Semantic parameters, syncretism and counting

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FishFeed
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The basic facts

(1) English

a. one boy
b. two boy-s
c. *two boy

The basic facts

(1) English

a. one boy
b. two boy-s
c. *two boy

(2) Turkish

a. bir çocuk
   one boy(sg)
b. iki çocuk
   two boy(sg)
c. *iki çocuk-lar
   two boy-PL

A semantic-parameter account

- Semantic parameter: the singular and plural mean something else in English and Turkish

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(3) Bale et al. (2010)

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b. $[\![\text{boy}]\!] = \{$ a, b, c $\}$

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(4) Martí (2020)

a. English-style language [+/- atomic]

(i) $[\![+\text{atomic}]\!] = \lambda P.\lambda x.\ P(x)\ \&\ \text{atom}(x)$

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b. Turkish-style language: [+/- minimal]

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SINGULAR – COUNTING – PLURAL
syncretism only targets adjacent regions

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- Meanings are assigned to abstract structure-building blocks.
- Forms have meaning inasmuch they spell out the meaning-bearing elements (features)
- But since one form may realize multiple different feature sets, it may have different meanings

Avoiding my own trap...

Why counting number

Split systems I: Gender/Class

Split systems II: Case

Split systems III: Case+Gender

Some basic ideas

Conclusions

Appendix

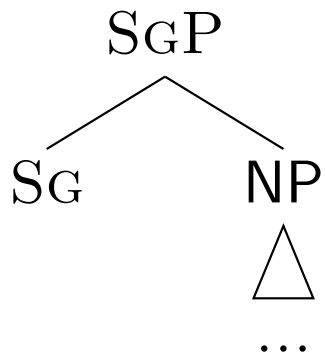
Numeral phrases: the "traditional" view

(8) In the sequence

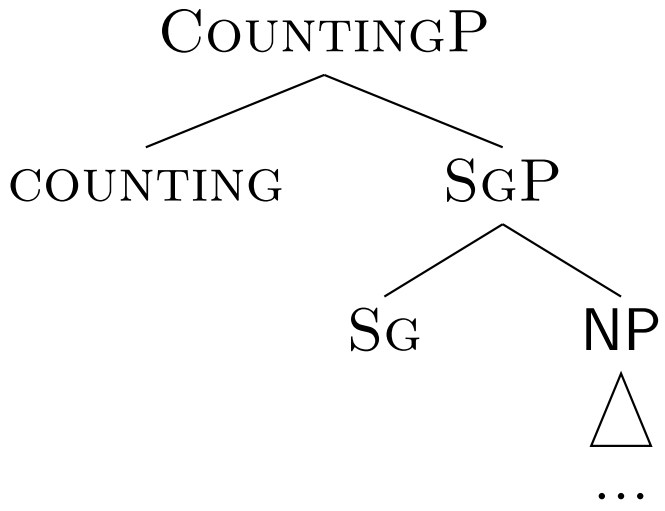
SINGULAR – COUNTING – PLURAL

syncretism only targets adjacent regions

Avoiding my own trap...



Avoiding my own trap...



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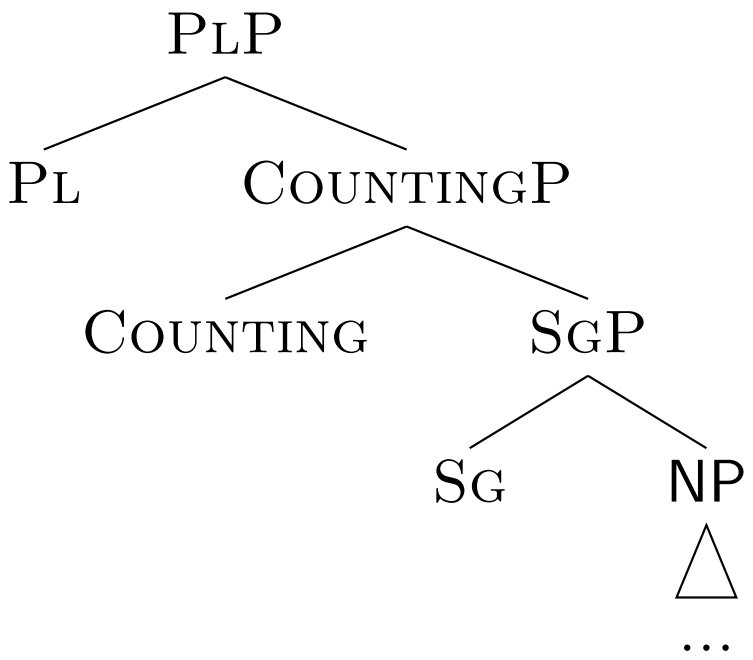

Avoiding my own trap...

(9) a. one **dog**

Avoiding my own trap...

(9) a. one **dog**
b. bir **çocuk**

Avoiding my own trap...

(9) a. one **dog**
b. bir **ç̇ocuk**
c. There was **dog** on the wall

Avoiding my own trap...

(9)
a. one **dog**
b. bir **ç̣ocuk**
c. There was **dog** on the wall
d. one **fence**

Avoiding my own trap...

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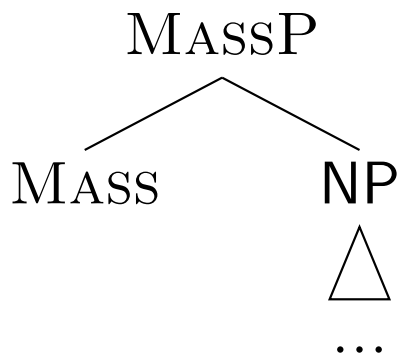
e. a meter of **fence**

Avoiding my own trap...



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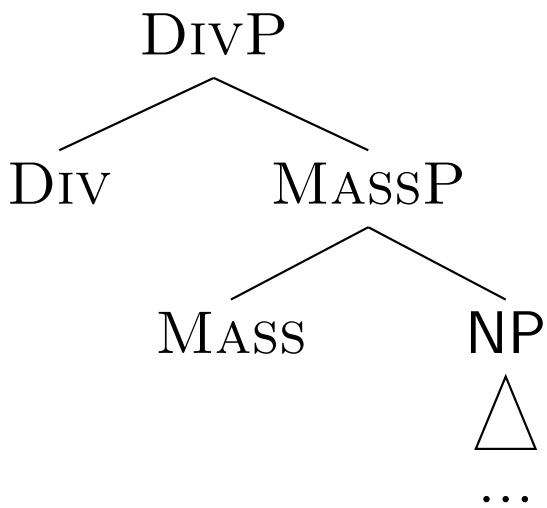

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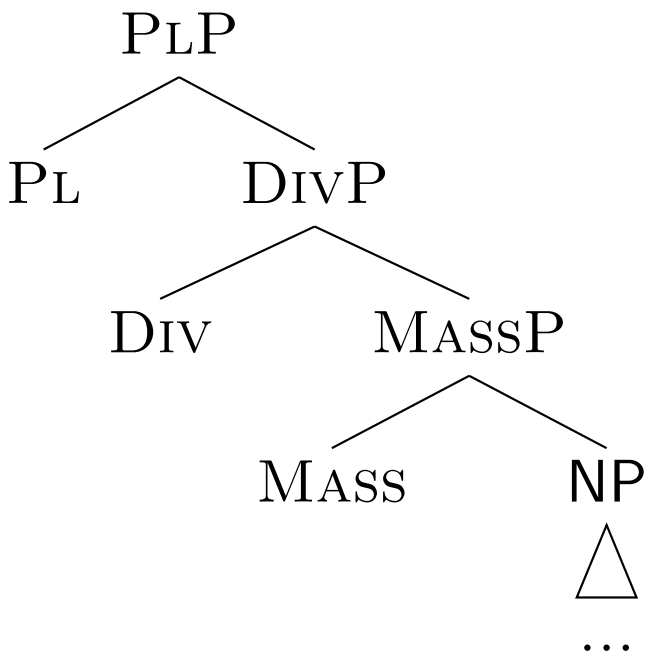

(10) Dutch (Fenna Bergsma, p.c.)

a. een (meter) touw-Ø
one meter rope
'one (meter of) rope' (sg/mass)

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c. Er liggen touw-**en** op de grond.
   there lie rope-PL on the ground
   'There are (some) ropes on the ground.' (plural)

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a. bir (parça) kek-Ø
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(12) Patterns of syncretism in Dutch and Turkish

	SG/MASS	COUNTING	PLURAL
Dutch	-Ø	-en	-en
Turkish	-Ø	-Ø	-ler

The Slavic paucal pattern

(13) a. litr piv-a
liter beer-MASS
'a liter of beer' (mass)

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c. Na stole stály piv-a
on table stood beer-PL
'There stood some glasses with beer on the table.'
(plural)

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'There stood some glasses with beer on the table.'
(plural)

(14) Na stole stálo jedno piv-o
on table stood one beer-SG
'There was one beer on the table.' (sg)

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Numeral phrases: the "traditional" view

Tripartite systems

- Digor Ossetic, Anatolian variety

	MASS one bowl water	SINGULAR horse	COUNT ten horses	PLURAL horses
NOM	eu khoppa don-**Ø**	bæx-**Ø**	dæs bæx-i	bæx-tæ-**Ø**
ACC	eu khoppa don-**Ø**	bæx-**Ø**	dæs bæx-i	bæx-tæ-**Ø**
GEN	eu khoppa don-**i**	bæx-**i**	dæs bæx-e **-j**	bæx-t **-i**
INE	eu khoppa don-**i**	bæx-**i**	dæs bæx-em-**i**	bæx-t **-i**
DAT	eu khoppa don-**æn**	bæx-**æn**	dæs bæx-em-**æn**	bæx-t **-æn**
ABL	eu khoppa don-**æj**	bæx-**æj**	dæs bæx-em-**æj**	bæx-t **-æj**
ADE	eu khoppa don-**bæl**	bæx-**bæl**	dæs bæx-e **-bæl**	bæx-tæ-**bæl**
ALL	eu khoppa don-**mæ**	bæx-**mæ**	dæs bæx-e **-mæ**	bæx-tæ-**mæ**

Tripartite systems

(15) Niuean

a. Ko [*e lupo* Ø *kava haau*], ne inu e Sione.
PRED ABS bottle beer your PST drink ERG Sione
'Your bottle of beer Sione drank.'

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b. Ne faka-moui [he ekekafo] [*e* Ø *tagata na*.]
PST CAUS-live ERG doctor ABS SG person that
'The doctor saved that person.'

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c. Ne faka-momoui [he ekekafo] [*e* ***tau*** *tagata na*.]
PST CAUS-live.PL ERG doctor ABS PL person that
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Tripartite systems

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c. Ne faka-momoui [he ekekafo] [*e* ***tau*** *tagata na*.]
PST CAUS-live.PL ERG doctor ABS PL person that
'The doctor saved those people.'

d. Ne kitia [e au] [(*e*) *tokolima* ***e*** *tagata*.]
PST see ERG I ABS five DIV person
'I saw five people.'

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(16) Bulgarian

a. edin keks-Ø
one cake

(16) Bulgarian

a. edin keks-Ø
one cake

b. edno parche keks-Ø
one piece cake

(16) Bulgarian

a. edin keks-**Ø**
one cake

b. edno parche keks-**Ø**
one piece cake

c. dva keks-**a**
two cake-COUNT

(16) Bulgarian

a. edin keks-**Ø**
one cake

b. edno parche keks-**Ø**
one piece cake

c. dva keks-**a**
two cake-COUNT

d. Na masata ima keks-**ove**
on table-the has cake-s
'There are cakes on the table'

(17) Bulgarian

a. edin meter vəzhe-**Ø**
one meter rope

(17) Bulgarian

a. edin meter vəzhe-**Ø**
one meter rope

b. edno vəzhe-**Ø**
one rope

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b. edno vəzhe-Ø
   one rope

c. dve vəzhe-ta
   two rope-COUNT

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a. edin meter vəzhe-Ø
   one meter rope

b. edno vəzhe-Ø
   one rope

c. dve vəzhe-ta
   two rope-COUNT

d. Na masata ima vəzhe-ta
   on table-the has rope-s
   'There are (some) ropes on the table'

Split systems I: Gender/Class

(18) Patterns of syncretism in Bulgarian

	SG/MASS	COUNTING	PLURAL
masculine	-Ø	-a	-ove
neuter	-Ø	-ta	-ta

(19) Estonian Swedish (Ionin & Matushansky 2018: 108-9)

a. tri mann
three man.SG
'three men'

b. fem bärkiar
five birch.PL
'five birches'

Split systems I: Gender/Class

(20) Patterns of syncretism in Estonian Swe

	SG	COUNTING	PLURAL
masculine	A	A	B
feminine	A	B	B

Split systems I: Gender/Class

(20) Patterns of syncretism in Estonian Swe

	SG	COUNTING	PLURAL
masculine	A	A	B
feminine	A	B	B

(21) Patterns of syncretism in Turkish vs. Swedish

	SG	COUNTING	PLURAL
Turkish	A	A	B
English	A	B	B

split systems: Serbian

	NOM.SG.	PSEUDO-PART	COUNTING	PLURAL	
new, MASC.	*nov-Ø*	nov-og(a)	nov-a	nov-i	ABC

split systems: Serbian

	NOM.SG.	PSEUDO-PART	COUNTING	PLURAL	
new, MASC.	*nov-Ø*	nov-og(a)	nov-a	nov-i	ABC
rope, MASC.	*konopac-Ø*	konopc-a	konopc-a	konopc-i	AAB

split systems: Serbian

	NOM.SG.	PSEUDO-PART	COUNTING	PLURAL	
new, MASC.	*nov-Ø*	nov-og(a)	nov-a	nov-i	ABC
rope, MASC.	*konopac-Ø*	konopc-a	konopc-a	konopc-i	AAB
wife, FEM.	*žen-a*	žen-ē	žen-e	žen-e	ABB

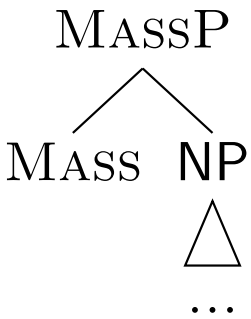
split systems: Serbian

	NOM.SG.	PSEUDO-PART	COUNTING	PLURAL	
new, MASC.	*nov-Ø*	nov-og(a)	nov-a	nov-i	ABC
rope, MASC.	*konopac-Ø*	konopc-a	konopc-a	konopc-i	AAB
wife, FEM.	*žen-a*	žen-ē	žen-e	žen-e	ABB
bone, FEM.	*kost-Ø*	kost-i	kost-i	kost-i	AAA

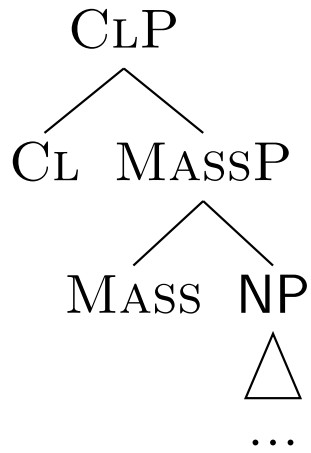
split systems: Serbian

	NOM.SG.	PSEUDO-PART	COUNTING	PLURAL	
new, MASC.	*nov-Ø*	nov-og(a)	nov-a	nov-i	ABC
rope, MASC.	*konopac-Ø*	konopc-a	konopc-a	konopc-i	AAB
wife, FEM.	*žen-a*	žen-ē	žen-e	žen-e	ABB
bone, FEM.	*kost-Ø*	kost-i	kost-i	kost-i	AAA
not attested	—	A	B	A	*ABA

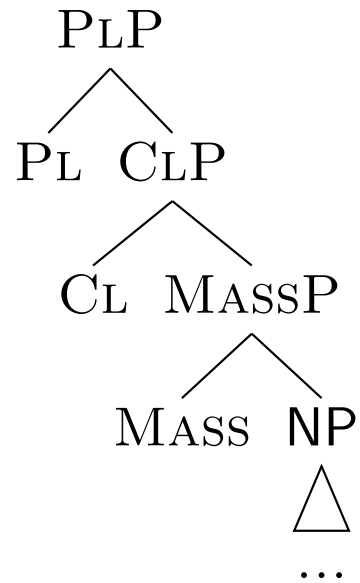
(22) Mass



(23) counting



(24) plural



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Numeral phrases: the "traditional" view

South Saami

(25) South Saami paradigm fragment (Bergsland 1946: 263, 264)

	house	two houses	houses
NOM	goåtie	g<ekt'ə **goåtieh**	**goåtieh**
GEN	**goåtien**	g<ekt'ən **goåtien**	goåtiej
ILL	**goåtan**	g<ekt'ən **goåtan**	goåt'əjdə
INE	**goåt'əsn**	g<ekt'əńə **goåt'əsn**	goåt'ə(j)ńə
ELA	**goåt'əst'ə**	g<ekt'əŕə **goåt'əst'ə**	goåtəjsťə
COM	**goåťə(j)ńə**	g<ekt'əńə **goåťə(j)ńə**	(goåtiej gujmie)

(26) Estonian (Norris 2014: 168-9, 25)

a. lõik siidruni-**t**
slice.NOM lemon-SG.PART
'a slice of lemon' (pseudo-partitive)

b. kaks inimes-**t**
two.NOM person-SG.PART
'two people' (counting)

c. inimes-**ed**
person-NOM.PL
'people' (plural)

(27) Estonian (Norris 2014: 181, 167, 25)

a. tüki-l leiva-**l**
piece-ADE bread-ADE
'on a piece of bread' (pseudo-partitive)

b. kahe-l inimese-**l**
two-ADE soldier-ADE
'on two people' (counting)

c. inimes-**te-l**
person-PL-ADE
'on people' (plural)

(28) Estonian:

	MASS	COUNTED	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

(29) Finnish (Brattico 2008: 142, Brattico 2011: 1051, Karlsson 2008: 249)

a. kasa hiekka-**a**
stack.NOM sand-SG.PART
'a stack of sand' (pseudo-partitive)

b. kolme talo-**a**
three.NOM house-SG.PART
'three houses' (counting)

c. talo-**t**
house-NOM.PL
'houses' (plural)

(30) Finnish (Norris 2014: 233, Brattico 2011: 1051, Karlsson 2008: 249)

a. litra-ssa maito-**a**
liter-SG.INE milk-SG.PART
'in a liter of milk' (pseudo-partitive)

b. kolme-ssa talo-**ssa**
three.INE house.SG.INE
'in three houses' (counting)

c. talo-**i**-**ssa**
house-PL-INE
'in houses' (plural)

(31) Estonian:

	MASS	COUNT	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

(31) Estonian:

	MASS	COUNT	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

(32) Finnish:

	MASS	COUNT	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	PART.SG	OBL.SG	OBL.PL

(31) Estonian:

	MASS	COUNT	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

(32) Finnish:

	MASS	COUNT	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	PART.SG	OBL.SG	OBL.PL

(33) North Saami:

	MASS	COUNT	PLURAL
NOM	NOM.SG	GEN.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

Split systems II: Case

(34) $\textsc{mass} = \textsc{sg}$

a. Máhtes lei okta/golbma gilo biergu
Mattis.loc was one/three kilo meeat.nom.sg
'Mattis had one/three kilo of meat'

Split systems II: Case

(34) MASS = SG

a. Máhtes lei okta/golbma gilo biergu
Mattis.loc was one/three kilo meeat.nom.sg
'Mattis had one/three kilo of meat'

b. Máhtte osttii ovtta/golbma gilo bierggu
Mattis bought one/three kilo meat.acc.sg
'Mattis kjøpte ett/tre kilo kjøtt.'

Split systems II: Case

(34) MASS = SG

a. Máhtes lei okta/golbma gilo biergu
Mattis.loc was one/three kilo meeat.nom.sg
'Mattis had one/three kilo of meat'

b. Máhtte osttii ovtta/golbma gilo bierggu
Mattis bought one/three kilo meat.acc.sg
'Mattis kjøpte ett/tre kilo kjøtt.'

c. Máhtte fierui jáffuid viđa lihtter(a) čáhcái
Mattis mixed flower five liter water.ill.sg
'Mattis rørte melet inn i fem liter vann.'

Split systems II: Case

(34) MASS = SG

a. Máhtes lei okta/golbma gilo biergu
Mattis.loc was one/three kilo meeat.nom.sg
'Mattis had one/three kilo of meat'

b. Máhtte osttii ovtta/golbma gilo bierggu
Mattis bought one/three kilo meat.acc.sg
'Mattis kjøpte ett/tre kilo kjøtt.'

c. Máhtte fierui jáffuid viđa lihtter(a) čáhcái
Mattis mixed flower five liter water.ill.sg
'Mattis rørte melet inn i fem liter vann.'

d. Jáffut galget luvvat viđa lihtter(a) čázis
flower should.be dissolved five liter water.loc.sg
'Melet skal løses opp i fem liter vann.'

Split systems II: Case

(34) MASS = SG

a. Máhtes lei okta/golbma gilo biergu
Mattis.loc was one/three kilo meeat.nom.sg
'Mattis had one/three kilo of meat'

b. Máhtte osttii ovtta/golbma gilo bierggu
Mattis bought one/three kilo meat.acc.sg
'Mattis kjøpte ett/tre kilo kjøtt.'

c. Máhtte fierui jáffuid viđa lihtter(a) čáhcái
Mattis mixed flower five liter water.ill.sg
'Mattis rørte melet inn i fem liter vann.'

d. Jáffut galget luvvat viđa lihtter(a) čázis
flower should.be dissolved five liter water.loc.sg
'Melet skal løses opp i fem liter vann.'

Split systems II: Case

(35) North Saami COUNTING

a. Ledje logi **bohcco** mat ledje vuodjalan rastá nuori.
it.was ten rein.GEN.SG that was swum across sound
It was ten reindeer that had swum across the sound.

Split systems II: Case

(35) North Saami COUNTING

a. Ledje logi **bohcco** mat ledje vuodjalan rastá nuori.
it.was ten rein.GEN.SG that was swum across sound
It was ten reindeer that had swum across the sound.

b. Doppe de fallehii logi **bohcco** ain hávális
there so it.attacked ten rein.GEN.SG even at.a.time
There it even attacked ten reindeer at a time.

Split systems II: Case

(35) North Saami COUNTING

a. Ledje logi **bohcco** mat ledje vuodjalan rastá nuori.
it.was ten rein.GEN.SG that was swum across sound
It was ten reindeer that had swum across the sound.

b. Doppe de fallehii logi **bohcco** ain hávális
there so it.attacked ten rein.GEN.SG even at.a.time
There it even attacked ten reindeer at a time.

c. njeallje logi **bohcco-s**
four ten reindeer-LOC.SG
'four in ten reindeer'

Split systems II: Case

(36) North Saam *bálggis* ‘path’

	MASS/SG	COUNT	PLURAL
NOM	*bálggis*		*balgá-t*
ACC	*balgá*		*balgá-id*
GEN			
ILL	*balgái*		*balgá-ide*
LOC	*balgás*		*balgá-in*
COM	*balgáin*		*balgá-iguin*

Avoiding my own trap...

Why counting number

Split systems I: Gender/Class

Split systems II: Case

Split systems III: Case+Gender

Some basic ideas

Conclusions

Appendix

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB
place, NEUT.	*mést-o*	mést-a	mést-a	mest-á	

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB
place, NEUT.	*mést-o*	mést-a	mést-a	mest-á	
soul, FEM.	*duš-á*	duš-í	duš-í	dúš-i	

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB
place, NEUT.	*mést-o*	mést-a	mést-a	mest-á	
soul, FEM.	*duš-á*	duš-í	duš-í	dúš-i	
creature, NEUT.	*suštestv-ó*	suštestv-á	suštestv-á	suštestv-á	

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB
place, NEUT.	*mést-o*	mést-a	mést-a	mest-á	
soul, FEM.	*duš-á*	duš-í	duš-í	dúš-i	
creature, NEUT.	*suštestv-ó*	suštestv-á	suštestv-á	suštestv-á	
week, FEM.	*nedélj-a*	nedélj-i	nedélj-i	nedélj-i	AAA
notebook, FEM.	*tetrád'-Ø*	tetrád'-i	tetrád'-i	tetrád'-i	

Russian

	NOM.SG.	GEN.SG. (MASS)	PAUCAL (COUNT)	NOM.PL (PLURAL)	
rank, MASC.	*čín-Ø*	čín-a	čín-a	čin-ý	
factory, MASC.	*zavód-Ø*	zavód-a	zavód-a	zavód-y	
time, NEUT.	*vrém-ja*	vrém-eni	vrém-eni	vrém-ená	AAB
place, NEUT.	*mést-o*	mést-a	mést-a	mest-á	
soul, FEM.	*duš-á*	duš-í	duš-í	dúš-i	
creature, NEUT.	*suštestv-ó*	suštestv-á	suštestv-á	suštestv-á	
week, FEM.	*nedélj-a*	nedélj-i	nedélj-i	nedélj-i	AAA
notebook, FEM.	*tetrád'-Ø*	tetrád'-i	tetrád'-i	tetrád'-i	
step, MASC.	*šág-Ø*	šág-a	šag-á	šag-ý	AXC

Split systems: case

(37) Russian, nominative (S. Toldova, p.c.)

a. metr zabor-**a**
meter.NOM fence-GEN.SG
'a meter of fence'

Split systems: case

(37) Russian, nominative (S. Toldova, p.c.)

a. metr zabor-**a**
meter.NOM fence-GEN.SG
'a meter of fence'

b. dva zabor-**a**
two.NOM fence-GEN.SG
'two fences'

Split systems: case

(37) Russian, nominative (S. Toldova, p.c.)

a. metr zabor-**a**
meter.NOM fence-GEN.SG
'a meter of fence'

b. dva zabor-**a**
two.NOM fence-GEN.SG
'two fences'

c. zabor-**y**
fence-NOM.PL
'fences'

Split systems: case

(38) Russian, nominative (S. Toldova, p.c.)

a. metr zabor-**a**
meter.NOM fence-GEN.SG
'a meter of fence'

b. dva zabor-**a**
two.NOM fence-GEN.SG
'two fences'

c. zabor-**y**
fence-NOM.PL
'fences'

Split systems: case

(39) Russian, instrumental (S. Toldova, p.c.)

a. s metr-om zabor-**a**
with meter-INS fence-GEN
'with a meter of fence'

Split systems: case

(39) Russian, instrumental (S. Toldova, p.c.)

a. s metr-om zabor-**a**
with meter-INS fence-GEN
'with a meter of fence'

b. s dv-umja zabor-**ami**
with two-INS fence-INS.PL
'with two fences'

Split systems: case

(39) Russian, instrumental (S. Toldova, p.c.)

a. s metr-om zabor-**a**
with meter-INS fence-GEN
'with a meter of fence'

b. s dv-umja zabor-**ami**
with two-INS fence-INS.PL
'with two fences'

c. s zabor-**ami**
with fence-INS.PL
'with fences'

Split systems: case

(40) Russian, instrumental (S. Toldova, p.c.)

a. s metr-om zabor-**a**
with meter-INS fence-GEN
'with a meter of fence'

b. s dv-umja zabor-**ami**
with two-INS fence-INS.PL
'with two fences'

c. s zabor-**ami**
with fence-INS.PL
'with fences'

Split systems: case

(41) Patterns of syncretism in Russian

	PSEUDO-PART	COUNTING	PLURAL
INS	-a	-ami	-ami
NOM	-a	-a	-y

Split systems: case

(41) Patterns of syncretism in Russian

	PSEUDO-PART	COUNTING	PLURAL
INS	-a	-ami	-ami
NOM	-a	-a	-y

(42) Patterns of syncretism in Dutch and Turkish

	PSEUDO-PART	COUNTING	PLURAL
Dutch	-Ø	-en	-en
Turkish	-Ø	-Ø	-ler

Russian masculine declension

	MASS	COUNT	PLURAL
NOM	-a		-y
ACC			
GEN		-ov	
LOC		-ax	
DAT		-am	
INS		-ami	

Avoiding my own trap...

Why counting number

Split systems I: Gender/Class

Split systems II: Case

Split systems III: Case+Gender

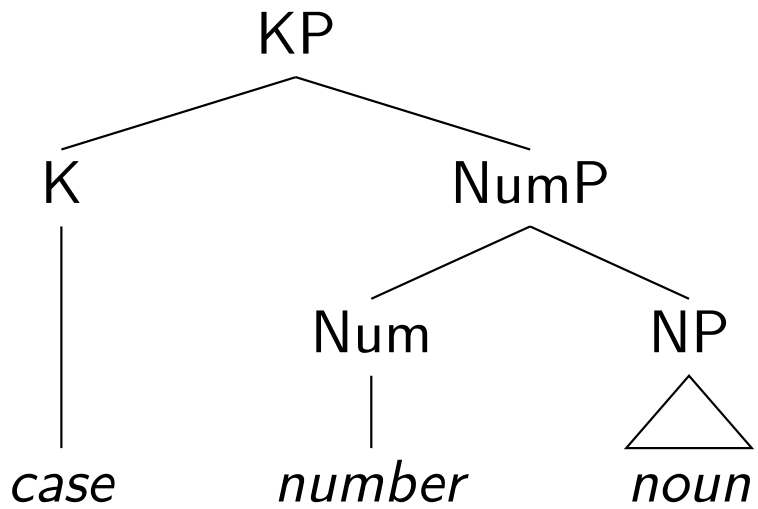
Some basic ideas

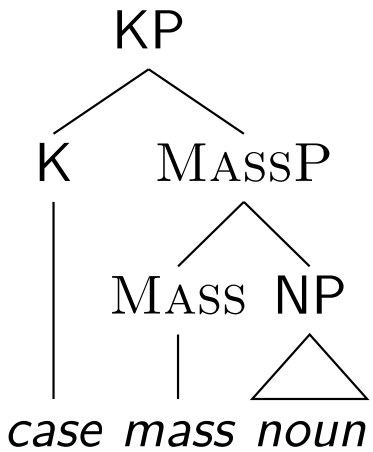
Conclusions

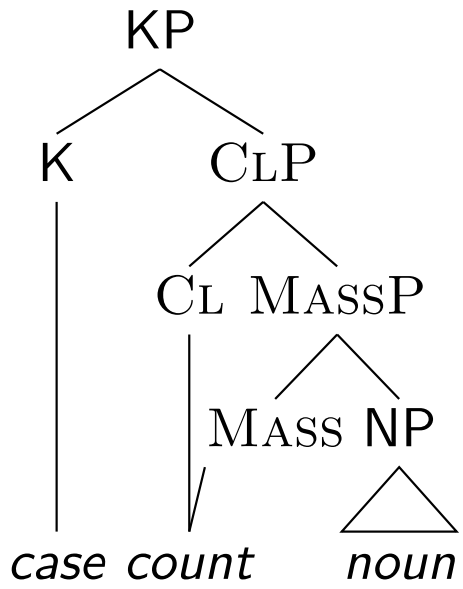
Appendix

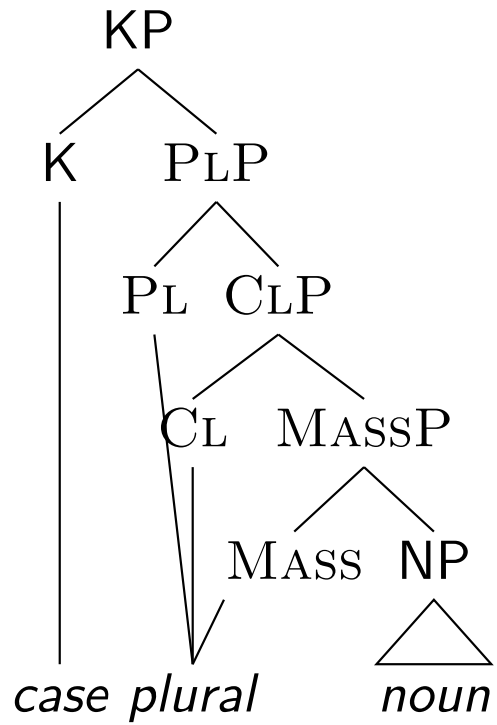
Numeral phrases: the "traditional" view

(43)



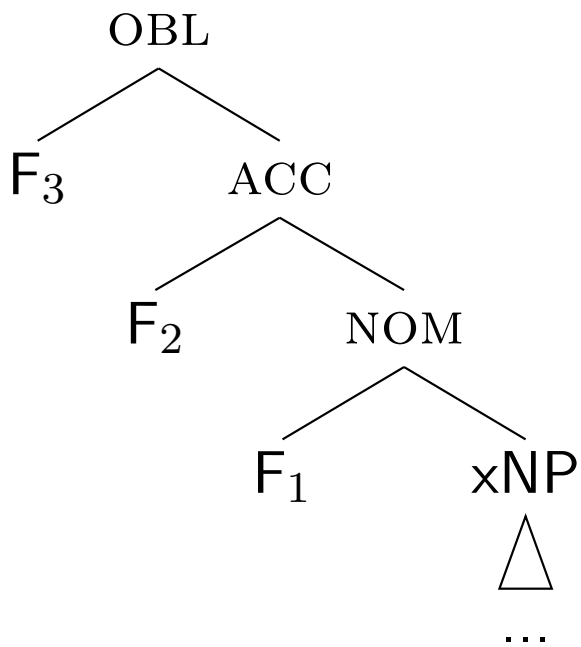

KP
K
MassP
Mass
NP
case
mass
noun


KP
K
ClP
Cl
MassP
Mass
NP
case
count
noun


KP
K
PlP
Pl
ClP
Cl
MassP
Mass
NP
case
plural
noun

	MASS one bowl water	COUNT ten horses	PLURAL horses
NOM	eu khopp don-**Ø**	dæs bæx-i	bæx-tæ-**Ø**
ACC	eu khopp don-**Ø**	dæs bæx-i	bæx-tæ-**Ø**
GEN	eu khopp don-**i**	dæs bæx-e **-j**	bæx-t **-i**
INE	eu khopp don-**i**	dæs bæx-em-**i**	bæx-t **-i**
DAT	eu khopp don-**æn**	dæs bæx-em-**æn**	bæx-t **-æn**
ABL	eu khopp don-**æj**	dæs bæx-em-**æj**	bæx-t **-æj**
ADE	eu khopp don-**bæl**	dæs bæx-e **-bæl**	bæx-tæ-**bæl**
ALL	eu khopp don-**mæ**	dæs bæx-e **-mæ**	bæx-tæ-**mæ**

(44)



(45) Serbian masculine nouns, nominative (Monika Bader, p.c.)

a. metar konopc-**a**
   meter rope-GEN.SG
   'a meter of rope'

b. dva konopc-**a**
   two rope-NUM
   'two ropes'

c. konopc-**i**
   rope-NOM.PL
   'ropes'

(46) Serbian masculine nouns, instrumental (Monika Bader, p.c.)

a. s metr-om konopc-**a**
with meter-INS.SG rope-GEN.SG
'with a meter of rope'

b. s dva konopc-**a**
with two rope-NUM
'with two ropes'

c. s konopc-**ima**
towards ropes-INS.PL
'with ropes'

(46) Serbian masculine nouns, instrumental (Monika Bader, p.c.)

a. s metr-om konopc-**a**
with meter-INS.SG rope-GEN.SG
'with a meter of rope'

b. s dva konopc-**a**
with two rope-NUM
'with two ropes'

c. s konopc-**ima**
towards ropes-INS.PL
'with ropes'

(47) s dva-ma kamion-**ima**
with two-INS truck-INS.PL
'with two trucks' (instrumental, Hammond 2005: 261)

Masculine nouns

	MASS COUNT	PLURAL
NOM	*-a*	*-i*
ACC		*-e*
GEN		*-ā*
LOC		*-ima*
DAT		
INS		

(48) Serbian (Bošković 2006: 528,525,528)

a. Uzgajač konja je kupio Meri.
breeder horses.GEN is bought Meri
'The horse breeder bought Meri.'

b. On je ovladao zemlj-om.
he is conquered country-INS
'He conquered that country.'

c. *Džokej je ovladao Meri.
jockey is conquered Meri
'The jockey conquered Meri.'

(49) Serbian (Monika Bader, p.c.)[1]

a. Uzgajač konja je kupio dva konja.
breeder horses.GEN is bought two horse.GEN
'The horse breeder bought two horses.'

b. *Džokej je ovladao dva konja.
jockey is conquered two horse.GEN
'The jockey conquered two horses.'

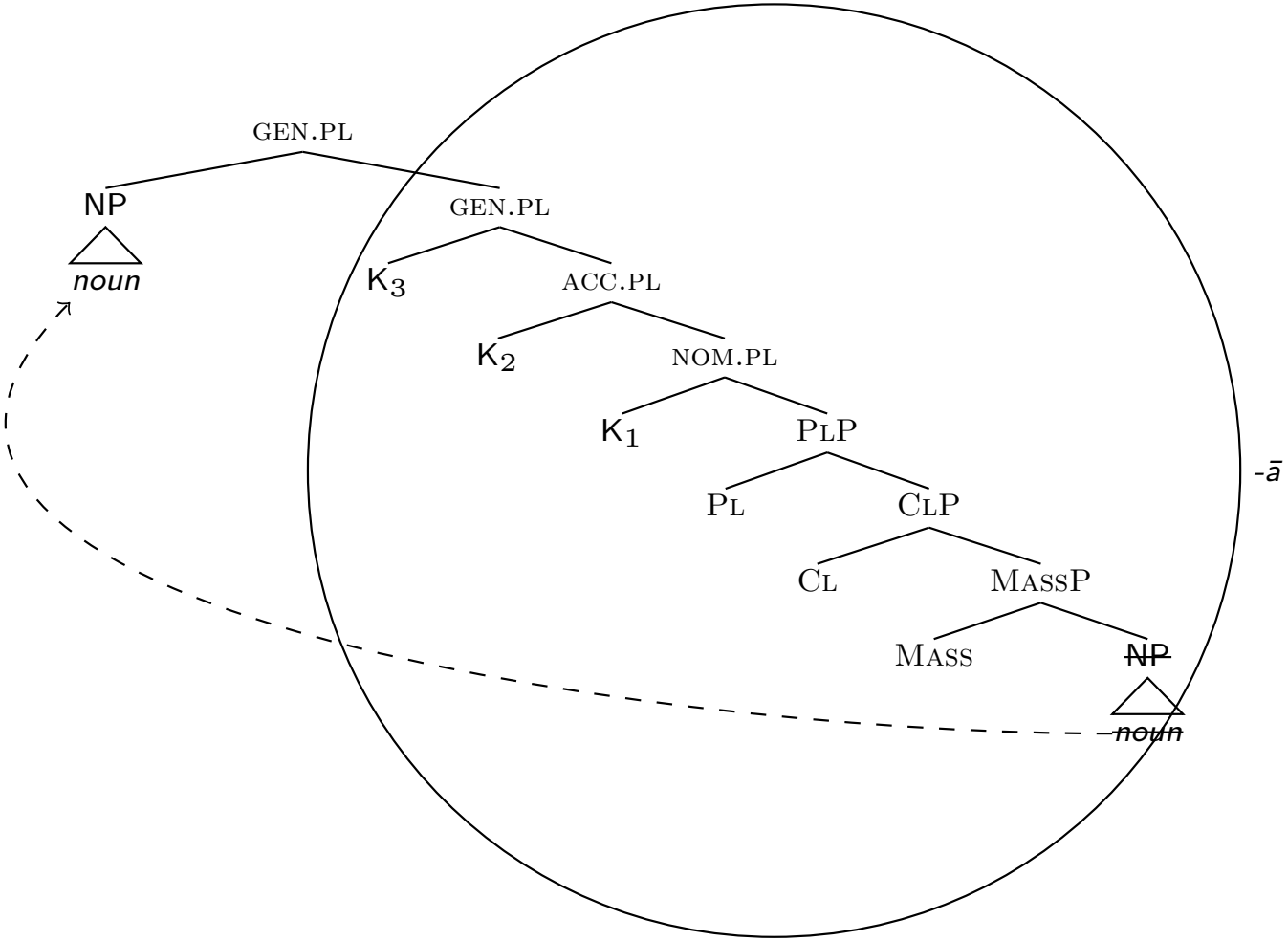
(50) Serbian (a from Bošković 2006: 529, b from Monika Bader, p.c)

a. Džokej je ovladao s(a) Meri.
jockey is conquered with Meri
'The jockey conquered Meri.'

b. Džokej je ovladao sa dva konja.
jockey is conquered with two horse.GEN
'The jockey conquered two horses.'

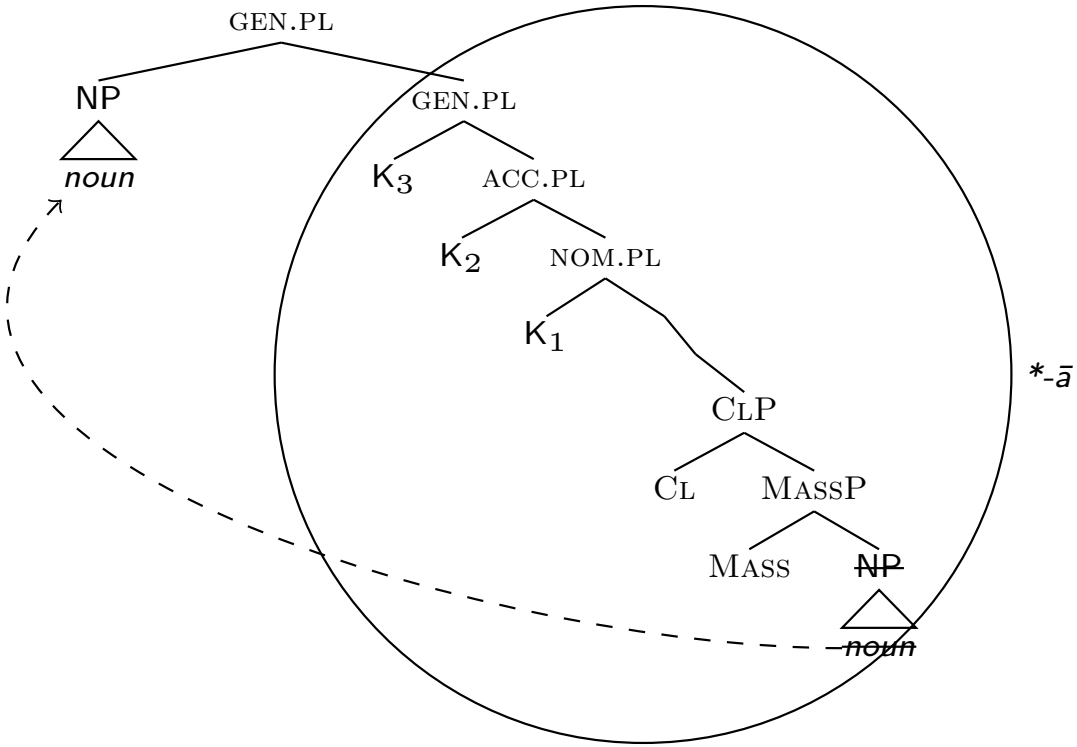
Serbian

	M C	P
NOM	*-a*	*-i*
ACC		*-e*
GEN		*-ā*
LOC		*-ima*
DAT		
INS		



(51)

a.	*-ā*	⇔	[GEN [ACC [NOM [PL [CL [MASS]]]]]]
b.	*-e*	⇔	[ACC [NOM [PL [CL [MASS]]]]]
c.	*-i*	⇔	[NOM [PL [CL [MASS]]]]

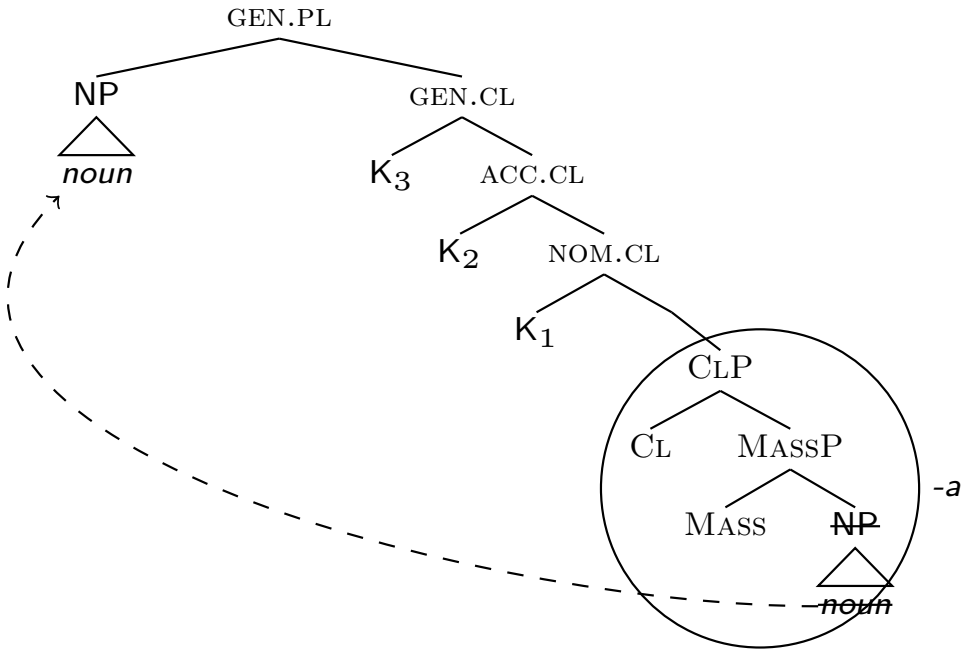


(52)

a.	*-ā*	⇔	[GEN [ACC [NOM [PL [CL [MASS]]]]]]	
b.	*-e*	⇔	[ACC [NOM [PL [CL [MASS]]]]]	
c.	*-i*	⇔	[NOM [PL [CL [MASS]]]]	

Serbian

	M C	P
NOM	*-a*	*-i*
ACC		*-e*
GEN		*-ā*
LOC		*-ima*
DAT		
INS		



(53) *a* $\Leftrightarrow$ [CL [MASS]]

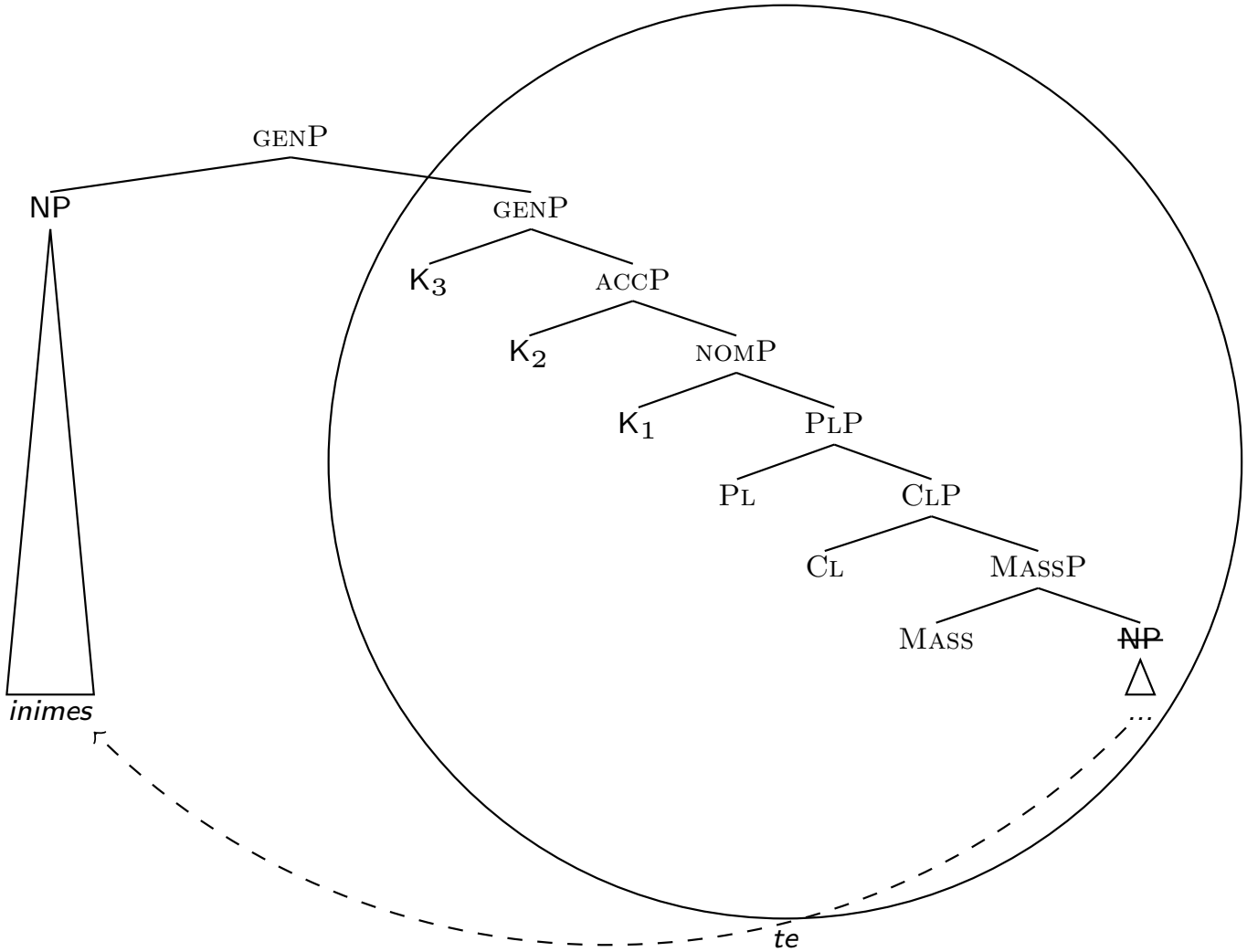
(54) Estonian:

	PSUDO-PART	COUNTED	PLURAL
NOM	PART.SG	PART.SG	NOM.PL
OBL	OBL.SG	OBL.SG	OBL.PL

(55) Estonian (Norris 2014: 25

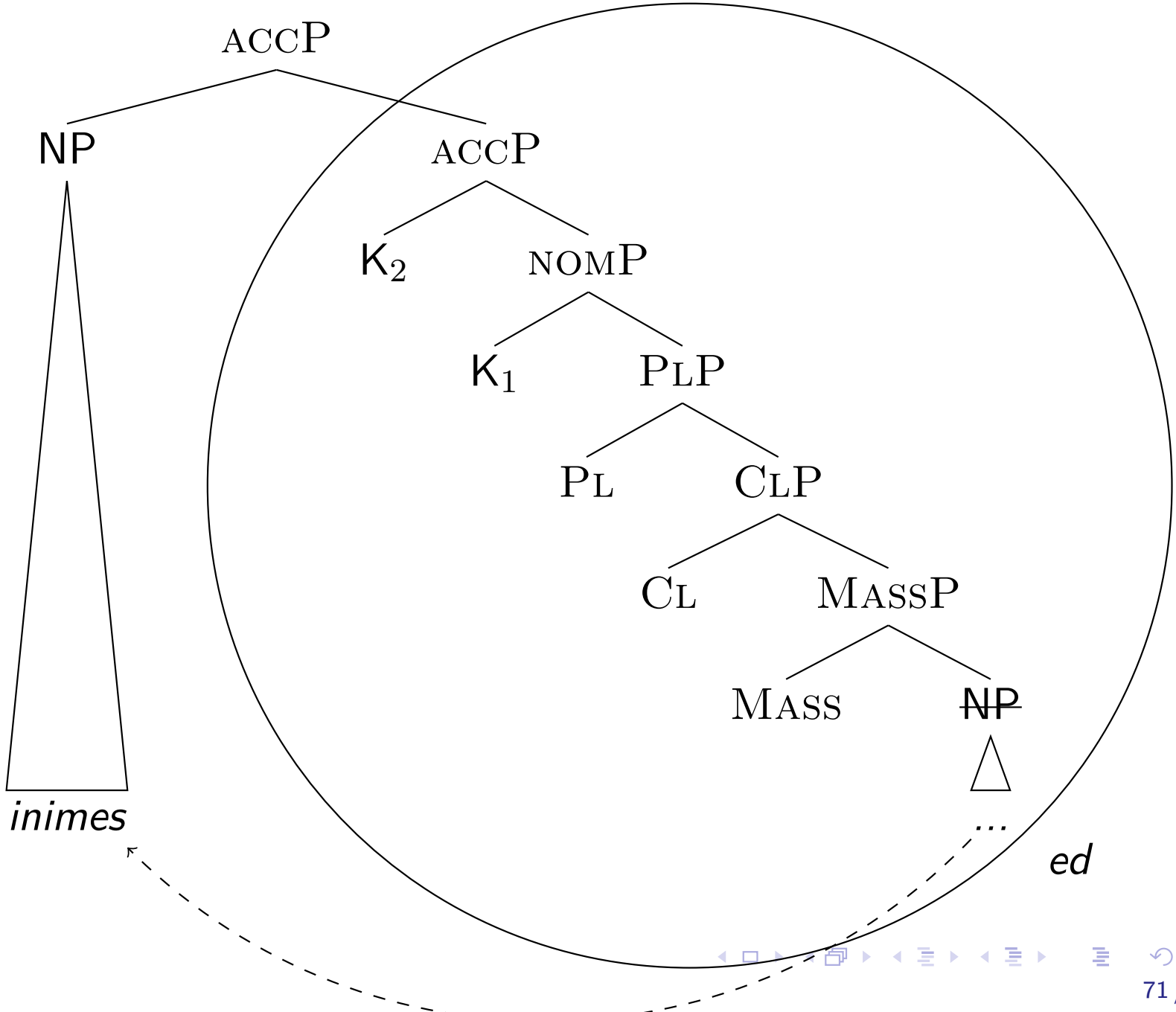
	person, SG.	person, PL.
NOM	inimene	inimes-ed
ACC	inimes-e	inimes-ed
GEN	inimes-e	inimes-te
PART	inimes-t	inimes-i
ILL	inimes-e-**sse**	inimes-te-**sse**
INE	inimes-e-**s**	inimes-te-**s**
ELA	inimes-e-**st**	inimes-te-**st**
ALL	inimes-e-**le**	inimes-te-**le**
ADE	inimes-e-**l**	inimes-te-**l**
ABL	inimes-e-**lt**	inimes-te-**lt**
TRANS	inimes-e-**ks**	inimes-te-**ks**
TERM	inimes-e-**ni**	inimes-te-**ni**
ESS	inimes-e-**na**	inimes-te-**na**
ABE	inimes-e-**ta**	inimes-te-**ta**
COM	inimes-e-**ga**	inimes-te-**ga**

(56)


GENP
NP
GENP
K3
ACCP
K2
NOMP
K1
PLP
PL
CLP
CL
MASSP
MASS
NP
...
inimes
te

(57) a. *te* = [GEN [ACC [NOM [PL [CL [MASS]]]]]]
b. *ed* = [ACC [NOM [PL [CL [MASS]]]]]

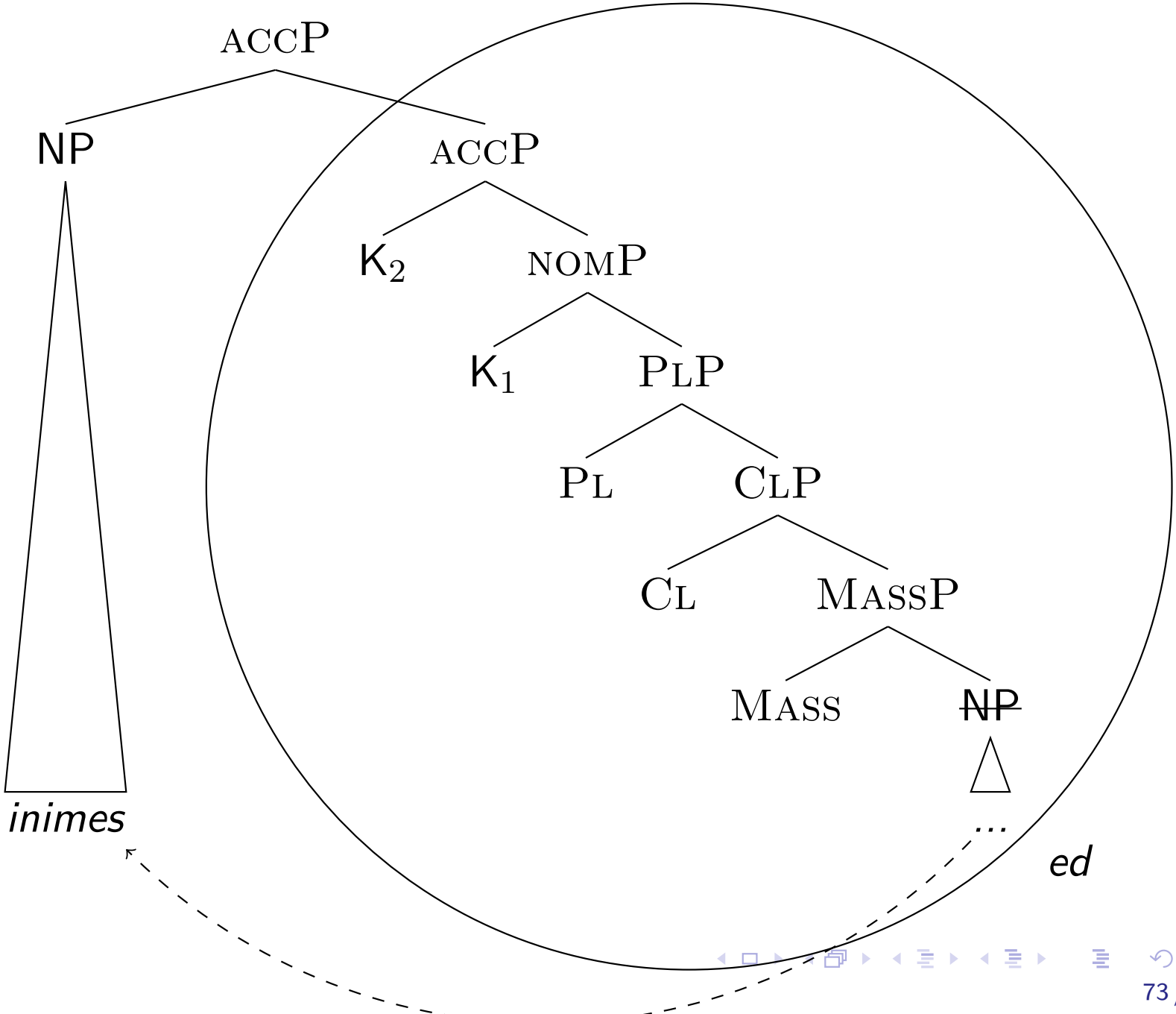
(58)



(59) Estonian:

	PSUDO-PART	COUNTED	PLURAL
NOM	*inimes-t*	*inimes-t*	*inimes-ed*
ACC	*inimes-t*	*inimes-t*	*inimes-ed*
GEN	*inimes-e*	*inimes-e*	*inimes-te*

(60)



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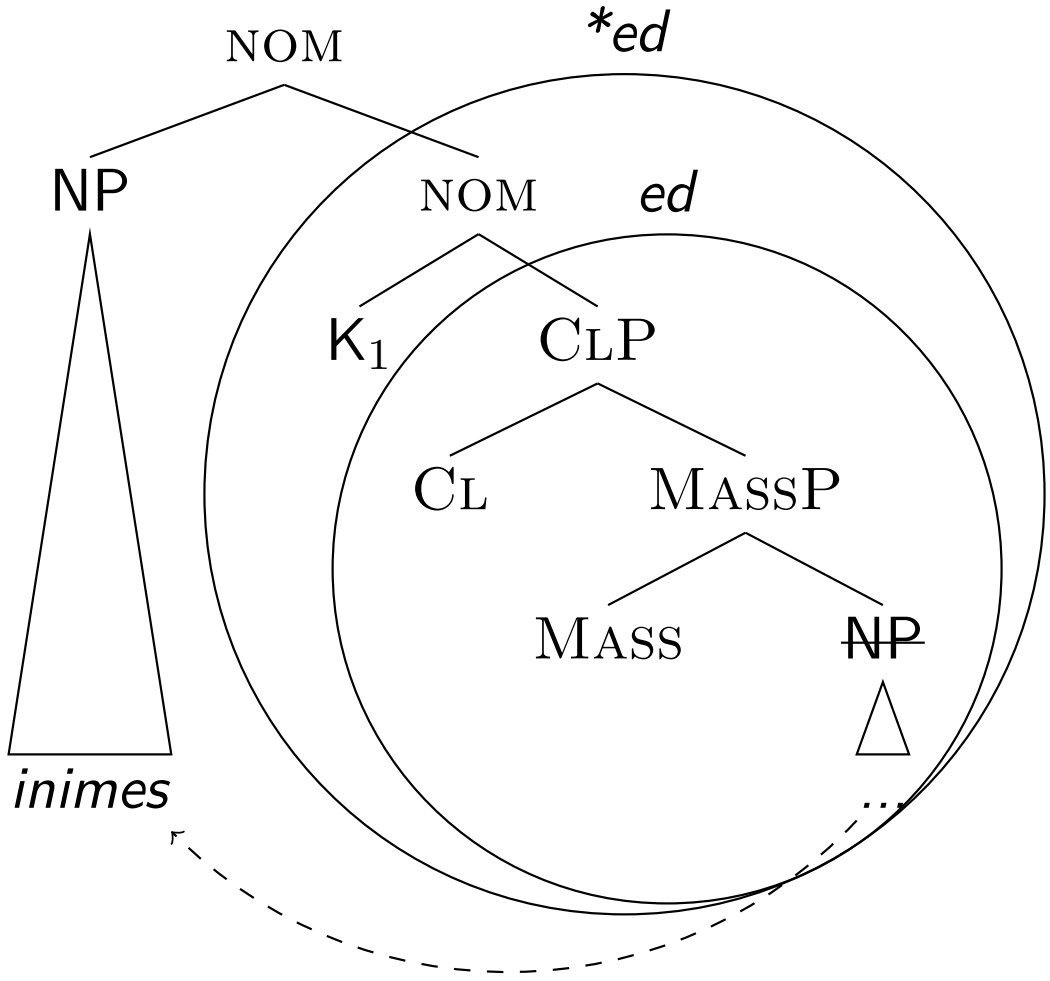

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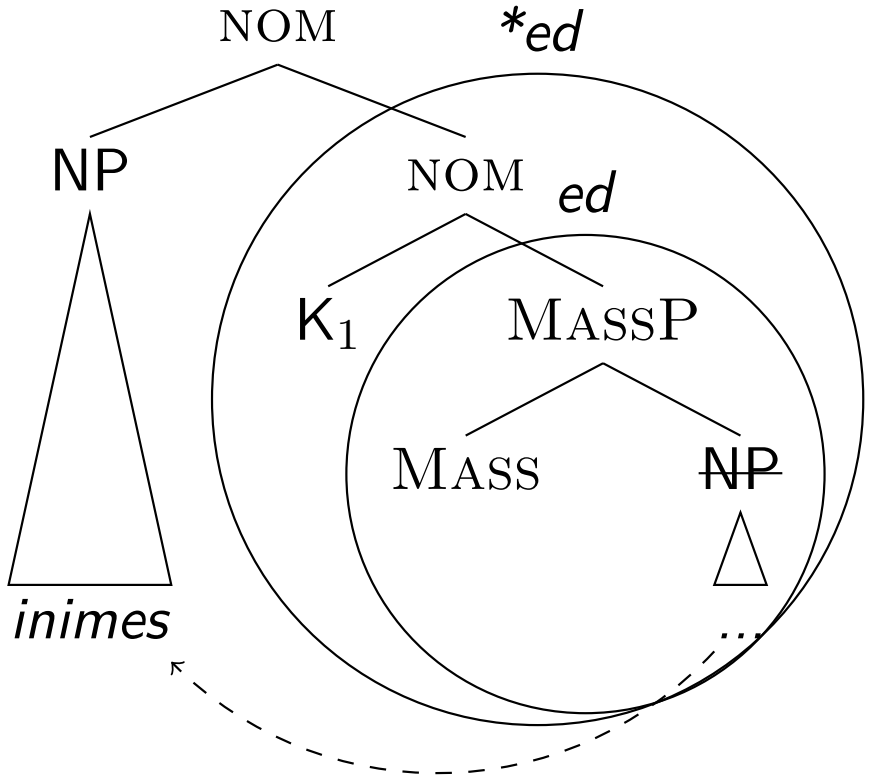

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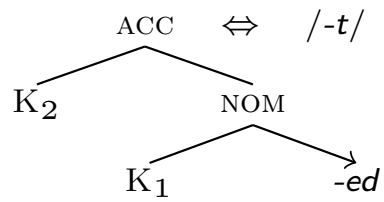

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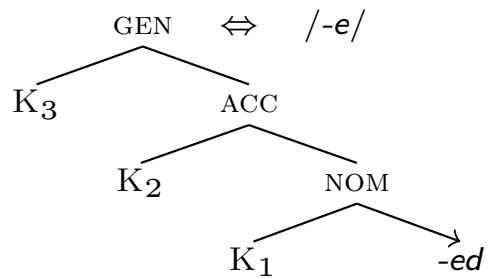

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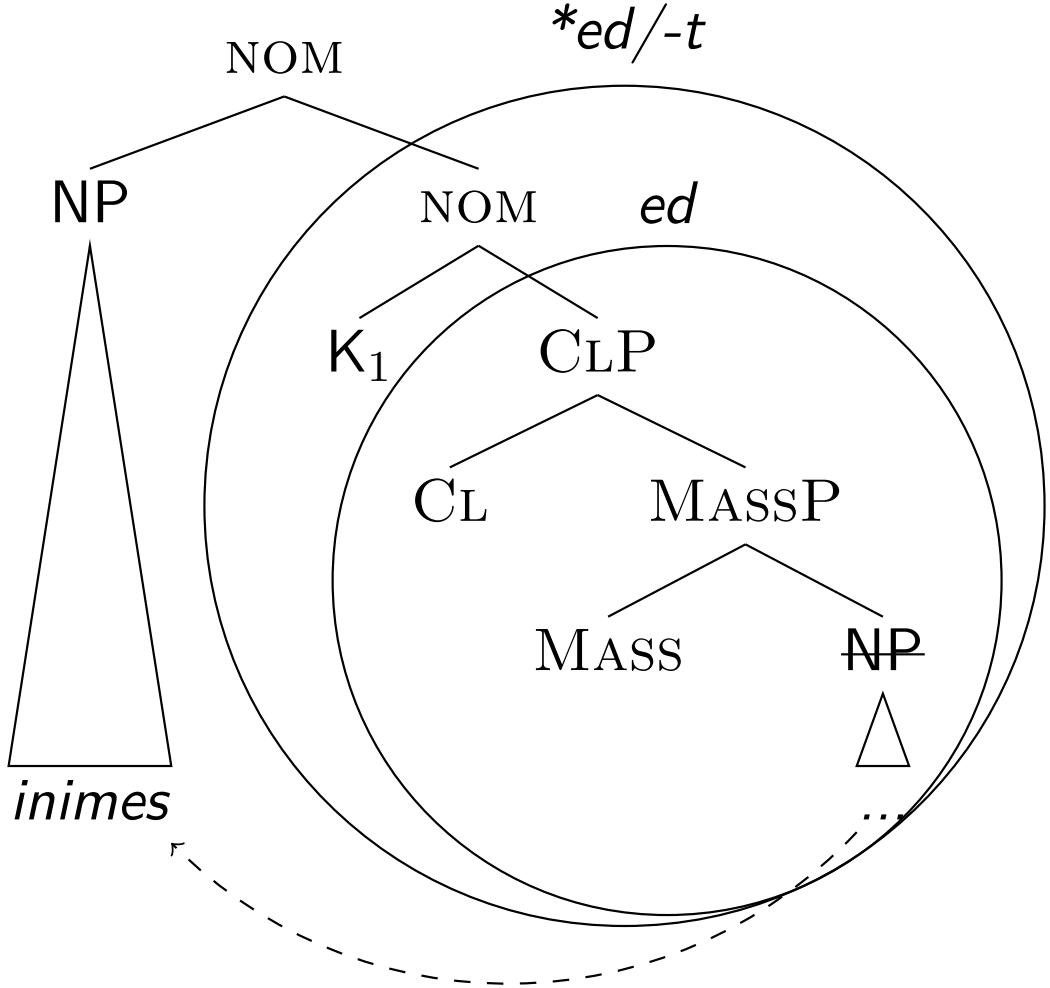

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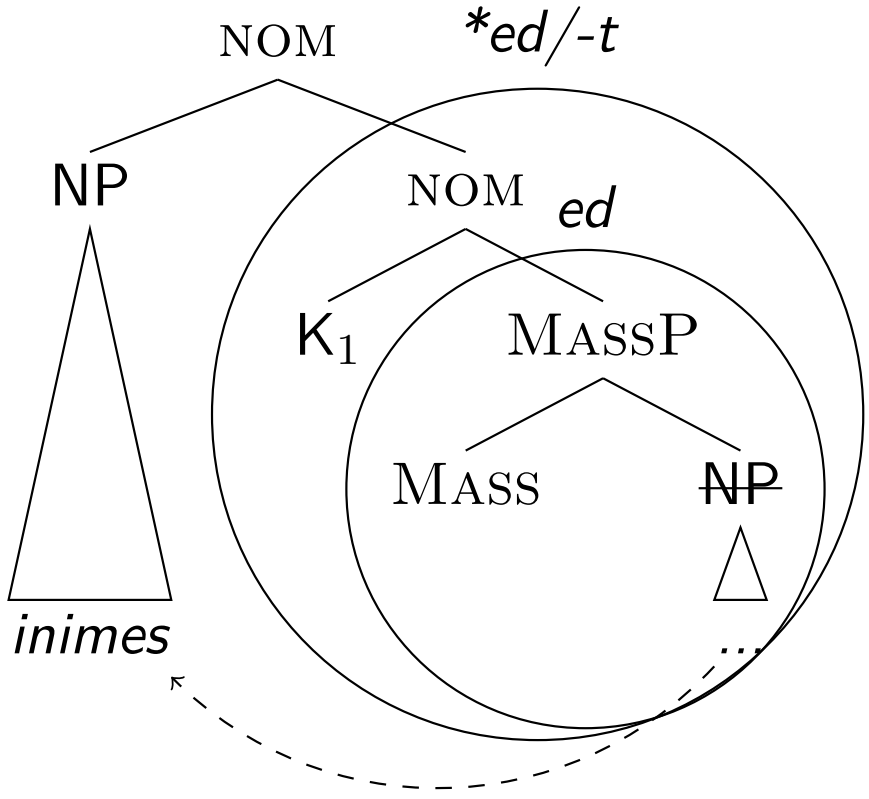

Avoiding my own trap...

Why counting number

Split systems I: Gender/Class

Split systems II: Case

Split systems III: Case+Gender

Some basic ideas

Conclusions

Appendix

Numeral phrases: the "traditional" view

(67) In the sequence

SINGULAR – COUNTING – PLURAL

syncretism only targets adjacent regions

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(68) a. English: ABB

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c. Ossetic: ABC

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- The basic idea: there are case projections on top of different numbers
- This leads to gaps in the functional sequence → spellout may fail
- Horizontal syncretisms → pointers
- The ultimate goal: the patterns fall out as a result of how different entries interact with the stuctures

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Numeral phrases: the “traditional” view

(69) English

a. One { apple | *apples }

Numeral phrases: the “traditional” view

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a. One { apple | *apples }

b. zero/two/fifty-five { *apple | apples }

Numeral phrases: the "traditional" view

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- In English, numerals other than 1 combine with the plural

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a. bir { çocuk | *çocuk-lar }
one boy boy-PL

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a. bir { çocuk | *çocuk-lar }
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b. sıfır/iki / üç / yirmi üç {çocuk | *çocuk-lar}
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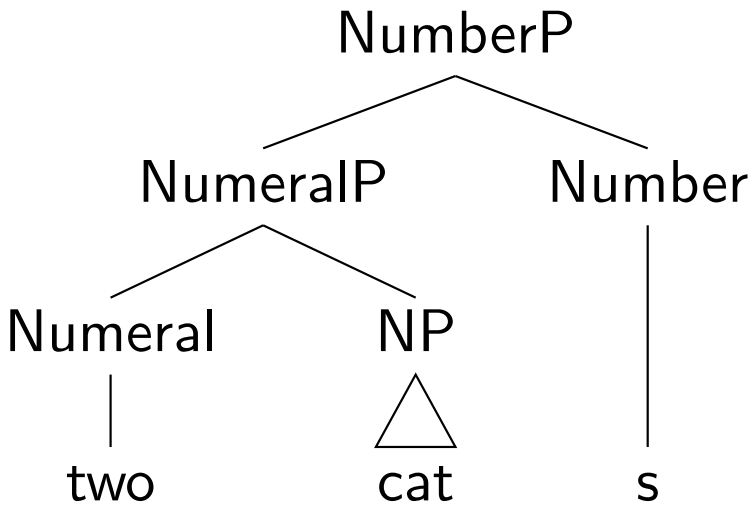

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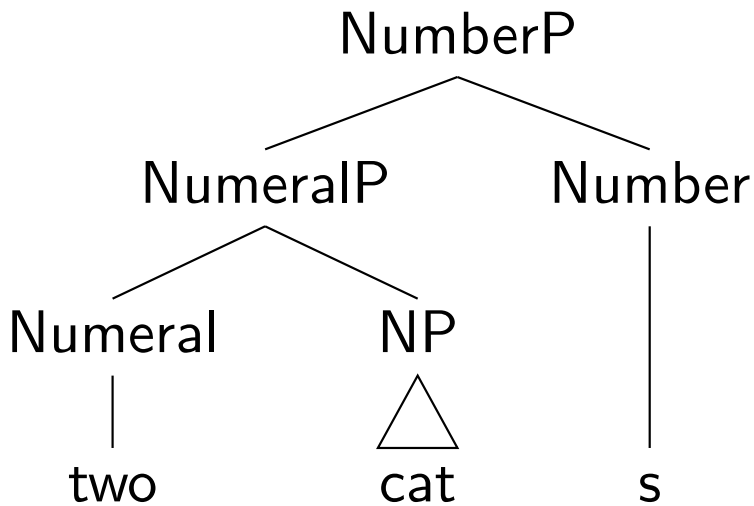

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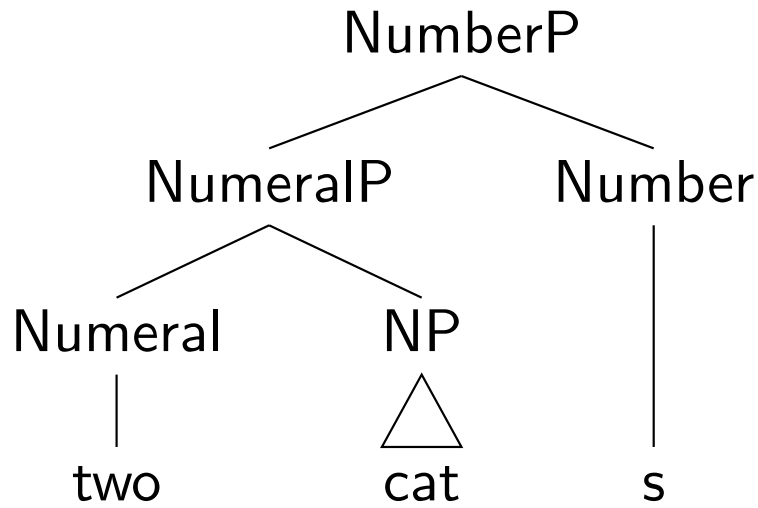

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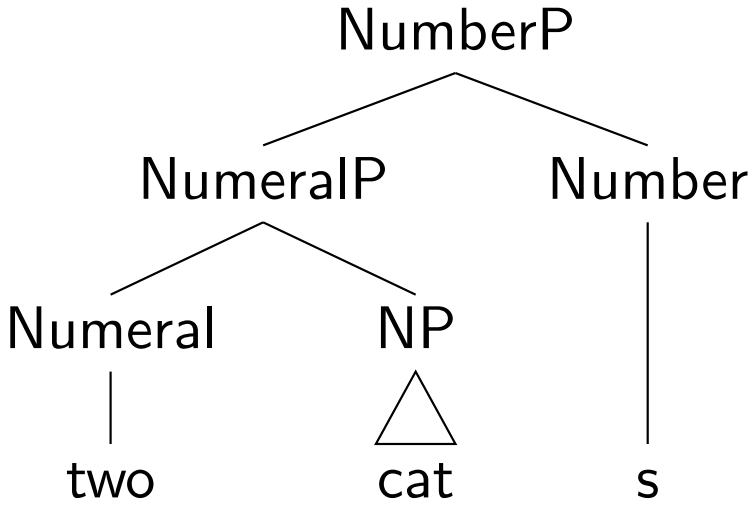

(72) English-style language: [+/- atomic]

a. $[\![+\text{atomic}]\!] = \lambda P.\lambda x.\ P(x)\ \&\ \text{atom}(x)$

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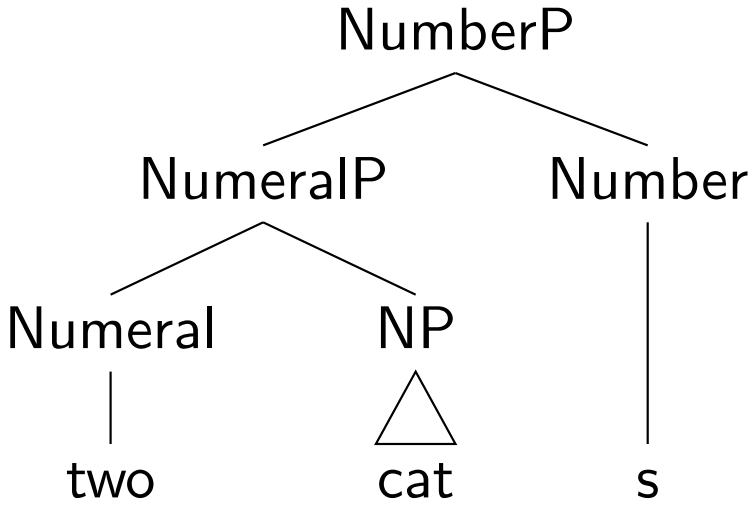

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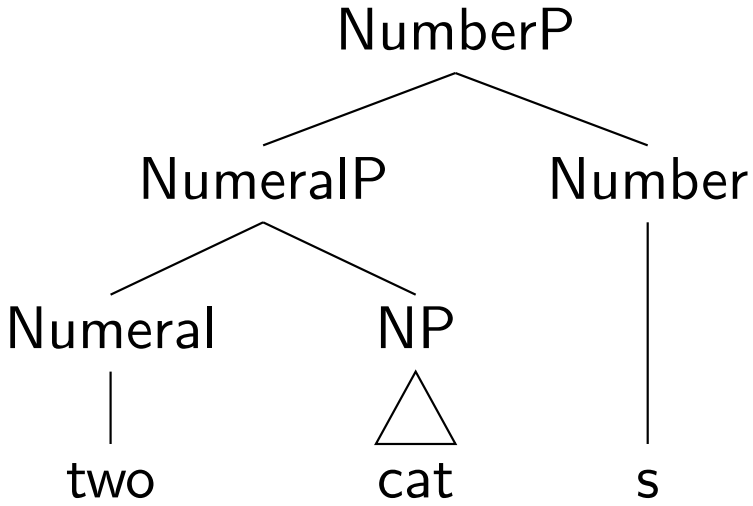

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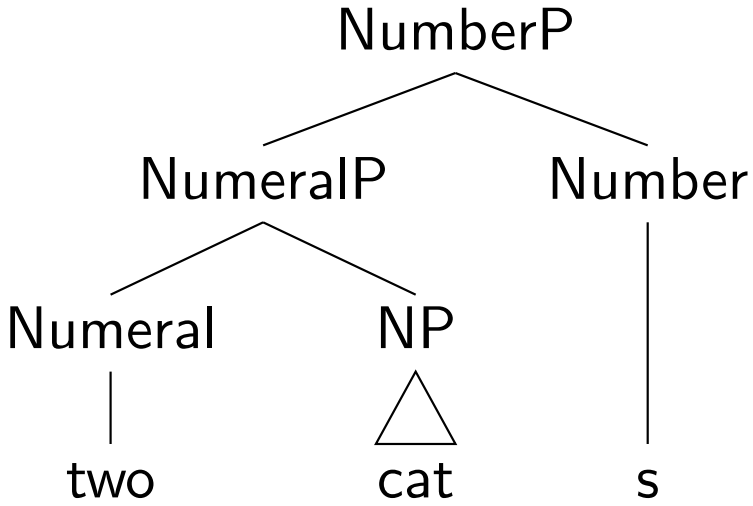

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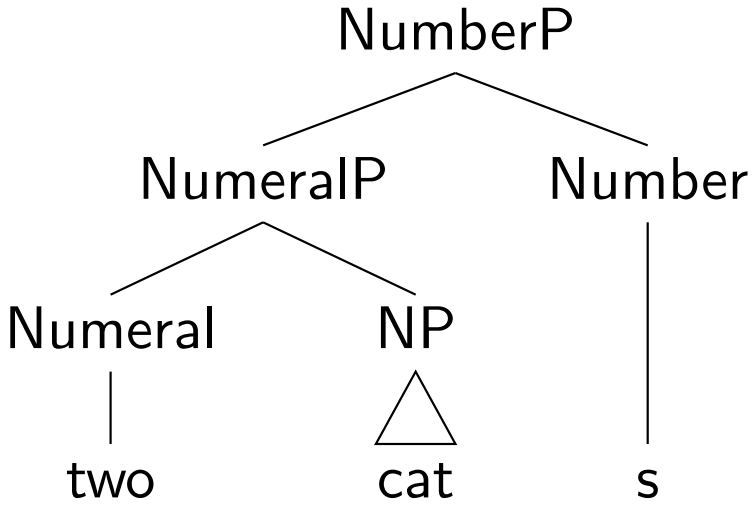

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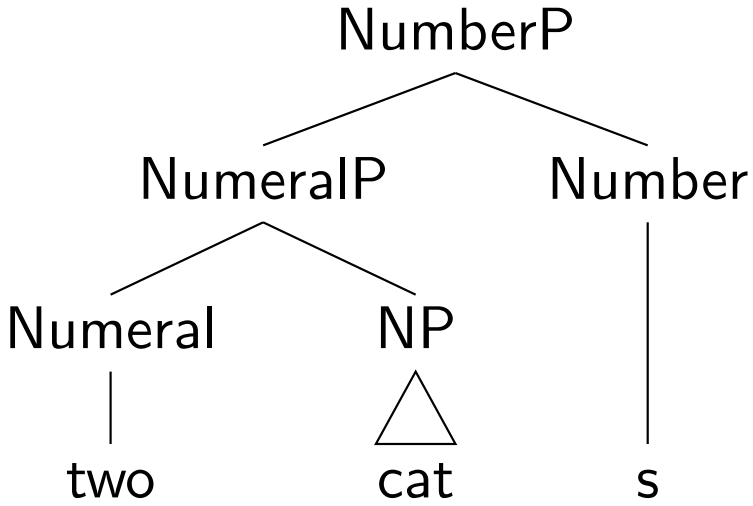

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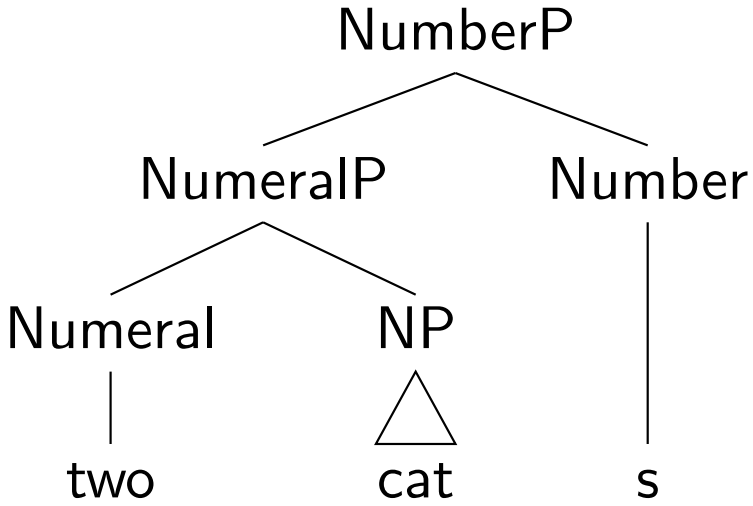

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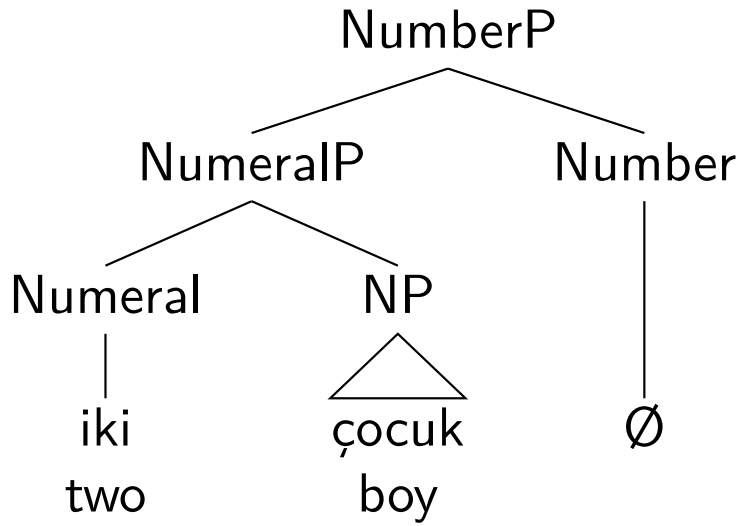

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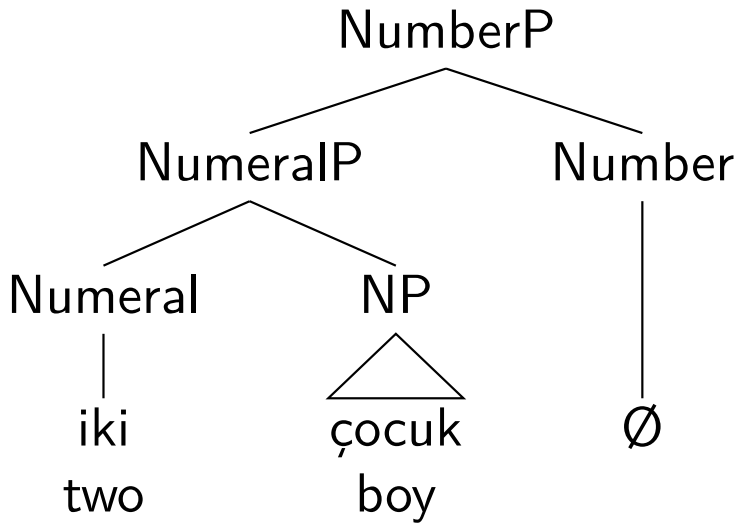

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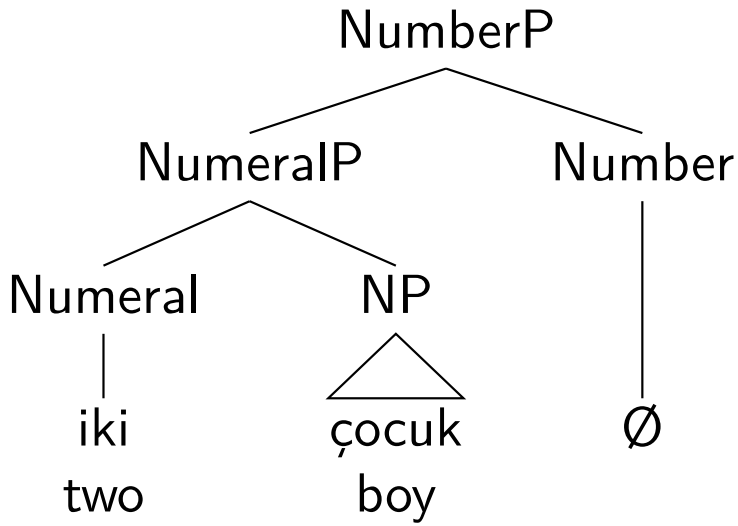

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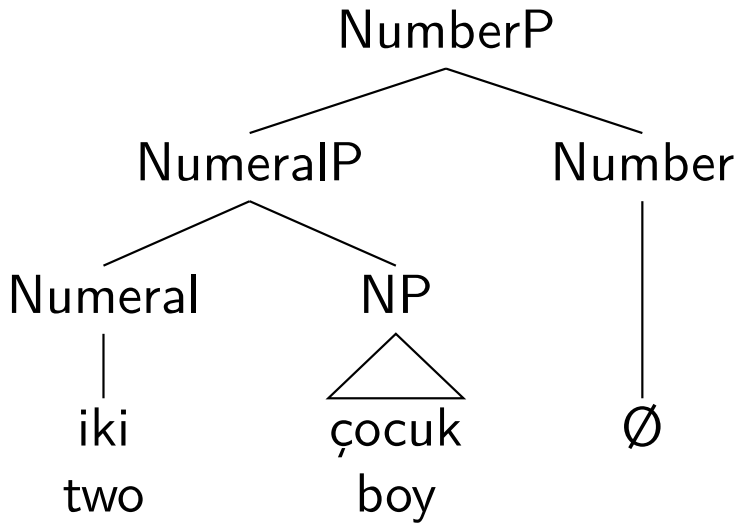

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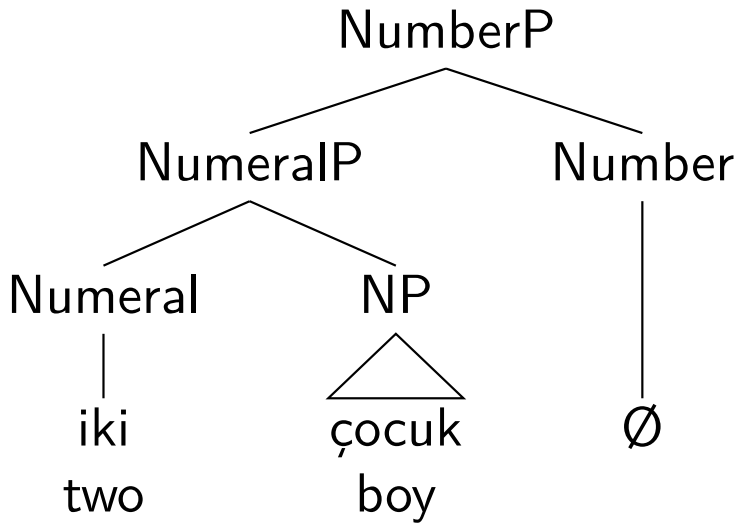

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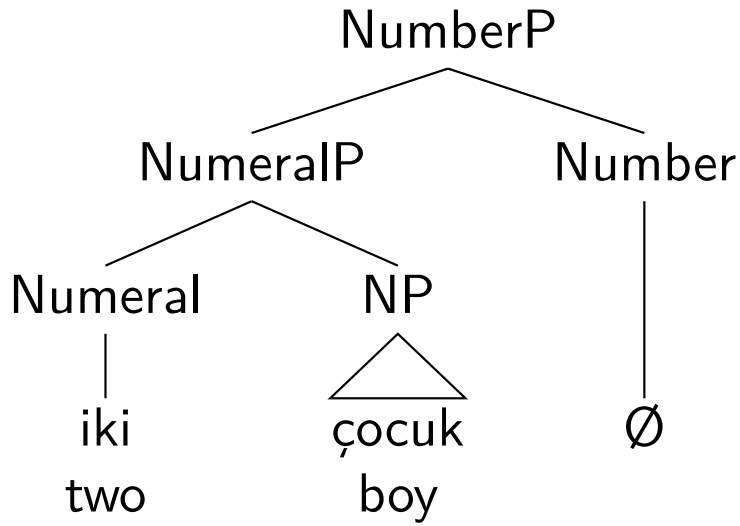

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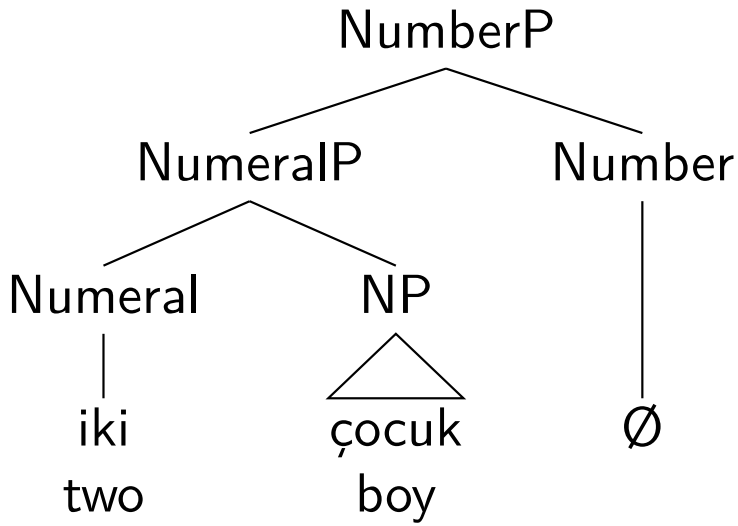

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b. $[\![\text{-minimal}]\!]\ ([\![\text{two NP}]\!]) =$ —

Avoiding my own trap...

Why counting number

Split systems I: Gender/Class

Split systems II: Case

Split systems III: Case+Gender

Some basic ideas

Conclusions

Appendix

Numeral phrases: the "traditional" view

Points of concern / difference

- The position of number (below numeral)

Points of concern / difference

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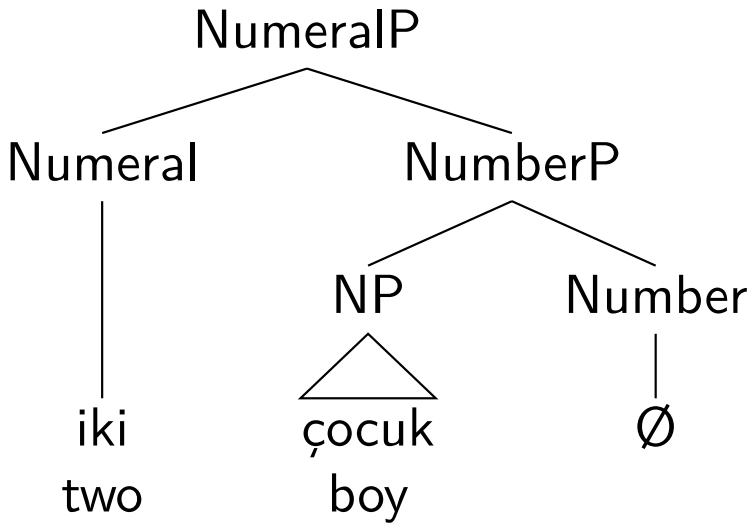
- Tripartite systems (ABC patterns)

Points of concern / difference

- The position of number (below numeral)
- Tripartite systems (ABC patterns)
- Split systems (some languages have both the Dutch and Turkish pattern)

The position of Number



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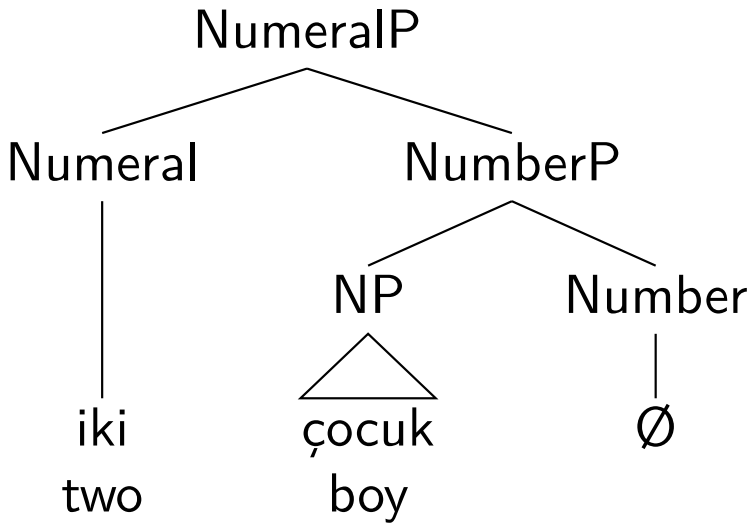

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a. $[\![+\text{minimal}]\!] = \lambda P.\lambda x.\ P(x)\ \neg\exists y\ P(y)\ y \sqsubset x$

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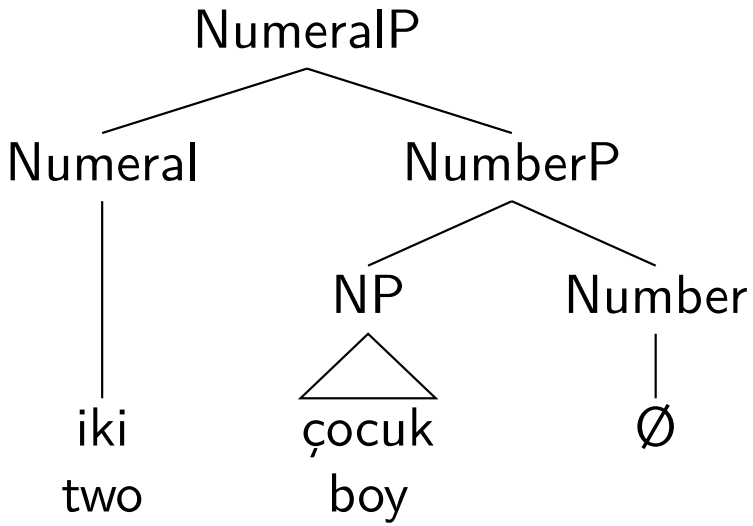

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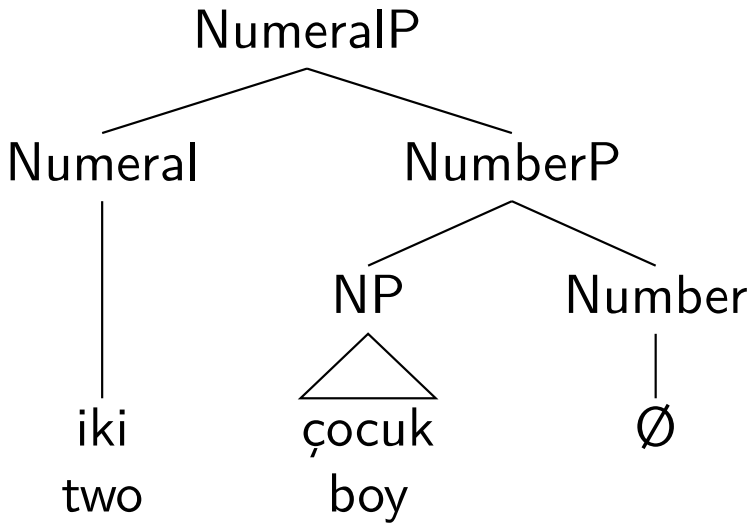

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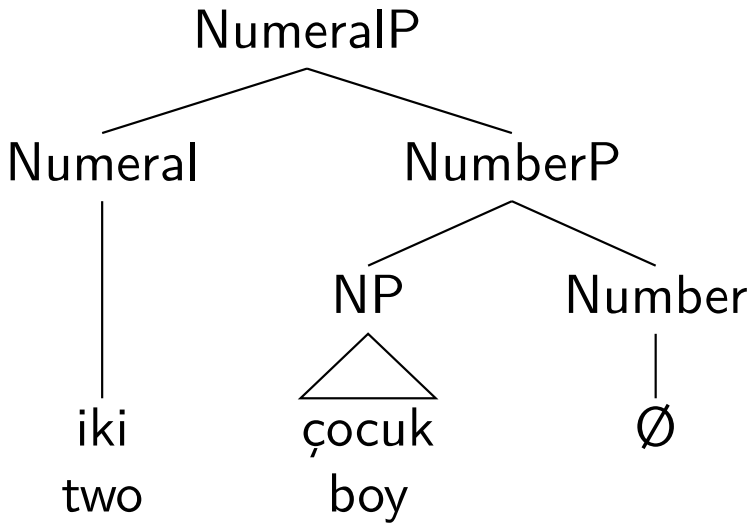

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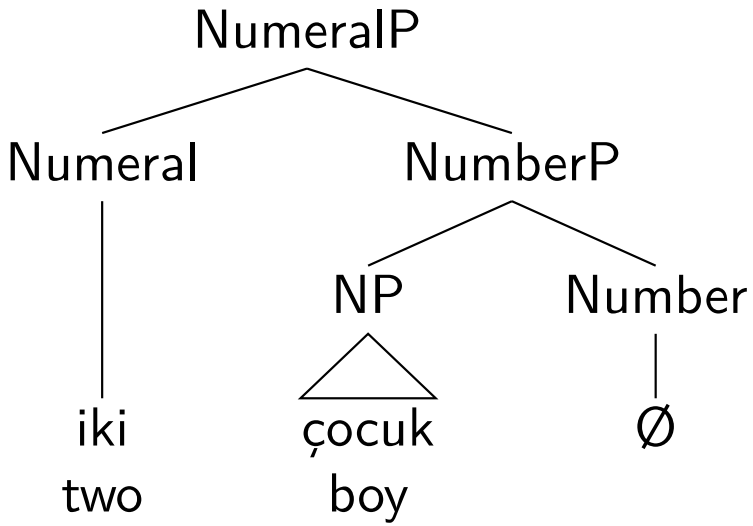

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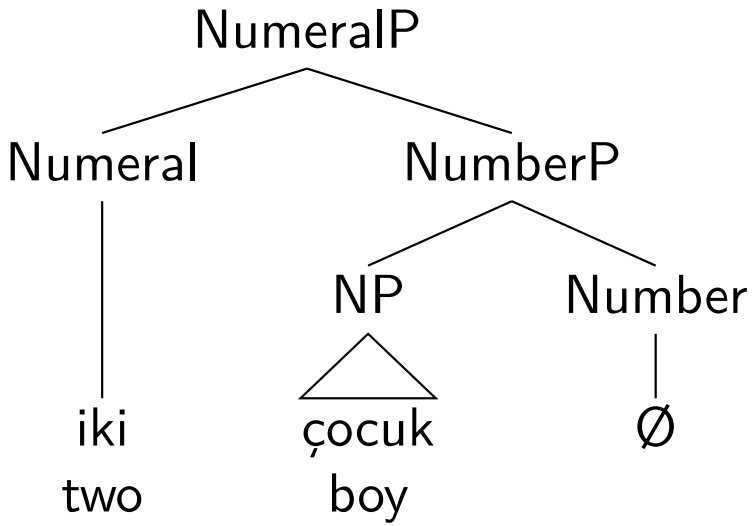

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The position of Number

(81) yoho ya ndo Ø mí=n-jödö
two PL man REL 3.IMP=MED-brothers
'two men who were brothers' (Hnonho Otomi – Oto-Manguean)

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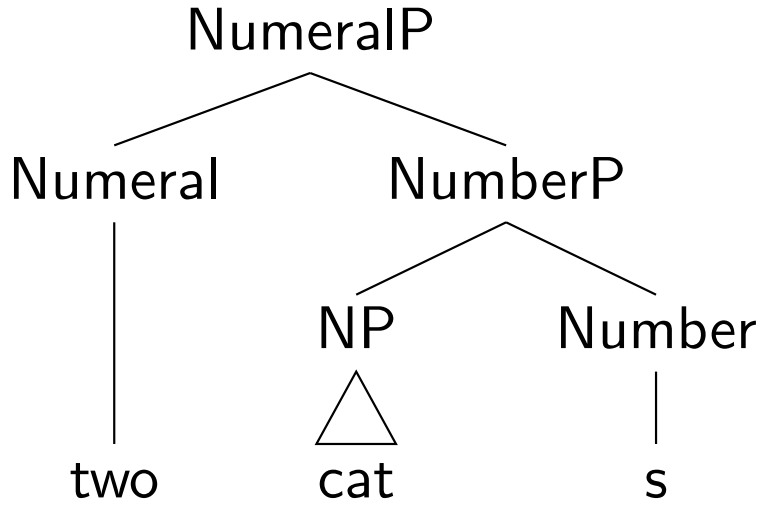
two PL man REL 3.IMP=MED-brothers
'two men who were brothers' (Hnonho Otomi – Oto-Manguean)

(82) keb' ke'q nim-a tz'i'
two PL big-aff dog
'two big dogs' (Sipakapense Maya – Mayan)

Points of concern



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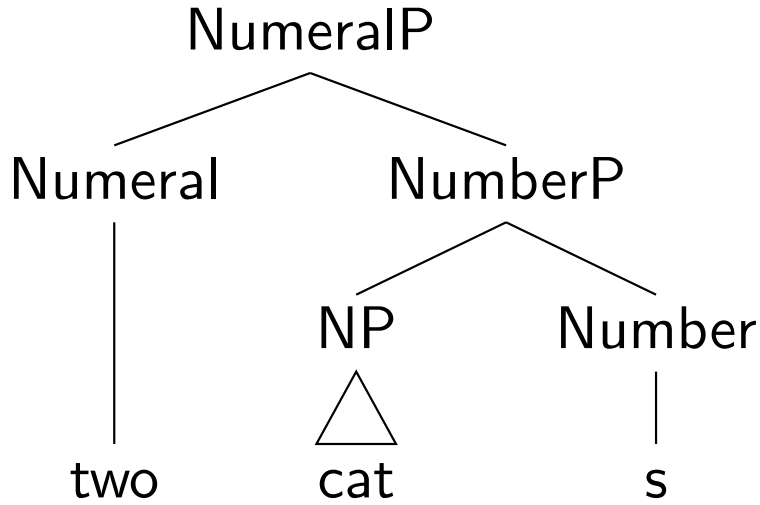

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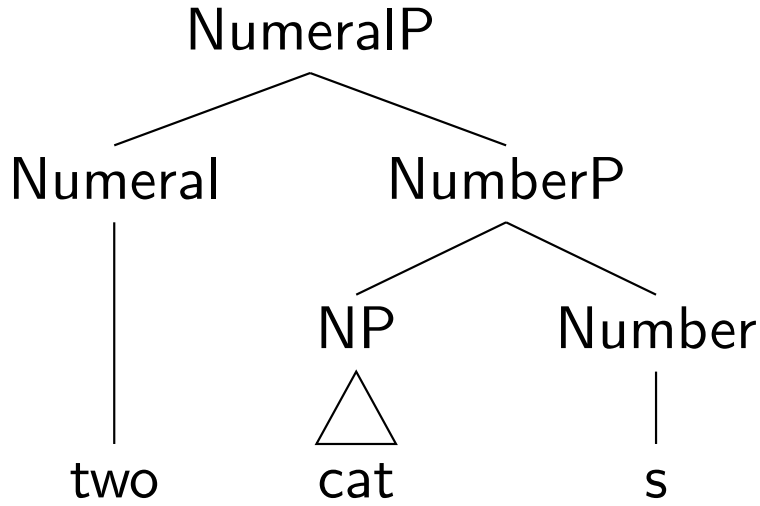

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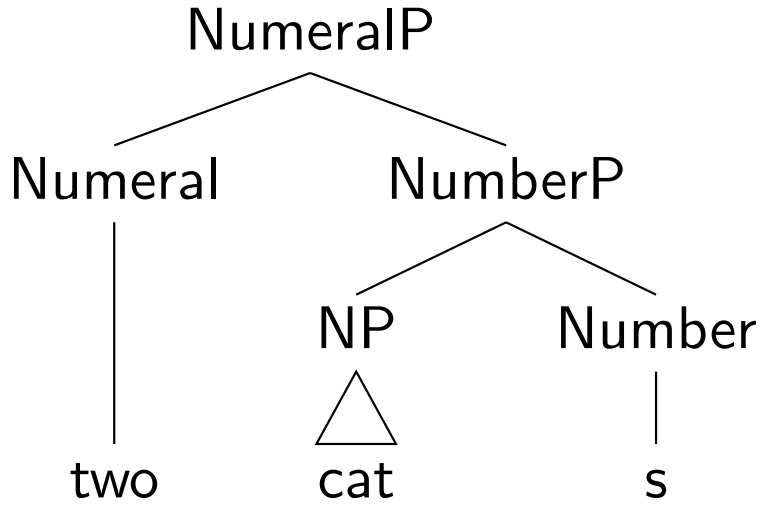

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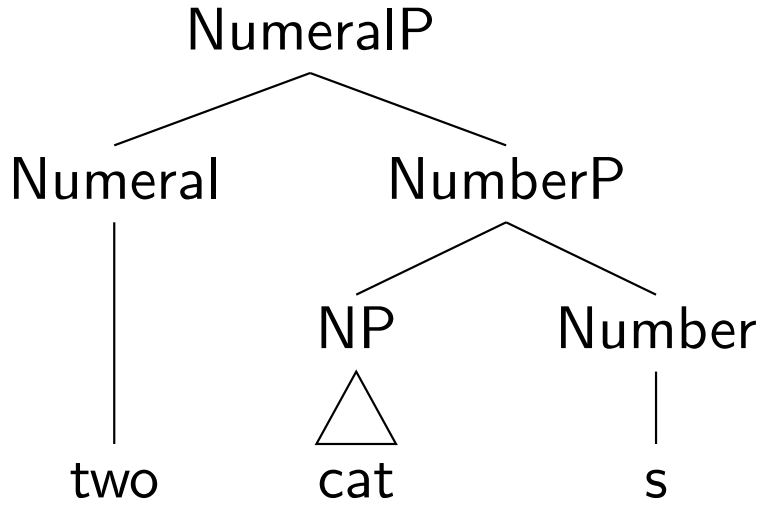

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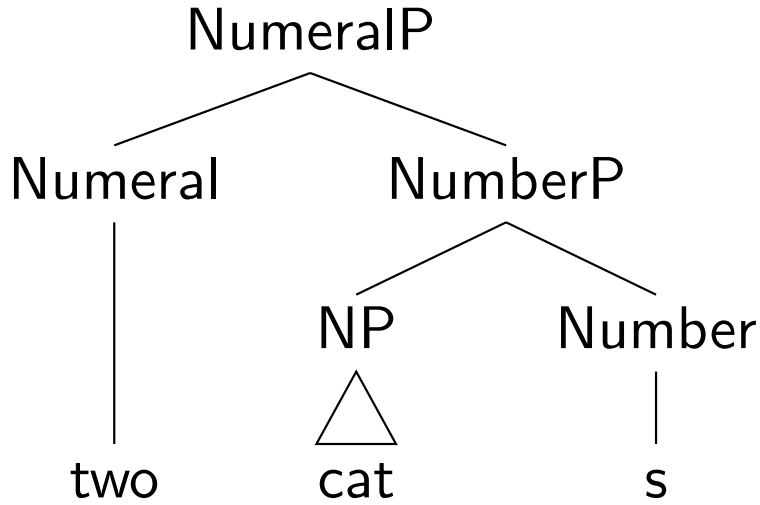

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The position of Number

(86) Niuean

a. Ne faka-moui [he ekekafo] [*e tagata na*.]
PST CAUS-live ERG doctor ABS person that
'The doctor saved that person.'

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c. Ne kitia [e au] [(*e*) *tokolima* ***e*** *tagata*.]
PST see ERG I ABS five DIV person
'I saw five people.'

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d. Ko [*e lupo kava haau*], ne inu e Sione.
PRED ABS bottle beer your PST drink ERG Sione
'Your bottle of beer Sione drank.'