

Diminutive adjectives in Czech as evidence for a rich internal structure of gradable adjectives

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Outline

Introduction

Arbitrary distribution

The position of the augment in the morphological structure

Building an account: the features

Augments as a function of root size: the intuition

Diminutives class-by-class

The comparative

Complex trees

Conclusions

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Three classes of adjectives

- ▶ Positive-degree adjectives in Czech often correspond to a root directly followed by agreement

mlad- **ý**
young AGR
'young'

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- ▶ However, a sizeable class of As requires the 'augment' **n**

snad- **n-** **ý**
eas- AUG AGR
'easy'

Three classes of adjectives

- ▶ Positive-degree adjectives in Czech often correspond to a root directly followed by agreement

mlad- **ý**
young AGR
'young'

- ▶ However, a sizeable class of As requires the 'augment' **n**

snad- **n-** **ý**
eas- AUG AGR
'easy'

- ▶ And a relatively smaller class requires the 'augment' **k**

slad- **k-** **ý**
sweet AUG AGR
'sweet'

Three kinds of positive

POS	GLOSS	POS	GLOSS	POS	GLOSS
blb- ý	'stupid'	čer- n -ý	'black'	blíz- k -ý	'close'
čir- ý	'pure'	drs- n -ý	'rough'	břit- k -ý	'sharp'
čist- ý	'clean'	hluč- n -ý	'noisy'	heb- k -ý	'smooth'
dlouh- ý	'long'	hod- n -ý	'kind'	hlad- k -ý	'smooth'
dobr- ý	'good'	jas- n -ý	'clear'	hoř- k -ý	'bitter'
drah- ý	'expensive'	jem- n -ý	'smooth'	krát- k -ý	'short'
drz- ý	'cheeky'	krás- n -ý	'beautiful'	krot- k -ý	'tame'
hloup- ý	'stupid'	lev- n -ý	'cheap'	křeh- k -ý	'fragile'
hust- ý	'dense'	mast- n -ý	'fatty'	leh- k -ý	'easy'
chud- ý	'poor'	mír- n -ý	'peaceful'	měk- k -ý	'soft'
jist- ý	'secure'	něž- n -ý	'tender'	měl- k -ý	'shallow'
krut- ý	'cruel'	pěk- n -ý	'pretty'	mrz- k -ý	'meager'
mal- ý	'small'	pev- n -ý	'firm'	níz- k -ý	'low'
mil- ý	'lovely'	pl- n -ý	'full'	prud- k -ý	'steep'
mlad- ý	'young'	prázdn- n -ý	'empty'	plyt- k -ý	'shallow'
nah- ý	'naked'	rov- n -ý	'straight'	říd- k -ý	'thin'
plach- ý	'timid'	sil- n -ý	'strong'	slad- k -ý	'sweet'
ploch- ý	'flat'	sla- n -ý	'salty'	sliz- k -ý	'slimy'
slab- ý	'weak'	slav- n -ý	'famous'	ten- k -ý	'thin'
slep- ý	'blind'	sluš- n -ý	'kind'	těž- k -ý	'heavy'
star- ý	'old'	skrom- n -ý	'modest'	trp- k -ý	'sour-bitter'
such- ý	'dry'	smut- n -ý	'sad'	úz- k -ý	'narrow'
tich- ý	'quiet'	snad- n -ý	'easy'	vel- k -ý	'big'
tup- ý	'blunt'	šťast- n -ý	'happy'	vlh- k -ý	'wet'
tvrd- ý	'hard'	tuč- n -ý	'fat'	vrát- k -ý	'unstable'
zl- ý	'evil'	vol- n -ý	'free'	brz- k -ý	'early'

The structure of the talk

- ▶ We investigate the distribution of the augments in the positive (we argue that it is governed by the arbitrary class of the root)

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- ▶ We propose an account based on two ingredients
 - ▶ the decomposition of adjectival meaning into smaller ingredients
 - ▶ the idea that roots realise different sets of these ingredients

The structure of the talk

- ▶ We investigate the distribution of the augments in the positive (we argue that it is governed by the arbitrary class of the root)
- ▶ We propose an account based on two ingredients
 - ▶ the decomposition of adjectival meaning into smaller ingredients
 - ▶ the idea that roots realise different sets of these ingredients
- ▶ We investigate augments in comparatives

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- ▶ There are homonymous roots, which in one meaning take n , in another meaning they don't

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(1) **lev-** á noha
left AGR leg
'(the) left leg'

(2) **lev-** $n-$ á noha
cheap AUG AGR leg
'(the) cheap leg'

The distribution of $n \sim \emptyset$ is not governed by semantics

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- ▶ There are synonymous roots, where one root takes n , the other doesn't

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(3) hrub- á pokožka
rough AGR skin
'a rough skin'

(4) drs- n - á pokožka
rough AUG AGR skin
'a rough skin'

The distribution of $n \sim \emptyset$ is not governed by the morphological category of the base (I)

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- (5) a. čest- n - ý
honest AUG AGR
'honest'
- b. čest
honour

The distribution of $n \sim \emptyset$ is not governed by the morphological category of the base (I)

- ▶ Some n adjectives appear to be derived from nouns, but not all of them are

(5) a. čest- n - ý
honest AUG AGR
'honest'

b. čest
honour

(6) a. skrom- n - ý
modest AUG AGR
'modest'

b. *skrom
Int: 'modesty'

The distribution of $n \sim \emptyset$ is not governed by the morphological category of the base (II)

- ▶ Nouns can become adjectives with or without n

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- (7) a. stříbr- o
silver NOM.NEUT.SG
'silver (metal)'
- b. stříbr- n- ý
silver AUG AGR
'silver (color/material)'

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- (7) a. stříbr- o
silver NOM.NEUT.SG
'silver (metal)'
- b. stříbr- n- ý
silver AUG AGR
'silver (color/material)'
- (8) a. zlat- o
gold NOM.NEUT.SG
'gold (metal)'
- b. zlat- ý
gold AGR
'golden (color/material)'

Interim conclusion

- ▶ The presence/absence of the augment n is an arbitrary property of the root

The distribution of $n \sim k \sim \emptyset$ is not governed by phonology

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- ▶ There are nearly identical roots, where one root takes k , one takes n , and yet another one \emptyset

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(9) **mlad-** \acute{y}
young AGR
'young'

(10) **slad-** $k-$ \acute{y}
smooth AUG AGR
'sweet'

(11) **klad-** $n-$ \acute{y}
positive AUG AGR
'positive'

The distribution of $n \sim k$ is not governed by semantics (I)

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- ▶ There are synonymous roots, where one root takes k , the other n

(12) **hez-** k - á hudba
nice AUG AGR music
'nice music'

(13) **pěk-** n - á hudba
nice AUG AGR music
'nice music'

The distribution of $n \sim k \sim \emptyset$ is not governed by semantics
(II)

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- ▶ There are near synonymous roots, where one root takes k , the other n (and yet another one \emptyset)

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- ▶ There are near synonymous roots, where one root takes k , the other n (and yet another one \emptyset)

(14) **snad-** n - á úloha
easy AGR task
'an easy task'

(15) **leh-** k - á úloha
light AUG AGR task
'an easy task'

The distribution of $n \sim k \sim \emptyset$ is not governed by semantics (II)

- ▶ There are near synonymous roots, where one root takes k , the other n (and yet another one \emptyset)

- (14) **snad-** n - á úloha
easy AGR task
'an easy task'
- (15) **leh-** k - á úloha
light AUG AGR task
'an easy task'
- (16) **jednoduch-** á úloha
simple AGR tas
'a simple task'

The distribution of **k** is not governed by the morphological category of the base

The distribution of *k* is not governed by the morphological category of the base

- ▶ Some *k* adjectives appear to be derived from nouns, but not all of them are

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- ▶ Some **k** adjectives appear to be derived from nouns, but not all of them are

- (17) a. **sliz-** **k-** **ý**
slime AUG AGR
'slimy'
- b. **sliz**
slime

The distribution of **k** is not governed by the morphological category of the base

- ▶ Some **k** adjectives appear to be derived from nouns, but not all of them are

(17) a. **sliz-** **k-** **ý**
slime AUG AGR
'slimy'

b. **sliz**
slime

(18) a. **heb-** **k-** **ý**
smooth AUG AGR
'smooth'

b. ***heb**

Scale type?

POS	GLOSS	NEG	GLOSS	DMV
sil- n -ý	'strong'	slab- ý	'weak'	OPEN
drah- ý	'expensive'	lev- n -ý	'cheap'	OPEN
šťast- n -ý	'happy'	smut- n -ý	'sad'	OPEN
jas- n -ý	'clear'	ne-jas- n -ý	'un-clear'	PARTIALLY CLOSED
pl- n -ý	'full'	prázd- n -ý	'empty'	CLOSED
vel- k -ý	'big'	mal- ý	'small'	OPEN
tvrd- ý	'hard'	měk- k -ý	'soft'	OPEN
těž- k -ý	'heavy'	leh- k -ý	'light'	OPEN
such- ý	'dry'	vlh- k -ý	'wet'	PARTIALLY CLOSED
hlad- k -ý	'smooth'	drs- n -ý	'rough'	PARTIALLY CLOSED
star- ý	'old'	mlad- ý	'young'	OPEN
tlust- ý	'thick'	ten- k -ý	'thin'	OPEN
dlouh- ý	'long'	krát- k -ý	'short'	OPEN
dobr- ý	'good'	špat- n -ý	'bad'	OPEN
hluč- n -ý	'noisy'	tich- ý	'silent'	PARTIALLY CLOSED

Interim conclusion

- ▶ The presence/absence of the augment n or k is an arbitrary property of the root

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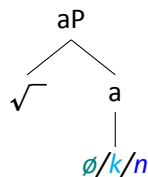
Conclusions

Three kinds of positive

POS	GLOSS	POS	GLOSS	POS	GLOSS
slab-	ý 'weak'	lev-n-ý	'cheap'	heb-k-ý	'smooth'
tup-	ý 'blunt'	hod-n-ý	'kind'	sliz-k-ý	'slimy'
slep-	ý 'blind'	šťast-n-ý	'happy'	křeh-k-ý	'fragile'
mal-	ý 'small'	jem-n-ý	'smooth'	vlh-k-ý	'wet'
dobr-	ý 'good'	skrom-n-ý	'modest'	leh-k-ý	'easy'
čist-	ý 'clean'	něž-n-ý	'tender'	měk-k-ý	'soft'
drz-	ý 'cheeky'	sluš-n-ý	'kind'	ten-k-ý	'thin'
hloup-	ý 'stupid'	pěk-n-ý	'pretty'	slad-k-ý	'sweet'
such-	ý 'dry'	mír-n-ý	'peaceful'	hlad-k-ý	'smooth'

Three kinds of positive

POS	GLOSS	POS	GLOSS	POS	GLOSS
slab-ý	'weak'	lev-n-ý	'cheap'	heb-k-ý	'smooth'
tup-ý	'blunt'	hod-n-ý	'kind'	sliz-k-ý	'slimy'
slep-ý	'blind'	šťast-n-ý	'happy'	křeh-k-ý	'fragile'
mal-ý	'small'	jem-n-ý	'smooth'	vlh-k-ý	'wet'
dobr-ý	'good'	skrom-n-ý	'modest'	leh-k-ý	'easy'
čist-ý	'clean'	něž-n-ý	'tender'	měk-k-ý	'soft'
drz-ý	'cheeky'	sluš-n-ý	'kind'	ten-k-ý	'thin'
hloup-ý	'stupid'	pěk-n-ý	'pretty'	slad-k-ý	'sweet'
such-ý	'dry'	mír-n-ý	'peaceful'	hlad-k-ý	'smooth'

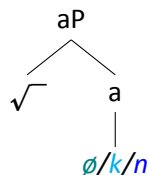


(19) Arbitrary root classes

- $a \rightarrow \emptyset$
- $a \rightarrow n / \underline{\quad} \text{Class-n}$
- $a \rightarrow k / \underline{\quad} \text{Class-k}$

Three kinds of positive

POS	GLOSS	POS	GLOSS	POS	GLOSS
slab- <i>y</i>	'weak'	lev- <i>n-y</i>	'cheap'	heb- <i>k-y</i>	'smooth'
tup- <i>y</i>	'blunt'	hod- <i>n-y</i>	'kind'	sliz- <i>k-y</i>	'slimy'
slep- <i>y</i>	'blind'	šťast- <i>n-y</i>	'happy'	křeh- <i>k-y</i>	'fragile'
mal- <i>y</i>	'small'	jem- <i>n-y</i>	'smooth'	vlh- <i>k-y</i>	'wet'
dobr- <i>y</i>	'good'	skrom- <i>n-y</i>	'modest'	leh- <i>k-y</i>	'easy'
čist- <i>y</i>	'clean'	něž- <i>n-y</i>	'tender'	měk- <i>k-y</i>	'soft'
drz- <i>y</i>	'cheeky'	sluš- <i>n-y</i>	'kind'	ten- <i>k-y</i>	'thin'
hloup- <i>y</i>	'stupid'	pěk- <i>n-y</i>	'pretty'	slad- <i>k-y</i>	'sweet'
such- <i>y</i>	'dry'	mír- <i>n-y</i>	'peaceful'	hlad- <i>k-y</i>	'smooth'



(19) Arbitrary root classes

- $a \rightarrow \emptyset$
- $a \rightarrow n / \underline{\quad} \text{Class-n}$
- $a \rightarrow k / \underline{\quad} \text{Class-k}$

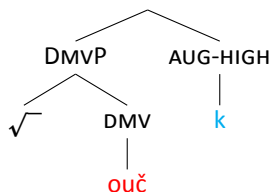
- This account does not work: diminutive morphology shows that *n* and *k* must occupy different structural positions

k follows DMV, it is structurally higher

POS	DMV	GLOSS
heb-k-ý	heb-ouč-k-ý	'smooth'
sliz-k-ý	sliz-ouč-k-ý	'slimy'
křeh-k-ý	křeh-ouč-k-ý	'fragile'
vlh-k-ý	vlh-ouč-k-ý	'wet'
leh-k-ý	leh-ouč-k-ý	'easy'
měk-k-ý	měk-ouč-k-ý	'soft'
ten-k-ý	ten-ouč-k-ý	'thin'
slad-k-ý	slad'-ouč-k-ý	'sweet'
hlad-k-ý	hlad'-ouč-k-ý	'smooth'
níz-k-ý	niz-ouč-k-ý	'low'
blíz-k-ý	bliz-ouč-k-ý	'near'
úz-k-ý	uz-ouč-k-ý	'narrow'
krát-k-ý	krat'-ouč-k-ý	'short'

k follows DMV, it is structurally higher

POS	DMV	GLOSS
heb- <i>k</i> -ý	heb-ouč- <i>k</i> -ý	'smooth'
sliz- <i>k</i> -ý	sliz-ouč- <i>k</i> -ý	'slimy'
křeh- <i>k</i> -ý	křeh-ouč- <i>k</i> -ý	'fragile'
vlh- <i>k</i> -ý	vlh-ouč- <i>k</i> -ý	'wet'
leh- <i>k</i> -ý	leh-ouč- <i>k</i> -ý	'easy'
měk- <i>k</i> -ý	měk-ouč- <i>k</i> -ý	'soft'
ten- <i>k</i> -ý	ten-ouč- <i>k</i> -ý	'thin'
slad- <i>k</i> -ý	slad'-ouč- <i>k</i> -ý	'sweet'
hlad- <i>k</i> -ý	hlad'-ouč- <i>k</i> -ý	'smooth'
níz- <i>k</i> -ý	niz-ouč- <i>k</i> -ý	'low'
blíz- <i>k</i> -ý	bliz-ouč- <i>k</i> -ý	'near'
úz- <i>k</i> -ý	uz-ouč- <i>k</i> -ý	'narrow'
krát- <i>k</i> -ý	krat'-ouč- <i>k</i> -ý	'short'

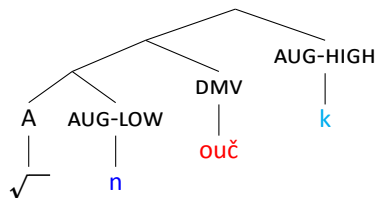


n precedes DMV, it is structurally lower

POS	DMV	GLOSS
lev- <i>n</i> -ý	lev- <i>ň-ouč-k</i> -ý	'cheap'
hod- <i>n</i> -ý	hod- <i>ň-ouč-k</i> -ý	'kind'
šťast- <i>n</i> -ý	šťast- <i>ň-ouč-k</i> -ý	'happy'
jem- <i>n</i> -ý	jem- <i>ň-ouč-k</i> -ý	'smooth'
skrom- <i>n</i> -ý	skrom- <i>ň-ouč-k</i> -ý	'modest'
něž- <i>n</i> -ý	něž- <i>ň-ouč-k</i> -ý	'gentle'
sluš- <i>n</i> -ý	sluš- <i>ň-ouč-k</i> -ý	'kind'
pěk- <i>n</i> -ý	pěk- <i>ň-ouč-k</i> -ý	'pretty'
mír- <i>n</i> -ý	mír- <i>ň-ouč-k</i> -ý	'peaceful'

n precedes DMV, it is structurally lower

POS	DMV	GLOSS
lev- <i>n</i> -ý	lev- <i>ň-ouč-k</i> -ý	'cheap'
hod- <i>n</i> -ý	hod- <i>ň-ouč-k</i> -ý	'kind'
šťast- <i>n</i> -ý	šťast- <i>ň-ouč-k</i> -ý	'happy'
jem- <i>n</i> -ý	jem- <i>ň-ouč-k</i> -ý	'smooth'
skrom- <i>n</i> -ý	skrom- <i>ň-ouč-k</i> -ý	'modest'
něž- <i>n</i> -ý	něž- <i>ň-ouč-k</i> -ý	'gentle'
sluš- <i>n</i> -ý	sluš- <i>ň-ouč-k</i> -ý	'kind'
pěk- <i>n</i> -ý	pěk- <i>ň-ouč-k</i> -ý	'pretty'
mír- <i>n</i> -ý	mír- <i>ň-ouč-k</i> -ý	'peaceful'

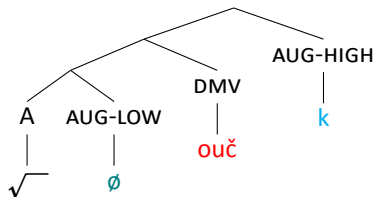


The zero class

POS	DMV	GLOSS
slab- ý	slab- ouč-k-ý	'weak'
tup- ý	tup- ouč-k-ý	'blunt'
slep- ý	slep- ouč-k-ý	'blind'
mal- ý	mal- ouč-k-ý	'small'
dobr- ý	dobr- ouč-k-ý	'good'
čist- ý	čist- ouč-k-ý	'clean'
hloup- ý	hloup- ouč-k-ý	'stupid'
such- ý	such- ouč-k-ý	'dry'

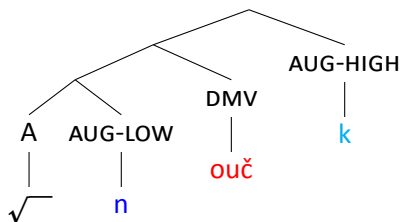
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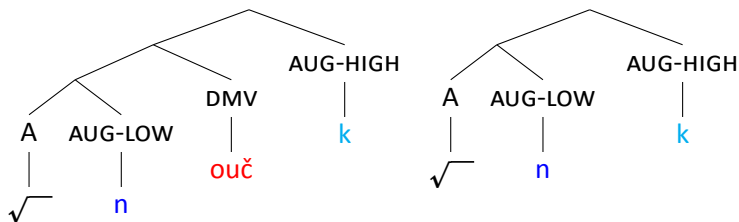
Taking stock

- ▶ In the diminutive of some roots, we see both augments
- ▶ Each of them occupies a different position



Taking stock

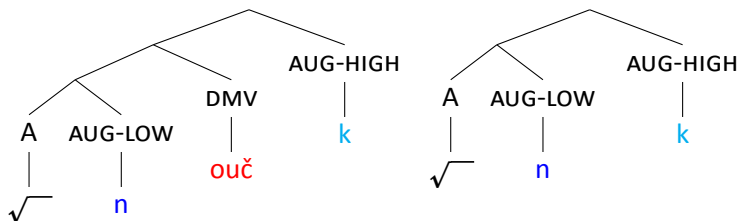
- ▶ In the diminutive of some roots, we see both augments
- ▶ Each of them occupies a different position



- ▶ Why do the augments not combine when there is no DMV?

Taking stock

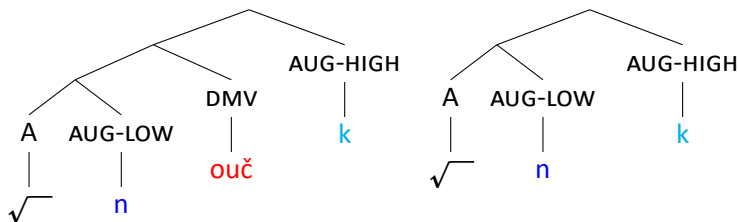
- ▶ In the diminutive of some roots, we see both augments
- ▶ Each of them occupies a different position



- ▶ Why do the augments not combine when there is no DMV?
 - ▶ What are the realization rules for AUG-LOW and AUG-HIGH?

Taking stock

- ▶ In the diminutive of some roots, we see both augments
- ▶ Each of them occupies a different position



- ▶ Why do the augments not combine when there is no DMV?
 - ▶ What are the realization rules for AUG-LOW and AUG-HIGH?
 - ▶ What features are realized by AUG-LOW and AUG-HIGH?

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Diminutives class-by-class

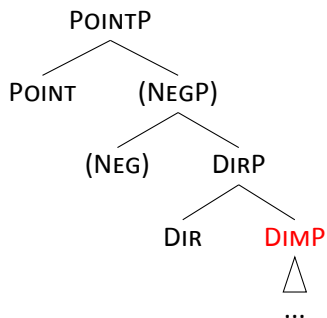
The comparative

Complex trees

Conclusions

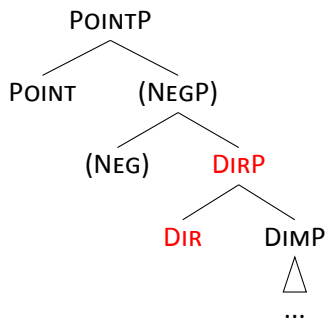
Decomposing adjectives

1. Adjectives contain a DIMENSION (DIM);



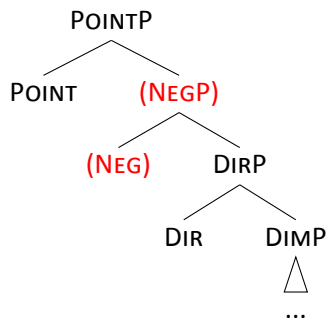
Decomposing adjectives

1. Adjectives contain a DIMENSION (DIM);
2. an ordering (DIR) of values along some dimension, providing a scale (defines gradable adjectives);



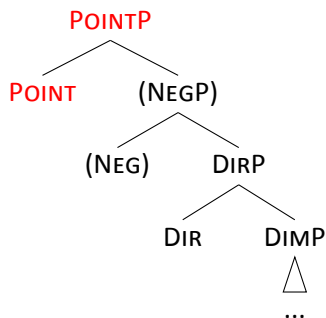
Decomposing adjectives

1. Adjectives contain a DIMENSION (DIM);
2. an ordering (DIR) of values along some dimension, providing a scale (defines gradable adjectives);
3. an optional scale reverser NEG: the same scale can be positive (*tall*) vs. negative (*short*); negative adjectives have NEG;



Decomposing adjectives

1. Adjectives contain a DIMENSION (DIM);
2. an ordering (DIR) of values along some dimension, providing a scale (defines gradable adjectives);
3. an optional scale reverser NEG: the same scale can be positive (*tall*) vs. negative (*short*); negative adjectives have NEG;
4. a POINT on the scale, representing the standard.



tall = taller than STD

a.

HEIGHT



b.

HEIGHT

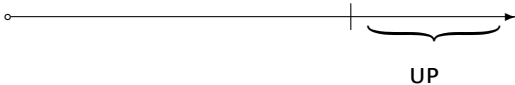
STD



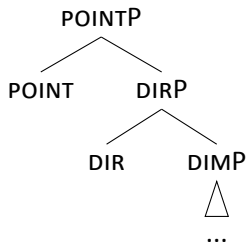
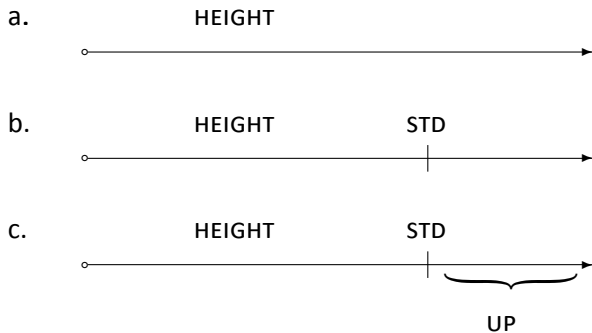
c.

HEIGHT

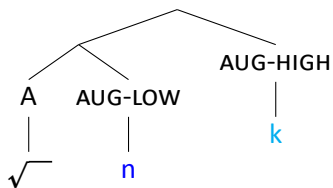
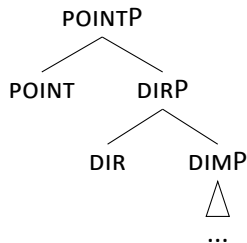
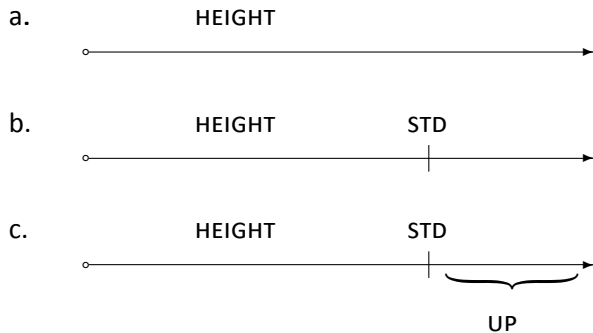
STD



tall = taller than STD



tall = taller than STD



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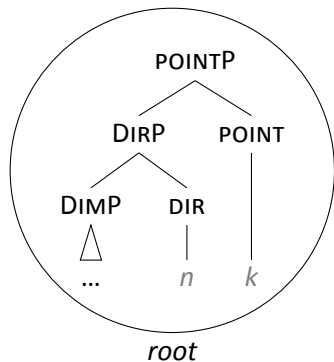
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The comparative

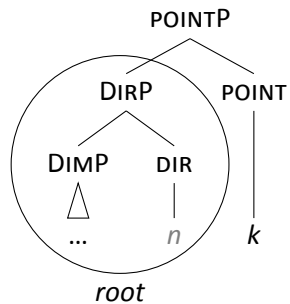
Complex trees

Conclusions

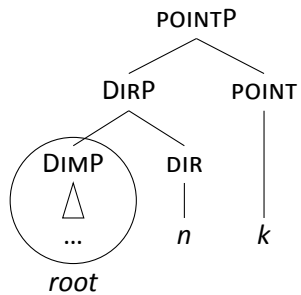
AUG= \emptyset



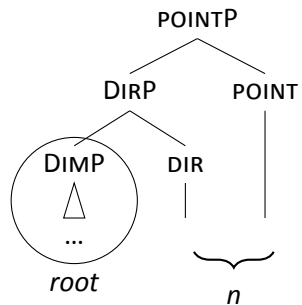
AUG=K



AUG=N



AUG=N



	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'

	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'

	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'

	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'

	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'

	DIM	DIR	(DMV)	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

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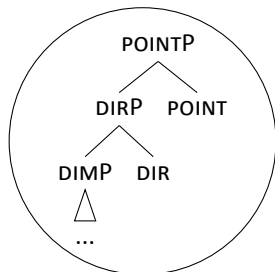
Conclusions

Class PointP

(20) tich-ý ~ tich -ouč-k-ý
silent-AGR silent-DIM-AUG-AGR

Class PointP

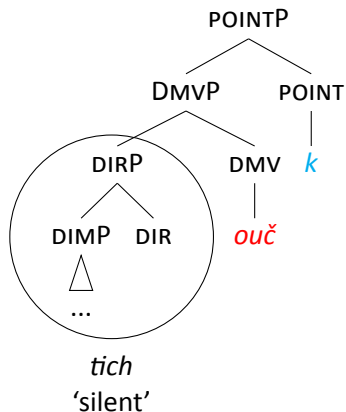
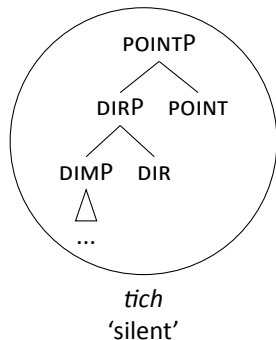
(20) *tich-ý* ~ *tich -ouč-k-ý*
silent-AGR silent-DIM-AUG-AGR



tich
'silent'

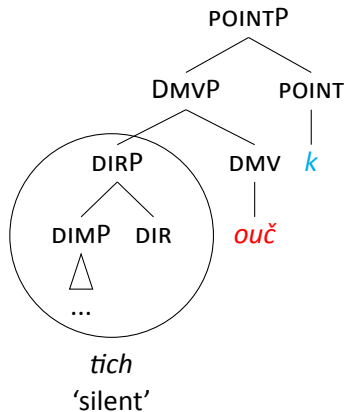
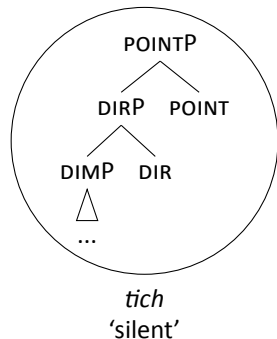
Class PointP

- (20) *tich-ý* ~ *tich -ouč-k-ý*
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Class PointP

- (20) *tich-ý* ~ *tich -ouč-k-ý*
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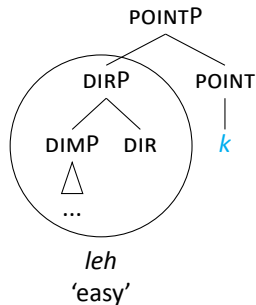
- (21) *The Superset Principle*
L can spell out S if it contains
S.

Class DirP

(22) leh-k-ý ~ leh -ouč-k-ý
easy-AUG-AGR easy-DIM-AUG-AGR

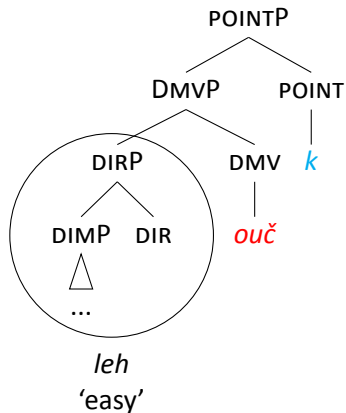
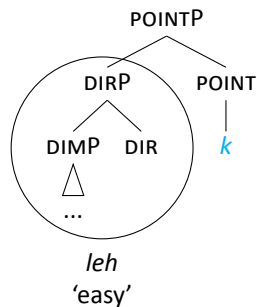
Class DirP

(22) leh-k-ý ~ leh -ouč-k-ý
easy-AUG-AGR easy-DIM-AUG-AGR



Class DirP

- (22) leh-k-ý ~ leh -ouč-k-ý
easy-AUG-AGR easy-DIM-AUG-AGR

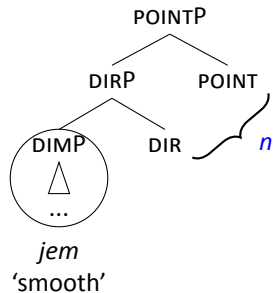


Class DimP

(23) jem-n-ý ~ jemň-ouč-k-ý
smooth-AUG-AGR smooth-AUG-DIM-AUG-AGR

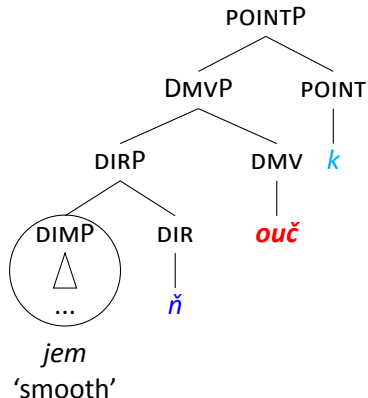
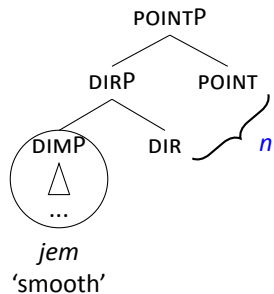
Class DimP

(23) jem-n-ý ~ jemň-ouč-k-ý
smooth-AUG-AGR smooth-AUG-DIM-AUG-AGR



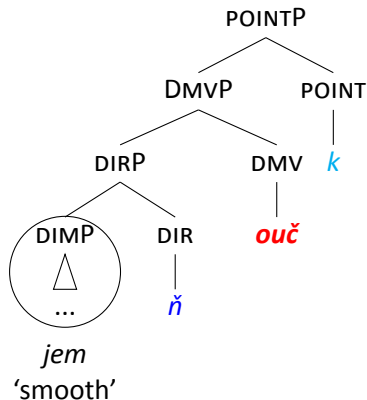
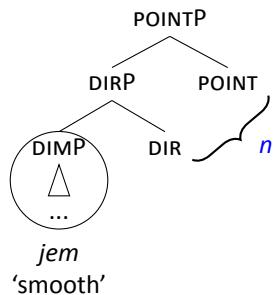
Class DimP

(23) jem-n-ý ~ jemň-ouč-k-ý
smooth-AUG-AGR smooth-AUG-DIM-AUG-AGR



Class DimP

- (23) jem-n-ý ~ jemň-ouč-k-ý
smooth-AUG-AGR smooth-AUG-DIM-AUG-AGR



- (24) *The Superset Principle*
L can spell out S if it contains S.

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

- ▶ gradable adjectives have a rich internal structure

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

- ▶ gradable adjectives have a rich internal structure
- ▶ roots have different sizes

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

- ▶ gradable adjectives have a rich internal structure
- ▶ roots have different sizes
- ▶ the augments n/k differ in feature specification:
 - ▶ n = DIR+POINT
 - ▶ k = POINT

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

- ▶ gradable adjectives have a rich internal structure
- ▶ roots have different sizes
- ▶ the augments n/k differ in feature specification:
 - ▶ n = DIR+POINT
 - ▶ k = POINT
- ▶ Selection is 'arbitrary' – but it has no need for arbitrary features of the sort 'class-n'

	DIM	DIR	DMV	POINT	GLOSS
tich-ý	tich				'silent'
tich-ý	tich		ouč	k	'silent'
leh-k-ý	leh			k	'light'
leh-k-ý	leh		ouč	k	'light'
jem-n-ý	jem	n			'smooth'
jem-n-ý	jem	n	ouč	k	'smooth'

- ▶ gradable adjectives have a rich internal structure
- ▶ roots have different sizes
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 - ▶ n = DIR+POINT
 - ▶ k = POINT
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Class I a. čir- ý čiř- **ej-š-í** 'pure'

Class I	a.	čir- ý	čiř-	ej-š-í	'pure'
	b.	star- ý	star-	š-í	'old'

Class I	a.	čir- ý	čiř- ej-š-í	'pure'
	b.	star- ý	star- š-í	'old'
Class II		žádouc- í	žádouc-n-ěj-š-í	'desirable'

Class I	a.	čir- ý	čiř- ej-š-í	'pure'
	b.	star- ý	star- š-í	'old'
Class II		žádouc- í	žádouc-n-ěj-š-í	'desirable'
Class III		pěk-n-ý	pěk-n-ěj-š-í	'prett-y'

Class I	a.	čir- ý	čiř- ej-š-í	‘pure’
	b.	star- ý	star- š-í	‘old’
Class II		žádouc- í	žádouc- n-ěj-š-í	‘desirable’
Class III		pěk- n-ý	pěk- n-ěj-š-í	‘prett-y’
Class IV	a.	pozd- n-í	pozd- -ěj-š-í	‘late’

Class I	a.	čir- ý	čiř- ej-š-í	‘pure’
	b.	star- ý	star- š-í	‘old’
Class II		žádouc- í	žádouc- n-ěj-š-í	‘desirable’
Class III		pěk- n-ý	pěk- n-ěj-š-í	‘prett-y’
Class IV	a.	pozd- n-í	pozd- -ěj-š-í	‘late’
	b.	snad- n-ý	snaz- š-í	‘easy’

Class I	a.	čir- ý	čiř- ej-š-í	‘pure’
	b.	star- ý	star- š-í	‘old’
Class II		žádouc- í	žádouc-n-ěj-š-í	‘desirable’
Class III		pěk-n-ý	pěk-n-ěj-š-í	‘prett-y’
Class IV	a.	pozd-n-í	pozd- -ěj-š-í	‘late’
	b.	snad-n-ý	snaz- š-í	‘easy’
Class V		hez-k-ý	hez-k -š-í	‘prett-y’

Class I	a.	čir- ý	čir- ej-š-í	‘pure’
	b.	star- ý	star- š-í	‘old’
Class II		žádouc- í	žádouc-n-ěj-š-í	‘desirable’
Class III		pěk-n-ý	pěk-n-ěj-š-í	‘prett-y’
Class IV	a.	pozd-n-í	pozd- -ěj-š-í	‘late’
	b.	snad-n-ý	snaz- š-í	‘easy’
Class V		hez-k-ý	hez-k -š-í	‘prett-y’
Class VI	a.	brz-k-ý	dřív- ěj-š-í	‘early’

Class I	a.	čir- ý	čiř- ej-š-í	‘pure’
	b.	star- ý	star- š-í	‘old’
Class II		žádouc- í	žádouc-n-ěj-š-í	‘desirable’
Class III		pěk-n-ý	pěk-n-ěj-š-í	‘prett-y’
Class IV	a.	pozd-n-í	pozd- -ěj-š-í	‘late’
	b.	snad-n-ý	snaz- š-í	‘easy’
Class V		hez-k-ý	hez-k -š-í	‘prett-y’
Class VI	a.	brz-k-ý	dřív- ěj-š-í	‘early’
	b.	slad-k-ý	slad- š-í	‘sweet’

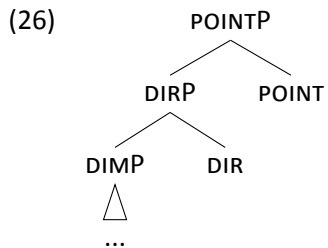
	POS	CMPR
I	∅	∅
II	∅	n
III	n	n
IV	n	∅
V	k	k
VI	k	∅

	POS	CMPR
I	∅	∅
II	∅	n
III	n	n
IV	n	∅
V	k	k
VI	k	∅

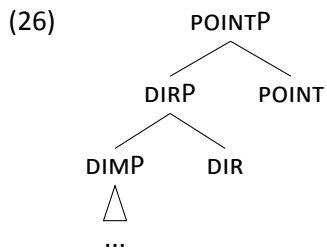
(25) Grano and Davis (2018)

Universally, the comparative form of a gradable adjective is derived from or identical to its positive form.

The structure of the comparative



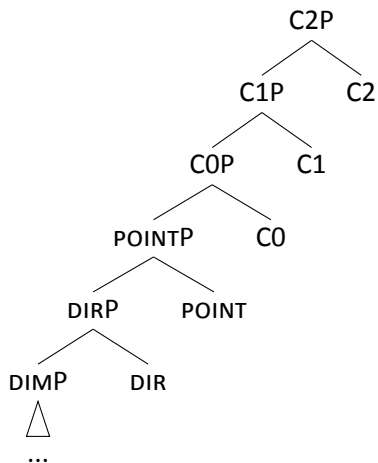
The structure of the comparative



- (27) žádouc-í ~ žádouc-n-ěj-š-í
desirable-AGR desirable-AUG-CMPR-CMPR-AGR
'desirable ~ more desirable'

The structure of the comparative

(28)



Some augment distributions can be reduced to root size

	POS	CMPR
DimP	n	n-ěj-š
DirP	k	k -š
PointP	∅	n-ěj-š
COP	∅	∅-ěj-š
C1P	∅	∅ -š

Some augment distributions can be reduced to root size

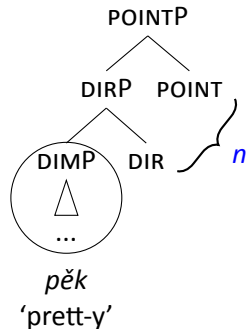
	POS	CMPR
DimP	n	n-ěj-š
DirP	k	k -š
PointP	∅	n-ěj-š
COP	∅	∅-ěj-š
C1P	∅	∅ -š
??	n	∅-ěj-š
??	n	∅ -š
??	k	∅ -š

Class DIMP

(29) pěk-n-ý ~ pěk-n-ěj-š-í
prett-AUG-AGR prett-AUG-CMPR-CMPR-AGR

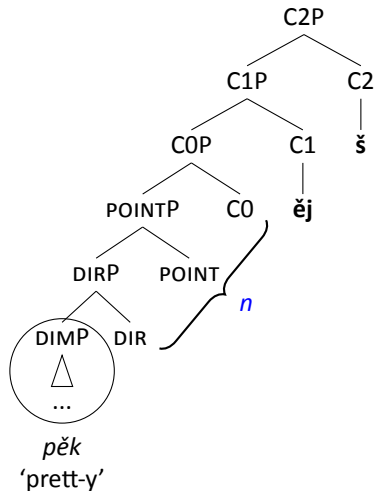
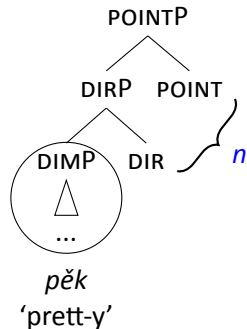
Class DIMP

(29) pěk-n-ý ~ pěk-n-ěj-š-í
prett-AUG-AGR prett-AUG-CMPR-CMPR-AGR



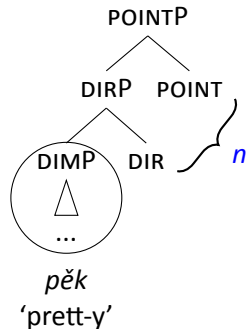
Class DIMP

- (29) pěk-n-ý ~ pěk-n-ěj-ší
prett-AUG-AGR prett-AUG-CMPR-CMPR-AGR

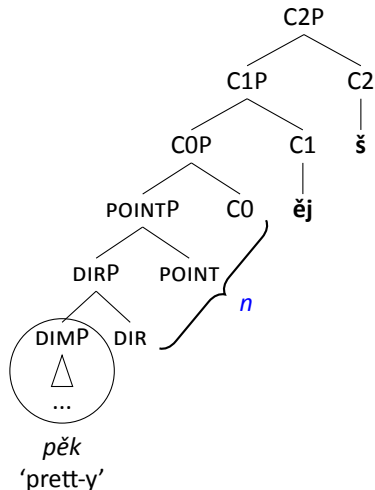


Class DIMP

- (29) pěk-n-ý ~ pěk-n-ěj-ší
prett-AUG-AGR prett-AUG-CMPR-CMPR-AGR



- (30) *The Superset Principle*
L can spell out S if it
contains S.

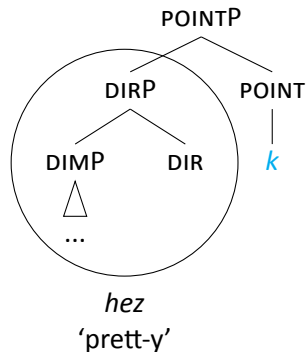


Class DIRP

(31) hez-k-ý ~ hez-k-š-í
 prett-AUG-AGR prett-AUG-CMPR-AGR

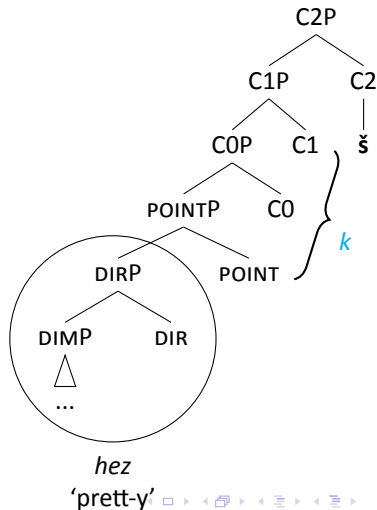
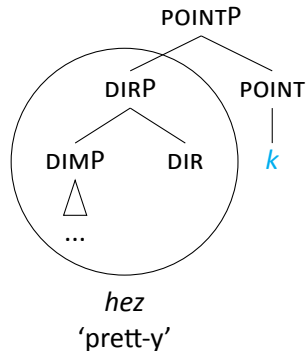
Class DIRP

- (31) hez-k-ý ~ hez-k-š-í
 prett-AUG-AGR prett-AUG-CMPR-AGR



Class DIRP

- (31) hez-k-ý ~ hez-k-š-í
prett-AUG-AGR prett-AUG-CMPR-AGR

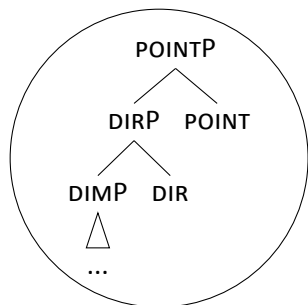


Class POINTP

- (32) žádouc-í ~ žádouc-**n-ěj-š-í**
desirable-AGR desirable-AUG-CMPR-CMPR-AGR
'desirable ~ more desirable'

Class POINTP

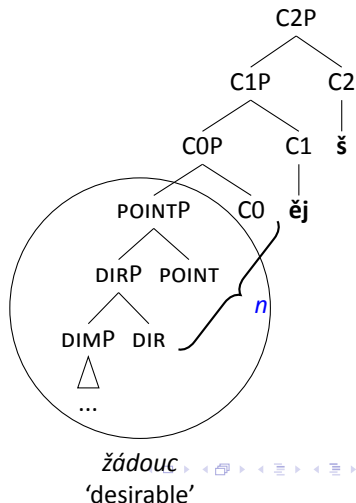
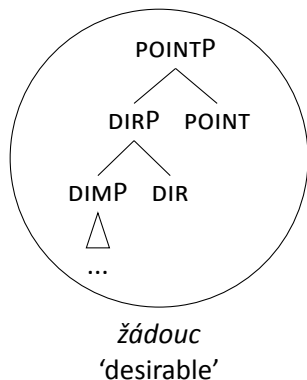
- (32) žádouc-í ~ žádouc-n-ěj-š-í
desirable-AGR desirable-AUG-CMPR-CMPR-AGR
'desirable ~ more desirable'



žádouc
'desirable'

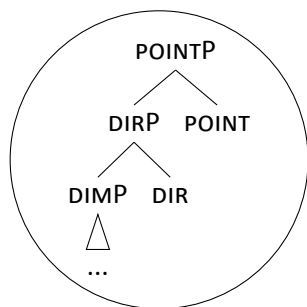
Class POINTP

- (32) žádouc-í ~ žádouc-n-ěj-š-í
desirable-AGR desirable-AUG-CMPR-CMPR-AGR
'desirable ~ more desirable'

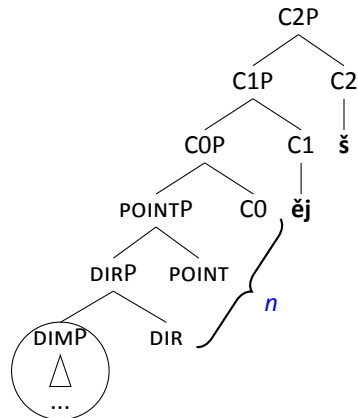


Class POINTP

- (26) žádouc-í ~ žádouc-n-ěj-š-í
desirable-AGR desirable-AUG-CMPR-CMPR-AGR



žádouc
'desirable'



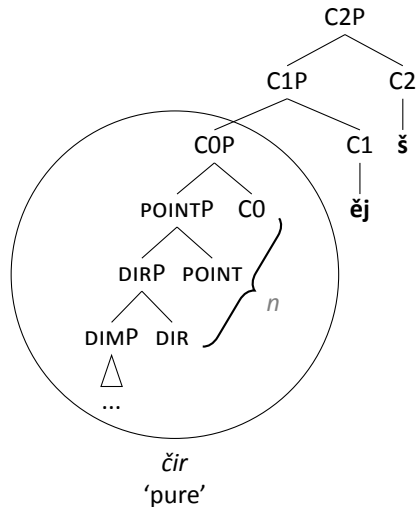
žádouc
'desirable'

Class COP

(33) čir-ý ~ čir̄ -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR

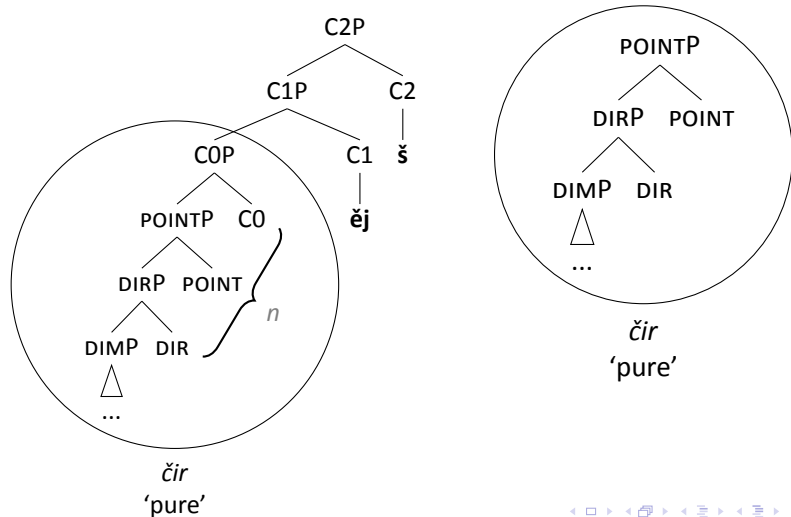
Class COP

- (33) čir-ý ~ čir -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR



Class COP

- (33) čir-ý ~ čir -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR

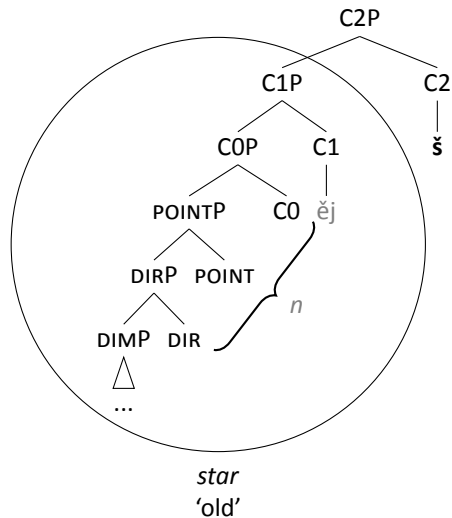


Class C1P

- (34) star-ý ~ star -š-í
old-AGR old-CMPR-AGR
'old ~ older'

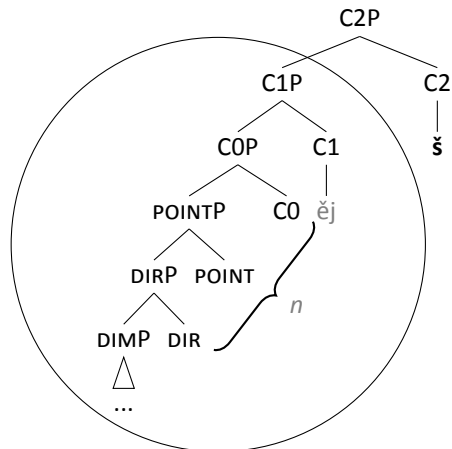
Class C1P

- (34) star-ý ~ star -š-í
old-AGR old-CMPR-AGR
'old ~ older'

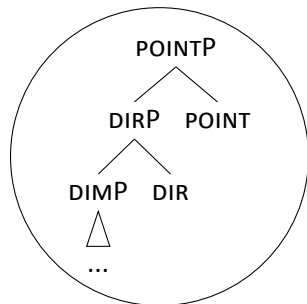


Class C1P

- (34) star-ý ~ star -š-í
old-AGR old-CMPR-AGR
'old ~ older'



star
'old'



star
'old'

Outline

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Augments as a function of root size: the intuition

Diminutives class-by-class

The comparative

Complex trees

Conclusions

Some augment distributions cannot be reduced to root size

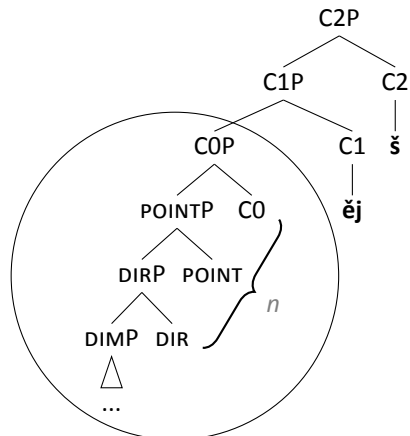
	POS	CMPR
DimP	n	n-ěj-š
DirP	k	k -š
PointP	∅	n-ěj-š
COP	∅	∅-ěj-š
C1P	∅	∅ -š
X	n	∅-ěj-š
Y	n	∅ -š
Z	k	∅ -š

Class X

(35) pozd-**n**-í ~ pozd -**ěj-š**-í
late-N-AGR late-CMP-CMP-AGR

Class X

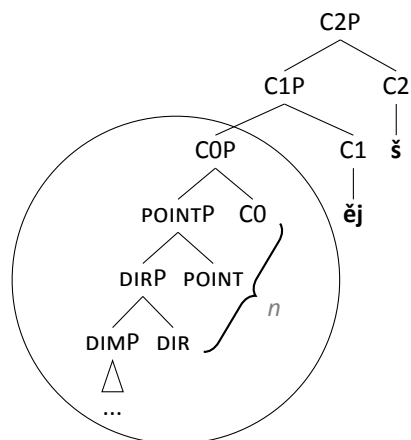
(35) *pozd-n-í* ~ *pozd -ěj-š-í*
late-N-AGR ~ late-CMP-CMP-AGR



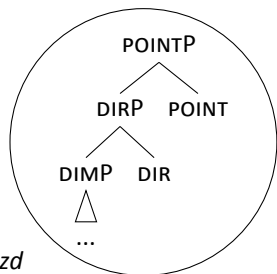
pozd
'late'

Class X

(35) *pozd-n-í* ~ *pozd -ěj-š-í*
 late-N-AGR ~ late-CMP-CMP-AGR



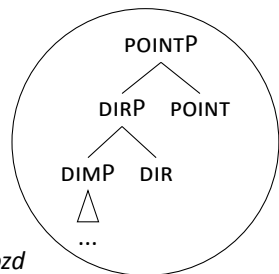
pozd
 'late'



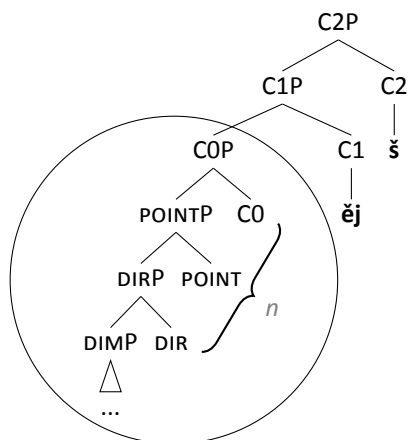
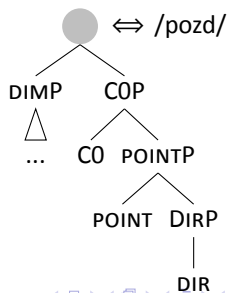
**pozd*
 'late'

Class X

(35) pozd-n-í ~ pozd -ěj-š-í
 late-N-AGR ~ late-CMP-CMP-AGR



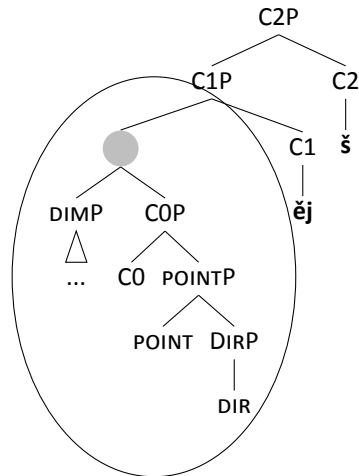
**pozd*
 'late'



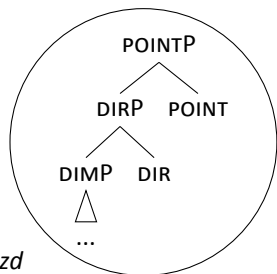
pozd
 'late'

Class X

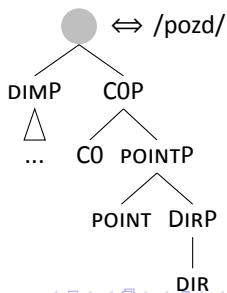
(35) *pozd-n-í* ~ *pozd -ěj-š-í*
 late-N-AGR ~ late-CMP-CMP-AGR



pozd
 'late'

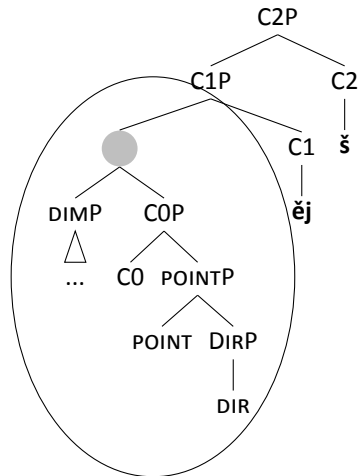


**pozd*
 'late'

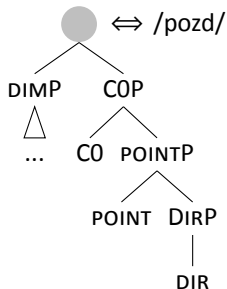
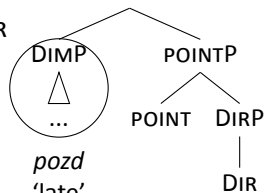


Class X

(35) *pozd-n-í* ~ *pozd -ěj-š-í*
 late-N-AGR ~ late-CMP-CMP-AGR

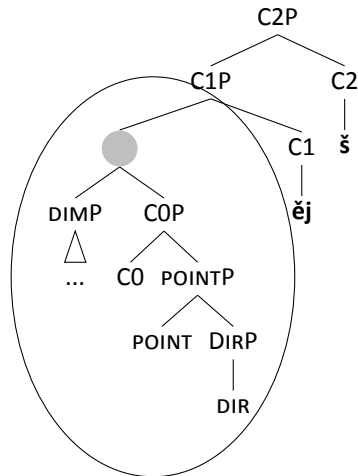


pozd
 'late'

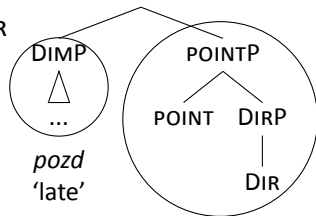


Class X

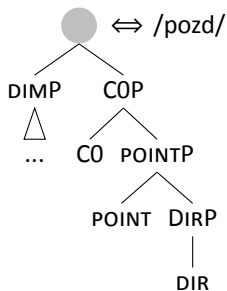
(35) *pozd-n-í* ~ *pozd -ěj-š-í*
 late-N-AGR ~ late-CMP-CMP-AGR



pozd
 'late'



n

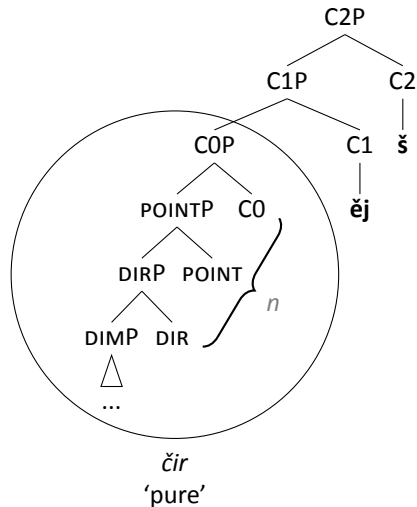


Class COP: not all roots contain movement

- (36) čir-ý ~ čir̄ -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR

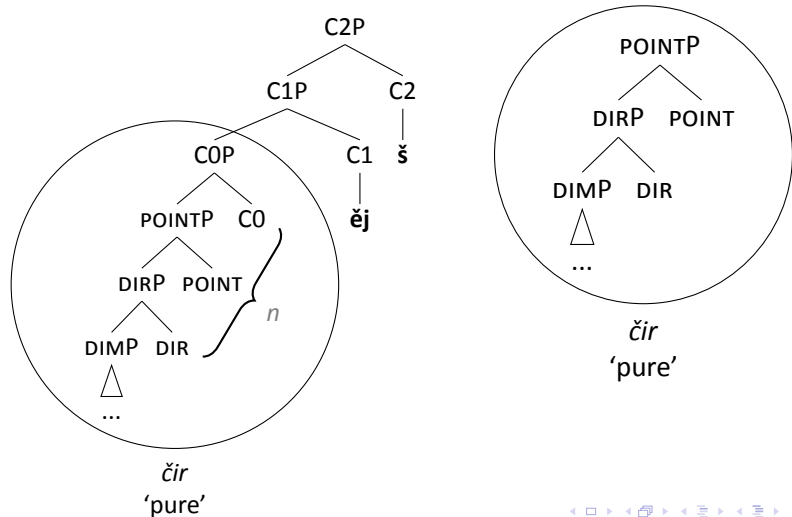
Class COP: not all roots contain movement

- (36) čir-ý ~ čiṛ -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR



Class COP: not all roots contain movement

- (36) čir-ý ~ čir -ěj-š-í
pure-AGR pure-CMPR-CMPR-AGR

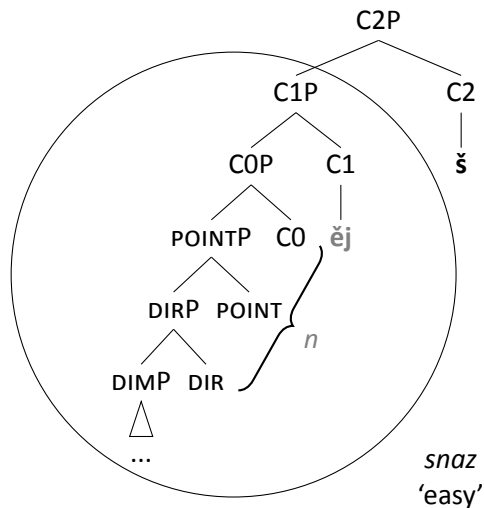


Class Y

(37) snad-n-ý ~ snaz -š-í
easy-N-AGR easy-CMPR-AGR

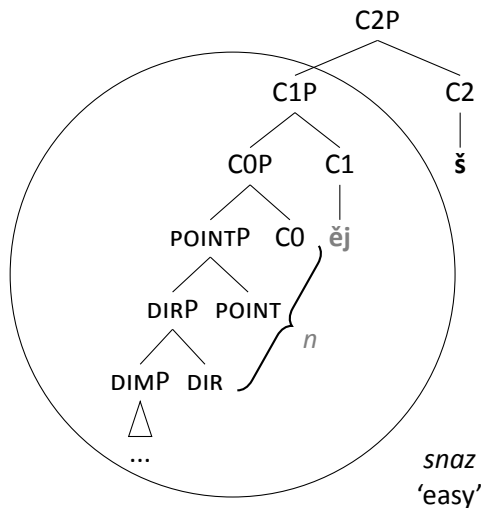
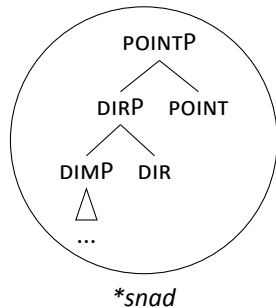
Class Y

- (37) snad-n-ý ~ snaz -š-í
easy-N-AGR easy-CMPR-AGR



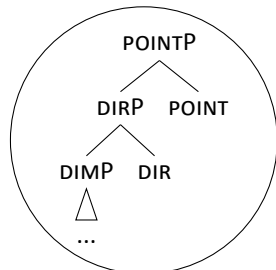
Class Y

(37) snad-n-ý ~ snaz -š-í
 easy-N-AGR ~ easy-CMPR-AGR



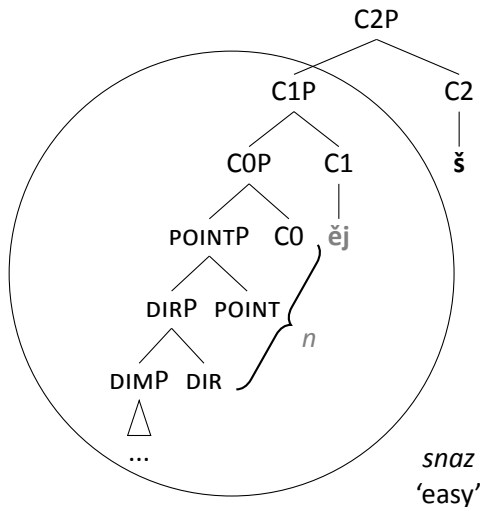
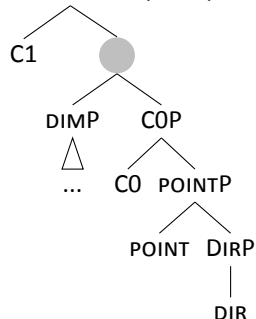
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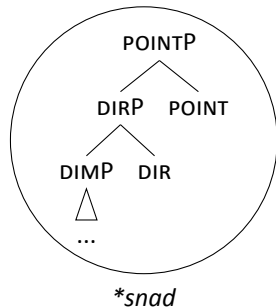
**snad*

C1P \Leftrightarrow /snad/

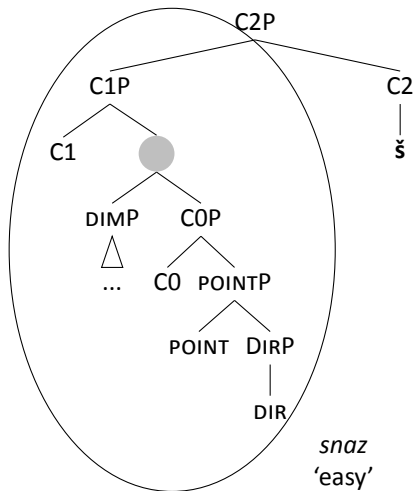
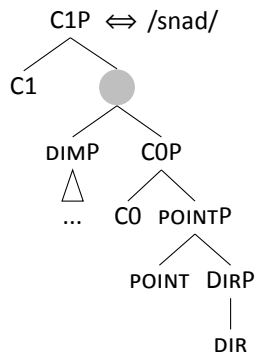


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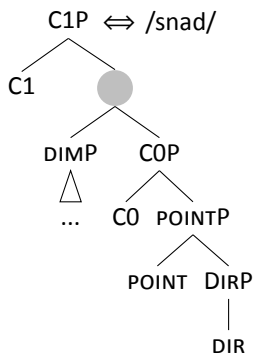
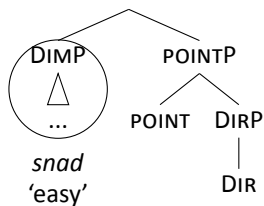
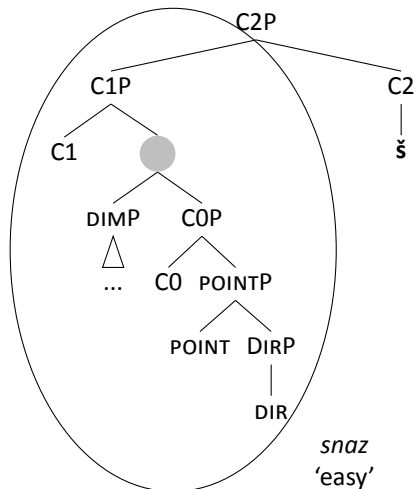
**snad*



snaz
 'easy'

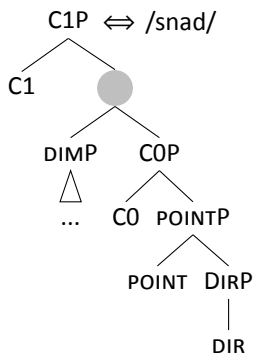
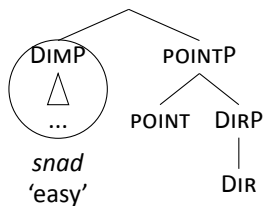
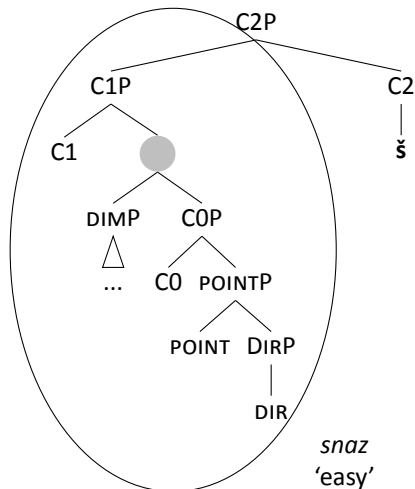
Class Y

(37) *snad-n-ý* ~ *snaz -š-í*
 easy-N-AGR ~ easy-CMPR-AGR



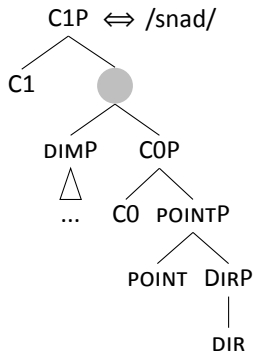
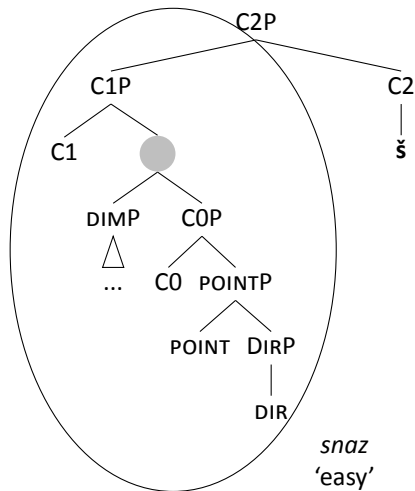
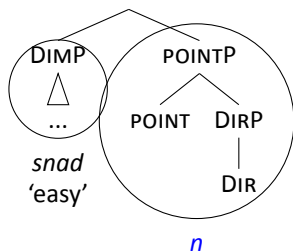
Class Y

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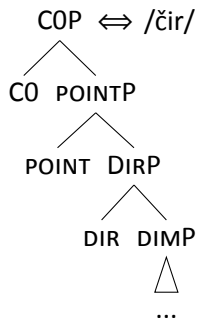


Class Y

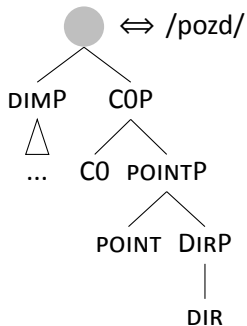
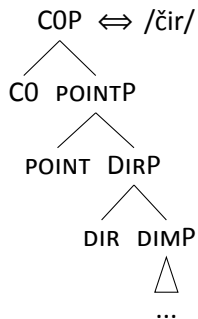
(37) *snad-n-ý* ~ *snaz -š-í*
 easy-N-AGR ~ easy-CMPR-AGR



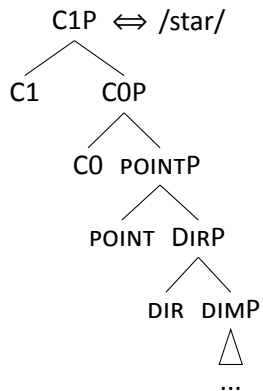
Comparing classes



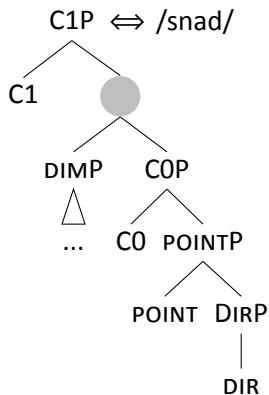
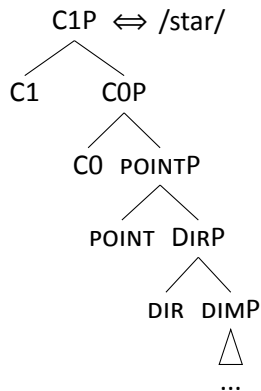
Comparing classes



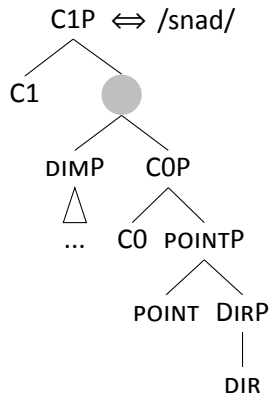
Comparing classes



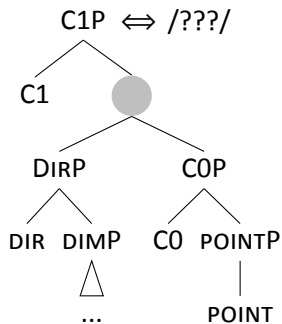
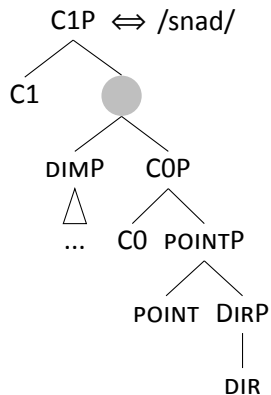
Comparing classes



Hypothetical classes



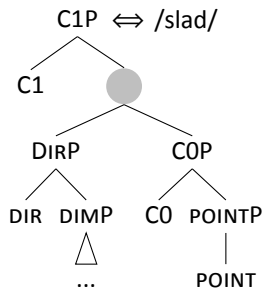
Hypothetical classes



Class Z

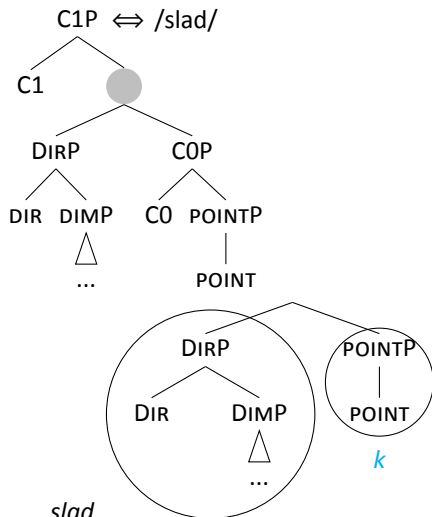
(38) slad-k-ý
sweet-AUG-AGR

~ slad -š-í
sweet-CMPR-AGR



Class Z

(38) slad-k-ý ~ slad -š-í
sweet-AUG-AGR sweet-CMPR-AGR

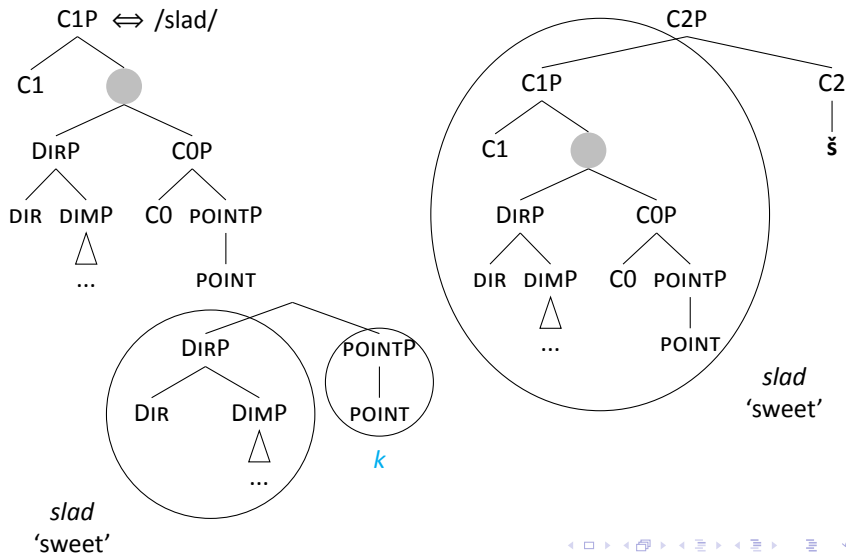


slad
'sweet'

Class Z

(38) slad-k-ý
sweet-AUG-AGR

~ slad -š-í
sweet-CMPR-AGR



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- ▶ Three types of positive degree: $\emptyset \sim n \sim k$
- ▶ Different structural height revealed by diminutives
- ▶ Account
 - ▶ Decomposition into three components (DIM, DIR, POINT)
 - ▶ Arbitrary root size
 - ▶ Explains why DMV is always followed by k
- ▶ Each class has at least two different ways of forming a comparative (augments can be missing)
 - ▶ Root size + shape

Thank you!

References

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