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CONCERNING   INFLECTION   CLASSES   IN   LIVONIAN*

Abstract. Livonian has among the Finnic languages characteristically the greatest variety of optional inflectional ending variants and the most complicated system of morphophonological alternations. The present article gives an overview of the repertoire of simple inflectional forms in verbal and nominal paradigms (53 verb forms and 25 nominal forms) and their ending variants, as well as morphophonological alternations. These ending variants and morphemic alternations served as a basis for establishing 62 verb types and 238 nominal types. For this reason, a minimal set of forms of classificatory significance was established, and the types were arranged into classes on the basis of the series of ending variants in the paradigms. The article provides an introduction to this procedure on the basis of verb types; 22 classes and 5 declensions were established.

Keywords: Finnic, Livonian, syllable structure, morphophonological alternations, gradation, nominal inflection, verb inflection, inflection types.

Livonian inflectional morphology is an extremely intriguing topic of research because Livonian exhibits both complicated variation of inflectional suffixes and a complicated system of morphophonological alternations. In this respect Livonian exceeds, in the Finnic space, even the complexity of the considerably better studied Estonian (cf. e.g. Viks 1992; Viitso 2003; Blevins 2007; 2008).

The great variety of inflectional endings of both verbs and nominals[1] in Livonian is a result of two universal processes. First, most inflected languages have a relatively stable set of frequent word forms, which are learned as such by all speakers, and speakers do not turn much attention to their morphological analysis. Second, all speakers learn rather quickly that there are words that can serve for them as prototypes for the creation of necessary but hitherto unnoticed forms of similar other words. As for all Livonian speakers, both processes act on an individual level, and no standardization of vocabulary and grammar has never occurred, a linguist must distinguish between the structurally conditioned variation and individual variation. These two kinds of variation have been continually intertwined as can be seen already beginning with Wiedemann 1861, which is the first attempt to

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[1] In Finnic languages, NOMINALS include nouns, adjectives, numerals, and pronouns.

classify inflected words together with an unsuccessful attempt to minimize the variation of suffix-final $\tilde{o}$-vowels to total absence. This could well be the reason why the later linguists, cf. Penttilä 1933 and Kettunen 1947, were satisfied with presenting the variants and avoided looking for a system in the variation. As the field data used by Kettunen and Penttilä are lost, there is no hope to obtain an overview of the geographical background of paradigms and variants in Kettunen 1939 and 1947 and similarly, and the partitive plural forms presented by Penttilä 1933.

The present article is a byproduct of a classification attempt of verbs and nominals[2] for users of a forthcoming Livonian dictionary. As the dictionary attempts to be first and foremost learner's dictionary, the classification cannot and does not presuppose any previous knowledge of the language except a general overview of the morphological system. The attempt can be characterized as (a) a partition of the set[3] of all nouns and (b) a partition of the set of all verbs on the basis of both their formatives and their stem allomorphs (i.e., the classification as such does not deal with the establishment of regular and irregular or exceptional inflectional forms). At the same time the classification attempts to give prominence to distinctions of the level and broken tone,[4] which is important both lexically and morphologically.

1. Main characteristics of Livonian word structure

1.1. Syllable structure

Livonian words have primary stress on the first stem syllable. In Livonian, a STRESSED SYLLABLE is either short or long. Short and long stressed syllables share to a certain extent their sound patterns but have a different prosodic structure because of the contrast of two lexical tones, the level and broken tone in long syllables, and because of complicated quantity patterns, which vary depending on the length and tonal characteristics of stressed syllables. The system of quantity patterns in Livonian requires application of a more detailed syllable structure model than the traditional onset-nucleus-coda model, cf. Figure 1.

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[2] The author's data on Livonian morphology were collected mainly in the 1970's and 1980's, at first mostly from Katriņ Krason (1889—1979, from Kuoštrõg) and later from Pētõr Damberg (1909—1987, from Sīkrõg). One has to note that Kuoštrõg and to some extent its north-eastern neighbors represented both phonetically and morphologically the most archaic part of East Livonian whereas in Sīkrõg, similarly to Īra and West Livonian, relatively late apocopation of the vowel $\tilde{o}$ had taken place. Still, at first I did not intend to compile a systematic overview of Livonian morphology. However, at the end of 1979 when Pētõr Damberg agreed to compile a card index of Livonian vocabulary, I compiled my first lists of inflection types of Livonian verbs (50 types) and nominals (122 types), which were critically inspected by Pētõr Damberg and later used by him, as each inflected word in the index received a type number. Soon one by one additional types were discovered. The card file was never completed because of Damberg's death. The number of word types has grown also later, the present number of verb types is 62 and that of nominal types is 238.
[3] A PARTITION of a set X is a division of the set X into non-overlapping and non-empty subsets, usually called cells, or blocks. In the set X, these subsets are collectively exhaustive and mutually exclusive.
[4] Here the norms of modern (East) Livonian orthography are followed, except that here an apostrophe shows the broken tone while the distinctive tones are not indicated in the orthography. In addition, the long low back labial $\bar{\rho}$ is extracted from $\bar{o}$, which is left to render the long mid back labial.
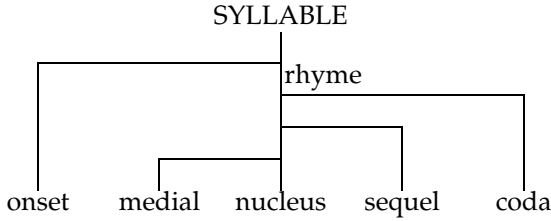
Figure 1. **Structure of Livonian stressed syllables.**

This model gives prominence to all positions where quantity contrast occur (medial, nucleus, and sequel) and separates them from the positions that do not participate in morphophonological alternations (onset and coda), cf. Table 1.

Note that when considering the nucleus as the primarily obligatory position in a stressed syllable, it is possible to identify the structural necessity of different types of medial, sequel and coda fillers for short, level tone[5] long, and broken tone long syllables. While most Finnic languages with the contrast of short vs. long vowels have no short stressed monosyllables, Livonian has some, e.g. *ma* 'I', *li* 'go! (2Sg)', *sä* 'take! (2Sg)', *se ~ sie* 'this', and it has also a triplet of monosyllables with contrasting similar nuclei, cf. *li* 'go (Imp2Sg)', *lī* 'become (Imp2Sg)', *rī'* 'threshing house'.

Table 1

General rhyme structure of stressed syllables

Syllable	Medial		Nucleus		Sequel	Coda
Short	±	*i u*	short: *e o*		short vowel: *i u*	
	−		short: *a u*	±	short consonant: *p t ṭ k s š*	−
			short: *i ä a ȯ õ u*			
Long with level tone	±	*i u*	short: *e o*		long vowel: *i u*	±
	−		short: *i ä a ȯ õ u*	+	long consonant: *p t ṭ k s š* *m n ṇ l ļ r ṛ*	
	±	*ī ū*	short *e o*		short vowel: *i u*	±
	−		long: *ī ē ā̈ ā* *ō ǭ ō̇ ȭ ū*	±	short consonant: *p t ṭ k s š* *m n ṇ l ļ r ṛ v j*	
Long with broken tone	±	*i u*	short: *e' o'*		short vowel: *i u*	±
	−		short: *a' ä' i'* *ȯ' õ' u'*	+	short consonant: *b d ḍ g z ž* *m n ṇ l ļ r ṛ v j*	
	±	*ī' ū'*	short: *e o*		short vowel: *i*	±
	−		long: *ī' ē' ā̈' ā'* *ō' ǭ' ȭ' ū'*	±	short consonant: *p t ṭ k s š* *b d ḍ g z ž m n ṇ l ļ r ṛ v j*	

Note. The symbols +, ±, and – denote that filling of the position for the corresponding nucleus type in the framework of the syllable type is structurally necessary, optional, or excluded.

The interrelation of tones and segment length appears most clearly in disyllabic opening-diphthong and triphthong series where in both series two

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[5] This tone, shared by Livonian and Latvian, has been described as *level*, *non-broken*, *plain*, *rising*, *stretched*, none of which is a good. As in the literature on Latvian tones published in English the first one seems to be the most preferred term, the term LEVEL TONE will be used.

pattern pairs out of five patterns participate in regular morphophonological alternations, cf. Figure 2. Inclusion of the diphthong $\bar{\varrho}'i$ here is conditioned by the fact that the short a alternates with both $\bar{a}$ and $\bar{\varrho}$ in East Livonian.
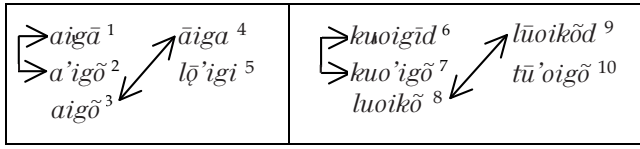

Figure 2. **Opening diphthongs, triphthongs, and their paradigmatic relations.**
Key: 1 edge (NGSg), 2 edge (PSg), 3 time (PSg), 4 time (NGSg), 5 broken, torn (Adv); 6 ships (NGPl), 7 ship (PSg), 8 valley (PSg), 9 valleys (NGPl), 10 birch bark (GSg).

All the five patterns represent disyllabic feet. Note that in a foot, a short stressed syllable is followed by a second syllable with a long vowel, and a long stressed syllable is followed by a second syllable with a short vowel; this inverse proportionality is often referred to as ISOCHRONY.

Both alternating patterns represent subtypes of the so-called gradation or grade alternation. The framework of gradation in a paradigm implies that one form with one pattern of two prosodically different grades is considered to be in the WEAK GRADE ($aig\bar{a}$ and $\bar{a}iga$), and the other form or pattern type is in the STRONG GRADE ($a'ig\tilde{o}$ and $aig\tilde{o}$).

2. Morphophonological alternations

Morphophonological alternations in Livonian include (1) gradation, that is, the weak and strong grade alternations in word stems, which include a set of tonal, quantitative, and structural alternations caused by different positional rules, some of which are inactive, that is, historical but others still belong to the active grammar, though now often differently motivated, (2) non-gradational tone alternation, and (3) a heterogeneous set of non-gradational segment losses and alternations in word stems.

2.1. Gradation

Gradation is the most important type of morphophonological alternation of stems of both verbs and nominals. Its types and history were described in detail in Viitso 2009. Its most general types are as follows.

(1) Disyllabic vocalic weak-grade stems alternate with monosyllabic strong-grade stems. (In a strong-grade stem, the rise of a long sequel or the broken tone is connected with apocope of the former stem vowel. Before a suffix beginning in a vowel, the final consonant of a strong-grade stem takes the position of onset of the second syllable or is geminated if single.)

(1a) A weak-grade stem begins in a short open syllable, the corresponding strong-grade stem has a short nucleus and the broken tone. Cf. $kal\bar{a}$ 'fish (NSg)', $kal\bar{a}$/d (NPl) vs. $ka'll$/$\tilde{o}$ (PSg, IllSg); $jag\bar{u}$/d 'parts (NPl)' vs. $ja'g$ (NSg), $ja'gg$/$\tilde{o}$ (PSg, IllSg); $sieg\bar{a}$ 'mix (Imp2Sg)' vs. $sie'gg$/$\tilde{o}$ 'to mix'. This type has a subtype (1a′) with a monosyllabic weak-grade stem in the partitive singular form, which is identical with the first syllable of the corresponding disyllabic weak-grade stem, cf. $k\ddot{a}$/ta 'hand (PSg)', $k\ddot{a}d\bar{u}$/d 'hands (NPl) vs. $k\ddot{a}'d$ (GSg), $k\ddot{a}'dd$/$\tilde{o}$ (IllSg), cf. also $ke'\check{z}$ (NSg), $ke'\check{z}\check{z}$/i (PPl).

15

(1b) A weak-grade form begins in a short syllable, the corresponding strong-grade stem has the level tone, a short nucleus, and a long sequel. Cf. *võtā* 'take (Imp2Sg)' : *võtt/õ* 'to take'; *maksā* 'liver (NSg)', *maksā/d* (NPl) vs. *maks/õ* (PSg, IllSg); *maksū/d* (NPl) vs. *maks/õ* (PSg, IllSg).

(1c) A weak-grade-stem begins in a long syllable with a long medial or nucleus and has a short or no sequel, the corresponding strong-grade stem has a long sequel. Cf. *rānda* 'coast (NSg)', *rānda/d* (NPl) vs. *rand/õ* (PSg, IllSg)'; *tāta* 'fill (Imp2Sg)' vs. *täut/õ* 'to fill'. This type has a subtype (1c′) with a monosyllabic weak-grade stem in the partitive singular forms, which is identic with the first syllable of the corresponding disyllabic weak-grade stem, cf. *kīl/ta* 'side (PSg)', *kīlgõ/d* 'sides (NPl)' vs. *kilg* (GSg), *kilg/õn* (DSg), cf. also *kiḷg* (NSg), *kiḷg/i* (PPl), *kīe/ta* 'rope (PSg)'; *kīedõ/d* 'ropes (NPl)' vs. *kieud* (GSg), *kieud/õ* (IllSg), cf also *kieuž* (NSg), *kieuž/i* (PPl).

(2) Disyllabic consonantal weak-grade stems alternate with disyllabic vocalic strong-grade stems.

(2a) A weak-grade stem begins in a short syllable, the corresponding strong-grade stem has the broken tone. Cf. *azūm* 'place of a situation (NSg)' vs. *a'zmõ/d*; *maigāz* 'greedy (NSg)' vs. *ma'igõ* (GSg); *ibīz* 'horse (GSg)' vs. *i'bbi* 'horse (NSg)', *i'bbiz/t* 'horses (NPl)'; *aigīz* 'situated on the edge (AdjGSg)' vs. *a'igi* (NSg), *a'igiz/t* (NPl).

(2b) A weak-grade stem begins in a short syllable, the corresponding strong-grade stem has the level tone and a long sequel. Cf. *võṭīm* 'key (NSg)' vs. *võṭmõ* (GSg), *rikāz* 'rich (NSg)' vs. *rikkõ* (GSg); *kukīz* 'insect (GSg)' vs. *kukki* (NSg), *kukkizt* (NPl), *piškīz* 'little (GSg)' vs. *piški* (NSg), *piškiz/t* (NPl).

(2c) A weak-grade stem begins in a long syllable with a long medial or a long nucleus and has a short or no sequel, the corresponding strong-grade stem has the level tone and a long sequel. Cf. *kõṇim* 'handle of a basket or bushel (NGSg)', *kõṇim/t* (PSg) vs. *kaṇmõ/d* (NPl)'; *āmbaz* 'tooth (NSg)', PSg *āmbaz/t* vs. *ambõ* (GSg), *ambõ/d* (NPl); *tōvaz* 'sky; storm (NSg)', *āmbax/t* (PSg) vs. *touvõ* (GSg), *touvõ/d* (NPl); *pūṛaz* 'sail (NSg)', *pūṛaz/t* vs. *puṛṛõ* (GSg), *puṛṛõ/d* (NPl); *āigiz* 'of the time (AdjGSg)', *āigiz* (PSg) vs. *aigi* (NSg), *aigiz/t* (NPl); *ōkiz* 'full of holes (GSg)' vs. *ouki* (NSg), *oukiz/t* (NPl).

(3) A monosyllabic weak-grade stem in the partitive singular form alternates with a monosyllabic strong-grade stem in all the other forms. These partitive case forms have the endings *-dā*, *-da*, *-tā*, and *-ta* (cf. *sie/dā* 'this', *tūl/da* 'fire', *uks/tā* 'door', *nāiz/ta* 'woman').

(3a) A monosyllabic weak-grade consonantal stem has a short nucleus and a short sequel and differs from the corresponding strong-grade stem in sequel length. Cf. *laps/tā* 'child (PSg)' vs. *laps* (GSg), *laps/t* (NPl), *laps/õn* (DSg).

(3b) A monosyllabic weak-grade consonantal stem has a either a long medial or a long nucleus and a short sequel and differs from the corresponding strong-grade stem (a) in medial or nucleus length and (b) in sequel length. Cf. *tūoiz/ta* 'other, second (PSg)' vs. *tuoiz* (GSg), *tuoiz/t* (NPl), *tuoi* (NSg); *nāiz/ta* 'woman (PSg)' vs. *naiz* (GSg), *nai* (NSg).

(3c) In a few verb paradigms, the alternation of (a) a monosyllabic weak grade stem with a long nucleus and a short sequel in the infinitive form with the corresponding strong grade stem with a short nucleus and a long and a long sequel co-occurs with the alternation of (b) a related disyllabic weak-grade stem with a short initial with the corresponding monosyllabic strong grade stem

with the broken tone: (a) a monosyllabic weak grade stem with a long nucleus and a short sequel in the infinitive form alternates with the corresponding strong grade stem with a short nucleus and a long sequel. Cf. (a) *tūl/da* 'come (Inf)' vs. *tul/kstõ* (Cnd2Pl); (b) *tulā/b* 'you come (Pr2Sg)' vs. *tu'l* (Imp2Sg), *tu'l/tõ* (Pr2Pl). Cf. (1a) and (2c).

(3d) A monosyllabic weak-grade stem with a long nucleus and a short sequel in the partitive singular differs from the monosyllabic strong grade stem in nucleus length and tone; in addition, there is a disyllabic weak-grade stem in the nominative singular case. Cf. *mīn/da* 'me (P)', *minā* 'I' vs. *mi'n* 'my, mine (G)', *mi'nn/õn* 'me (D)'; *tǟn/da* 'him, her (P)', *tämā* '(s)he (N) vs. *tä'm* 'his, her (G)', *tä'mm/õn* 'him, her (D)'.

(3e) A monosyllabic weak-grade stem with a long nucleus and a short sequel in the partitive singular form differs from the monosyllabic strong-grade stem in tone. Cf. *tūl/da* 'fire (PSg)' vs. *tu'l* (GSg), *tu'll/õ* (IllSg), *tu'l̦* (NSg), *tu'l̦/di* (PPl).

(4) A monosyllabic weak grade consonantal stem has a long nucleus and a short sequel and differs from the first syllable of the corresponding disyllabic strong grade stem either in nucleus and sequel length or in nucleus length and loss of the vocalic sequel. Cf. *võ̃r/ta* 'net (PSg)' vs. *võrgõ* (NGSg), *võrgõ/d* (NPl); *jõ̃g/ța* 'sand (PSg)' vs. *jõugõ* (NGSg), *jõugõ/d* (NPl).

2.2. Non-gradational tone alternations

Non-gradational tone alternations include two cases of broken case forms among forms with the level tone:

(1) In nominal paradigms with a monosyllabic long monophthong or long opening diphthongs the illative singular form receives the broken tone (*sū* 'mouth' vs. *sū'zõ*, *pā* 'head' vs. *pā'zõ*, *sūo* 'fen; bog' vs. *sū'o/zõ*).

(2) In the paradigm of the word *mīez* 'man' only the nominative and partitive singular forms have the level tone; all the other forms have the broken tone, cf. *mīez*, *mīez/tõ* (PSg) vs. *mī'e* (GSg), *mī'e/d* (NPl), *mē'/d̦i* (PPl).

2.3. Non-gradational alternations in word stems

Non-gradational segment alternations in Livonian word stems represent results of (a) segment losses and (b) positional segment changes. In both cases it is simple to establish the forms which have preserved the original segment from innovational forms.

Alternations resulting from segment losses are connected with (a) syncope of vowels *ū*, *ī*, and *i* in the closed second syllable of trisyllabic feet and (b) loss of stem-final consonants (losses of *t* and *z*).

Positional segment changes are mostly connected with the long-lasting palatalizing influence of certain inflectional endings consisting of or beginning in *i* or in a palatalized consonant on (a) the vowels *ä*, *ǟ*, *ie*, *īe*, *a* of the preceding initial syllable, (b) the vowel *õ* of the preceding non-initial syllable, or (c) stem-final consonants *d, z, s, l, n, r*. One or two cases show alternation of *a* with *ä*, which emerged because of metaphony of *a* before the second syllable with the former stem-vowel **i*. Cases (b) may have exceptions; on the other hand, they include the change of *õr̦* into a troublesome sequence *ir̦* and the further depalatalization of *r̦* to *r* in the corresponding plural forms.

Examples of segment losses and segment alternations are presented in Table 2 where the innovational forms are shaded. The usual order of cases

has been changed in order to make the patterning of innovations more transparent.

Table 2

Examples of segment alternations in word stem

		PSg	NSg	PPl	IllPl	NPl	GSg	Gloss
1a	*ū ~ Ø*	*azūm/t*	*azūm*	*a'zmidi*	*a'zmiž*	*a'zmõ/d*	*a'zmõ*	place; bed
1b	*ī ~ Ø*	*võţīm/t*	*võţīm*	*võţmidi*	*võţmiž*	*võţmõ/d*	*võţmõ*	key
1c	*i ~ Ø*	*kõņim/t*	*kõņim*	*kaņmidi*	*kaņmiž*	*kaņmõ/d*	*kõņim*	handle
2	*t ~ Ø*	*laint/õ*	*laint*	*lāinidi*	*lāiniž*	*lāinõ/d*	*laint*	wave
		neitst/õ	*neitst*	*neitsidi*	*neitsiž*	*neitsõ/d*	*neitst*	girl
3a	*z ~ Ø*	*mīezt/õ*	*mīez*	*mē'/ḑi*	*mī'e/zõ*	*mī'e/d*	*mī'e*	man
		õḷaz//t	*õḷaz*	*aḷḷidi*	*aḷḷiž*	*aḷḷõ/d*	*aḷḷõ*	green
3b	*z ~ Ø*	*nāizta*	*nai*	*naiž/i*	*naiž/iz*	*naiz/t*	*naiz*	woman
		siņīz/t	*si'ņņi*	*siņīž/i*	*siņīž/iz*	*siņīz/t*	*siņīz*	blue
4	*a ~ ä*	*laps/tā*	*läpš*	*läpš/i*	*läpš/īz*	*laps/t*	*laps*	child
		tamm/õ	*täm*	*tõmidi*	*tõmiž*	*tõmõ/d*	*tam*	oak
5a	*ä ~ e*	*kä/tā*	*ke'ž*	*ke'žž/i*	*kež/īz*	*kädū/d*	*kä'd*	hand
5b	*ā̈ ~ ē*	*sā̈r/tõ*	*sēr*	*sēŗ/i*	*sēŗ/iž*	*sār/d*	*sär*	leg
5c	*ie ~ e*	*vie/tā*	*ve'ž*	*ve'žž/i*	*vežī/z*	*vied/ūd*	*vie'd*	water
5d	*īe ~ ē*	*kīel/dõ*	*kēḷ*	*kēḷ/i*	*kēḷ/iž*	*kīel/d*	*kīel*	tongue
		mīez/tõ	*mīez*	*mē'/ḑi*	*mē'/ži*	*mī'e/d*	*mī'e*	man
6	*õ ~ i*	*bībõl/t*	*bībõl*	*bībiḷ/i*	*bībiḷ/iž*	*bībõl/d*	*bībõl*	bible
7a	*nd ~ z*	*sadānd/t*	*sadāz*	*sadānd/idi*	*sadānd/iž*	*sadānd/õd*	*sadānd*	hundredth
7b	*d ~ tš*	*kīnd/tõ*	*kīņtš*	*kīņtš/i*	*kīnd/iž*	*kīndõ/d*	*kīnd*	nail; claw
7c	*d ~ kš ~ Ø*	*ī'dtõ*	*ikš*	*ikš/i*	*ī'd/iž*	*ī'/d*	*ī'd*	one
7d	*d ~ ḑ*	*lī'ed/tõ*	*lē'ḑ*	*lē'ḑ/i*	*lē'ḑ/iž*	*līe'd/õd*	*līe'd*	leaf
7e	*d ~ ž*	*kä/tā*	*ke'ž*	*ke'žž/i*	*ke'ž/īs*	*kädū/d*	*kä'd*	hand
7f	*d ~ Ø**	*kä/tā*	*ke'ž*	*ke'žž/i*	*ke'ž/īs*	*kädū/d*	*kä'd*	hand
		ūd/tõ	*ūž*	*ūž/i*	*ūži/is*	*ū/d*	*ūd*	new
		ī'd/tõ	*ikš*	*ikš/i*	*ī'd/iž*	*ī'/d*	*ī'd*	one
7g	*g ~ Ø*	*kīl/ta*	*kiḷg*	*kiḷg/i*	*kīlgiž*	*kīlgõ/d*	*kilg*	side
		võr/ta	*võrgõ*	*võrgidi*	*võrgiž*	*võrgõ/d*	*võrgõ*	net
8a	*s ~ š*	*oks/õ*	*oksā*	*okš/ţi*	*oksīž*	*oksā/d*	*oksā*	branch
		vits/õ	*vitsā*	*vitš/ti*	*vitsīž*	*vitsā/d*	*vitsā*	rod
		liest/õ	*liestā*	*lešt/i*	*liestīž*	*liestā/d*	*liestā*	plaice
8b	*z ~ ž*	*i'zz/õ*	*izā*	*i'ž/ḑi*	*izīž*	*izā/d*	*izā*	father
		nāiz/ta	*nai*	*naiž/i*	*naiž/iz*	*naiz/t*	*naiz*	woman
9a	*l n r ~ ḷ ņ ŗ*	*tūl/dõ*	*tu'ḷ*	*tu'ḷ/ḑi*	*tu'ḷ/ži*	*tu'l/d*	*tu'l*	fire
		jūr/tõ	*jūŗ*	*jūŗ/i*	*jūŗ/iž*	*jūr/d*	*jūr*	root
9b	*l n r ~ ḷ ņ r*	*tidār/t*	*tidār*	*tidāŗ/i*	*tidāŗ/iž*	*tidār/d*	*tidār*	daughter
9c	*l n ~ ḷ ņ*	*appõn/t*	*appõn*	*appiņ/i*	*appiņ/iz*	*appõn/d*	*appõn*	sour

* It is not excluded that for one part of Livonians the loss of *d* is valid also for the partitive singular forms of words like *ūž* and *ikš*.

18

3. Inflection

3.1. Verb: inflectional endings

The verb in Livonian has (1) finite forms that occur as predicates or auxiliary components of complex predicates and (2) non-finite forms.

Finite forms are inflected for mood, tense, aspect, person, and number. The moods include the indicative (Ind), conditional (Cnd), imperative (Imp), quotative (Quo), and jussive (Jus). The indicative, conditional and imperative forms distinguish between three persons: the first (1), second (2), and the third (3) and two numbers: the singular and the plural. The quotative and jussive forms distinguish between two numbers.

Livonian has a suppletive negative auxiliary verb with paradigms in the present indicative, past indicative, imperative, and jussive, cf. Table 3.

Note that the negation verb forms in the indicative have the broken tone only when emphasized. The imperative and jussive forms are often referred to as the PROHIBITION VERB. The imperative has no 1st person singular and 3rd person forms.

Table 3

Livonian negation verb forms

	Indicative				Imperative		Jussive	
	Present		Past					
	Sg	Pl	Sg	Pl	Sg	Pl	Sg	Pl
1	*ä'b ~ äb*	*ä'b ~ äb*	*i'z ~ iz*	*i'z ~ iz*	–	*algõm*		
2	*ä'd ~ äd*	*ät*	*i'zt ~ izt*	*i'zt ~ izt*	*alā*	*algid*	*algõ*	*algõd*
3	*ä'b ~ äb*	*ä'b ~ äb*	*i'z ~ izt*	*i'zt ~ izt*	–	–		

All other verbs, with the exception of two defective verbs, have in addition to affirmative forms in the indicative, imperative, and jussive mood (with endings presented in Table 4) also special indicative and imperative negative aspect forms (with endings presented in Table 5), which are used with the corresponding negation verb forms. It must be noted, that the conditional mood forms can be negated by means of the present indicative forms of the negation verb.

The indicative mood has two simple tenses — the present (Pr) and the imperfect (Ipf). The quotative and jussive mood paradigms show a singular and a plural form for all the three persons. In the indicative and conditional of the 1st and 3rd persons, the same affirmative form is used in the singular, while in the imperfect indicative and conditional the same affirmative form is used for the 2nd and 3rd person plural. In addition, the indicative and conditional 2nd and 3rd person singular negative forms coincide with the 2nd person affirmative singular form. The 2nd person singular form of the imperative mood has no endings and, thus, represents a pure stem.

The negative forms are used together with the suppletive negative auxiliary verb. In the indicative and conditional mood, the negative forms

do not distinguish between tense in the indicative mood, between the three persons in the singular and between the second and third person in the plural. In the imperative, negative forms differ from affirmative forms only in gradational *ā/a*-stems: affirmative forms reveal a pure *ā/a-* stem and the negative forms a strong-grade form. The quotative and jussive have no special forms that would differ from the affirmative forms.

Table 4

Endings of Livonian affirmative finite verb forms

	Person	Singular	Plural
Indicative present	1	*-b -õb -m*	*-mõ -m -õm*
	2	*-d -õd*	*-tõ -t -õt*
	3	*-b -õb -m*	*-bõd -õbõd -māt(õ)*
Indicative imperfect	1	*-,* -i -īz -iz -ž -kš*	*-,mõ -imõ īzmõ -izmõ -žmõ -kšmõ*
	2	*-,d -id īzt -izt -žt -št*	*-,tõ -itõ -īzt(õ) -izt(õ) -žtõ -kštõ*
	3	*-,* -i -īz -iz -ž -kš*	*-,tõ -itõ -īzt(õ) -izt(õ) -žtõ -kštõ*
Conditional	1	*-ks -õks*	*-ksmõ -õksmõ*
	2	*-kst -õkst*	*-kstõ -õkstõ*
	3 *-ks -õks*		*-kstõ -õkstõ*
Imperative	1	*–*	*-gõm -õgõm -kkõm -kõm*
	2	Ø	*-gīd -gid -õgid -kkõd -kõd*
Quotative	1—3	*-i -ji*	*-iji -id -jid -ijid*
Jussive	1—3	*-gõ -g -õg -kkõ -kõ*	*-gõd -õgõd -kkõd -kõd*

Note. The comma (U+0326) in the sequence -, renders stem consonant palatalization, notably in three imperfect forms *tu'ḷ* 'came', *vȯ'ḷ* 'was', and *pa'ṇ* 'put'.

Table 5

Endings of Livonian negative verb forms

		Singular	Plural
Indicative	1	Ø	*-mõ -m -õm*
	2–3		*-tõ -t -õt*
Conditional	1	*-ks -õks*	*-ksmõ -õksmõ*
	2–3		*-kstõ -õkstõ*
Imperative	1	*–*	*-gõm -õgõm -kkõm -kõm*
	2	*-õ Ø*	*-gīd -gid -õgid*

Non-finite forms include (1) active and passive present and past participles, (2) the supine, (3) the infinitive, and (4) the gerund (Table 6). Participles occur as predicatives and attributes, supines and gerunds as adverbials, infinitives as subjects and objects. Participles and supines have case forms which are not interest for the present study.

Table 6

Endings of Livonian non-finite forms

PARTICIPLE		Sg	Pl
Active	Present	*-bõ -b -õb*	*-bõd -õbõd*
	Past	*-nd -n -õn*	*-nõd -nd -õnd*
Passive	Present	*-dõb -tõb -õb*	*-dõbõd -tõbõd -õdõbõd*
	Past		*-dõd -tõd -õd*
INFINITIVE			*-da -dõ -õ*
GERUND			*-dsõ -õs*
SUPINE	Illative		*-mõ -m -õm*
	Inessive		*-mõs -õmõs*
	Elative		*-mõst -õmõst*
	Abessive		*-mõt -õmõt*
	Debitive		*-mõst -õmõst*
	Translative		*-mõks -õmõks*

Finally, one has to emphasize that the East Livonian verb has 2—3 forms without inflectional endings. Although in many cases the forms are identical, there are also verbs with different forms, cf.

Ind SgN	Imp 2Sg	Imp 2SgN	Gloss
lā'	*li*	*li*	go
ūo	*vȯ'l*	*vȯ'l*	be
jelā	*jelā*	*je'llõ ~ je'l*	live
võtā	*võtā*	*võttõ ~ võt*	take
ānda	*ānda*	*andõ ~ and*	give

Note that the strong-grade negative second person singular forms of the imperative mood with the ending *-õ* of *ā-/a*-stems and also of mono-syllabic consonantal stems, such as in *alā võtt/õ* 'don't take', *alā kūld/õ* 'don't listen', are known from Irē to Kūolka. Monosyllabic negative imperative forms occurred in Sīkrõg and at least in Pizā West Livonian.[6]

3.2. Nominals: inflectional endings

Nominals are used most actively in the framework of eight cases: the nominative, genitive, partitive, dative, instrumental, illative, inessive, and elative. Differently from other Finnic languages, the nominative is primarily the case of the subject and never that of the object. The dative expresses to whom or to what something has been given or added or belongs and from whom or from what something is received or removed. Of the three local cases — the illative, inessive and elative — the illative expresses where to something is aimed or is moving, the inessive expresses where something

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[6] Hence there is some reason to believe that the single example in Kettunen 1939: LXV and Kettunen 1947: 83 of an *ā*-stem negative second person singular form of the imperative *alà tappà* 'don't kill' is either a theorizing under the influence of other Finnic languages or it had been heard from a person from a mixed Livonian-Estonian family. No relevant data are known from Mustānum, Ūžkilā, Īra, and Lūž. Kettunen started his field work on Livonian in Lūž in the West Livonian area.

is situated, and the elative expresses where something comes from. The allative, adessive, and ablative are functionally parallel cases of the former three and are used only for a few places or processes, mainly with place names and adverbs, including some adverbalized former noun and adjective forms. The instructive case occurs in some adverbs, e.g. *jālgiņ* 'by foot', and can be used with numerals and all measure nouns. In most cases the forms of the last five cases are learned and reproduced.

Table 7

Case endings of Livonia nominals

	Singular	Plural
Nominative	Ø	*-d -õd -t -g -nt* Ø
Genitive	Ø	*-d -õd -t -nt*
Partitive	*-dā -tā -da -ta -ṭa -dõ -tõ -t -õ -i*	*-di -ti -ḑi -ṭi -i -īdi -idi*
Dative	*-n -õn*	*-ddõn -dõn -õdõn -tõn*
Instrumental	*-kõks -ks -õks*	*-dkõks -tkõks -dõks -õdõks -tõks*
Illative	*-zõ -õ(z)*	*-ži -īž -iž -ž -īz -iz*
Inessive	*-sõ -s -õs -š(õ)*	*-ši -īs(i) -is(i)*
Elative	*-stõ -st -õst*	*-šti -īst(i) -ist(i)*
Allative	*-l(õ) -õl*	*-iļ*
Adessive	*-l(õ) -õl*	*-iļ*
Ablative	*-ld(õ(st)) -õld(õ(st))*	*-iļd*
Abessive	*-tõ*	–
Instructive	–	*-īņ -iņ*

Nominative and genitive singular forms have no endings, and usually the two forms are identical. The presence of different forms in these cases is more or less predictable only for disyllabic *z-* and *i-*nominals. On the other hand, the genitive singular stem is actually the base stem of most dative an instrumental singular case forms and, in a modified form, also of partitive singular forms of nominals with the partitive endings *-da*, *-dõ*, *-tā*, *-ta*, *-tõ*, *i-*words. The instrumental case resulted from the merger of the former translative case and the comitative case and for a few nominals this distinction is still obligatory, as e.g. for the adjective *täuž* 'full', cf. translative *tādõks* vs. comitative *täudkõks*, and sometimes the distinction is still possible. Otherwise *-kõks* is used with monosyllabic vocalic stems, monosyllabic strong-grade stems, and in plural forms.

3.3. Distribution of inflectional endings: some general notes

Livonian has a rich morphology and most forms have several simple or complex endings. Evidently the whole repertoire of inflectional endings, especially that of verbs is too extensive to be effectively handled. On the other hand, even forms without endings are important as they reveal pure stems, especially when different forms without endings also show different pure stems. Anyway, the set of 53 verb forms can be reduced to 16 forms of classificatory importance. Similarly, in the nominals, the inessive and elative forms are similar in the

singular and the plural[7], and the instructive forms are similar to the plural inessive and elative. So the set of nominal case forms can be reduced to 14 forms.

Several forms share one or two similar ending patterns where a consonantal ending pattern -C(C) has (a) one parallel pattern -õC(C), or (b) also a third parallel type -C(C)õ, and in the area from Kuoštrõg to Vaid even the type -õC(C)õ occurred. In such cases endings of the patterns -C(C) and -C(C)õ follow first of all vocalic stems and optionally certain consonantal stems while patterns -õC(C) and -õC(C)õ always follow consonantal stems. Combining consonantal stems with patterns -C(C) and -C(C)õ is subject to several restrictions[8]; the most general ones are as follows:

(1) endings beginning in *t* never follow *t, ţ, ņ, ļ, ŗ*;
(2) endings beginning in *ţ* never follow *t, ţ, s, š, b, d, ḍ, g m, n, l, r, v, j*;
(2) endings beginning in *k* never follow *p, k; s, š*;
(3) endings beginning in *s* never follow *ţ, s, š, ņ, ļ, ŗ*;
(4) endings beginning in *š* never follow *p, t, k, s, š, m, n, l*:
(5) endings beginning in *b, z,* never follow *p, t, ţ, k, s, š, m,*
(6) endings beginning in *d* never follow *p, t, ţ, k, s, š, d, ḍ.*

The verb and nominal types can be grouped into several classes on the basis of their stem structure. Nominals have more classes, but all verb classes have parallels among nominal classes, namely:

(1) monosyllabic vocalic stems ending in a long vowel or a diphthong;
(2) gradational *ā/a*-stems (the stem vowel can be found in the present 3Sg form or both in nominative singular and nominative plural forms);
(3) gradational *ī/i*-stems (the stem vowel can be found in the present 3Sg form or in nominative singular and nominative plural forms);
(4) gradational *ū*-stems (the stem vowel can be found in the present 3Sg form or both in nominative singular and nominative plural forms);
(5) gradational *õ*-stems (the stem vowel can be found in the weak-grade present 3Sg form or in both nominative singular and nominative plural forms);
(6) bigradational stems with (a) a weak-grade disyllabic vocalic stem with a short initial syllable (notably in the present 3Sg or nominative plural form), (b) a weak-grade monosyllabic stem (notably in the infinitive or partitive singular form, and (c) one or two strong-grade stems;
(7) non-gradational mono- and polysyllabic consonantal stems, which add some õ-initial endings in order to avoid inconvenient consonant clusters, first of all the endings of of dative and instrumental singular, and the plural endings of nominals ending in *d, ḍ, t.*

3. Classification of verbs on the basis of endings

As there is a long tradition of using infinitive forms as base forms of verbs, it makes sense to use the classificatory properties of the infinitive as one of the main factors in defining the main classes or conjugations of verbs:

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[7] Here the somewhat longer elative forms have been used because outside a relatively small set of frequent notions/words instead of local-case forms, phrases of noun in genitive + postposition were used. For elative, however, the frame *Mis sa tõd sīestõ / nēšti _?* 'What do you want from this/these __?' yielded the necessary case forms, though with certain difficulties.
[8] This list is not valid when combining derivational affixes with stems.

(a) the ending *-dõ* defines the conjugation of monosyllabic verb stems ending in a long monophthong or a long opening diphthong, (b) the ending *-da* defines the conjugation of verbs having in their baseform a weak-grade monosyllabic stem, (c) all other verbs with a vocalic or consonantal stem have the infinitive ending *-õ*, except for three defective verbs. In order to establish all 24 classes and subclasses of verbs with different ending combinations more features are needed. Table 8 shows forms of classificatory importance, which reveal the distribution of different endings in verb classes.

Table 8

Distribution of inflectional endings in 24 verb classes

	Type	Inf	Ger	Sup	Pr 3Sg	Pr 2Pl	Pr 3Pl	Ipf 3Sg	Ind Sgn	Cnd 3Sg	Imp 2Sg	Imp2 Sgn	Imp2 Pl	Jus Sg	Quo Sg	Pp acSg	Pp ps
1.	1	*dõ*	*dsõ*	*mõ*	*b*	*tõ*	*bõd*	*kš*	Ø	*ks*	Ø	Ø	*gīd*	*kõ*	*ji*	*nd*	*dõd*
2.	2–3	*dõ*	*dsõ*	*mõ*	*b*	*tõ*	*bõd*	*ž*	Ø	*ks*	Ø	Ø	*gid*	*gõ*	*ji*	*nd*	*dõd*
3.	4	*dõ*	*dsõ*	*mõ*	*b*	*tõ*	*bõd*	*iz*	Ø	*ks*	Ø	Ø	*gid*	*gõ*	*ji*	*nd*	*dõd*
4.	5–9	*dõ*	*dsõ*	*mõ*	*b*	*tõ*	*bõd*	*i*	Ø	*ks*	Ø	Ø	*gid*	*gõ*	*ji*	*nd*	*dõd*
5.	10	*da*	*dsõ*	*mõ*	*m*	*tõ*	*māt*	,	Ø	*ks*	Ø	Ø	*gid*	*kõ*	*i*	*nd*	*dõd*
6.	11–12	*da*	*dsõ*	*mõ*	*b*	*tõ*	*bõd*	,	Ø	*ks*	Ø	Ø	*gid*	*gõ*	*i*	*nd*	*dõd*
7.	13	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*īz*	Ø	*ks*	Ø	*õ~Ø*	*gīd*	*g*	*ji*	*õn*	*dõd*
8.	14–17	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*iz*	Ø	*ks*	Ø	*õ~Ø*	*gid*	*g*	*ji*	*õn*	*dõd*
9.	18–19	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*īz*	Ø	*ks*	Ø	*õ~Ø*	*gīd*	*g*	*ji*	*õn*	*õd*
10.	20–23	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*iz*	Ø	*ks*	Ø	*õ~Ø*	*gid*	*g*	*ji*	*õn*	*õd*
11.	24–26	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*īz*	Ø	*ks*	Ø	*õ~Ø*	*gīd*	*g*	*ji*	*õn*	*tõd*
12.	27–28	*õ*	*õs*	*m*	*b*	*t*	*bõd*	*iz*	Ø	*ks*	Ø	*õ~Ø*	*gid*	*g*	*ji*	*õn*	*tõd*
13.	29–30	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*īz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*dõd*
14.	31–32	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*īz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*õd*
15.	33–36	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*īz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*tõd*
16.	37–42	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*dõd*
17.	43–45	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*õd*
18.	46–47	*õ*	*õs*	*õm*	*b*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*tõd*
19.	48–50	*õ*	*õs*	*õm*	*õb*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*dõd*
20.	51–52	*õ*	*õs*	*õm*	*õb*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*õd*
21.	53–59	*õ*	*õs*	*õm*	*õb*	*õt*	*õbõd*	*iz*	Ø	*õks*	Ø	Ø	*õgid*	*õg*	*iji*	*õn*	*tõd*
22.	60	–	–	–	*b*	*t*	*b*	*z*	–	–	Ø	–	*gid*	*gõ*	–	–	–
23.	61	–	–	–	–	–	–	–	–	–	Ø	–	*gīd*	*gõ̃*	–	–	–
24.	62	–	–	–	*m*	–	–	–	–	*īks*	–	–	–	–	–	–	–

Note. Solid horizontal lines separate verb classes of seven conjugations: (1) **1—4** verbs with monosyllabic long-vowel stem; (2) **5—6** verbs with a monosyllabic weak-grade stem; (3) **7—12** *ā/a*-stem verbs; (4) **13—15** *ū*-stem verbs, (5) **16—18** *õ*-stem verbs, (6) **19—21** consonantal-stem verbs, (7) **22—24** defective verbs.

Note that the endings of the past passive participle show a special distribution in this table because participle endings divide four conjugations into three parts. The ending *-dõd* occurs after *b, g, z, ž, m* and after monosyllabic

stems ending in a long vowel, *l*, and *r*; the ending -*tõd* occurs after *d*, *p*, *k*, *s*, *š* and after disyllabic stems ending in the cluster-final *l* and *r*; the ending -*õd* occurs after *t*, *ṭ* and after disyllabic stems ending in the cluster-final *d*. Although passive participles are, as a rule, formed from transitive forms, here in view of the potential possibility of attributive use of passive participles of generally intransitive verbs with nouns denoting time, place, or device of an action expressed by the participle, the type number of all non-defective verbs ensures the possibility of correct formation of such a participle.

4. Classification of nominals on the basis of endings

As the nominative case form is the base form of nominals in dictionaries, a classification of nominals should make first of all make use of this form. Still, there is a small set of highly frequent nominals, namely some pronouns whose nominative case forms, as well as some other case forms, are highly unique. For this reason such pronomina have been extracted from other nominals into a separate declension.

The nominative case forms present in pure form (a) monosyllabic vocalic stems ending in a long vowel or a diphthong, and (b) disyllabic *ā*/*ē*/*a*-stems (the stem in both nominative singular and nominative plural forms), (c) mostly adjectival *ī*- and *i*-stems that have in the genitive a parallel pure stem ending *īz* or *iz*, which occurs also in most other cases except in four plural case forms where *ž* occurs instead of *z*, (d) a few words ending in *ū*, *ō*, and *õ*, characteristically with somewhat aberrant morphology, (e) consonantal stems among which the greater part of polysyllabic *z*-stems have in the genitive singular a parallel disyllabic vocalic stem.

The main and historically older part of *ī*/*i*-stems, *ū*-stems, and *õ*-stems can be identified on the basis of nominative plural forms.

The border between non-gradational *õ*-stems and consonantal stems remains a fuzzy area in Livonian morphology because the vowel *õ* of non-initial syllables is a result of older and newer vowel reductions and analogies.

The hitherto established 238 nominal types have been divided into 85 classes. This division is not as transparent as that of verbs in Table 8.

Livonian inflectional morphology in the Finnic space

Livonian inflectional morphology is special when compared to that of other Finnic languages because of (a) both of its rich repertoire of inflectional ending variants and its complicated morphophonological alternation, (b) the sharp difference between the distribution of strong- and weak-grade forms in paradigms of *ā*/*a*-stems by comparison with *ū*-, *õ*-, and *ī*/*i*-stems. This has been called forth by the onetime kaleidoscopic sound changes in an area between Estonian and Baltic dialects.

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Abbreviations

Ac — active voice, **Adj** — adjective, **Cnd** — conditional, **D** — dative**, El** — elative, **G** — genitive, **Ill** — illative, **Imp** — imperative, **Ind** — indicative, **Ipf** — imperfect, **Jus** — Jussive, **P** — partitive, **Pp** — participle, **Ps** — passive, **Quo** — quotative, **Sg** — singular, **Sgn** — negative form of the singular, **1** — 1ˢᵗ person, **2** — 2ⁿᵈ person, **3** — 3rd person. Abbreviations make compounds.

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ТИЙТ-РЕЙН ВИЙТСО (Тарту)

О КЛАССАХ СЛОВОИЗМЕНЕНИЯ В ЛИВСКОМ ЯЗЫКЕ

Из прибалтийско-финских языков именно для ливского характерны исключительное обилие словоизменительных окончаний и сложнейшая система морфофонологических чередований. В статье дан обзор простых форм в глагольных и именных парадигмах (53 и 25 форм соответственно) и вариантов их окончаний, а также основных морфофонологических чередований. Так как идентификация всех типов глагольного и именного словоизменения в рамках этого обзора выявила 62 глагольных типа и 238 именных, для большей доступности материала проведена классификация рассмотренных типов, в основу которой легли серии вариантов окончаний в конкретных парадигмах. В данной статье эта процедура проведена на материале глаголов, установлено 22 глагольных класса и пять спряжений.