stress, the question of stress placement arises. In order to answer the question, I presented a sample of recent acoustic data from Malyja Aŭciuki and Vialikija Aŭciuki, as well as an analysis of the acoustic characteristics of pretonic and stressed vowels, both in unmarked and pretonic prominence contexts. Then, I considered two earlier accounts of pretonic prominence: the stress retraction analysis and the pitch peak retraction analysis. It was shown that the instrumental data does not lend support to either of these approaches. Instead, this paper proposed that pretonic prominence results from the redistribution of acoustic prominence associated with stress over two syllables, pretonic and stressed. The current analysis successfully accounts for the pretonic prominence phenomenon and avoids the challenges that other accounts face.

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