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Counting Lithuanian conjugations

Outline

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1. Defining conjugation

Conjugation = verbal inflection class

Inflection class = pattern of expression of grammatical features

On the definition of inflection(al) class: (Aronoff 1994: 64), (Stump 2015: 114–115); for canonical approach see (Corbett 2009), (Stump 2015)

2. Constructed examples

Let verbs in language L_1 have 3 forms (INF, PRS, PST) expressed by suffixes

	TEKU 'fly'	PURO 'kiss'	
INF	<i>teku-m</i>	<i>puro-m</i>	<i>...-m</i>
PRS	<i>teku-n</i>	<i>puro-n</i>	<i>...-n</i>
PST	<i>teku-o</i>	<i>puro-o</i>	<i>...-o</i>

All verbs in L_1 have the same set of suffixes

Conclusion: there are **no conjugations in L_1**

2. Constructed examples

Let verbs in language L_2 have 3 forms (INF, PRS, PST) expressed by suffixes

	NELO 'fly'	VERI 'kiss'		
INF	<i>nelo-m</i>	<i>veri-p</i>	<i>...-m</i>	<i>...-p</i>
PRS	<i>nelo-n</i>	<i>veri-q</i>	<i>...-n</i>	<i>...-q</i>
PST	<i>nelo-o</i>	<i>veri-r</i>	<i>...-o</i>	<i>...-r</i>

Verbs differ in their expression of grammatical features

There are 2 patterns: $\{-m, -n, -o\}$ and $\{-p, -q, -r\}$

Conclusion: there are **two conjugations in L_2**

2. Constructed examples

Conjugations are frequently based on **variable affixation**, but they also manifest themselves in:

- Vowel/consonant alternations
- Stress patterns
- etc.

As a result, conjugations can be defined by **combinations of variables**:

- Affixes + vowel alternations
- Affixes + stress patterns
- etc.

3. Traditional interpretation of Lithuanian conjugations

3 conjugations are distinguished on the basis of PRS inflections, see, e.g. (Ambrazas 1997: 298)

	I (a)	II (i)	III (o)
	KEPTI 'bake	MYLĖTI 'love'	SAKYTI 'say'
1SG	kep-u	myli-u	sak-au
2SG	kep-i	myl-i	sak-ai
3SG	kep-a	myl-i	sak-o
1PL	kep-a-m(e)	myl-i-m(e)	sak-o-m(e)
2PL	kep-a-t(e)	myl-i-t(e)	sak-o-t(e)
3PL	kep-a	myl-i	sak-o

3. Traditional interpretation of Lithuanian conjugations

Other variables are not taken into account in these 3 conjugations, but are discussed elsewhere:

- PST suffixes
- PRS/PST/INF affixes
- Vowel/consonant/tone alternations
- Stress patterns

3. Traditional interpretation of Lithuanian conjugations

Direction of approach to inflection classes

- **Left-to-right = root-to-ending** (traditional, i.e. structural types of primary vs. secondary/suffixed verbs, vowel alternations, additional affixes of PRS, thematic vowels/endings)
- **Right-to-left = ending-to-root** (this talk)

4. Obligatory variables of Lithuanian verb inflection

Obligatory variables:

Patterns of tense suffixes

Patterns of stress placement

Non-obligatory variables:

- Additional PRS/PST/INF affixes (beside tense/person-number suffixes)
- Vowel/consonant/tone alternations

Cf. (Andronov 2000: 42-43) who treats both structural types and PRS/PST suffixes as features relevant to every verb

4a. Obligatory variables: tense suffixes

- Affixal inflection of Lithuanian verbs is based on 3 stems: INF, PRS, PST
- Subsystems of INF, PRS, PST = **stem spaces** (Bonami & Boyé 2002), **paradigm sectors**, inflectional variation of paradigm sectors = **segregated inflection classes** (Stump 2015: 119)
- See (Arkadiev 2012) on morphomicity of Lithuanian verbal stems

4a. Obligatory variables: tense suffixes

Subsystem of INF

	KEPTI 'bake'	MYLĒTI 'love'	SAKYTI 'say'	...
FUT.1SG	<i>kèp-siu</i>	<i>mylé-siu</i>	<i>saký-siu</i>	<i>-siu</i>
PST.HAB.1SG	<i>kèp-davau</i>	<i>mylé-davau</i>	<i>saký-davau</i>	<i>-davau</i>
IRR.1SG	<i>kèp-čiau</i>	<i>mylé-čiau</i>	<i>saký-čiau</i>	<i>-čiau</i>
...				

Subsystem of forms based on INF stem with respect to suffixes and stress placement is **invariable**

4a. Obligatory variables: tense suffixes

Subsystem of PRS (finite)

	<i>a</i> -type	<i>i</i> -type	<i>o</i> -type
	KEPTI 'bake'	MYLĖTI 'love'	SAKYTI 'say'
1S G	kep-u	myli-u	sak-au
2S G	kep-i	myl-i	sak-ai
3S G	kep-a	myl-i	sak-o
1P L	kep-a-m(e)	myl-i-m(e)	sak-o-m(e)
2P L	kep-a-t(e)	myl-i-t(e)	sak-o-t(e)
3P L	kep-a	myl-i	sak-o

4a. Obligatory variables: tense suffixes

Subsystem of PST (finite)

	é-type		o-type	
	KEPTI 'bake'	SAKYTI 'say'	BĚGTI 'run'	MYLĚTI 'love'
1S G	kepi-au	saki-au	bĚg-au	mylĚj-au
2S G	kep-ei	sak-ei	bĚg-ai	mylĚj-ai
3S G	kep-ě	sak-ě	bĚg-o	mylĚj-o
1P L	kep-ě-m(e)	sak-ě-m(e)	bĚg-o-m(e)	mylĚj-o-m(e)
2P L	kep-ě-t(e)	sak-ě-t(e)	bĚg-o-t(e)	mylĚj-o-t(e)
3P L	kep-ě	sak-ě	bĚg-o	mylĚj-o

4a. Obligatory variables: tense suffixes

Lithuanian conjugations with respect to tense suffixes can be seen as combinations of PRS and PST suffix patterns

- $3 \times 2 = 6$ theoretical combinations are possible
- 5 combinations are attested (a-è, a-o, i-o, o-è, o-o)
= 5 conjugations (with respect to tense suffixes)

a-è	a-o	i-o	o-è	o-o
KEPTI 'bake'	BĖGTI 'run'	MYLĖTI 'love'	SAKYTI 'say'	SAUGOTI 'protect'
<i>kep-a</i>	<i>bėg-a</i>	<i>myl-i</i>	<i>sak-o</i>	<i>saug-o</i>
<i>kep-è</i>	<i>bėg-o</i>	<i>mylėj-o</i>	<i>sak-è</i>	<i>saugoj-o</i>

4a. Obligatory variables: tense suffixes

Cf. (Andronov 2000: 43) where PRS/PST variation is combined with structural types yielding 7 classes:

type		Praes.	Praet.	Nr					
primary		<i>a-</i>	<i>o-</i>	1	<i>bėgti, bėga, bėgo</i> 'to run'				
		<i>a-</i>	<i>ė-</i>	2	<i>nešti, neša, nešė</i> 'to carry'				
m	inf. : praes., praet.	<i>o-</i>	<i>ė-</i>	3	<i>daryti, daro, darė</i> 'to do'				
i	inf., praet. : praes.	<i>a-</i>	<i>o-</i>	4	<i>drebėti, dreba, drebėjo</i> 'to tremble'; <i>giedoti, gieda, giedojo</i> 'to chant'				
x									
e						<i>i-</i>	<i>o-</i>	5	<i>mylėti, myli, mylėjo</i> 'to love'
d						<i>o-</i>	<i>o-</i>	6	<i>žinoti, žino, žinojo</i> 'to know'
secondary		<i>a-</i>	<i>o-</i>	7	<i>vėdinti, vėdina, vėdino</i> 'to air'; <i>balsuoti, balsuoja, balsavo</i> 'to vote'; etc.				

Interim conclusions 1

Counting conjugations

- 1 INF pattern of tense suffixes
- 3 PRS patterns of tense suffixes (*a, i, o*)
- 2 PST patterns of tense suffixes (*ė, o*)

Lithuanian conjugations (with respect to tense suffixes) are combinations of PRS and PST suffix patterns

- 5 combinations are attested (*a-ė, a-o, i-o, o-ė, o-o*)
= 5 conjugations

4b. Obligatory variables: stress patterns

Default placement of the stress is lexically determined

Note that stems may differ in stress placement, e.g.:

- *bég-ti, bég-a, bég-o* ‘run’ (stress is always on the root)
- *myl-é-ti, mýl-i/mỹl-i, myl-ěj-o* ‘love’ (stress is on root/suffix)
- *at-něš-ti, àt-neš-a, àt-neš-é* ‘bring’ (stress is on root/prefix),
- etc.

4b. Obligatory variables: stress patterns

- Inflection classes determine the mobility of the stress
- Mobility = stressed ending in 1/2s G, default stress elsewhere
- Cf. BĖGTI 'run' and KEPTI 'bake'

PRS

IMMOB

bėg-u

bėg-i

bėg-a

bėg-am(e)

bėg-at(e)

bėg-a

MOB

kep-ù

kep-ì

kėp-a

kėp-am(e)

kėp-at(e)

kėp-a

PST

IMMOB

bėg-au

bėg-ai

bėg-o

bėg-ome

bėg-ote

bėg-o

MOB

kepi-aũ

kep-eĩ

kėp-ė

kėp-ėm(e)

kėp-ėt(e)

kėp-ė

4b. Obligatory variables: stress patterns

In theory, one conjugation (as a combination of PRS-PST patterns) may have 4 stress patterns:

PRS mob	PRS immob	PRS immob	PRS mob
PST mob	PST immob	PST mob	PST immob

4 stress patterns × 5 PRS-PST patterns = 20 possible combinations

4b. Obligatory variables: stress patterns

a-è (all 4 patterns)

KÈPTI 'bake'

ÉSTI 'eat, devour'

GÌMTI 'be born'

KÉLTI 'raise'

a-mob: *kep-ù*

a-immob: *éd-u*

a-immob: *gìmst-u*

a-mob: *keli-ù*

è-mob: *kepi-aũ*

è-immob: *édži-au*

è-mob: *gimi-aũ*

è-immob: *kéli-au*

a-o (all 4 patterns)

VAŘGTI 'bother'

ŠÓKTI 'jump'

SÉNTI 'grow old'

DREBÉTI 'tremble'

a-mob: *vargst-ù*

a-immob: *šók-u*

a-immob: *sénst-u*

a-mob: *dreb-ù*

o-mob: *varg-aũ*

o-immob: *šók-au*

o-mob: *sen-aũ*

o-immob: *drebéj-au*

4b. Obligatory variables: stress patterns

i-o (2 patterns)

NORÉTI 'want'

TIKÉTI 'believe'

i-mob: n/a

i-immob: *nóri-u*

i-mob: *tiki-ù*

i-immob: n/a

o-mob: n/a

o-immob: *noréj-au*

o-immob: *tikéj-au* o-mob: n/a

o-è (2 patterns)

RAŠÝTI 'write'

MÓKYTI 'teach'

o-mob: *raš-aũ*

o-immob: *mók-au*

o-mob: n/a

o-immob: n/a

è-mob: *raši-aũ*

è-immob: *móki-au*

è-immob: n/a

è-mob: n/a

4b. Obligatory variables: stress patterns

o-o (2 patterns)

SÁUGOTI 'protect'

BIJÓTI 'be afraid'

o-mob: n/a o-immob: *sáug-au*

o-mob: *bij-aũ*

o-immob: n/a

o-mob: n/a o-immob: *sáugoj-au*

o-immob: *bijój-au*

o-mob: n/a

Interim conclusions 2

When stress patterns are taken into account, 14 combinations are found out of 20:

- a-è 4 (all patterns)
- a-o 4 (all patterns)
- i-o 2 (immob-immob, mob-immob)
- o-è 2 (mob-mob, immob-immob)
- o-o 2 (immob-immob, mob-immob)

5. Conclusions

- **Obligatory vs. non-obligatory** parameters of variability of inflection
- Obligatory = patterns of tense suffixes + stress
- Right-to-left/**ending-to-root** approach

5. Conclusions

- **Patterns of tense suffixes:**

3 PRS patterns of tense suffixes (*a, i, o*)

2 PST patterns of tense suffixes (*ė, o*)

5 combinations (conjugations) of PRS-PST tense suffixes:

a-ė, a-o, i-o, o-ė, o-o

- **Patterns of stress :**

Immobile vs. mobile

- **14 combinations (conjugations) of stress and tense suffix patterns (see Interim conclusions 2)**



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Thank you!

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