# Structure of Lithuanian
Class 01: The Lithuanian language. The sounds of Lithuanian

1   Introduction

Lithuanian (Lith. *lietuvių kalba* [lʲɪɛˈtʊvʲuː kɐlˈbɐ]) is an Indo-European language spoken by some 3 million people in and around Lithuania. There are also significant Lithuanian-speaking communities in the US, Canada and the UK due to big waves of emigration from Lithuania in the 1940's and the 1990's. The closest living relative of Lithuanian is Latvian, although the two languages are not mutually intelligible. Also, there is no dialectal continuum at the border between the two countries (c.f. Ukraine/Poland or Germany/Netherlands), but rather an abrupt switch to a very different variety.
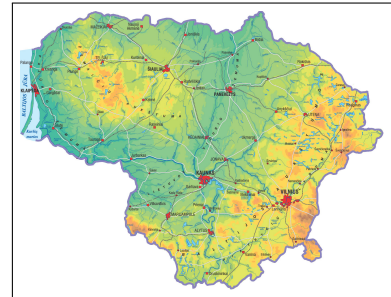
Some basic facts about Lithuanian are listed below:

- Classification: Indo-European → Balto-Slavic → Baltic → East Baltic;

- Lithuanian is a 'satem' language: Lt. [ʃ]irdis *'heart'* vs Gk. [karˈðja] *'heart'*;

- Divided into High and Low Lithuanian, with many subdialects. Some of the dialects show only limited mutual intelligibility;

- The standard language is based on central High Lithuanian, as spoken around the city of Kaunas. Its prescriptive norms are strictly regulated by the Lithuanian Language Committee (lietuvių kalbos komisija);

- The system of word accent is very complex and governed by multiple rules and principles. The position of stress in a word frequently changes as it is declined or conjugated;

- Lithuanian is also a pitch-accent language. Accented heavy syllables are divided into two types: falling and rising. Acoustically, intensity, segmental quality, length and F_0 levels all play a role in distinguishing the two *priegaidės 'intonations'*;

- Inflectional morphology plays a big role in the grammar of Lithuanian. Nominals inflect for gender, number, case and sometimes definiteness. Verbs have a system of synthetic and periphrastic tense forms. There is subject agreement in person, number and gender (participial forms only);

- The neutral word order in Lithuanian is SVO. However, extensive scrambling is frequently found since nominal case usually helps determine a DP's role in a sentence;

- Lithuanian is moderately pro-drop, with pronominal subjects surfacing very frequently without additional emphasis, but they can almost always be omitted.

2 Phonetics and Phonology

2.1 The Consonants: an Overview

Table 1 lists the Lithuanian consonant phonemes. Frequently occurring allophones are enclosed in square brackets.

Table 1: The consonants of Lithuanian

	Labial	Dental/Alveolar	Post-Alveolar	Palatal	Velar	Glottal
Plosive	p pʲ	t [tʲ]			k kʲ	
	b bʲ	d [dʲ]			g gʲ	
Affricate		ts tsʲ	tʃ tʃʲ			
		dz dzʲ	dʒ dʒʲ			
Nasal	m mʲ	n nʲ			[ŋ ŋʲ]	
Fricative	ʋ ʋʲ	s sʲ	ʃ ʃʲ		(x xʲ)	
	(f fʲ)	z zʲ	ʒ ʒʲ		(ɣ ɣʲ)	
Lateral Appr.		l lʲ				
Central Appr.				j		
Trill		r rʲ				

The consonants enclosed in round parentheses occur only in loanwords:

(1)   fazė [ˈfaːzʲeː] *'phase'*
        Bachas [ˈbaːxɐs] *'Bach'*
        himnas [ˈɣʲɪmnɐs] *'hymn'*

The phonemes marked in gray are rare and restricted primarily to dialectal words, toponyms and personal names.

The trills, especially the palatalized one, are often realized as taps in fast speech:

(2)   geras [ˈgʲæːrɐs] *'good'*
        griūti [ˈgrʲuːtʲɪ] *'to collapse'*

2.2 Hard and Soft Consonants

Most consonants have phonemic palatalized counterparts:

(3)
ramu /rɐˈmʊ/	*calm*.NOM.SG.N	↔	ramiu /rɐˈmʲʊ/	*calm*.INSTR.SG.M
kasau /kɐˈsɐʊ/	*scratch*.PRS.1SG	↔	kasiau /kɐˈsʲɐʊ/	*scratch*.PST.1SG

This contrast applies only to positions before back vowels. In other positions, it is neutralized as follows:

2

- Before underlyingly front vowels, all consonants are automatically palatalized:

  (4)   mėlynas /ˈmeːliːnɐs/ → [ˈmʲeːlʲiːnɐs] *'blue'*

- In a C₁C₂ sequence, C₁ inherits the palatal features from C₂:

  (5)   alpstu /ɐlpsˈtʊ/ → [ɐlpsˈtʊ] *'I'm fainting'*
         alksnis /ˈɐlksnɪs/ → ˈɐlksnʲɪs → [ˈɐlʲk(ʲ)sʲnʲɪs] *'alder (tree)'*

- Word-finally, only non-palatalized consonants are possible:

  (6)   rasiu [ˈrɐsʲʊ] *'I will find'*
         ras [rɐs] *'he/they will find'*

The (lightly) palatalized consonants [tʲ, dʲ] are not separate phonemes since they only occur after underlyingly front vowels (more on this below):

(7)   tyras /ˈtiːrɐs/ → [tʲiːrɐs] *'pure'*
       dėti /ˈdeːtɪ/ → [ˈdʲeːtʲɪ] *'to put'*

In case palatalization is phonemic (e.g. triggered by a particular affix), /t/ and /d/ change into /tʃʲ/ and /dʒʲ/ respectively:

(8)   Gyt+io /ˈɡiːt+jɔː/ → [ˈɡʲiːtʃʲɔː] *'Gytis.*GEN.SG*'*

Thus, the palatalized counterparts of both /t, d/ and /tʃ, dʒ/ are – in phonemic terms – /tʃʲ, dʒʲ/. Since the non-palatalized consonants /tʃ/ and /dʒ/ are rare and practically never appear stem-finally in paradigms where the affixes alternate between such that do trigger phonemic palatalization[1] and such that do not, this asymmetry does not disrupt the phonological system of the language.

Non-palatalized consonants are often velarized. This is especially noticeable in case of /l/ which is realized as [lˠ] (like the 'dark' [l] in American English):

(9)   /ˈluːpɐ/ → [[ˈlˠuːpɐ]] *'lip'*[2]

2.3   Consonantal Processes

Although the morphemic structure of most Lithuanian words restricts word-final consonants to /t/, /s/, /k/, /m/ and /n/, some adverbs and functional words end in other consonants, where one can observe the process of word-final devoicing:

---

[1] Remember that affixes beginning with underlyingly front vowels will trigger palatalization that is phonemically non-significant.

[2] Double square brackets will be used to indicate narrow phonetic transcriptions.

(10)   kad /kɐd/ → [kɐt] *'that (compl)'*
        jog /jɔːg/ → [jɔːk] *'that (compl)'*
        lig /lɪg/ → [lʲɪk] *'until'*

Other processes related to laryngeal features include regressive voicing assimilation of obstruents before other obstruents:

(11)   kas+dam+as /ˈkɐs+dɐm+ɐs/ → [ˈkɐz̲dɐmɐs] *'while digging'*
        BUT:
        kąs+n+is /ˈkaːs+n+ɪs/ → [ˈkaːs̲ʲnʲɪs], *[ˈkaːz̲ʲnʲɪs] *'piece'*
        slapt+as /ˈslɐpt+ɐs/ → [ˈs̲laːptɐs]³, *[ˈz̲laːptɐs] *'secret (adj)'*

Dissimilation is triggered when two coronal stops collide:

(12)   ved+a /ˈvæd+ɐ/ → [ˈvʲæːdɐ] *'he leads'*
        ved+ti /ˈvæd+tɪ/ → [ˈvʲæs̲ʲtʲɪ] *'to lead'*

A sequence of the type CsC is simplified as follows:

(13)   klyd+st+a /ˈkliːd+st+ɐ/ → [ˈk⁽ʲ⁾lʲiːstɐ] *'he makes a mistake'*

A coronal non-distributed fricative becomes distributed before a distributed fricative/africate:

(14)   ves+čiau /ˈvæs+tʃʲɐʊ/ → [ˈvʲæʃʲtʃʲɐʊ] *'I would lead'*

A nasal assimilates in its place of articulation to a following plosive:

(15)   pin+k /pɪn+k/ → [pʲɪŋk] *'weave! (imp)'*
        šla<n>p+a /ˈʃlɐ<n>p+ɐ/ → [ˈʃlɐmpɐ] *'it gets wet'*

A nasal in a coda position typically deletes before a fricative or a liquid, lengthening the preceding vowel (up until about 100 years ago, these lengthened vowels were also nasalized):

(16)   siunt+ti /ˈsʲʊnt+tɪ/ → ˈsʲʊnstɪ → [ˈsʲuːsʲtʲɪ] *'to send'*
        brend+ti /ˈbrænd+tɪ/ → ˈbrænstɪ → [ˈbʲrʲæːsʲtʲɪ] *'to mature'*
        But:
        siunt+j+u /sʲʊnt+j+ˈʊ/ → [sʲʊn̲tʃʲʊ] 'I am sending'
        brend+o /ˈbrænd+ɔː/ → [ˈbʲrʲæn̲dɔː] *'(s)he matured'*

As the example above shows, the spirantization of /t/ feeds nasal absorption.

---

³ The long [aː] will be explained in the next section.

There is no gemination in Lithuanian, and double consonants are never written.

2.4   The Vowels: an Overview

Table 2: The vowels of Lithuanian

	Front	Back
High [+ATR]	iː	uː
High [−ATR]	ɪ ɪᵉ	ʊ ʊᵓ
Mid [+ATR]	eː (e)	
Mid [−ATR]		ɔː (ɔ)
Low (near-open)	æ	ɐ
Low (open)	æː	aː

- The vowels /aː/ and /ɐ/ are phonetically central. Phonologically, they are simply [+back] and pattern with the rest of the back vowels;

- The front mid vowel is phonetically tense, while the back mid vowel is lax. This is merely a phonetic difference;

- The short back vowel /ɔ/ is used only in loanwords and a couple of interjections:

  (17)   policija [pɔˈlʲɪtsʲɪjæ] *police*

- The short vowel /æ/ is phonetically often a (lowered) mid vowel – [ɛ̞] – but it patterns with low vowels phonologically, hence its location in the chart;

- Many Lithuanians have a short /e/ (which may be somewhat lower than its long counterpart) in addition to /æ/, which they use in loanwords, such as *telefonas* [tʲelʲeˈfɔnɐs] *'telephone'*. However, for many speakers, the distinction does not exist and only /æ/ is used;

- The two vowels with off-glides – /ɪᵉ/ and /ʊᵓ/[4] – behave as single phonemes and are therefore included in the chart. All other diphthongs are bi-phonemic (see below).

2.5   Vocalic Processes

The [±back] distinction is neutralized in low vowels in non-initial positions. After non-palatalized consonants, [aː] and [ɐ] are used. Otherwise, it's always [æː] and [æ]:

(18)   /ˈsʲʊnt+j+ɐ+mæ/ → [ˈsʲʊntʃʲæmʲæ] *'we send'*

---

[4] Further notated as simply /ɪɛ/ and /ʊɔ/ without superscripting.

Normally, a surface sequence of the type [Cʲæ] can be traced back to one of two possible underlying representations: /Cæ/ (underlying front vowel, automatic palatalization) and /Cʲɐ/ or /Cjɐ/ (underlying back low vowel fronted due to underlyingly palatalized consonant). In case the consonant is a coronal stop, there is going to be a surface difference. After an underlyingly front vowel, /t/ and /d/ will palatalize but will not turn into affricates. In case they are palatalized underlyingly, [tʃʲ] and [dʒʲ] will appear on the surface:

(19)   [tʲæ] ← /tæ/
         [tʃʲæ] ← /tʲɐ/, /t+jɐ/

As was mentioned before, in a word-initial position, the front-back distinction is sound:

(20)   ąžuolas [ˈaːʒʊɔlɐs] *'oak tree'*
         ežeras [ˈæːʒʲærɐs] *'lake'*

Back vowels other than /aː/ and /ɐ/ are phonetically somewhat fronted after palatalized consonants, but they never become fully front vowels:

(21)   /ˈsʲuːstɪ/ → [ˈsʲʉːsʲtʲɪ], *[ˈsʲyːsʲtʲɪ]

Unstressed long vowels may be somewhat shortened (although the prescriptive norm prefers them to remain fully long), but they always retain their quality (esp. [+ATR] in high vowels):

(22)   pelkė [ˈpʲæ·lʲkʲe·] *'swamp (Nom.Sg)'*
         žąsį [ˈʒaːsʲi·] *'goose (Acc.Sg)'*
         sūnų [ˈsuːnu·] *'son (Acc.Sg)'*
         upę [ˈʊpʲæ·] *'river (Acc.Sg)'*

☞ Significant shortening and/or quality reduction in unstressed syllables (esp. inflectional endings) is typical for many dialects, but not the standard language. Some speakers of urban vernaculars do it under the influence of Russian.

The short low vowels /ɐ/ and /æ/ are usually lengthened in non-final stressed syllables:

(23)   /kɐˈsʊ/ → [kɐˈsʊ] *'I dig'*
         /ˈkɐsɐ/ → [ˈkaːsɐ] *'he digs'*
         But:
         /rɐnˈkɐ/ → [rɐŋˈkɐ] *'hand'*

☞ There are some notable morpho-syntactic contexts in which this lengthening rule cannot apply. These will be discussed later in the course.

In addition to the process described above, some vowels change quantitatively and qualitatively depending on the syllable intonation (rising or falling). This will be discussed next week in the class on Lithuanian prosody.

Two short vowels without a consonant in between usually form a diphthong:

(24)   /ˈdɐʊʒɔː/ → [ˈdɐ̯ʊʒɔː] *'he breaks'*

Otherwise, the hiatus will be resolved via an epenthetic glide:

(25)   /mɐʒ+ˈeː+ɐ/ → [mɐˈʒʲeːjæ] *'it shrinks'*

The diphthongs occurring in native Lithuanian words include the following items:

(26)
[ɐ̯ɪ]	laikas [ˈlɐ̯ɪkɐs] *'time'*
[ɐ̯ʊ]	laukas [ˈlɐ̯ʊkɐs] *'field'*
[æ̯ɪ]	meilė [ˈmʲæ̯ɪlʲeː] *'love'*
[ʊ̯ɪ]	muilas [ˈmʊ̯ɪlɐs] *'soap'*

☞ The so-called 'semi-diphthongs' (combinations of a nuclear vowel with a moraic sonorant in the coda position) will be treated in the prosody class.

The approximant /ʋ/ is often vocalized in a coda position, fusing with the preceding vowel. The alternation is visible when a word is morphologically inflected:

(27)   /ˈbʊʋ+tɪ/ → [ˈbuːtʲɪ] *'to be'*
         /ˈbʊʋ+ɔː/ → [ˈbʊʋɔː] *'was'*

3   Palatalization: Summary

The are three sources of palatalization in Lithuanian:

- In lexical roots, there are often underlyingly palatalized consonants before back vowels. This contrast is phonemically distinctive. This palatalization is therefore lexical and inherent.

  (28)   /ʒʲɔːg-/ *'grasshopper'*
           /lʲuːt-/ *'lion'*

- Morphological concatenation often produces strings of the type [Cj[–cons, +back]]. In this case, the segment /-j-/ is absorbed into the preceding consonant, producing a palatalized one. The consonant is not underlyingly palatalized, but it becomes palatalized during the derivation.

(29) /kɐs+ɐ+ʊ/ → [kɐˈsɐ̯ʊ̯] *'I scratch'*
  /kɐs+jɐ+ʊ/ → [kɐˈsʲɐ̯ʊ̯] *'I scratched'*

- Before underlyingly front vowels, all consonants are automatically palatalized (see above).

- In a handful of nominal and verbal roots, the sequence [CjV] is preserved without absorbing the glide into the preceding consonant:

(30) pjauti [ˈpjaˑʊ̯tʲɪ] *'to cut'*[5]
  bjaurus [bjɐ̯ʊˈrʊs] *'ugly, nasty'*

4 The Spelling System

Aa Ąą Bb Cc Čč Dd Ee Ęę Ėė Ff Gg Hh Ii Įį Yy Jj
Kk Ll Mm Nn Oo Pp Rr Ss Šš Tt Uu Ųų Ūū Vv Zz Žž

Lithuanian spelling is partly phonemic and partly etymological. The absorptions of nasals in coda positions in front of other consonants and word-finally had led historically to the existence of nasal vowels, which were later de-nasalized and merged with the corresponding long vowels. Therefore, the letters in the pairs **į** ∼ **y** and **ų** ∼ **ū** represent identical vowels:

(31) būtų [ˈbuːtuː] *'it would be'*
  įdomybė [iːdɔˈmʲiːbʲeː] *'something interesting'*

The underlyingly short vowels /ɐ/ and /æ/ may be lengthened in certain configurations (see above), in which case they are indistinguishable from the formerly nasal vowels represented by the letters **ą** and **ę**:

(32) rasą [ˈraːsaː] *'dew (Acc.Sg)'*   lesa [ˈlʲæːsɐ] *'it pecks'*
  rąstas [ˈraːstɐs] *'wooden log'*   skęsta [ˈsʲkʲæːstɐ] *'it sinks'*

In Table 3, the Lithuanian alphabet is listed. For consonants, only the main realization is listed. Palatalized consonants are handled under the letter **Ii**. Voicing/devoicing, as well as other consonantal processes, are ignored in the table.

The consonants [x] and [dʒ] do not have their own letters and use the digraphs **ch** and **dž**:

(33) choras [ˈxɔrɐs] *'choir'*
  džiugu [dʒʲʊˈgʊ] *'happy'*

---

[5] The lengthening of the first element of the diphthong will be explained in the next class.

Table 3: The Lithuanian alphabet

Letter	Sound	Context / Example
A a	[ɐ]	kada [kɐˈdɐ] *‘when’*
	[aː]	under the lengthening condition, i.e. in stressed non-final syllables: kasa [ˈkaːsɐ] *‘he digs’*
Ą ą	[aː]	(indicates an absorbed nasal) ąžuolą [ˈaːʒu̯ɔlaː] *‘oak’*
B b	[b]	bokštas [ˈbɔːkʃtɐs] *‘tower’*
C c	[ts]	caksėti [tsɐkʲˈsʲeːtʲɪ] *‘to tick (clock)’*
Č č	[tʃ]	čiuožti [ˈtʃʲu̯ɔʃʲtʲɪ] ‘to skate (on ice)’
D d	[d]	dūmai [ˈduːmɐɪ] *‘smoke’*
E e	[æ]	nešk [nʲæʃk] *‘carry! (imp.)’*
	[æː]	under the lengthening condition, i.e. in stressed non-final syllables: nešė [ˈnʲæːʃʲeː] *‘he carried’*
Ę ę	[æː]	(indicates an absorbed nasal) gęsta [ˈɡʲæːstɐ] *‘it goes out (light)’*
Ė ė	[eː]	gėlė [ɡʲeːˈlʲeː] *‘flower’*
F f	[f]	in loanwords: fonas [ˈfɔnɐs] *‘background’*
G g	[ɡ]	gauti [ˈɡɐu̯tʲɪ] *‘to get’*
H h	[ɣ]	in loanwords: halė [ˈɣaːlʲeː] *‘indoor marketplace’*
I i	[ɪ]	kisti [ˈkʲɪsʲtʲɪ] *‘to change’*
	[Cʲ]	indicates palatalization of a consonant before a back vowel: brolio [ˈbrɔːlʲɔː] *‘brother (Gen.Sg)’*
Į į	[iː]	(indicates an absorbed nasal) įdomus [iːdɔˈmʊs] *‘interesting’*
Y y	[iː]	yda [ˈiːdɐ] *‘flaw’*
J j	[j]	joti [ˈjɔːtʲɪ] *‘to ride (a horse)’*
K k	[k]	kąsti [ˈkaːsʲtʲɪ] *‘to bite’*
L l	[l]	lova [ˈlɔːʋɐ] *‘bed’*
M m	[m]	moteris [ˈmɔːtʲærʲɪs] *‘woman’*
N n	[n]	nendrė [ˈnʲænʲdʲrʲeː] *‘cane (plant)’*
O o	[ɔː]	oda [ɔːˈdɐ] *‘skin’*
	[ɔ]	in loanwords: bosas [ˈbɔsɐs] *‘boss’*
P p	[p]	peilis [ˈpʲæɪlʲɪs] *‘knife’*
R r	[r]	randu [rɐnˈdʊ] *‘I find’*
S s	[s]	sausas [ˈsɐu̯sɐs] *‘dry’*
Š š	[ʃ]	šąla [ˈʃaːlɐ] *‘it gets cold’*
T t	[t]	tauta [tɐu̯ˈtɐ] *‘nation’*
U u	[ʊ]	butas [ˈbʊtɐs] *‘apartment’*
Ų ų	[uː]	(indicates an absorbed nasal) vyrų [ˈʋʲiːruː] *‘men (Gen.Pl)’*
Ū ū	[uː]	rūkas [ˈruːkɐs] *‘smoke, fog’*
V v	[ʋ]	voras [ˈʋɔːrɐs] *‘spider’*
Z z	[z]	zylė [zʲiːˈlʲeː] *‘tit (bird, DE. Meise)’*
Ž ž	[ʒ]]	žiurkė [ˈʒʲʊrʲkʲeː] *‘rat’*

5 Basic Expressions

Labà dienà! [lɐˈbɐ dʲɪɛˈnɐ], coll. [ˈlaːbɐ ˈdʲɪɛnɐ] – Good afternoon! Hello! (formal)
Lãbas rýtas! [ˈlaːbɐs ˈrʲiːtɐs] – Good morning!
Lãbas vãkaras! [ˈlaːbɐs ˈvaːkɐrɐs] – Good evening!
Lãbas! [ˈlaːbɐs] – Hello! Hi!

Vìso gẽro! [ˈvʲɪsɔː ˈgʲæːrɔː] – Goodbye! *lit.* 'Alles Gute!'
Sudiẽ(v)! [sʊˈdʲɪɛ(ʊ̯)] – Goodbye! (formal)
Ikì pasimãtymo! [ɪˈkʲɪ pɐsʲɪˈmaːtʲiːmɔː] – Goodbye!
Ikì! [ɪˈkʲɪ] – Bye!
Labãnaktis! [lɐˈbaːnɐkʲtʲɪs] – Good night!

Màno vaȓdas … [ˈmɐnɔː ˈvɐrdɐs] – My name is …
Kóks tàvo vaȓdas? [ˈkɔːks ˈtɐʊ̯ɔː ˈvɐrdɐs] – What is your name?
Kuõ tù vardù? [ˈkʊ̯ɔ ˈtʊ vɐrˈdʊ] – What is your name?

Labaĩ malonù (susipažìnti)! [lɐˈbɐɪ mɐlɔːˈnʊ sʊsʲɪpɐˈʒʲɪmʲtʲɪ] – It is nice to meet you!
lit. 'Very pleasant.NEUT to-meet-each-other!'

Bibliography

Ambrazas, Vytautas (2006): Dabartinės lietuvių kalbos gramatika (A grammar of Modern Lithuanian). Mokslo ir enciklopedijų leidybos institutas, Vilnius.

Dambriūnas, Leonardas, Antanas Klimas and William R Schmalstieg (1998): Beginner's Lithuanian. Hippocrene Books.

Kazlauskas, Juozas (1968): Lietuvių kalbos istorinė gramatika (A historic grammar of Lithuanian). Mintis.

Poljakov, Oleg (2015): The Marvel of Indo-European Cultures and Languages. Vilnius University Publishing House, Vilnius.

Meilutė Ramonienė and Joana Pribušauskaitė (2008): Praktinė lietuvių kalbos gramatika (A practical grammar of Lithuanian). Baltos Lankos, Vilnius.

Stang, Chr. S. (1966): Vergleichende Grammatik der baltischen Sprachen. Universitetsforlaget, Oslo-Bergen-Tromsø.