LENGTH OF VOWELS IN SOTAK DIALECTS

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The Sotak dialects are a small group of Eastern Slovak dialects in the North East corner of Czechoslovakia. While the rest of Eastern Slovak dialects have been more or less stabilized for some centuries now, so that they have no long vowels, and the stress is on the penultimate syllable, the Sotak group, even during the last seventy years has been undergoing important phonetic and phonological changes.

As this development is still going on we have only considered the speech of the oldest people. According to our findings, the length of the vowels is still relevant (phonemic) with the oldest speakers in the Sotak dialects.

Some authors, however, are not of the same opinion.

Samuel Czambel, for instance, the author of the monograph on the Eastern Slovak dialects published in 1906 and Zdzisław Stieber, the Polish linguist (in the thirties before the Second World War) do not mention the long vowels in the Sotak dialects at all.

Phonetically, the absolute lengths of the Sotak vowels are variable, depending on their position in words, on the adjacent sounds, on the presence of stress and on pitch.

Our sonographs also show that both long and short vowels may be lengthened before a pause or at the end of a sentence due to the influence of intonation.

As even at present, some of the authors think the length of the Sotak vowels is the result of stress only, our primary task then, is to study the connection between the vowel length and stress, and how they influence each other.

Three facts have emerged from our investigation: First—The long vowels always have the main stress. Second—The short vowels can also occur under stress. Third—The lengthening of both long and short vowels when stressed is generally known, but the increase in duration is not noticeable and is not a significant feature.

In our opinion, the length of the Sotak vowels should be observed when they are in the same or similar positions, under the same stress, and with the same pitch. Our

3 Atlas slovenských nárečí which is in print now has no long vowels in the Sotak area.
investigations show, that, in such conditions, the duration seems to be the principal
and significant feature of contrast between long and short vowels, and is capable of
distinguishing the meaning of words.

There are four pairs of long and short vowels in the Sotak vowel system at pre-
sent. Let me introduce them in words and listen to them in sentences as recorded on
magnetic tape (they are repeated twice each).

The first pair is [a]—[aː]: pam "steam"—paːm "a pair", spal'i "they slept"—
spal'ːi "he will burn".
The second pair is [æ]—[æː] which occur mostly after palatal consonants: p'æta—
"a heel"—p'æːta "the fifth", p'æ̞na "a foam"—p'æːna "tispey".
The third pair is [o]—[oː] pot "sweat", "under"—p'ot "a loaf!
The fourth pair is [e]—[εː]—ščep'u "I graft"—ščep'ːu "I split".
As to former long vowels [iː] and [uː] they do not differ in length from the corres-
ponding short vowels any more.

According to our measurements on the Sona-Graph and oscillograph, the length
of the individual vowel pairs is as shown on the Table I and Table II.

<table>
<thead>
<tr>
<th>Subject A</th>
<th>Duration (Time)</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>a para</td>
<td>0,20 sec</td>
<td>1 : 1.50</td>
</tr>
<tr>
<td>a para</td>
<td>0,30 sec</td>
<td>1 : 1.63</td>
</tr>
<tr>
<td>a spal'i</td>
<td>0,16 sec</td>
<td>1 : 1.63</td>
</tr>
<tr>
<td>a spal'i</td>
<td>0,28 sec</td>
<td>1 : 1.63</td>
</tr>
<tr>
<td>æ p'æta</td>
<td>0,15 sec</td>
<td>1 : 1.15</td>
</tr>
<tr>
<td>æ p'æta</td>
<td>0,22 sec</td>
<td>1 : 1.15</td>
</tr>
<tr>
<td>æ p'æna</td>
<td>0,16 sec</td>
<td>1 : 1.15</td>
</tr>
<tr>
<td>æ p'æna</td>
<td>0,25 sec</td>
<td>1 : 1.15</td>
</tr>
<tr>
<td>o pot</td>
<td>0,17 sec</td>
<td>1 : 1.17</td>
</tr>
<tr>
<td>o pot</td>
<td>0,26 sec</td>
<td>1 : 1.17</td>
</tr>
<tr>
<td>e ščep'u</td>
<td>0,13 sec</td>
<td>1 : 1.20</td>
</tr>
<tr>
<td>e ščep'ːu</td>
<td>0,18 sec</td>
<td>1 : 1.20</td>
</tr>
</tbody>
</table>

The length is kept best with the open vowels [aː] and [æː] respectively. The ave-
grage ratio between the short [a] and the long [aː] is 1 : 1.56. This proportion is smaller
with the pair [æ]—[æː] and still smaller with the pair [o]—[oː].
The average ratio between short and long vowels of the other Slovak dialects,
as well as of Standard Slovak and Czech is 1 : 2 although differences occur even there.
As stated previously, the duration is the most significant feature of long Sotak
vowels. But it is not the only significant characteristic. Sonagrams show that dif-
ference between the long and short vowels is also due to the quality of sounds, due to
their acoustic patterns.

X-ray pictures confirm that this is the result of the slightly different positions of
articulators, especially the tongue.

This acoustic difference is smallest between the low mid vowels [a] and [æ], as
shown in the sonograms (Fig. 1 and 2). The long [æ] is more open and the second
resonance bar is slightly nearer to the base line (1.7 KH) while with [a] is 2 KH.
The same difference is seen between the short and long half open front vowels
[e] (the second difference is seen between the short and long half open front vowels
[æ] (the second difference is seen between the short and long half open front vowels
[e] (the second difference is seen between the short and long half open front vowels
[e] (the second difference is seen between the short and long half open front vowels
[e] (the second difference is seen between the short and long half open front vowels

The bars of the long [æ] show already a resemblance to the u-sounds. No wonder the
long [æ] has changed into [u] in some Eastern Slovak dialects, or the diphthong [uu] re-
spectively; although mostly this change has been into a short [u]. See Fig. 4 and 5.
The long [ε] is of higher frequency (the second formant from 2 to 4 KH) than the
short [ε] (from 2 to 3 KH), its resonance bars resembling i-sound patterns. In Eastern
Slovak dialects this long vowel has changed into [i] or [e] or the diphthong [iu]. See
Fig. 6 and 7.

It appears that the difference in acoustic quality between these pairs of half closed
vowels [e—ɛ] and [ε—ε] is becoming more significant in the course of time, and as
this significance increases the duration of the long vowels is becoming shorter.
One or two other factors need to be pointed out. The older generation is aware that
it is the longer duration that makes the difference between these pairs of sounds. The
younger generation (by this we mean 30 to 60 years old) perceive the length of the
long vowels of their elders, but they themselves pronounce the sounds short. In other
words: the signal of length of the elders is perceived by the younger individuals, but
it is emitted as short; as shown on the sonagrams Fig. 8 and 9, and on the Table III.
The ratio between short and long vowels is 1 : 1 with the younger.

Table III (Subject C is M. G., Modra n.Crochou).

<table>
<thead>
<tr>
<th>Subject C</th>
<th>Duration (Time)</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>a para</td>
<td>0.15 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>a: pazm</td>
<td>0.15 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>æ p'æna</td>
<td>0.18 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>æ: p'æzna</td>
<td>0.17 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>o pot</td>
<td>0.17 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>o: po!</td>
<td>0.17 sec</td>
<td>1 : 1</td>
</tr>
<tr>
<td>e ść</td>
<td>0.07</td>
<td>1 : 1</td>
</tr>
<tr>
<td>e: śće</td>
<td>0.07</td>
<td>1 : 1</td>
</tr>
</tbody>
</table>

* the former long vowels

It is out of scope of this paper to give all the reasons that have caused the shortening
of the long Sotak vowels. We will, however, give one more.

In the Sotak dialects psycho-sociological factors have played an important part.
People coming from the Sotak district into areas (especially the town Humenné)
where the long vowels have been dropped and where the stress is already generally
on the penultimate syllable, felt they were peculiar, or even curiosities. They were
imitated and laughed at because of their speech. They therefore, consciously began
to shorten their vowels. This was the reason they gave when asked them why they
were trying to shorten their vowel sounds.

The children imitate the speech of the old people during the learning process, but
later on they try to eliminate outstanding and handicapping variations from the
norm of Eastern Slovak dialects.

And even the Standard Slovak (where the long vowels are phonemic) which they
learn at school, and listen to on the radio and television does not prevent this process
going on.
Liška: Length of Vowels in Sotak Dialects

Fig. 1.

Fig. 2.
Liška: Length of Vowels in Sotak Dialects

![Fig. 3](image1)

![Fig. 4](image2)
Liška: Length of Vowels in Sotak Dialects

Fig. 5.

Fig. 6.
Liška: Length of Vowels in Sotak Dialects

Fig. 7.

Fig. 8.

Fig. 9.