Pretonic prominence (PP)

The immediately pretonic syllable is characterized by increased duration and intensity of the vowel, if:
• the pretonic vowel (V₂) is mid or low (ɛ, ə, a);
• the stressed vowel (V₁) is high or mid-high (i, u, e, o).

PP applies to native lexical items (1) and recent borrowings (2). It also applies across word boundaries (3): (1) ‘sistro’ (2) ‘sister.NOM’ (3) na vuliny ‘in the street’

Vowel neutralization

Various types of vowel neutralization in unstressed syllables are prominent in East Slavic, especially Russian and Belarusian. Depending on the dialect, a low or mid-low V₂ (/ɛ, ə, a/) can preserve its quality, be realized as [a], or exhibit a ‘dissimilative pattern’ - be realized as [a] unless V₁ is /a/, in which case V₂ is realized as [a].

The Auciuki dialect, sitting on the boundary between dialects with and without neutralization exhibits a mixed pattern different from all of the above (Vajtovič 1972). Note that in PP contexts (top row), there is no neutralization.

Further pretonic, as well as post-tonic syllables in the Auciuki dialect receive strong neutralization – to [a] or [e] or even complete loss of the vowel.

Data

Acoustic data (narratives recorded in a quiet setting in the speakers’ homes) was collected in 2015 in the villages of Malaja Auciuki and Vialikaja Auciuki using a Zoom H4n voice recorder. Data from three informants (female, age 65-81) is used in this paper. Tokens in which PP applies (n=100) and tokens with no PP (n=100) were extracted from declarative clauses with all-new intonation and analyzing used Praat (Boersma & Weenink 2016).

The highest value for intensity, pitch, and duration was extracted for vowels in four conditioning environments:
(i) V₁ unmarked, [+low]:
(ii) V₀, PP, [+low]:
(iv) V₀, PP, [+low];

V₁

The values for each acoustic characteristic of (i) V₁, PP contexts were compared with those of (iv) V₀, PP and (ii) V₁, PP. The unmarked second comparsion was carried out in order to ensure that intrinsic phonetic difference between V₁, PP, [+low] and V₀, PP, [-low] are not the only source of any differences observed.

Selected references:
Belousova, A. S. 1974. K sotsialno-t,""""eort""""dnyst""""nno-""""natsional""""nost""""nno-""""en""""v""""n""""v""""n

Why not stress retraction, or pitch peak retraction?

PP has been considered a stress retraction. Some evidence that this is not the case comes from speakers’ intuitions, as well as vowel neutralization facts. The stress shift account predicts that V₂, no longer bearing stress, should neutralize in PP contexts. Relevant examples, with V₁ /a/ and V₂ /ɛ/ are somewhat rare, but they show no neutralization on either vowel (4).

4. "vělozičko ‘open-toe sandal’ [

Further studies, by Bethin 2006 (a,b) accounts for Auciuki PP as a retraction of pitch peak associated, with stress from V₁ so V₂. The acoustic data shows, however, that there is no pitch movement associated with PP.

Analysis

Drawing on Broch 1916, Belaja 1974, and Vajtovič 1972, I propose that PP relies on a sonority effect: because V₂ which is [-low], is low on sonority, V₁ receives compensatory lengthening and intensity.

Every word in the Auciuki dialect contains an iambic foot, which consists of V₁ and V₂; all other syllables are unstressed (cf. Crosswhite 2000 for Russian). Within the foot, [+low] vowels are bi-moraic, and [low] vowels are mono-moraic (cf. Crosswhite 2001 on Carniolan Slovene). Unfooted vowels are non-moraic – this is reflected in vowel neutralization that applies to syllables outside of the foot. When V₁ equals V₂ in height, they contribute a mora each. In PP contexts, the sonority of the vowels is unequal, which results in V₂ losing a mora and V₁ acquiring one (cf. Hayes 1989). Acoustically, this is why in PP cases, V₁ is longer and higher in sonority than V₂.

Constraints:

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MAX, DEP, IDENT: undominated
MAXPROM (Alderete 1999):
RSTYPE=IPMB
R Pt Type=TEM
*STRUC=Crosswhite 2000: monoe do not appear in output forms

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No low/mid-low vowel should be non-moraic
No low/mid-low vowels should be mono-moraic
No non-low/mid-low vowel should be bi-moraic