

Polish verb roots and affixes: an insight from inflectional allomorphy

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What's a verb root?

- A** a **simple** element (V or $\sqrt{\quad}$)
- B** a **complex structure** (multiple heads like 'process', 'indicative', 'tense', etc.)

Goal: argue for **B**

Polish present tense inflection classes offer an insight into the **syntactic complexity** of verb roots and their affixes

Synopsis

- Polish present tense forms:
 1. multiple conjugations
 2. shape of suffixes (allomorphs)
 3. theme vowels
 4. types of palatalization
 5. root suppletion
- the full range of this complexity across conjugations can be captured with:
 - ▶ verb root size (cf. Ramchand 2008),
 - ▶ affix size (e.g. Taraldsen 2009, Márkus 2015, Caha et al. 2019)
 - ▶ affix shape (cf. Blix 2021, Cortiula 2023)

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4 present tense inflection classes ('class' = TV)

(1)

	I	II	III	IV
1sg	dəsta j ẽ	rəbj ẽ	čit a m	umj ε m
2	dəsta j ε š	rəbj i š	čit a š	umj ε š
3	dəsta j ε	rəbj i	čit a	umj ε
1pl	dəsta j ε mi	rəbj i mi	čit a mi	umj ε mi
2	dəsta j ε tɕε	rəbj i tɕε	čit a tɕε	umj ε tɕε
3	dəsta j ɔ̃	rəbj ɔ̃	čit a(j) ɔ̃	umj ε(j) ɔ̃

Class I/type 1: j-suffix

(2)

1a

1sg dɔsta j ẽ

2 dɔsta j ɛ š

3 dɔsta j ɛ

1pl dɔsta j ɛ mi

2 dɔsta j ɛ tɕɛ

3 dɔsta j ɔ̃

1b

gžɛb j ẽ

gžɛb j ɛ š

gžɛb j ɛ

gžɛb j ɛ mi

gžɛb j ɛ tɕɛ

gžɛb j ɔ̃

Class I/type 2: palatalization

(3)

	2a	
1sg	ss	ẽ
2	sç	ε š
3	sç	ε
1pl	sç	ε mi
2	sç	ε tçε
3	ss	õ

- ▶ ε by itself doesn't palatalize, e.g.
sens-εm / *çεnç-εm 'sense-INST'

Class I/type 2: palatalization

(3) **2a**

1sg	ss	ẽ
2	sç	ε š
3	sç	ε
1pl	sç	ε mi
2	sç	ε tçε
3	ss	õ

- ▶ ε by itself doesn't palatalize, e.g.
sens-εm / *çεnç-εm 'sense-INST'

Class I/type 2: PAL as a morpheme

(3) **2a**

1sg	ss		ẽ
2	ss	PAL	ε š
3	ss	PAL	ε
1pl	ss	PAL	ε mi
2	ss	PAL	ε tʂε
3	ss		õ

► coronal palatalization:

s, z, t, d, n → ʂ, ʐ, tʂ, dʐ, ɲ

Class I/type 2: PAL as a morpheme

(3) **2a**

1sg	ss		ẽ
2	ss	PAL	ε š
3	ss	PAL	ε
1pl	ss	PAL	ε mi
2	ss	PAL	ε tʃε
3	ss		õ

► coronal palatalization:

s, z, t, d, n → **ʃ, ʒ, tʃ, dʒ, ɲ**

Class I/type 2: PAL as a morpheme

(4)

	2a
1sg	ss $\tilde{\epsilon}$
2	ss PAL ϵ š
3	ss PAL ϵ
1pl	ss PAL ϵ mi
2	ss PAL ϵ tʃε
3	ss $\tilde{\omega}$

	2b
	piš $\tilde{\epsilon}$
	piš PAL ϵ š
	piš PAL ϵ
	piš PAL ϵ mi
	piš PAL ϵ tʃε
	piš $\tilde{\omega}$

▶ coronal palatalization:
s, z, t, d, n → ϵ , z , $t\epsilon$, dz , η

▶ non-coronals: unaffected by PAL

Class I/type 3: root suppletion

(5)	3	
1sg	bjər	ẽ
2	bjεž	ε š
3	bjεž	ε
1pl	bjεž	ε mi
2	bjεž	ε tʂε
3	bjər	õ

Class I roots and suffixes

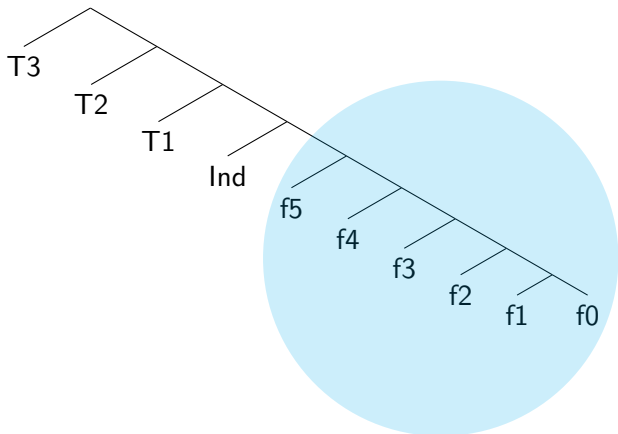
(6)	1	2	3
1sg	dəsta j ẽ	ss ẽ	bjər ẽ
2	dəsta j ε š	ss PAL ε š	bjež ε š
3	dəsta j ε	ss PAL ε	bjež ε
1pl	dəsta j ε mi	ss PAL ε mi	bjež ε mi
2	dəsta j ε tɛɛ	ss PAL ε tɛɛ	bjež ε tɛɛ
3	dəsta j õ	ss õ	bjər õ

► Asymmetry

1sg/3pl vs. other forms: least complex and with root suppletion

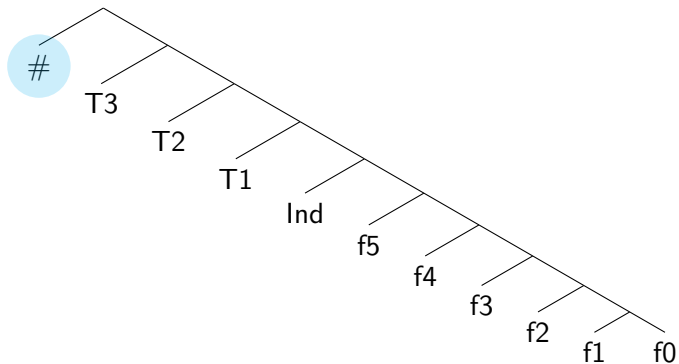
Analysis ingredient #1: (simplified) present tense fseq

(7)



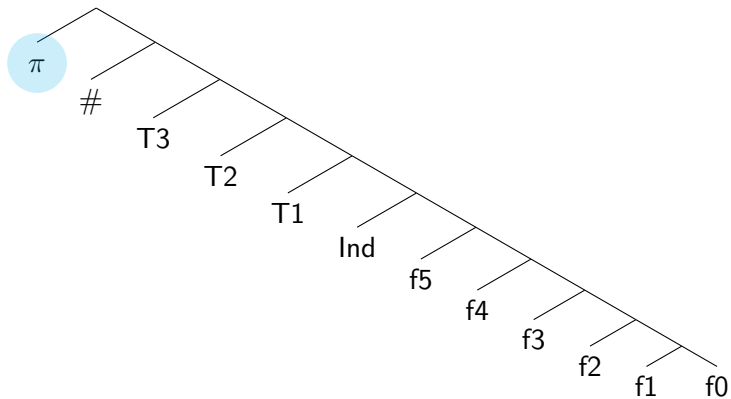
Number: singular

(8)



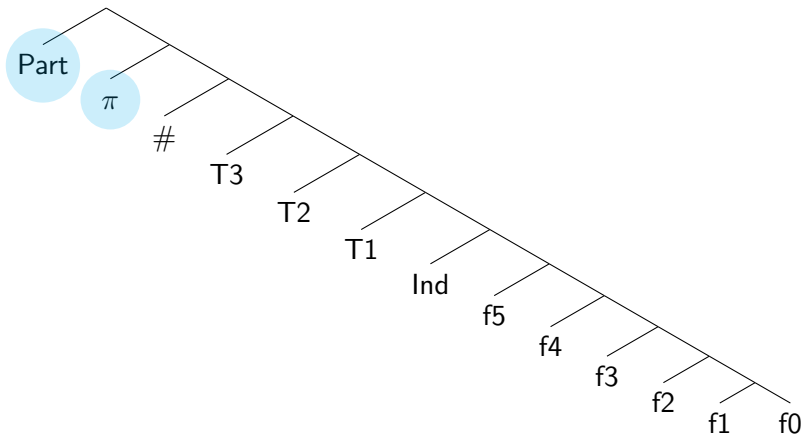
Persons: 3rd

(9)



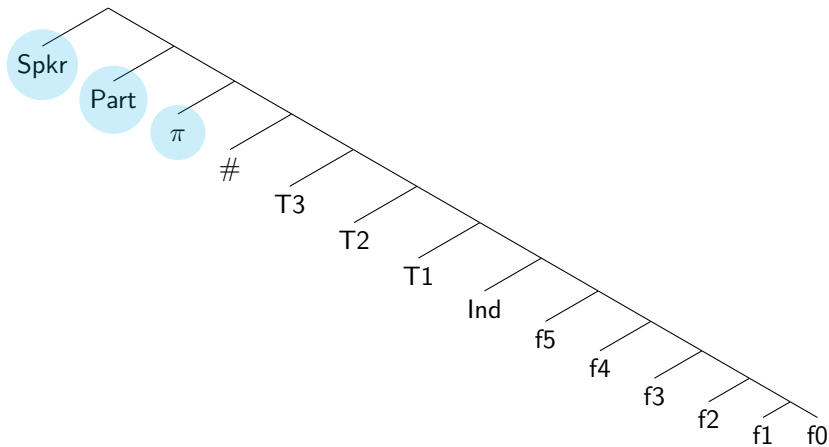
Persons: 2nd

(10)



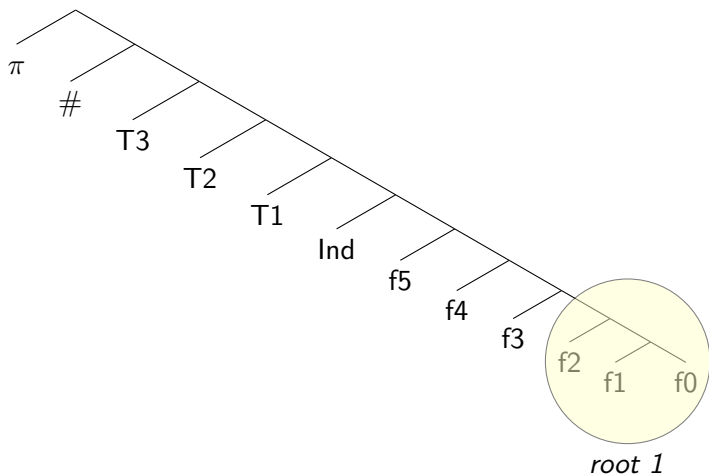
Persons: 1st

(11)



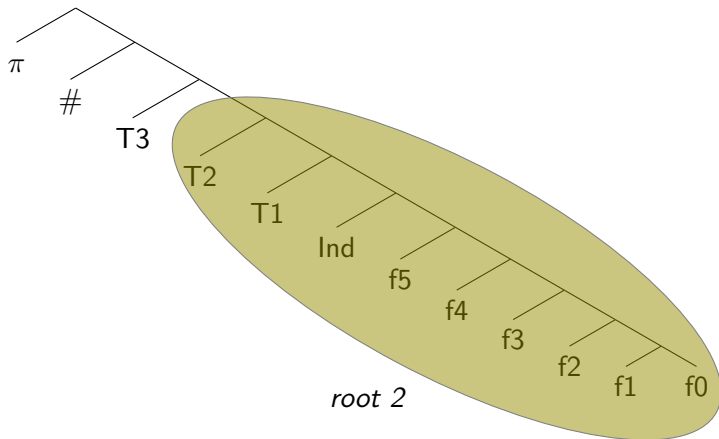
Ingredient #2: root sizes

(12)



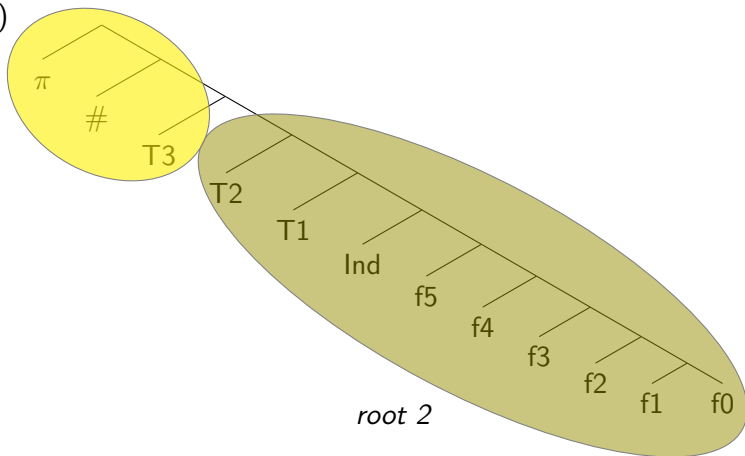
Ingredient #2: root sizes

(13)



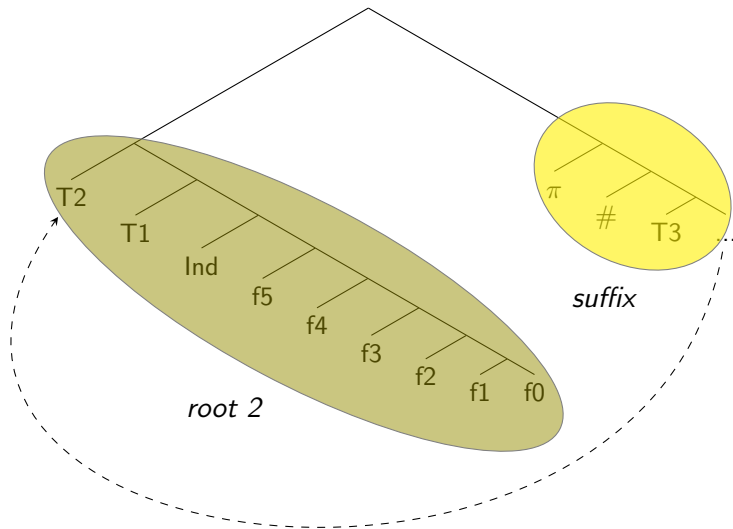
Root sizes and affixes

(14)



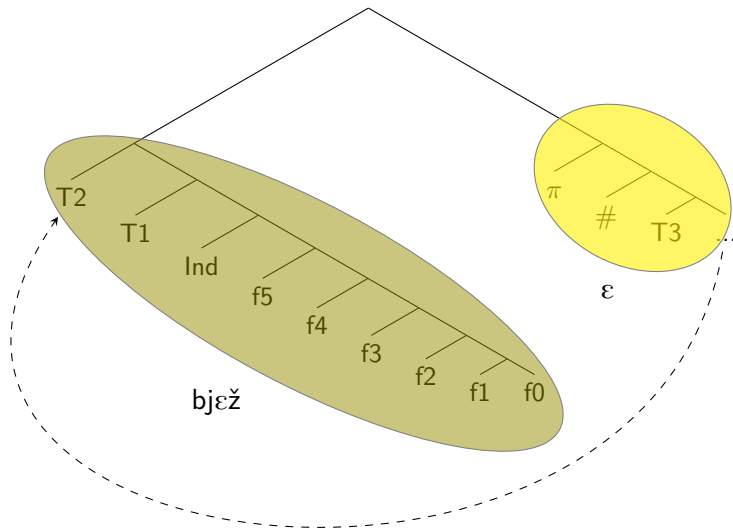
Lexicalization

(15)



3sg: class I/type 3

(16)



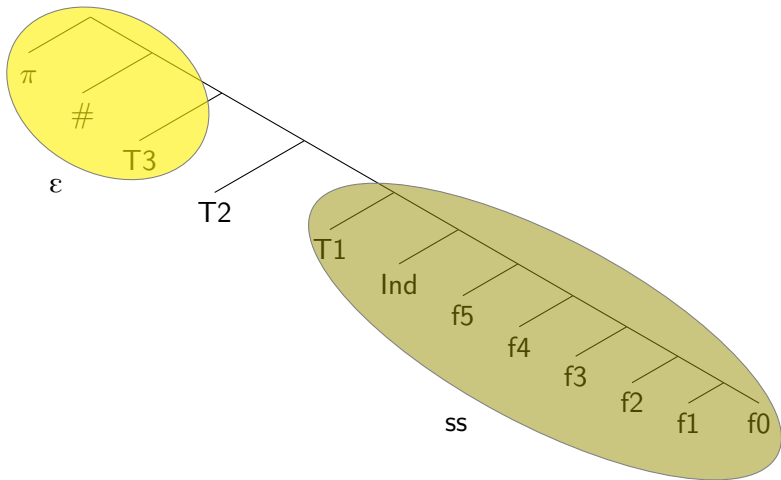
3sg: class I/type 3 – lexicalization table

(17)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π
3sg I/3	bjεž									ε		

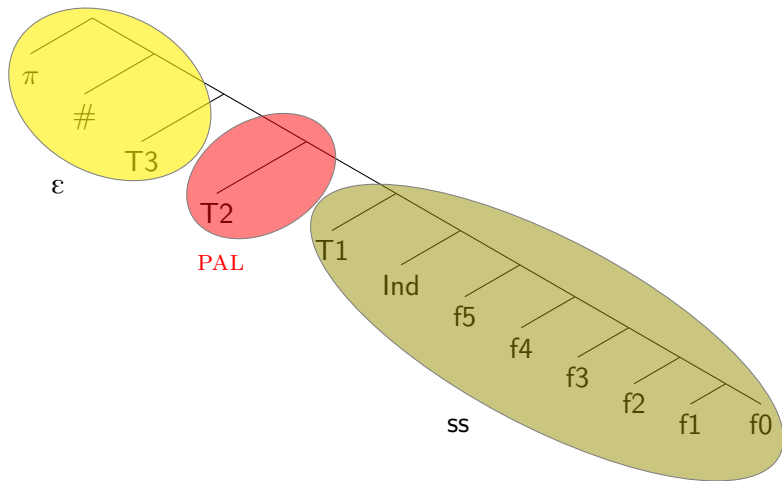
3sg: class 1/type 2

(18)



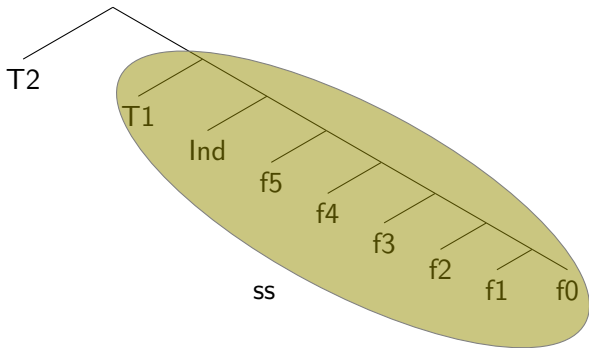
3sg: class I/type 2

(19)



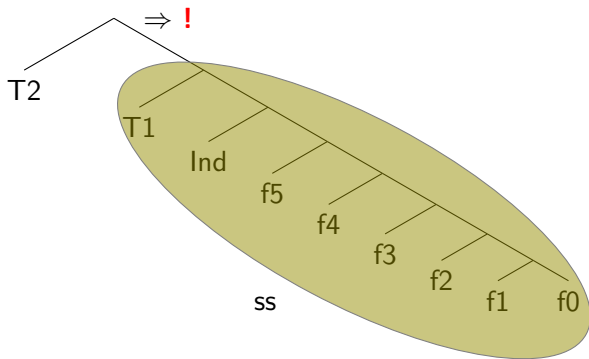
3sg: class 1/type 2 – lexicalization

(20)



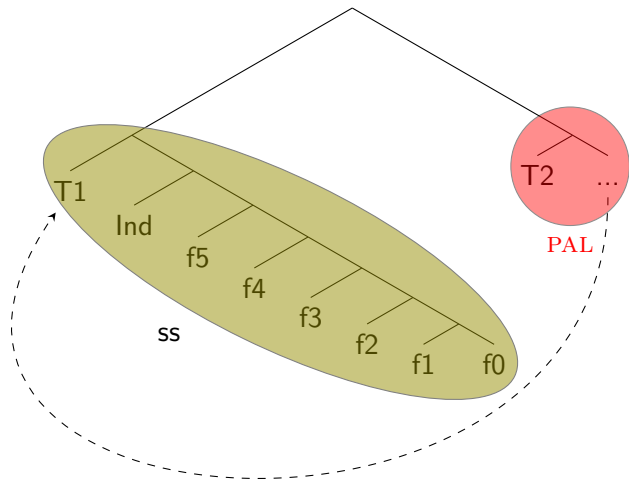
step 1: merge f and lexicalize fP

(21)



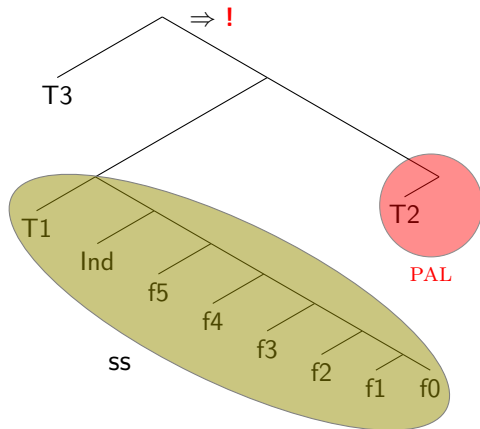
step 2: evacuate the closest non-remnant constituent
and lexicalize fP

(22)



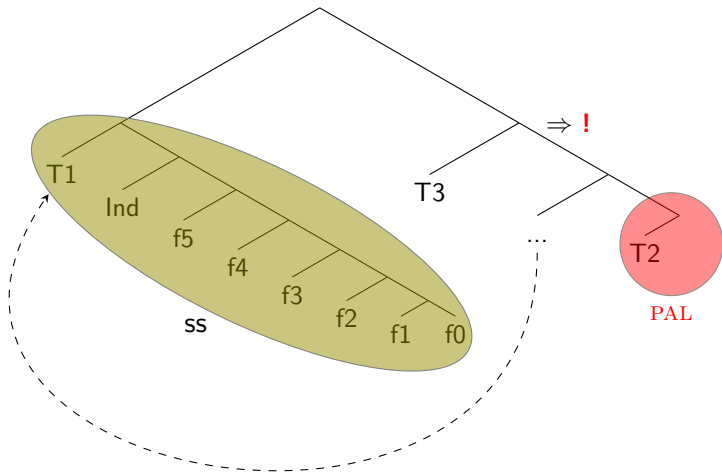
step 1: merge f and lexicalize fP

(23)



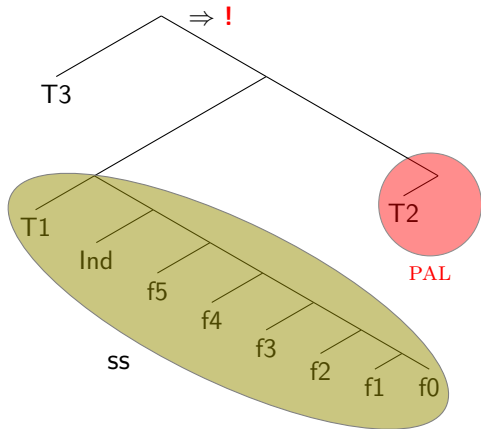
step 2: evacuate the closest non-remnant constituent
and lexicalize fP

(24)



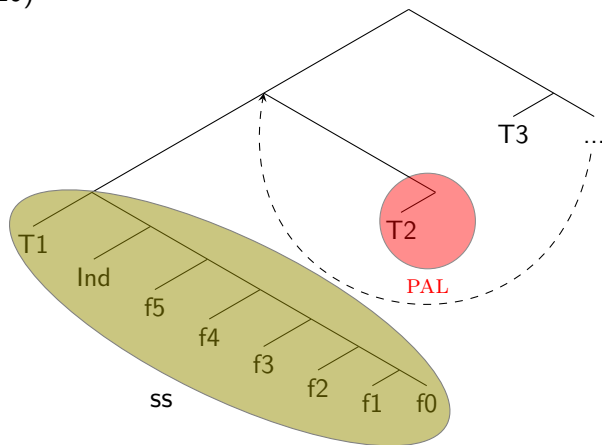
backtrack

(25)



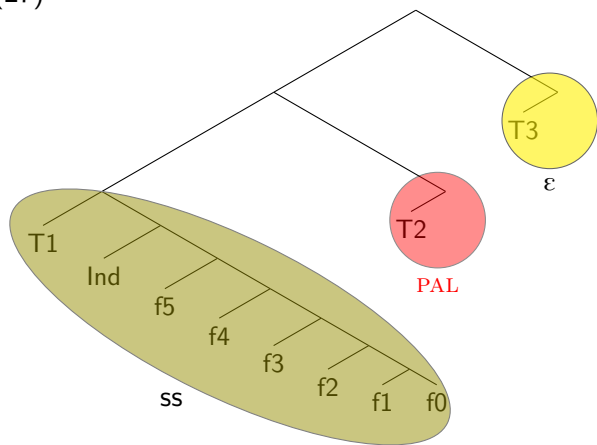
step 3: evacuate the immediately dominating node and lexicalize fP

(26)



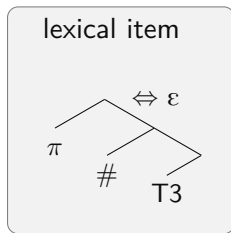
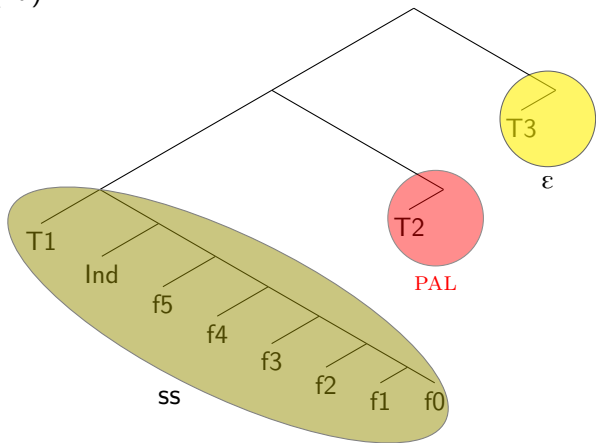
step 3: evacuate the immediately dominating node and lexicalize fP

(27)



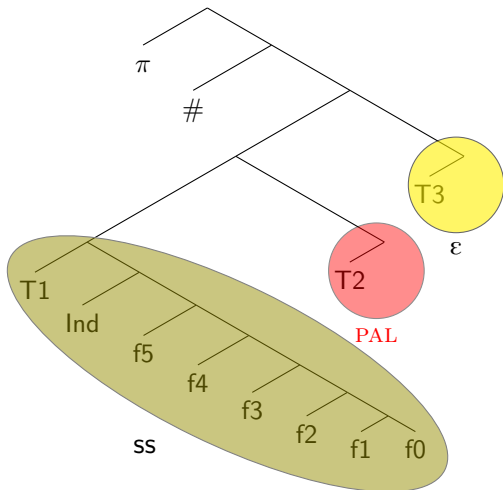
ϵ as a subset spellout

(27)



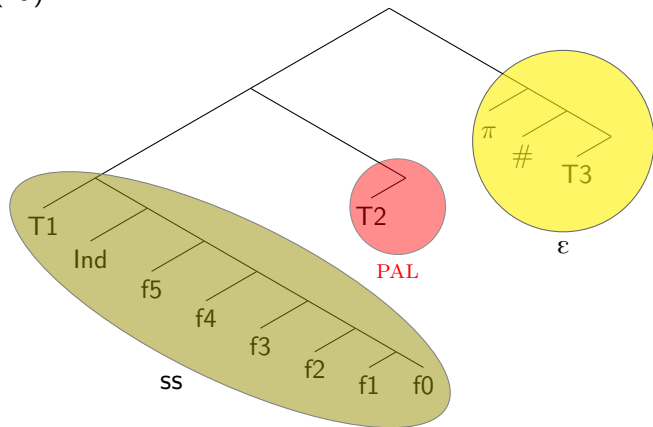
adding # and π

(28)



ε as a superset spellout after lexicalizing $\#$ and π

(29)



3sg: class I/type 2 vs. 3

(30)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π
3sg I/2	ss								PAL	ϵ		
I/3	bjεž									ϵ		

3sg: class I/type 1 vs. 2 vs. 3

(31)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π
I/1	d	o	s	t	a							
3sg I/2	s	s							PAL			
I/3	b	j	ϵ	ž								

2sg: adding Part

(32)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part
I/1 2sg	d	ɔ	st	a									<input type="text"/>
3sg	d	ɔ	st	a									

2sg: no LI starts in Part

(33)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part	
I/1 2sg	d	o	s	t	a								ϵ	!
3sg	d	o	s	t	a								ϵ	

2sg: backtrack one cycle and try a different LI

(34)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part
I/1 2sg	d	o	s	t	a						ϵ	š	
3sg	d	o	s	t	a						ϵ		

2sg & 3sg in class I

(35)

		f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part
I/1	2sg	d	ɔ	sta	j					ϵ		š		
	3sg	d	ɔ	sta	j					ϵ				
I/2	2sg	ss								PAL	ϵ		š	
	3sg	ss								PAL	ϵ			
I/3	2sg	bjεž									ϵ		š	
	3sg	bjεž									ϵ			

Recall simpler-looking 1sg

(36)

	1	2	3
1sg	dɔsta j ẽ	ss ẽ	bjɔr ẽ
2	dɔsta j ɛ š	ss PAL ɛ š	bjɛž ɛ š
3	dɔsta j ɛ	ss PAL ɛ	bjɛž ɛ

adding Spkr

(37)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part	Spkr
1sg	d	o	s	t	a						ϵ	š		<input type="text"/>
I/1 2	d	o	s	t	a						ϵ	š		
3	d	o	s	t	a						ϵ			

no LI starts in Spkr

(38)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part	Spkr
1sg	d	o	s	t	a					ϵ		š		!
I/1 2	d	o	s	t	a					ϵ		š		
3	d	o	s	t	a					ϵ				

backtrack, backtrack, ...

(39)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part	Spkr
1sg	d	o	s	t	a		$\tilde{\epsilon}$							
I/1 2	d	o	s	t	a					ϵ		\check{s}		
3	d	o	s	t	a					ϵ				

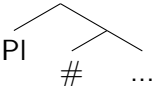
1sg: 'disappearing' PAL and root suppletion

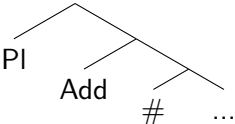
(40)

		f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	π	Part	Spkr
I/1	1sg	dɔsta		j				ẽ							
	2	dɔsta		j							ε		š		
	3	dɔsta		j							ε				
I/2	1sg	ss						ẽ							
	2	ss							PAL		ε		š		
	3	ss							PAL		ε				
I/3	1sg	bjɔr						ẽ							
	2	bjεž									ε		š		
	3	bjεž									ε				

Number features

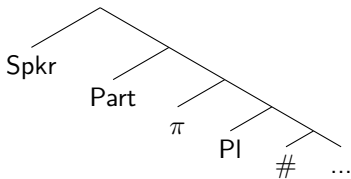
(41)  singular (x)

(42)  associative plural ($x + \text{others}$)

(43)  additive plural ($x + x + x + \dots$)

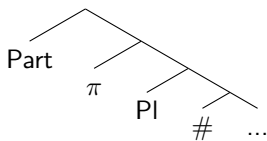
Plurals

(44)



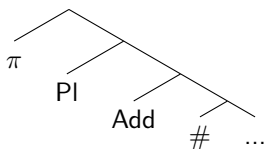
1pl (*I + others*)

(45)



2pl (*you + others*)

(46)



3pl (*people*)

Adding PL

(47)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	PI	π	Part	Spkr
1sg	d	ɔ	ʃ	a			ẽ								
2	d	ɔ	ʃ	a						ɛ			ʃ		
I/1 3	d	ɔ	ʃ	a						ɛ					
1pl	d	ɔ	ʃ	a						ɛ			mi		
2	d	ɔ	ʃ	a						ɛ			tʃɛ		

Adding ADD

(48)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr		
I/1	1sg	d	ɔ	st	a	j												
	2	d	ɔ	st	a	j					$\tilde{\epsilon}$							
	3	d	ɔ	st	a	j					ϵ						\check{s}	
	1pl	d	ɔ	st	a	j					ϵ							mi
	2	d	ɔ	st	a	j					ϵ							t ϵ ϵ
	3	d	ɔ	st	a	j					ϵ							t ϵ ϵ

3pl: no LI starts in ADD

(49)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	PI	π	Part	Spkr
1sg	d	ɔ	st	a	j		ẽ									
2	d	ɔ	st	a	j					ɛ				š		
3	d	ɔ	st	a	j					ɛ						
1pl	d	ɔ	st	a	j					ɛ				mi		
2	d	ɔ	st	a	j					ɛ				tɕɛ		
3	d	ɔ	st	a	j					ɛ				?		

I/1

backtrack, backtrack, ...

(50)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr	
1sg	d	o	s	t	a												
2	d	o	s	t	a												
3	d	o	s	t	a												
1pl	d	o	s	t	a												
2	d	o	s	t	a												
3	d	o	s	t	a												

1sg/3pl: 'disappearing' PAL and root suppletion

(51)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	PI	π	Part	Spkr
1sg	d	o	s	t	a											
I/1 1pl	d	o	s	t	a					ϵ			mi			
3pl	d	o	s	t	a											
1sg	s	s														
I/2 1pl	s	s							PAL	ϵ			mi			
3pl	s	s														
1sg	b	j	o	r												
I/3 1pl	b	j	e	z						ϵ			mi			
3pl	b	j	o	r												

Class II

(52)

1sg	rɔbʲ	ẽ
2	rɔbʲ	i š
3	rɔbʲ	i
1pl	rɔbʲ	i mi
2	rɔbʲ	i tɕɛ
3	rɔbʲ	õ

Class II

(53)

1sg	rɔbʲ	ẽ	
2	rɔbʲ	i	š
3	rɔbʲ	i	
1pl	rɔbʲ	i	mɪ
2	rɔbʲ	i	tɕɛ
3	rɔbʲ	õ	

► no palatalization before ẽ, õ, e.g.

bẽdẽ / *bʲẽdẽ

bõk / *bʲõk

Class II: PAL as a morpheme

(54)

1sg	rɔb	PAL	ẽ
2	rɔb	PAL	i š
3	rɔb	PAL	i
1pl	rɔb	PAL	i mi
2	rɔb	PAL	i tɕɛ
3	rɔb	PAL	õ

- non-coronal palatalization:
b, ts, m, n → **b^j**, **tɕ**, **m^j**, **ɲ**
s, z, t, d → **š**, **ž**, **ts**, **dz** (iotation)

Class II

(55)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	pi	Part	Spkr
1sg	rɔb	PAL					ẽ									
2	rɔb	PAL						i						š		
3	rɔb	PAL						i								
1pl	rɔb	PAL						i						mi		
2	rɔb	PAL						i						tɕɛ		
3	rɔb	PAL														

Class I vs. II

(56)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr
I/1	1sg	d	ɔ	ʃ			ẽ									
	2	d	ɔ	ʃ						ɛ				ʃ		
	3	d	ɔ	ʃ						ɛ						
	1pl	d	ɔ	ʃ						ɛ				mi		
	2	d	ɔ	ʃ						ɛ				tɛɛ		
	3	d	ɔ	ʃ	õ											
II	1sg	r	ɔ	b			ẽ									
	2	r	ɔ	b				i						ʃ		
	3	r	ɔ	b				i								
	1pl	r	ɔ	b				i						mi		
	2	r	ɔ	b				i						tɛɛ		
	3	r	ɔ	b											õ	

Class III

(57)	1sg	čit	a	m
	2	čit	a	š
	3	čit	a	
	1pl	čit	a	mi
	2	čit	a	tʃɛ
	3	čit	a(j)	õ

Class III: an impossible analysis

(58)

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	PI	π	Part	Spkr
I/1	1sg	dɔsta		j			ẽ									
	2sg	dɔsta		j						ɛ				š		
	3pl	dɔsta		j		õ										
III	1sg *	čit		a		m										
	2sg	čit		a										š		
	3pl	čit		a		õ										
II	1sg	rɔb	PAL				ẽ									
	2sg	rɔb	PAL					i						š		
	3pl	rɔb	PAL			õ										

Question:

Why doesn't lexicalization of class III SPKR involve backtracking to IND?

Class III: an impossible analysis

(58)

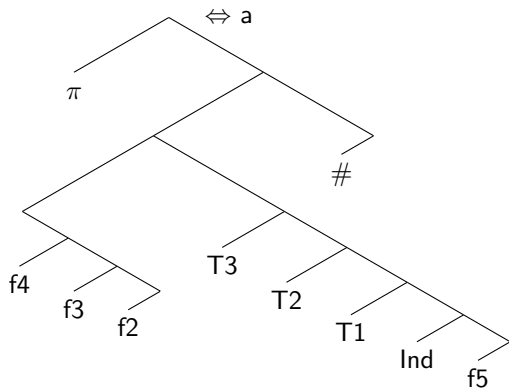
	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	PI	π	Part	Spkr
I/1	1sg	dɔsta		j			ẽ									
	2sg	dɔsta		j						ɛ				š		
	3pl	dɔsta		j		õ										
III	1sg *	čit		a		m										
	2sg	čit		a										š		
	3pl	čit		a		õ										
II	1sg	rɔb	PAL				ẽ									
	2sg	rɔb	PAL					i						š		
	3pl	rɔb	PAL			õ										

Question:

Why doesn't lexicalization of class III SPKR involve backtracking to IND?

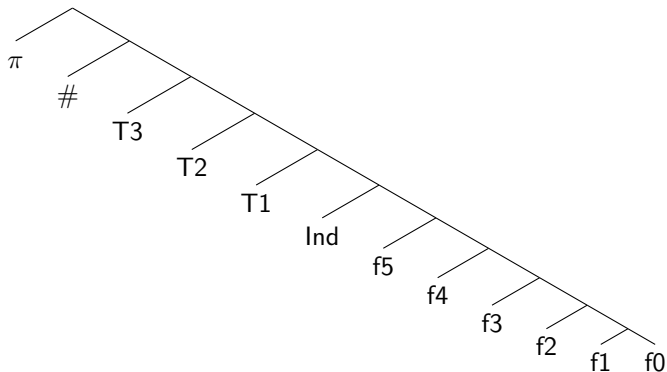
The shape of TV a

(59) lexical item



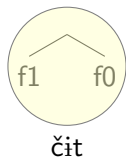
(Simplified) derivation of 3sg čit-a: fseq

(60)



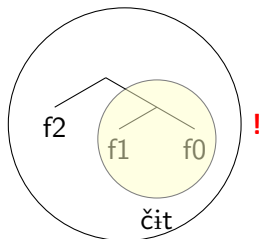
step 1: merge f and lexicalize fP

(61)



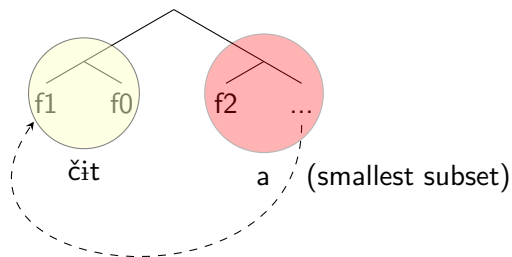
step 1: merge f and lexicalize fP

(62)



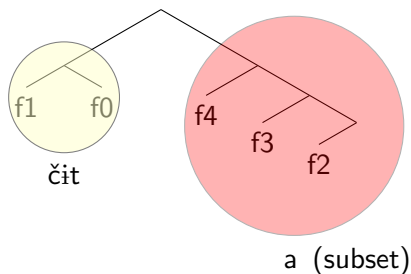
step 2: evacuate the closest non-remnant constituent
and lexicalize fP

(63)



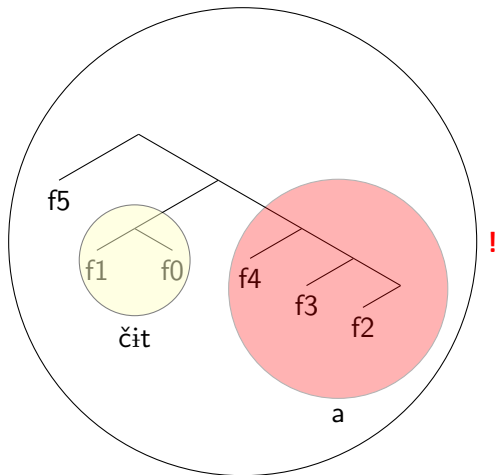
step 2: evacuate the closest non-remnant constituent
and lexicalize fP (same for f2–f4)

(64)



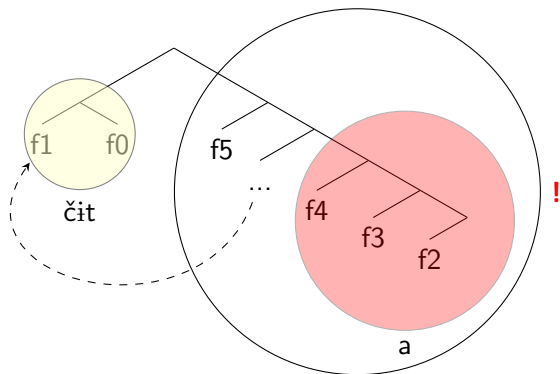
step 1: merge f and lexicalize fP

(65)



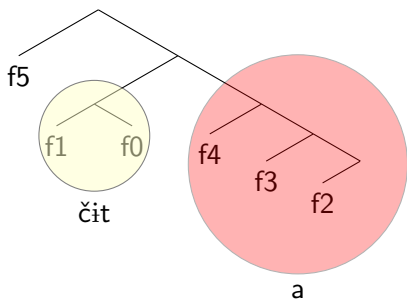
step 2: evacuate the closest non-remnant constituent and lexicalize fP

(66)



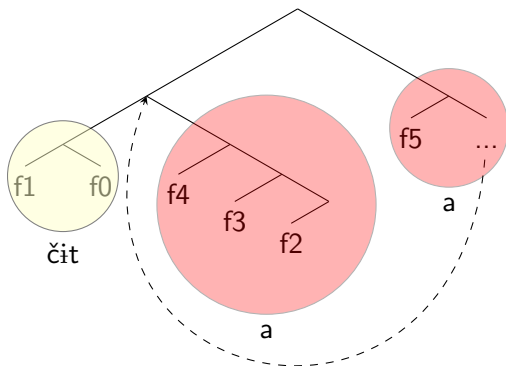
backtrack

(67)



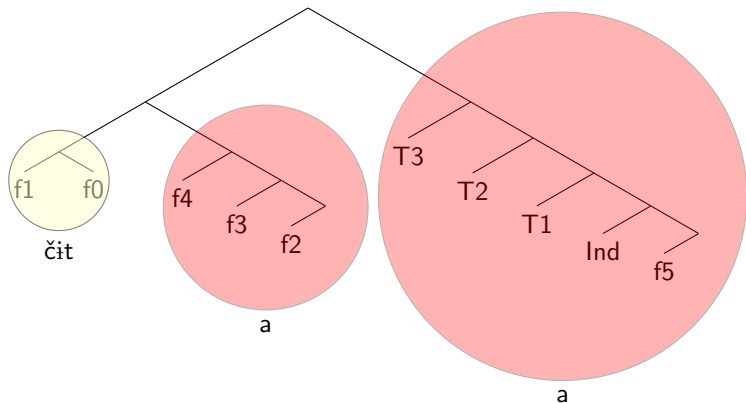
step 3: evacuate the immediately dominating node
and lexicalize fP

(68)



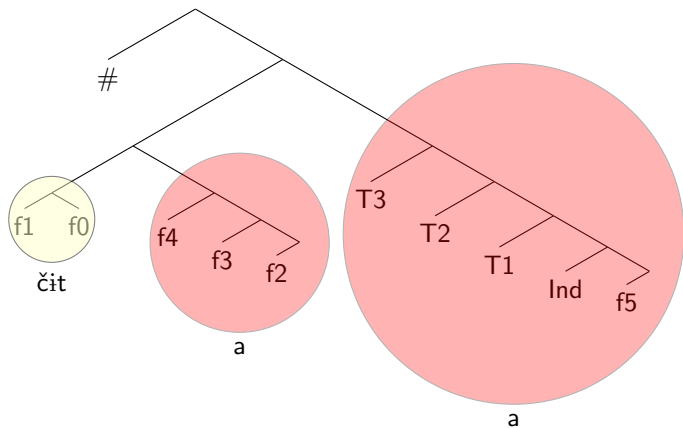
step 3: evacuate the immediately dominating node
and lexicalize fP (same for f5 – T3)

(69)



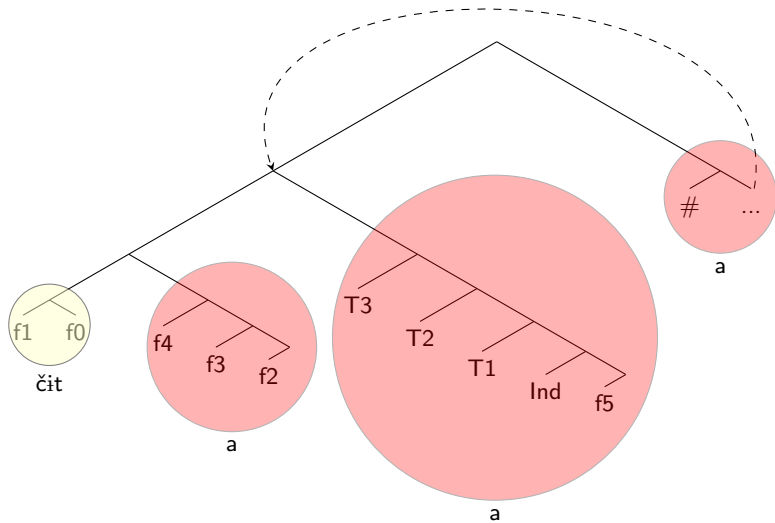
repeat for #

(70)



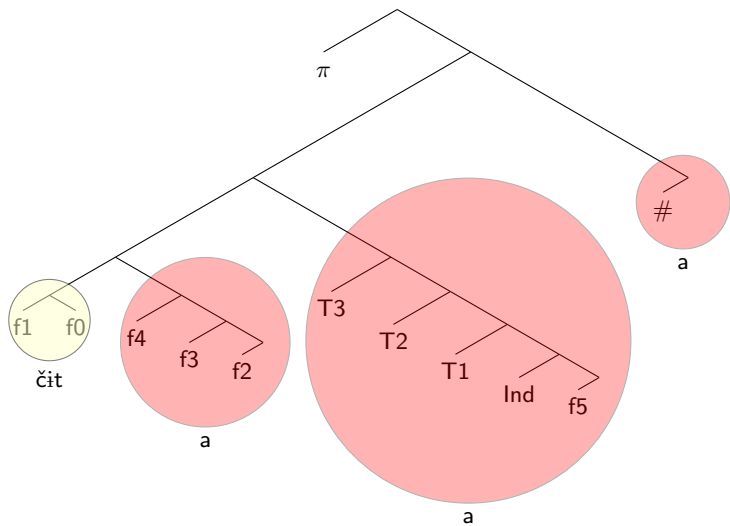
repeat for #

(71)



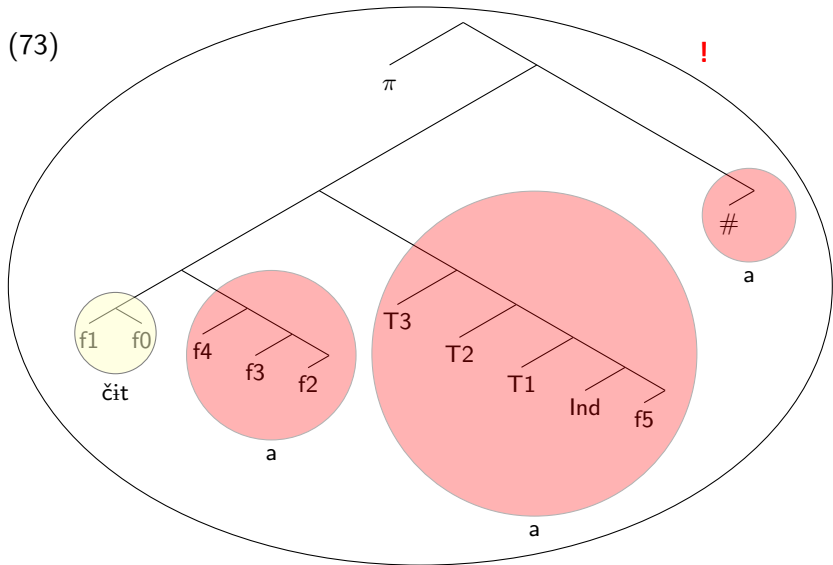
Add π

(72)



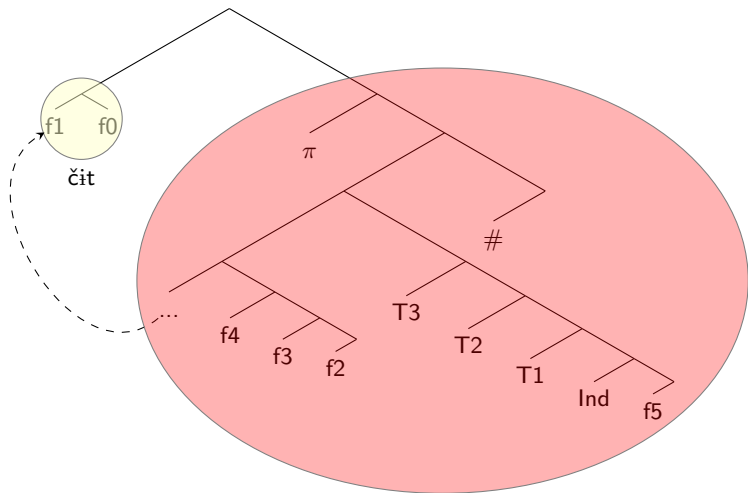
step 1: merge f and lexicalize fP

(73)



step 2: evacuate the closest non-remnant constituent
and lexicalize fP

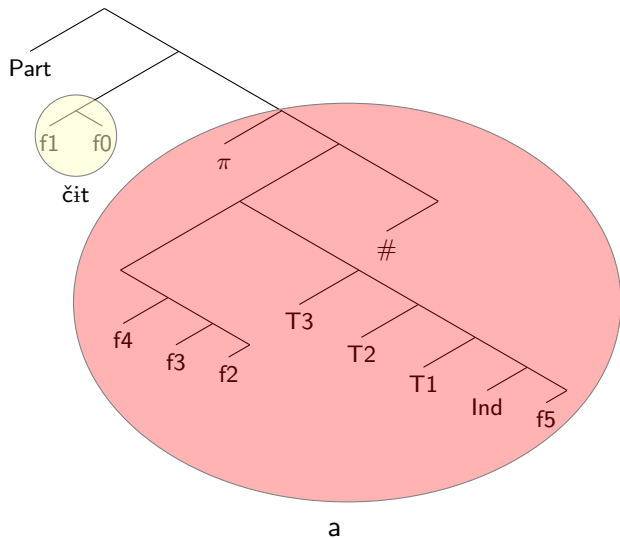
(74)



a (superset)

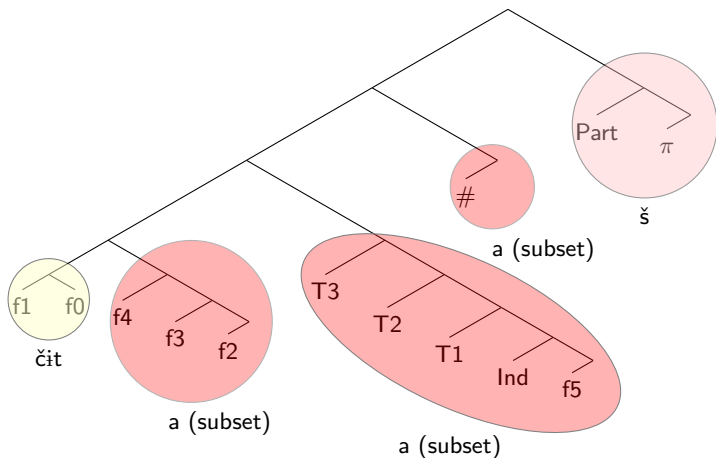
2sg: add PART

(75)



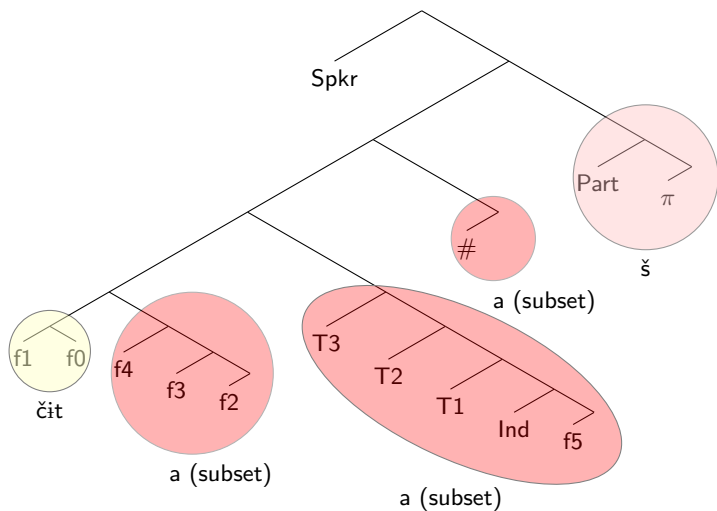
steps 1–3 fail, so backtrack to # (shortcut)

(76)



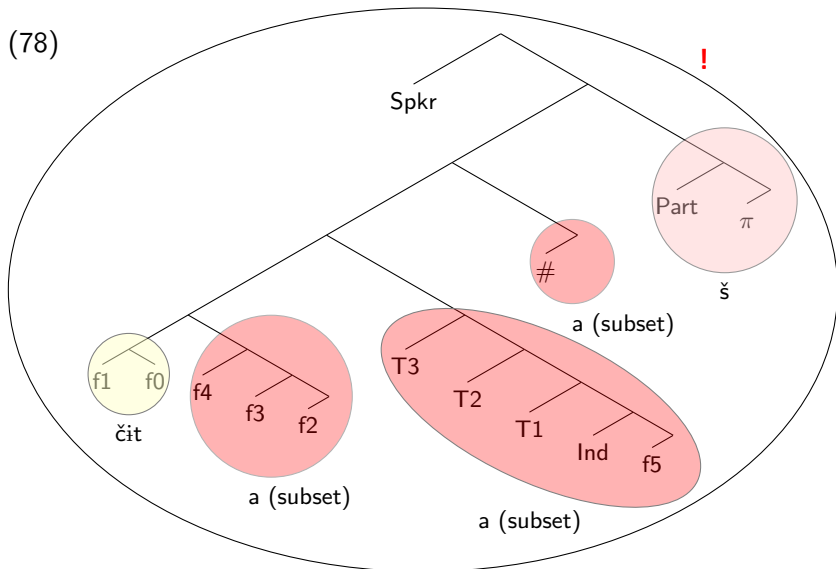
1sg: add SPKR

(77)



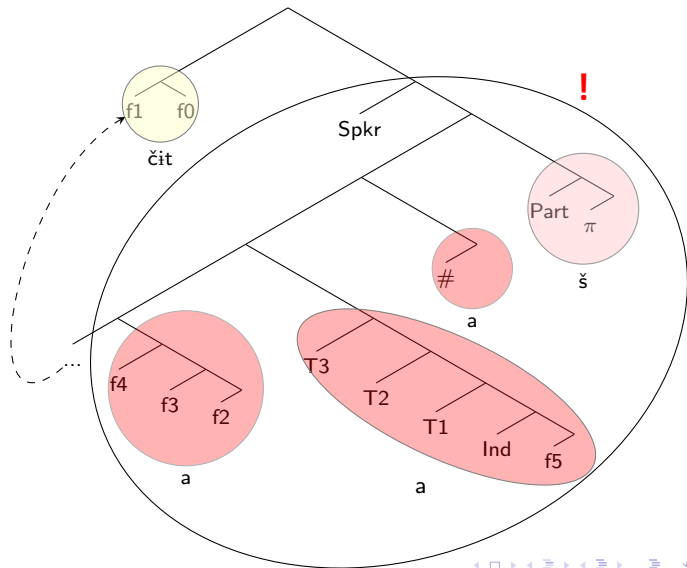
step 1: merge f and lexicalize fP

(78)



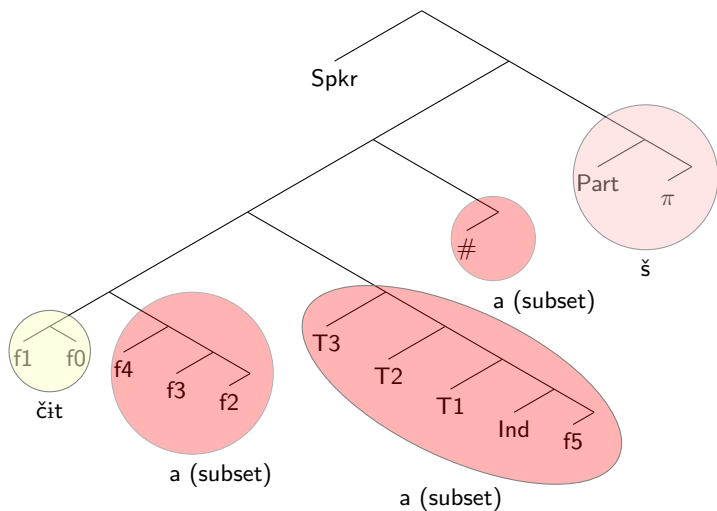
step 2: evacuate the closest non-remnant constituent
and lexicalize fP

(79)



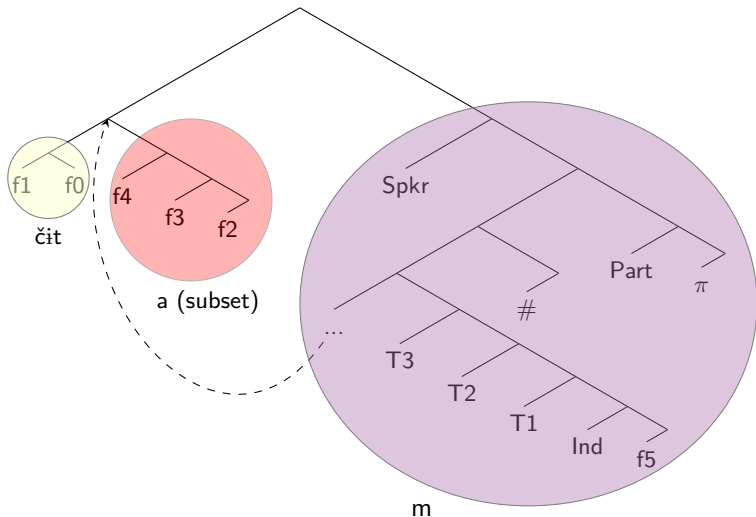
backtrack

(80)



step 3: evacuate the immediately dominating node and lexicalize fP

(81)



1sg: class III vs. I & II

(82)

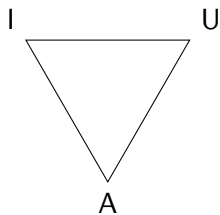
	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr
I/1	1sg	d	o	a	j		$\tilde{\epsilon}$									
	2sg	d	o	a	j					ϵ					š	
	3pl	d	o	a	j	\tilde{o}										
III	1sg	č	i	t	a		m									
	2sg	č	i	t	a										š	
	3pl	č	i	t	a	\tilde{o}										
II	1sg	r	o	b	PAL		$\tilde{\epsilon}$									
	2sg	r	o	b	PAL		i								š	
	3pl	r	o	b	PAL	\tilde{o}										

Class III vs. IV

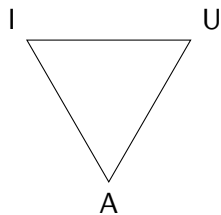
(83)

	III		IV			
1sg	čit	a	m	umj	ε	m
2	čit	a	š	umj	ε	š
3	čit	a		umj	ε	
1pl	čit	a	mi	umj	ε	mi
2	čit	a	tɕε	umj	ε	tɕε
3	čit	a(j)	õ	umj	ε(j)	õ

Element theory



Element theory



A → a

I → i

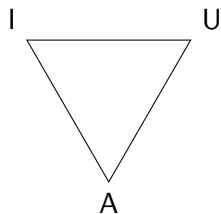
U → u

IA → ε

AU → ∅

IU → i

Element theory



$A \rightarrow a$

$IA \rightarrow \varepsilon$

Class III vs. IV with elements

(84)

	III		IV	
1sg	čit	A	m	umjl A m
2	čit	A	š	umjl A š
3	čit	A		umjl A
1pl	čit	A	mi	umjl A mi
2	čit	A	tɕɛ	umjl A tɕɛ
3	čit	A	õ	umjl A õ

Classes III and IV

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr
III	1sg	čit	A			m										
	2	čit	A											š		
	3	čit	A													
	1pl	čit	A										mi			
	2	čit	A										tɕɛ			
	3	čit	A			ɔ̃										
IV	1sg	umjl	A			m										
	2	umjl	A											š		
	3	umjl	A													
	1pl	umjl	A										mi			
	2	umjl	A										tɕɛ			
	3	umjl	A			ɔ̃										

Conclusion

Morphosyntactic and morphophonological complexity in the Polish present tense forms points to the following:

- ▶ verb roots vary in **syntactic size**
- ▶ verbal suffixes vary in **syntactic size** and **shape**

Conclusion

Morphosyntactic and morphophonological complexity in the Polish present tense forms points to the following:

- ▶ verb roots vary in **syntactic size**
- ▶ verbal suffixes vary in **syntactic size** and **shape**

Thank you!



All inflection classes: I/1

		f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr	
I	1a	1sg	d̥sta		j			ẽ										
		2	d̥sta		j						ɛ					š		
		3	d̥sta		j							ɛ						
		1pl	d̥sta		j							ɛ			mi			
		2	d̥sta		j							ɛ			tɕɛ			
		3	d̥sta		j		õ											
I	1b	1sg	gžeb		j			ẽ										
		2	gžeb		j						ɛ					š		
		3	gžeb		j							ɛ						
		1pl	gžeb		j							ɛ			mi			
		2	gžeb		j							ɛ			tɕɛ			
		3	gžeb		j		õ											

All inflection classes: 1/2 & 3

		f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	pi	Part	Spkr
I 2a	1sg	ss						ẽ									
	2	s[s~ɛ]								PAL	ɛ				š		
	3	s[s~ɛ]								PAL	ɛ						
	1pl	s[s~ɛ]								PAL	ɛ				mi		
	2	s[s~ɛ]								PAL	ɛ				tɕɛ		
	3	ss							õ								
I 2b	1sg	piš						ẽ									
	2	piš								PAL	ɛ				š		
	3	piš								PAL	ɛ						
	1pl	piš								PAL	ɛ				mi		
	2	piš								PAL	ɛ				tɕɛ		
	3	piš						õ									
I 3	1sg	bjɔr						ẽ									
	2	bjež									ɛ				š		
	3	bjež									ɛ						
	1pl	bjež									ɛ				mi		
	2	bjež									ɛ				tɕɛ		
	3	bjɔr						õ									

All inflection classes: II

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr
II a	1sg	rǒbj	pal				ẽ									
	2	rǒbj	pal					i						š		
	3	rǒbj	pal					i								
	1pl	rǒbj	pal					i					mi			
	2	rǒbj	pal					i					tɕɛ			
	3	rǒbj	pal			õ										
II b	1sg	dus	pal				ẽ									
	2	dus	pal					i						š		
	3	dus	pal					i								
	1pl	dus	pal					i					mi			
	2	dus	pal					i					tɕɛ			
	3	dus	pal			õ										
II c	1sg	kžič	(pal)				ẽ									
	2	kžič	(pal)					i						š		
	3	kžič	(pal)					i								
	1pl	kžič	(pal)					i					mi			
	2	kžič	(pal)					i					tɕɛ			
	3	kžič	(pal)			õ										

All inflection classes: III

	f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr
III	1sg	čit	A			m										
	2	čit	A											š		
	3	čit	A													
	1pl	čit	A										mi			
	2	čit	A										tεε			
	3	čit	A			ō										

All inflection classes: IV (surface ε)

		f0	f1	f2	f3	f4	f5	Ind	T1	T2	T3	#	Add	Pl	π	Part	Spkr	
IV	1	1sg	umjl	A			m											
		2	umjl	A											š			
		3	umjl	A														
	2	1pl	umjl	A											mi			
		2	umjl	A											tɕɛ			
		3	umjl	A			ɔ̃											
IV	2	1sg	jl	A			m											
		2	jl	A											š			
		3	jl	A														
	2	1pl	jl	A											mi			
		2	jl	A											tɕɛ			
		3	jɛdz				ɔ̃											