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GRADE ALTERNATION IN VÕRO SOUTH ESTONIAN

Abstract. The current overview of the system of complicated stem alternation and non-initial syllable alternation in Võro differs from the traditional Finnic grade alternation system where only two grades are considered. In Võro, the traditional system has been extended by another two grades, making it now possible to include all gemination cases typical of Võro which have been considered separately so far. In certain quality-alternational words, the phenomenon of the simultaneous occurrence of the traditional quality alternation and the quantity alternation (including all three quantities) can be considered the most important characteristic of Võro grade alternation. Here, the term *lengthening alternation* is used for the alternation of three grades, and its combination with quality alternation is understood as full alternation, which includes all types of grade alternation. Unlike the Estonian grade alternation system, Võro grade alternation in non-initial syllables offers plenty of research material. In the Võro literary language, which is based mostly on the eastern and southern varieties of Võro, series of regular grade alternation in non-initial syllables can be distinguished.

Keywords: South Estonian, Võro, morphophonology, grade alternation.

1. Grade alternation in Finnic languages

Grade alternation is characteristic of most Finnic languages. In addition to Võro, and more broadly South Estonian and Estonian, it also appears in Finnish, Karelian, Ingrian and Votic, and to a lesser extent in Ludic, in the northernmost dialects of Veps, and as a relatively late but a complicated phenomenon in Livonian. There are no traces of grade alternation in South Veps and most Central Veps dialects (Viitso 2008 : 143).

Generally, following the example of Estonian and Finnish, grade alternation in other Finnic languages is likewise considered to be the alternation of only two grades, strong (S) and weak grade (W). Finnish has quality alternation where a stop consonant in the strong grade disappears in the weak grade, e.g. *kulta* (S) : *kullan* (W) 'gold', and quantity alternation where geminates alternate with single stops, e.g. *seppä* (S) : *sepän* (W) 'smith'. It has to be noted that the type of grade alternation known in Finnish and Estonian grammars as strengthening or reverse alternation (Finnish *kään-teinen*) (e.g. Finnish *hammas* (W) : *hampaan* (S) 'tooth') is historically a weakening change.

In Estonian, grade alternation is not only restricted to stop consonants but includes more broadly stem alternations. Unlike in Finnish, quantity alternation in Estonian affects long stressed syllables where the second (Q2) and third quantity (Q3) alternate, e.g. Estonian *'soola* (W, Q2) : *`soola*¹ (S, Q3) 'salt'. The system of Estonian quantity alternation does not include the first quantity (Q1). At the same time attribution and alternation of quantity is also extended to word forms with quality alternation, and therefore weak forms of quality alternation can be found in all quantities, e.g. *'mägi* (S, Q1) : *`mäe* (W, Q3) 'mountain' (Karlsson 1983 : 322–33; Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael, Vare 1995 : 144–171).

2. Characteristic traits and types of grade alternation in Võro

The Võro system of stem and non-initial syllable alternations is more elaborate than that of Estonian or Finnish. In addition to quality alternation and the usual alternation of Q2 and Q3 Võro has three more types of quantity alternation:

Alternation of Q1 and Q2	<i>'valama</i> (Q1) : <i>'vallaq</i> (Q2) 'to pour'
Alternation of Q1, Q2 and Q3	<i>'uma</i> (Q1) : <i>'umma</i> (Q2) : <i>`umma</i> (Q3) 'one's'
Alternation of Q1 and Q3	<i>'vähä</i> 'ligu' (Q1) : <i>'vähä</i> 'likku' (Q3) 'smallish'

Thus, it can be said that in the Võro quantity alternation, all three quantities can alternate. If such a type of quantity alternation is to be differentiated from the usual Estonian or Finnic quantity alternation it could be called lengthening alternation.

Until now, lengthening alternation has normally been described simply as gemination (Nigol 1994 : 10; Keem, Käsi 2002 : 26–30), and it has been excluded from the system of grade alternation. The lengthening of short consonants to Q2 in Võro (e.g. *'kala* : *'kalla* 'fish') has been called short gemination and the lengthening to Q3 (e.g. *'kala* : *`kalla* 'fish') long gemination. The latter also appears in Estonian, where a short consonant can be lengthened to overlong in illative case, e.g. *'pada* : *`patta* 'kettle'; *'talu* : *`tallu* 'farm'. As the treatments of Finnic grade alternation do not usually include strengthenings, then such lengthenings are not considered to be part of grade alternation in Estonian. Strengthenings have, however, been regarded as part of grade alternation in Estonian and Livonian by Tiit-Rein Viitso (1962 : 46–47), and in Livonian by Hille Pajupuu and Tiit-Rein Viitso (2008 : 265–266).

2.1. Quality and quantity alternation

Historically, quality and quantity alternation have developed depending on whether the second syllable of the word was open or closed. If the second syllable was originally open, a strong grade developed, e.g. **jalkata* > *'jalga* 'leg'. If the second syllable was originally closed, a weak grade developed, e.g. **jalkan* > *'jala* 'leg'.

¹ In the present article, the signs ' and ` are used to mark word forms; the first sign denotes primary and secondary stressed syllables in Q1 and Q2, and the second sign primary and secondary stressed syllables in Q3.

In quality alternation, the stem of the strong grade contains a stop consonant or *s*, and the stem of the weak grade does not contain it, independent of the quantity of the stem variant, e.g. `särg (S, Q3) : `säre (W, Q1) 'roach'; `käsi (S, Q1) : `käe (W, Q3) 'hand'. Quality alternation appeared earlier than the change **t > s* before *i*, so that what originally weakened was a stop consonant not *s*.

In quantity alternation, the stem of the strong grade is in the third quantity, and the stem of the weak grade in the second quantity, e.g. `täkk (S, Q3) : `täko (W, Q2) 'stallion'.

2.2. Lengthening alternation

If one considers all Võro stem and non-initial syllable alternations within one grade alternation system, then the system should include in addition to quality and quantity alternation a lengthening alternation as a subcategory of the latter type. In such a descriptive system, stem forms of Võro words could be, depending on grade alternation, classified into strong (S) and weak (W) grades, and into lengthened (L) and over-lengthened (OL) grades (see Iva 2007 : 59–60; Jüvä 2005 : 103–104).

Lengthening alternation is historically the lengthening of the word stem that has developed to counterbalance the shortening and loss of word final sounds., e.g. lengthened grade **talota > `tallo*, over-lengthened **talohen > `tallo* 'farm'.

In lengthening alternation, the stem of the strong grade is in Q1, the stem of the lengthened grade in Q2, and the stem of the over-lengthened grade in Q3, e.g. `tina (S, Q1) : `tinna (L, Q2) : `tinna (OL, Q3) 'lead, tin'. Table 1 shows the conditions of occurrence of different grades in different grade alternation types.

Table 1

Conditions of occurrence of different grades
in different grade alternation types

Grade alternation type	Grade			
	S	W	L	OL
Quality alternation	Stop or <i>s</i>	Stop or <i>s > ø</i>	–	–
Quantity alternation	Q3	Q2	–	–
Lengthening alternation	Q1	–	Q2	Q3
Full alternation	Stop or <i>s</i>	Stop or <i>s > ø</i>	Q2	Q3

2.3. Full alternation

In Võro, there are words the forms of which reveal both quality alternation and lengthening alternation. In such words, the stem of the strong grade of quality alternation is lengthened, e.g. *häbü* (S) : `häü (W) : `häpü (L) : `häppü (OL) 'shame', *pügämä* (S) : `pükäq (L) : `püä (W) 'to shear'. Such alternation could be called full alternation, as shown in Figure 1 and on the bottom row in Table 1.

S	W	L	OL		S	L	W
`häbü	`häü	`häpü	`häppü		`pügämä	`pükäq	`püä
QALT				LALT			
FALT				FALT			

Figure 1. Full alternation in words *häbü* 'shame', *pügämä* 'to shear'. Abbreviations: S — strong grade, W — weak grade, L — lengthened grade, OL — overlengthened grade, QALT — quality alternation, LALT — lengthening alternation, FALT — full alternation.

2.4. Grade alternation in non-initial syllables

Grade alternation normally occurs on the boundary of the first and second syllable, which is exemplified by all of the above examples. Additionally, Võro has grade alternation in suffixes of non-initial secondary-stressed and unstressed syllables as well as in stem-final consonants.

2.4.1. Grade alternation after an unstressed syllable

Suffixal alternation or the grade alternation of unstressed non-initial syllables includes trisyllabic forms of nouns in genitive case (from the beginning of word or primary-stressed syllable), which are mainly in Q1 or Q2, and where there is a short consonant on the boundary of the second and third syllable, but a geminate in the partitive case (and the rest of the following cases). The stem of some of such words has been shortened in the nominative case after the loss of the final vowel, e.g.

`unik (S) : *`unigu* (W) : *`unikut* (S) 'heap, pile';
`sinep (S) : *`sinebi* (W) : *`sinepit* (S) 'mustard';
`raamat (S) : *`raamadu* (W) : *`raamatut* (S) 'book';
`aabits (S) : *`aabidsa* (W) : *`aabitsat* (S) 'A-B-C book';

and not shortened in some other cases, e.g.

`meeledü (W) : *`meeledü* (W) : *`meeletüt* (S) 'thoughtless; desperate; frantic';
`füüsiga (W) : *`füüsiga* (W) : *`füüsikat* (S) 'physics';
A`meeriga (W) : *A`meeriga* (W) : *A`meerikat* (S) 'America';

occasionally also in genitive case in disyllabic words of Q3, e.g.

`võet (S) : *`võedu* (W) : *`võetut* (S) 'taken';

2.4.2. Grade alternation in secondary-stressed feet

Grade alternation of secondary-stressed syllables in nouns includes trisyllabic forms in Q3, and tetrasyllabic forms where the secondary-stressed syllable is in different cases in different quantities, e.g.

`kana`rik (S) : *`kana`rigu* (W) : *`kana`rikku* (S) 'heather';
`aas`tak (S) : *`aas`taga* (W) : *`aas`takka* (S) 'year';
`kar`ma(n)ń (S) : *`kar`mani* (N) : *`kar`manni* (S) 'pocket';
`ehi`tüisi (S) : *`ehi`tüisile* (W), *`ehi`tüste* (S) : *`ehi`tüstele* (W) 'building';

'võro`kõisi (S) : 'võro`kõisilõ (W), 'võro`kõistõ (S) : 'võro`kõistõlõ (W) 'inhabitant of Võrumaa';

'alo`maidsi (S) : 'alo`maidsilõ (W), 'alo`mastõ (S) : 'alo`mastõlõ (W) 'lower'. (C.f. grade alternation types 14–18, Tables 2 and 4).

In verbs, the grade alternation of secondary-stressed syllables occurs in word forms with a tri- and tetrasyllabic stem in Q1 or Q2, or a disyllabic stem in Q3, e.g.

'kerğü`tämä (S) : 'kergüdä (W) 'to lift'; `kao`tama (S) : `kaoda (W) 'to lose'; 'erä`tümä (S) : 'erädü (W) 'to stray'; 'kahmõ`tuma (S) : 'kahmödu (W) 'to startle';

'mani`tsõma (S) : 'manidsõ (W) 'to mention'; 'rapa`hutma (S) : 'rapa`huda (W) 'to shake'.

(See also grade alternation types 15–16, Tables 3 and 5).

As there are two grades in the grade alternation of non-initial syllables, it is best to view it as an alternation of strong and weak grades, which most resembles quantity alternation. A complete correspondence with quantity alternation can be found in the *ehitüs-* and *võrokõnõ-* type alternation, because in these types, like in quantity alternation, the strong grade is in Q3 and the weak grade in Q2: 'ehi`tüisi (S, Q3) : 'ehi`tüisile (W, Q2) 'building'. Other word types with non-initial syllable alternation do not coincide with quantity alternation, because there is no alternation of Q2 and Q3, but instead a long (word-finally phonetically half-long) consonant comparable to Q3 and a short consonant comparable to Q1: 'hõrak (S, ≈ Q3) : 'hõraga (W, ≈ Q1) : 'hõrakat (S, ≈ Q3) 'red currant'. In the 'kana`rik-type, there is partially a direct alternation of Q1 and Q3: 'kana`rik (S, ≈ Q3) : 'kana`rigu (W, Q1) : 'kana`rikku (S, Q3) 'heather'.

A comparison of Võro, Estonian and Finnish grade alternation in non-initial syllables reveals that such alternation is very rare in Estonian. It only occurs in words with the suffix *ik*, where Q2 and Q3 (short and long geminate) alternate, e.g. 'korra`lik : 'korra`liku : 'korra`likku 'decent'. Such alternation is much more common in Võro and Finnish; in both languages it occurs both after an unstressed and secondary-stressed syllable.

Grade alternation after an unstressed syllable (*raamat(tu)* 'book')

est 'raamat (t̥) : 'raamatu (tt̥) : 'raamatut (tt̥) : 'raamatule (tt̥)

võr 'raamat (t) : 'raamadu (D) : 'raamatut (tt) : 'raamatulõ (tt)

fin `raamattu (tt) : `raamatun (t) : `raamattua (tt) : `raamatulle (t)

Grade alternation after a secondary-stressed syllable (*kadastik, katajikko* 'juniper copse')

est 'kadas`tik (k̥) : 'kadas`tiku (k̥k) : 'kadas`tikku (k̥k) : 'kadas`tikule (k̥k)

võr 'kadas`tik (k) : 'kadas`tigu (G) : 'kadas`tikku (k̥k) : 'kadas`tigulõ (G)

fin 'kata`jikko (kk) : 'kata`jikon (k) : 'kata`jikka (kk) : 'kata`jikkolle (k)

As can be seen from these examples, grade alternation in Võro secondary-stressed syllables corresponds quite closely to that of Finnish after a secondary-stressed syllable. After an unstressed syllable the correspondence is only partial. Both in Võro and Finnish, such word types have a weak grade in genitive, but the difference is that in Finnish, all cases (except essive) starting from inessive are in the weak grade (such as genitive),

whereas in Võro they are in the strong grade (such as partitive). Only comitative, which has developed later than other cases from genitive and the **kansak*-particle 'with', can be in the weak grade in Võro similar to genitive ('*raamadu* : '*raama*' *dugaq* 'book'). Hella Keem (1997 : 32), in her noun paradigms has, however, also considered comitative to be in the strong grade ('*raamadu* : '*raama*' *tugaq*). It has to be mentioned that the grade alternation system of non-initial syllables in the Võro literary language presented here is based on eastern and southern dialects of Võro (above all Vastseliina dialect), which was also the basis for Hella Keem's overview.

The occurrence in various grammatical forms of the different grades of grade alternation in primary-stressed as well non-initial syllables can be examined using grade alternation types (see Tables 2–5).

3. The division of Võro words into those with two, three and four grades

One word can have two, three or four grades. Thus accordingly, words with grade alternation can be divided into those with two, three, and four grades.

Words with two grades have (in quantity and quality alternation) only a strong and weak grade, e.g.

- `tükk* (S) : '*tükü* (W) 'piece',
- `kand* (S) : '*kanno* (W) 'stump',
- `argnõma* (S) : '*arõdaq* (W) 'to fork',

or (in lengthening alternation) only a strong and lengthened, or strong and over-lengthened grade, e.g.

- 'valama* (S) : '*vallaq* (L) 'to pour',
- 'kipõn* (L) : '*kibõna* (S) 'spark',
- 'imeq* (S) : `*imme* (OL) 'wonder'.

Words with three grades have (in full alternation) a strong, lengthened and weak grade, e.g.

- 'pügämä* (S) : '*pükäq* (L) : `*püä* (W) 'to shear',

or (in lengthening alternation) a strong, lengthened and over-lengthened grade, e.g.

- 'talo* (S) : '*tallo* (L) : `*tallo* (OL) 'farm',
- 'elämä* (S) : '*elläq* (L) : `*elli* (OL) 'to live'.

Words with four grades have a strong and weak, and lengthened and over-lengthened grade, e.g.

- 'häbü* (S) : `*hüü* (W) : '*häpü* (L) : `*häppü* (OL) 'shame',
- 'läga* (S) : '*laja* (W) : '*lakä* (L) : `*lakka* (OL) 'broad; wide'.

Only words with full alternation have four grades.

4. Morphophonology of Võro grade alternation

According to certain phonological modifications grade alternation can be classified on the basis of its direction (strengthening/weakening), and type (quantity, length and quality alternation) (Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael, Vare 1995 : 144–145; Erelt, Erelt, Ross 1997 : 173–174). Within quantity alternation, it is possible to distinguish an alternation of

quantity where only the quantity of the word changes (e.g. `laiv : 'laiva 'ship', `kuud' : 'koodi 'code'), and an alternation of length, where additionally the phonological length of a stop, affricate, or sibilant changes (e.g. 'saabas : `saapa 'boot', `kuut' : 'koodi 'flail'). As was mentioned in the beginning of the article, it has to be kept in mind that strengthening (or reverse) alternation is in fact a weakening change.

4.1. Quantity alternation

In the strengthening quantity alternation of Võro, Q1 and Q3, or Q1, Q2 and Q3 can alternate in addition the usual alternation of Q2 and Q3.

Weakening quantity alternation:

Q3 > Q2 (e.g. `kapp' : 'kapi 'cupboard', `parv' : 'parvõ 'flight, flock', `laul' : 'laulu 'song')

Strengthening quantity alternation:

Q2 > Q3 (e.g. 'kalmõq : `kalmõ 'graveyard', 'lainõq : `lainõ 'wave')

Q1 > Q3 (e.g. 'imeq : `imme 'wonder', 'lağa : `lakka 'broad, wide')

Q1 > Q2 > Q3 (nt 'kala : `kalla : `kalla 'fish')

4.2. Length alternation

Length alternation can take place in a stem when a stop or sibilant is preceded by a long vocalic interval or a voiced consonant, or when followed by a voiced consonant (Erelt, Kasik, Metslang, Rajandi, Ross, Saari, Tael, Vare 1995 : 144–145), e.g. `luutma : 'looda 'to hope', `palk' : 'palgi 'timber', `kõplama : 'kõbladaq 'to hoe', `liblõq : `liplõ 'leaflet'. A special feature of the Võro length alternation as compared to that of Estonian is that in addition to a stop and sibilant it also involves an affricate (e.g. `partś : 'pardsi 'duck', `tsirtsama : 'tsirdsadaq 'to splash', `hätsemä : 'häidsedäq 'to bloom').

Weakening length alternation:

(Q3) *k, p, t, ts, ss* > (Q2) *g, b, d, ds, s* (e.g. piip : piibu 'pipe', kõrtś : kõrdsi 'tavern, pub')

Strengthening length alternation:

(Q2) *g, b, d, ds, s* > (Q3) *k, p, t, ts, s* (e.g. lõigõq : `lõikõ 'cut; paragraph', häidseq : `hätse 'flower, blossom, bloom')

4.3. Quality alternation

The sub-types of weakening quality alternation are assimilation, substitution and loss. In case of assimilation a combination of a voiced consonant and a stop (or a sibilant derived from it) in the strong grade alternates with a voiced geminate in the weak grade. In substitution, a single stop in the strong grade alternates with *v* in the weak grade, and the sequences *ub, ud, ug* and *uś* (< **ut*) in the strong grade words containing a long vowel or a diphthong in the first syllable alternate with a short geminate in the weak grade. In case of loss, a stop (or a sibilant derived from it) in the strong grade has been lost in the weak grade.

Assimilation:

- (Q3) *ld* > (Q2) *ll* `kuld : kulla 'gold'
 (Q3) *mb* > (Q2) *mm* `tõmbama : tõmmadaq 'to draw'
 (Q3) *rd* > (Q2) *rr* `kõrd : kõrra 'order, time, floor'
 (Q3) *rs* > (Q2) *rr* `kõrs : 'kõrrõ 'stalk'
 (Q3) *nd* > (Q2) *nn* `pind : pinnu 'sliver'
 (Q3) *nd* > (Q2) *n* `püüindmä : 'püünä (*'püüinnä) 'to catch'

Substitution:

- b* > *v* tõi : tõvõ 'disease'
b > *vv* `kuub : kuvvõ 'coat'
d > *vv* `laud : lavva 'board; table'
g > *vv* lõug : lõvva 'chin'
ś > *vv* kuuś : kuvvõ 'six'

Loss:

- d/t* > \emptyset pada : paa 'kettle', paht : paha 'pigsty'
g/k > \emptyset saaġ : sae 'saw', lohke : loho 'pit'
s > \emptyset käsi : käe 'hand'

The subtypes of strengthening quality alternation are dissimilation, substitution and addition. In case of dissimilation a voiced geminate in the weak grade alternates with a combination of a voiced consonant and a stop in the strong grade. In substitution, a weak grade *v* alternates with a strong grade *b*, or a *v*-geminate with *ud*. In case of addition, a stop has been lost in the weak grade but is present in the strong grade.

The terms strengthening, dissimilation, substitution and addition are purely conventional and follow from the order of presentation of the forms, because in reality they are all cases of weakening.

Dissimilation:

- (Q2) *nn* > (Q3) *nd* tunnõq : `tundõ 'feeling, sense'
 (Q2) *rr* > (Q3) *rd* purrõq : `purdõ 'footbridge'
 (Q2) *ll* > (Q3) *ld* kollõq : `koldõ 'hearth'
 (Q2) *mm* > (Q3) *mb* kommõq : `kombõ 'custom'

Substitution:

- (Q2) *v* > (Q3) *b* saivas : `saiba 'pole'
 (Q2) *vv* > (Q3) *d* kuvvas : `kuuda 'axe handle'

Addition:

- \emptyset > *g/k* ojadaq : `oiga 'to moan', ohadaq : `ohka 'to sigh'
 \emptyset > *d/t* tahas : `tahta 'dough'

5. Types of grade alternation

In Võro, grade alternation together with grammatical endings has an important role in distinguishing grammatical forms. The following grade alternation types reflect the order of occurrence of different grades in the changing paradigm of nouns and verbs. In the case of both nouns and verbs, first the types are presented using abbreviations of different grades (Tables 2 and 3) followed by the examples presented as a changing para-

digim of type words (Tables 4 and 5). The paradigm of examples includes forms which cannot be derived on the basis of other forms or which themselves are the basis for other forms. The abbreviations used for the grades in the tables are the following: strong grade (S), weak grade (W), lengthened grade (L), and over-lengthened grade (OL).

Table 2

Grade alternation types of noun

No.	SgN	SgG	SgP	SgIII	PIG	PIP	PIIII	PIAII
1	–	–	–	–	–	–	–	–
2	S	S	S	S	W	S	S	S
3	S	S	S	S	W	S	S	W
4	S	W	S	S	S	S	S	W
5	S	W	S	S	S/W	S	S	W/W
6	S	W	L	OL	L	L	OL	W ~ L
7	S	W	OL	OL	L/L	L	OL	S ~ L/L
8	S	S	OL	OL	L/L	L	OL	S ~ L/L
9	S	S	OL	OL	OL	OL	OL	S
10	S	S	L	OL	L	L	OL	S ~ L
11	L	L	L	OL	OL	OL	OL	OL
12	L	S	S	S	S	S	S	S
13	W	S	W	S	S/W	S	S/W	S/W
14	S	W	S	S	S	S	S	S
15	S	W	S	S	S	S	S	W
16	W	W	S	S	S	S	S	S
17	–	W	–	S	S	S	S	S
18	–	–	–	S	S/W	S	S	W

Table 3

Grade alternation types of verbs

No.	Sup	Inf	PtsPt		IndPr Sg1 (maq 'I')	IndPr Sg3 (tä 's/he')	IndIpf Sg1 (maq 'I')	IndIpf Sg3 (tä 's/he')
			Akt	Pas				
1	–	–	–	–	–	–	–	–
2	S	W	W	S	S	S/W	S	S
3	S	W	S	S	S	S	S	S
4	S	S	S	W	W	S	W/S	S/S
5	S	S	S	S	W	S	W	S
6	S	S	S	W	W	W	S	S
7	S	W	W	W	S	S	S	W
8	S	L	S	W	W	S	W	S
9	S	L	L	OL	W	S	W	OL/S
10	S	L	S	S	S	S	S	S
11	S	L	S	S	S	S	L	OL
12	S	L	S	S	S	S	OL	OL
13	S	L	S	S	L	L	S	S
14	S	L	L	OL	S	S	OL	OL
15	S	S	S	S	W	S	W	S
16	S	S	S	W	W	S	W	S

Table 4

Examples of grade alternation types of nouns

No.	SgN	SgG	SgP	SgIII	PIG	PIP	PIIII	PIAII
1	\`oppaja	\`oppaja	\`oppajat	\`oppajajhe	\`oppajidõ	\`oppajit	\`oppajihe	\`oppajilõ
2	\`täi	\`täi	\`täid	\`täihthe	\`täie	\`täie	\`täihthe	\`täiele
3	\`tüü	\`tüü	\`tüüd	\`tüühü	\`töie	\`töid	\`töihthe	\`töiele
4	\`silmi	\`silmä	\`silmä	\`silmä	\`silmi	\`silmi	\`silmi(he)	\`silmile
5	\`täüsi	\`täüve	\`täüt	\`täüde	\`täüsi / \`täüite	\`täüsi	\`täüsi(he)	\`täüisile / \`täüitele
6	\`häbü	\`häü	\`häpü	\`häppü	\`häpe	\`häpe	\`häppe(he)	\`häpele ~ \`häpele
7	\`käsi	\`käe	\`kätt	\`kätte	\`kässi / \`käte	\`kässi	\`kässi(he)	\`kässile ~ \`kässile / \`kätele
8	\`hüdsi	\`hüdse	\`hüst	\`hüste	\`hütsi / \`hüste	\`hütsi	\`hütsi(he)	\`hüdsile ~ \`hütsile / \`hüstele
9	\`vari	\`varo	\`varjo	\`varjo	\`varjõ	\`varjõ	\`varjõ(he)	\`varõlõ
10	\`pini	\`pini	\`pinni	\`pinni	\`pinne	\`pinne	\`pinne(he)	\`pinnele ~ \`pinnele
11	\`makõ	\`makõ	\`makõt	\`makkõhe	\`makkidõ	\`makkit	\`makkihe	\`makkilõ
12	\`elläi	\`eläjä	\`eläjät	\`eläjähe	\`eläjde	\`eläjüt	\`eläjihe	\`eläjiile
13	\`läteq	\`lätte	\`lätet	\`lättehe	\`lättide / \`lätete	\`lättit	\`lättihe / \`lätetehe	\`lättile / \`lätetele
14	\`hõrak	\`hõraga	\`hõrakat	\`hõrakahe	\`hõrakidõ	\`hõrakit	\`hõrakihe	\`hõrakilõ
15	\`kanarile	\`kanarigu	\`kana`rikku	\`kana`rikku	\`kana`rikkõ	\`kana`rikkõ	\`kana`rikkõ(he)	\`kanarigõlõ
16	\`perädü	\`perädü	\`perätüt	\`perätühe	\`perä`tüide	\`perä`tüid	\`perä`tüihe	\`perä`tüiele
17	\`alonõ	\`alodsõ	\`alodsõ	\`alotsõhe	\`alotsidõ	\`alotsit	\`alotsihe	\`alotsilõ
18	\`inemine	\`inemise	\`inemist	\`ine`miste	\`ine`miisi / \`ine`miste	\`ine`miisi	\`ine`miisi(he)	\`ine`miisile

Table 5

Examples of grade alternation types of verbs

No.	Sup	Inf	PtsPt		IndPr Sg1 (maq 'I')	IndPr Sg3 (tä 's/he')	IndIpf Sg1 (maq 'I')	IndIpf Sg3 (tä 's/he')
			Akt	Pas				
1	'kõnõlõma	'kõnõldaq	'kõnõlnuq	'kõnõld	'kõnõlõ	'kõnõlõs	'kõnõli	'kõnõl'
2	'stiimä	'stiväq	'sõnnuq	'stiit	'stiit	'stiit / sõöse	'sei	'sei
3	'vaoma	'vaioq	'vaonuq	'vaot	'vao	'vaos	'vaio	'vaio
4	'piitdmä	'piitdäq	'piitdnuq	'piitvet	'piitvää	'piitid	'piitvvi / 'piitidse	'piitte / 'piitidse
5	'lasema	'laskõq	'lasenuq	'last	'lasõ	'lask	'lasi	'lask
6	'lõpma	'lõppõq	'lõpnuq	'lõpõt	'lõpõ	'lõpõs	'lõppi	'lõppi
7	'sõimama	'sõimadaq	'sõimanuq	'sõimat	'sõima	'sõimas	'sõimssi	'sõimas
8	'pügämä	'pükäq	'pügänuq	'põet	'piia	'pügä	'põi	'piigi
9	'tegemä	'tetäq	'tennuq	'tett	'tii	'tege	'tei	'tekk / 'tegi
10	'valama	'vallaq	'valanuq	'valõt	'vala	'vala	'vali	'vali
11	'tulõma	'tullaq	'tulnuq	'tult	'tulõ	'tulõ	'tulli	'tull'
12	'elämä	'elläq	'elänuq	'elet	'elä	'eläs	'elli	'elli
13	'sibama	'sipaq	'sibanuq	'sibat	'sipa	'sipa	'sibasi	'sibasi
14	'nõsõma	'nõstaq	'nõsnuq	'nõst	'nõsõ	'nõsõs	'nõssi	'nõssi
15	'kaotama	'kaotaq	'kaotanuq	'kaotõt	'kaoda	'kaotas	'kaodi	'kaot'
16	'rapa 'hutma	'rapa 'hutaq	'rapa 'hutnuq	'rapa 'hudõt	'rapa 'huda	'rapa 'hut	'rapa 'hudi	'rapa 'hut'

Grade alternation types of nouns can be divided into five groups (s. Tables 2 and 4).

- I. Type 1 (*õppaja* 'teacher') lacks grade alternation.
- II. Types 2–5 (*täi* 'louse', *tüü* 'work', *silm* 'eye', *täis* 'full') have weakening alternation (only quantity and quality alternation).
- II. Types 6 and 7 (*häbü* 'shame', *käsi* 'hand') have weakening alternation together with lengthening alternation (full alternation).
- III. Types 8–12 (*hüdsi* 'coal', *vari* 'shade, shadow', *pini* 'dog', *makõ* 'sweet; insipid', *elläi* 'animal') have only lengthening alternation.
- IV. Type 13 (*läteq* 'spring') has strengthening alternation.
- V. Types 14–18 (*hõrak* 'red currant', *kanarik* 'heather', *perädü* 'huge; miserable', *alonõ* 'underlay', *inemine* 'human being') have alternation of non-initial syllables.

Grade alternation types of verbs can be divided into five groups (s. Tables 3 and 5).

- I. Type 1 (*kõnõlõma* 'to speak') lacks grade alternation.
- II. Types 2–7 (*süümä* 'to eat', *vaoma* 'to sink', *püüdmä* 'to catch', *laskema* 'to let', *lõpma* 'to end, to die', *sõimama* 'to abuse') only have quantity or quality alternation.
- III. Types 8 and 9 (*pügämä* 'to shear', *tegemä* 'to do, to make') have quality alternation together with lengthening alternation (full alternation).
- IV. Types 10–14 (*valama* 'to pour', *tulõma* 'to come', *elämä* 'to live', *sibama* 'to scurry', *nõsõma* 'to rise') have only lengthening alternation.
- V. Types 15–16 (*kaotama* 'to lose', *rapa hutma* 'to shake') have alternation of non-initial syllables.

6. The spread of grade alternation in the Võro linguistic area and its representation in the Võro literary language

The usual grade alternation occurring on the boundary of the first and the second syllable — both quality and quantity alternation as well as lengthening alternation — has spread throughout the Võro linguistic area and even further. Alternation of non-initial syllables as described above, and used in the Võro literary language in the Võro-Estonian dictionary (Iva 2002 : 592–597) does not have a similar spread in the Võro linguistic area (Keem, Käsi 2002 : 28; Nigol 1994 : 31–32). According to the linguistic feature distribution maps by Mihkel Toomse (1998 : 110–111, 114–115, 125–126) and observations of the present author, this alternation type is more common in the southern and eastern parts of the Võro linguistic area, including the Seto area. According to Mihkel Toomse, the alternation of non-initial syllables is also quite strongly represented in other parts of the Võro linguistic area as one of the main features of South Estonian pronunciation, reaching even as far as Tartu and Mulgi areas. Nevertheless, many of the above word forms could occur without non-initial syllable alternation, above all in the language usage of South and North Võro but also elsewhere in Võrumaa: *unik* : *uniku* 'heap', *sinep* : *sinepi* 'mustard', *raamat* : *raamatu* 'book', *aabits* : *aabitsa* 'A-B-C book', *visat* : *visatu* 'thrown', *võet* : *võetu* 'taken', *meeletü* 'thoughtless; desperate; frantic', *alotsõ* 'underlay', *kotussõ*

'place', *ehitüsi* 'building', *võrokõsi* 'inhabitant of Võrumaa', *inemisi* 'human being', *alomisi* 'lower'. In the close proximity of the Tartu dialect area, in particular in the more modern language usage, most of these types occur without grade alternation. Thus, a similar system prevails as in literary Estonian where grade alternation only occurs in non-initial syllables in the *kanarik*-type as the alternation of Q2 and Q3: *kanariku* : *kanarikku* 'heather'.

It seems that non-initial syllable alternation can be sociolinguistically a somewhat sensitive linguistic feature. The table of the recommended word forms of the Võro-Seto written language published in 1995 (Võrokiilne lugõmik 1995 : 14) contains word forms with non-initial syllable alternation (*raamadu* 'book', *kõrraligu* 'decent', *Joosõbi* 'Joseph', *kõlladsõ* 'yellow'). Variants of the same word forms without alternation (*raamatu*, *kõrraliku*, *Joosõpi*, *kõllatsõ*) are not recommended, because they are not as typical of Võro. This recommendation has found support in the norm proposed by Hella Keem, where example paradigms always contain only the variants with non-initial syllable alternation (see Keem 1997 : 32). This principle has been maintained in the norm of written Võro and has been used so far.

Conclusions

In Võro, grade alternation together with grammatical endings has an important role in distinguishing grammatical forms. When examining the Võro system of stem and non-initial syllable alternation it seems reasonable to treat it somewhat differently from the traditional treatment of Finnic grade alternation which only includes two grades. In the present article, two more grades have been added to the usual treatment of grade alternation. A unified four-grade alternation system includes cases of gemination which are characteristic of Võro but which up to now have been viewed as separate phenomena. The most characteristic trait of the Võro grade alternation is a phenomenon whereby in certain words the traditional quality alternation occurs together with quantity alternation including all three quantities. Such a quantity alternation could be called lengthening alternation and its co-occurrence with quality alternation could be treated as full alternation which includes all possible grade alternation types.

As compared to literary Estonian, there is an abundance of non-initial syllable alternation in Võro. This, however, is not evenly spread over the Võro linguistic area, but occurs above all in the eastern and southern part of the Võro language area, and thus finds its usage in the Võro literary language based on the language of this area.

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ЧЕРЕДОВАНИЕ СТУПЕНЕЙ В ВЫРУСКОМ ЮЖНОЭСТОНСКОМ ЯЗЫКЕ

В вырусском языке чередование ступеней наряду с падежными окончаниями играет существенную роль при различении грамматических форм. Исследование вырусской системы отношений между основами и непервыми слогами выявило необходимость рассмотреть его несколько в ином плане, чем это делалось до сих пор в прибалтийско-финской традиции, которая охватывала лишь две ступени. В данной статье обычные границы чередования ступеней расширены ещё на две ступени. В единую четырехступенчатую систему включены характерные для вырусского языка явления геминации, которые раньше рассматривались как изолированные факты. Как наиболее характерное своеобразие вырусского чередования ступеней выделяется явление, которое встречается в определенных словах, подверженных чередованию, в которых встречается одновременно как традиционное чередование ступеней, так и традиционное чередование всех трех степеней долготы. Подобное чередование трех степеней долготы можно назвать чередованием длительностей, а его комбинацию с чередованием ступеней можно было бы понимать как полное чередование, охватывающее все возможные его виды.

По сравнению с эстонским литературным языком в вырусском языке много примеров чередования ступеней в непервых слогах. Оно не распространяется по всему вырусскому языковому ареалу, но встречается в первую очередь в восточной и южной частях этого ареала и характерно для речеупотребления, на котором базируется вырусский литературный язык.