

What's your name, what's your title On the morphosyntax of Czech academic degrees

Pavel Caha

Masaryk University (Brno)

GuidoFest
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The main intuition

Polish

Constituent lexicalisation

Taking stock

Conclusions

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Marking Academic Degrees in Czech

(1) Czech

a. **Bc.** Jan Novák (~ bachelor)

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- a. **Bc.** Jan Novák (~ bachelor)
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(2) Polish

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(4) The main generalisations

- a. higher titles may contain lower ones, never the other way round

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(4) The main generalisations

- a. higher titles may contain lower ones, never the other way round
- b. However, it is unpredictable which title
replaces/overrides the previous one, and which one
stacks on top of the previous one

POS-CMPR-SPRL (Bobaljik 2012)

- (5) a. higher degrees may contain lower ones, not the other way round

POS-CMPR-SPRL (Bobaljik 2012)

- (5) a. higher degrees may contain lower ones, not the other way round
- b. it is unpredictable which degree *overrides* the previous one, and which one *stacks*

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- (6) Persian (Parvaneh Danesh, p.c.)
 - a. bolænd
tall

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 - a. bolænd
tall
 - b. bolænd -tær
tall CMPR

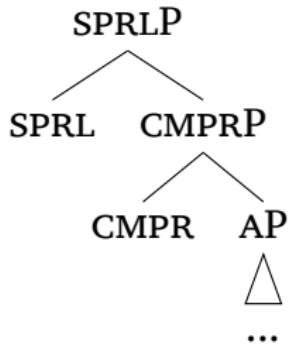
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- a. bolænd
tall
 - b. bolænd -tær
tall CMPR
 - c. bolænd -tær -in
tall CMPR SPRL

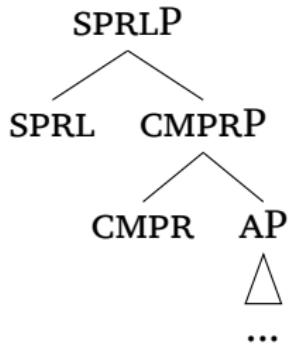
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 - a. bolænd
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tall CMPR SPRL
- (7) English
 - a. fast
 - b. fast -er
 - c. fast -est

(8)



(8)

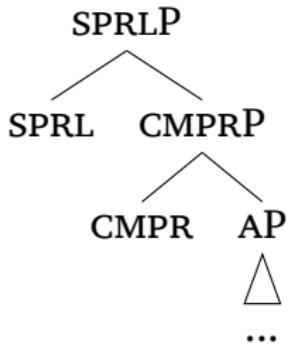


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Table I: The lexicalisation table

ADJ	CMPR	SPRL
bolænd		
bolænd	tær	
bolænd	tær	in

(8)



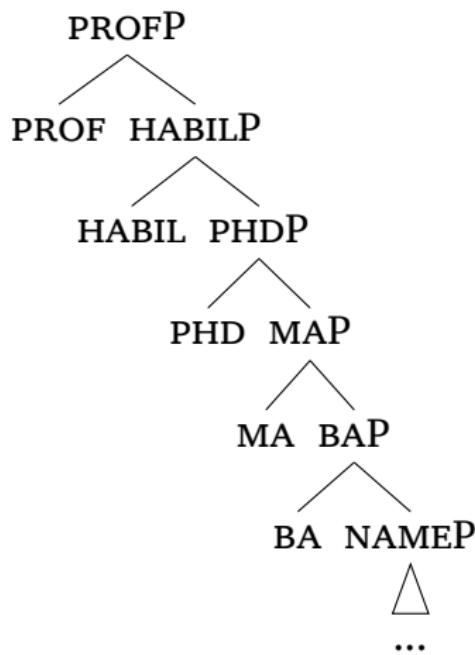
(9) Table I: The lexicalisation table

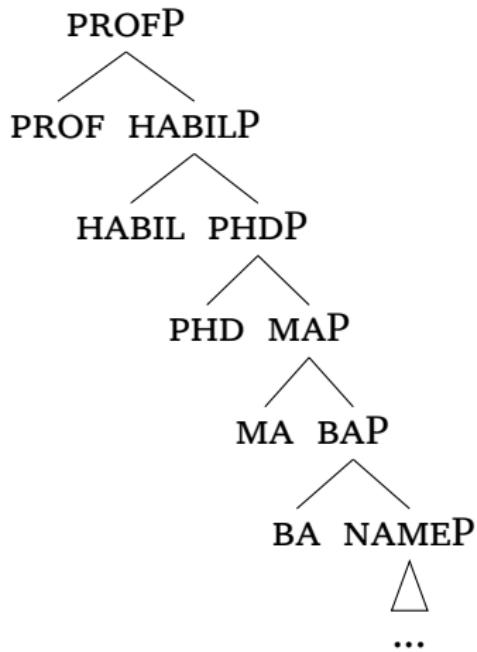
ADJ	CMPR	SPRL
bolænd		
bolænd	tær	
bolænd	tær	in

(10)

Czech

ADJ	CMPR	SPRL
fast		
fast	er	
fast		est

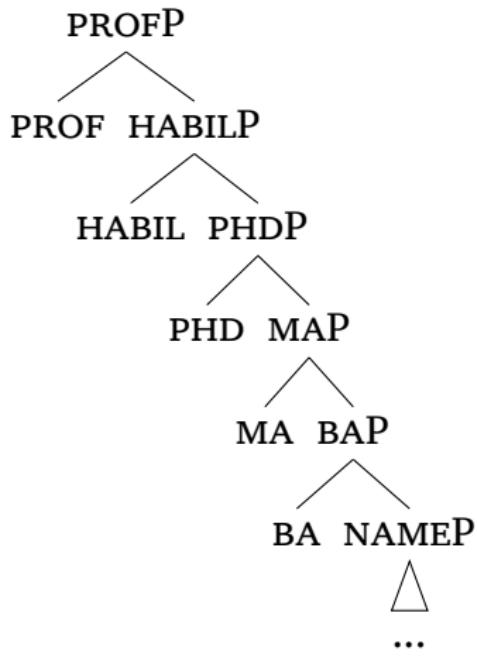




Czech

PROF	HABIL	PHD	MA	BA	NAME
				Bc	JN
			Mgr.	JN	
		PhD	Mgr.	JN	
	doc	PhD	Mgr.	JN	
prof	PhD	Mgr.	JN		

Polish

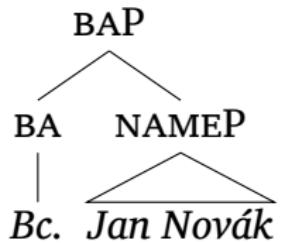


Czech

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Polish

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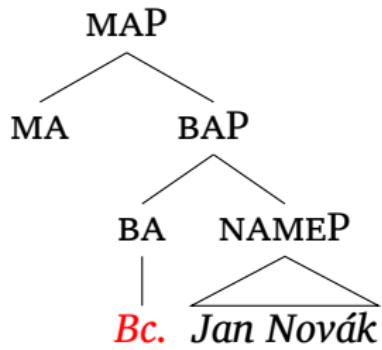


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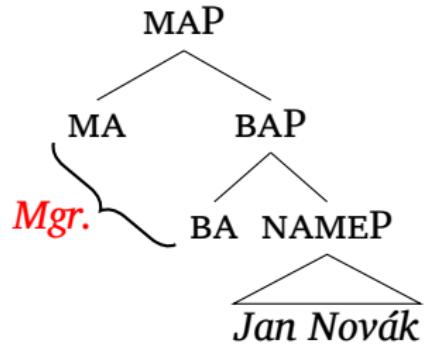


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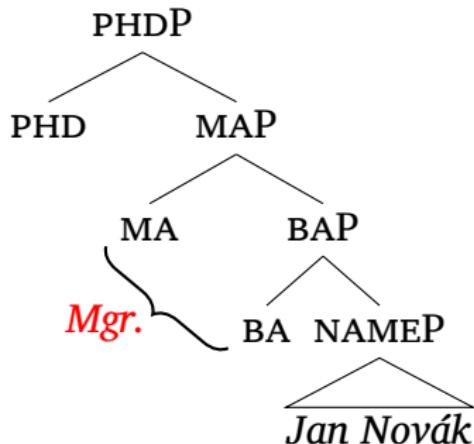


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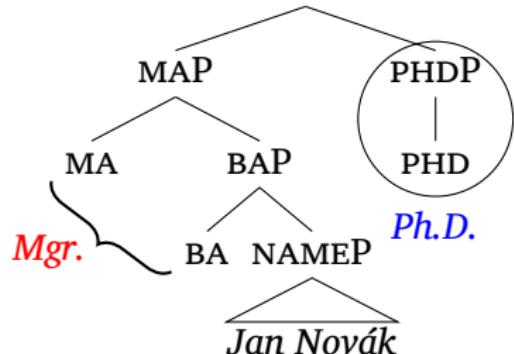


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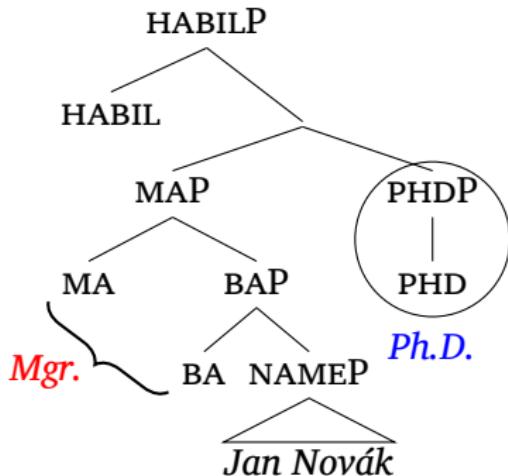


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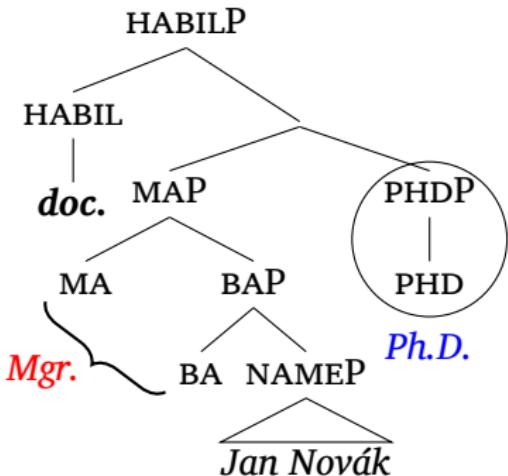


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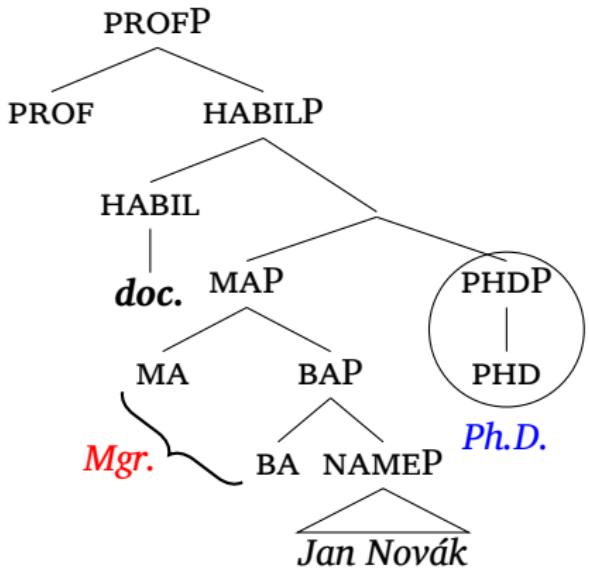


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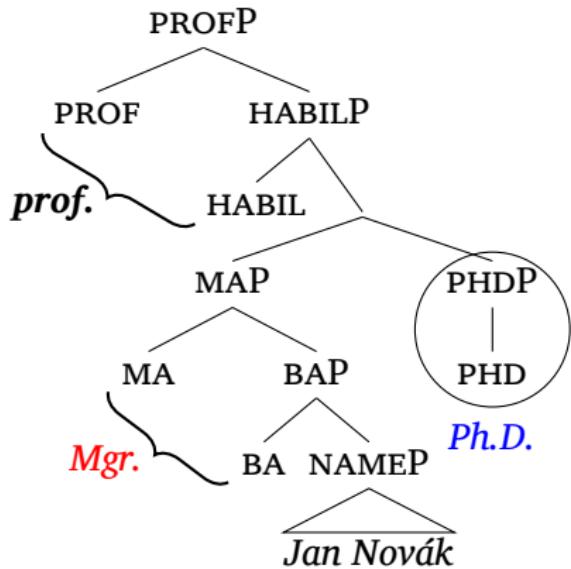


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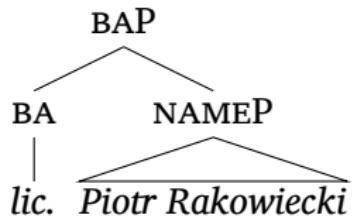
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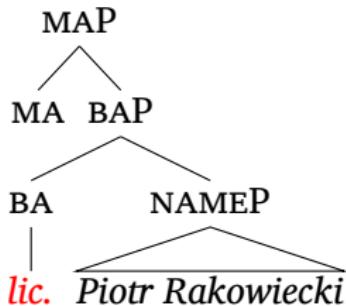


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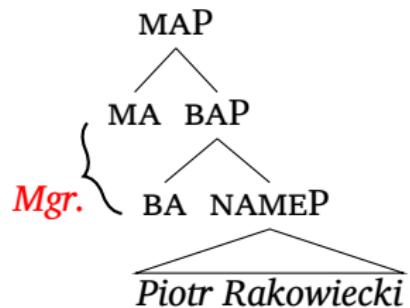


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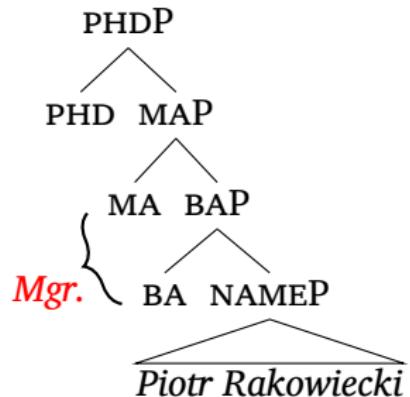


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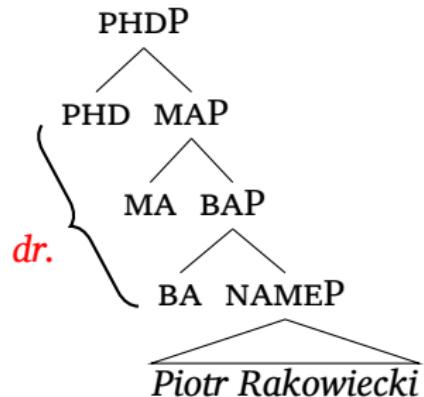


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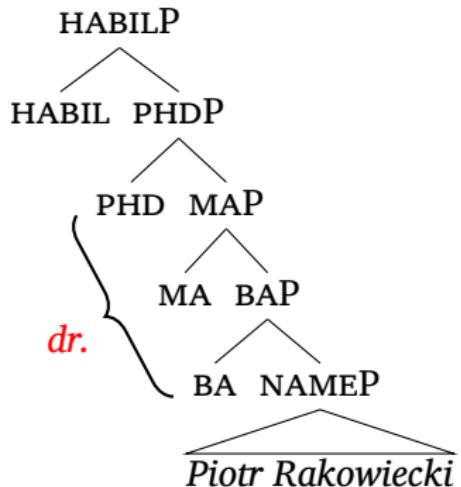


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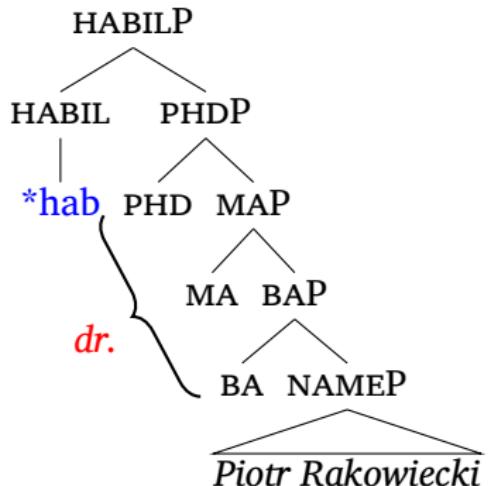


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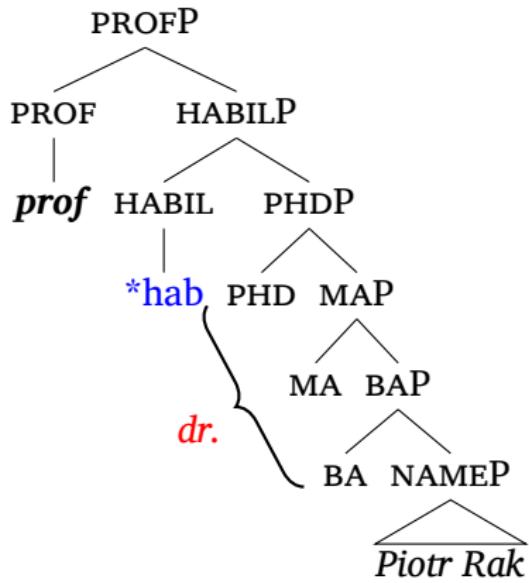


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Intro

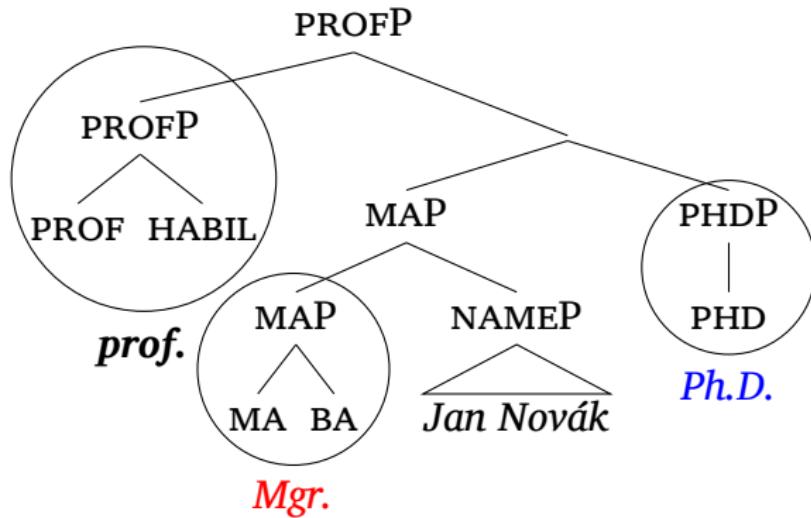
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Field of Study

(11) Czech

a. **Bc.** Jan Novák (~ bachelor)

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)

Field of Study

- (11) Czech
- a. **Bc.** Jan Novák (~ bachelor)
 - b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
 - c. **Ing.** Jan Novák, **Ph.D.**

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc. Ing.** Jan Novák, **Ph.D.**

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc. Ing.** Jan Novák, **Ph.D.**

(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc. Ing.** Jan Novák, **Ph.D.**

(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Mgr.** Jan Novák (~ master)

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc.** **Ing.** Jan Novák, **Ph.D.**

(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Mgr.** Jan Novák (~ master)
- c. **MUDr.** Jan Novák (~ medical doctor)

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc. Ing.** Jan Novák, **Ph.D.**

(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Mgr.** Jan Novák (~ master)
- c. **MUDr.** Jan Novák (~ medical doctor)
- d. **MUDr.** Jan Novák, **Ph.D.** (~ PhD)

Field of Study

(11) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
- c. **Ing.** Jan Novák, **Ph.D.**
- d. **doc.** **Ing.** Jan Novák, **Ph.D.**

(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Mgr.** Jan Novák (~ master)
- c. **MUDr.** Jan Novák (~ medical doctor)
- d. **MUDr.** Jan Novák, **Ph.D.** (~ PhD)

(13) The dr. titles

- a. **MUDr.** (medicinae universae doctor, medicine)

Field of Study

- (11) Czech
- a. **Bc.** Jan Novák (~ bachelor)
 - b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
 - c. **Ing.** Jan Novák, **Ph.D.**
 - d. **doc.** **Ing.** Jan Novák, **Ph.D.**
- (12) Czech
- a. **Bc.** Jan Novák (~ bachelor)
 - b. **Mgr.** Jan Novák (~ master)
 - c. **MUDr.** Jan Novák (~ medical doctor)
 - d. **MUDr.** Jan Novák, **Ph.D.** (~ PhD)
- (13) The dr. titles
- a. **MUDr.** (medicinae universae doctor, medicine)
 - b. **JUDr.** (juris utriusque doctor, law)

Field of Study

- (11) Czech
- a. **Bc.** Jan Novák (~ bachelor)
 - b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
 - c. **Ing.** Jan Novák, **Ph.D.**
 - d. **doc.** **Ing.** Jan Novák, **Ph.D.**
- (12) Czech
- a. **Bc.** Jan Novák (~ bachelor)
 - b. **Mgr.** Jan Novák (~ master)
 - c. **MUDr.** Jan Novák (~ medical doctor)
 - d. **MUDr.** Jan Novák, **Ph.D.** (~ PhD)
- (13) The dr. titles
- a. **MUDr.** (medicinae universae doctor, medicine)
 - b. **JUDr.** (juris utriusque doctor, law)
 - c. **PhDr.** (philosophiae doctor, humanities)

Field of Study

(11) Czech

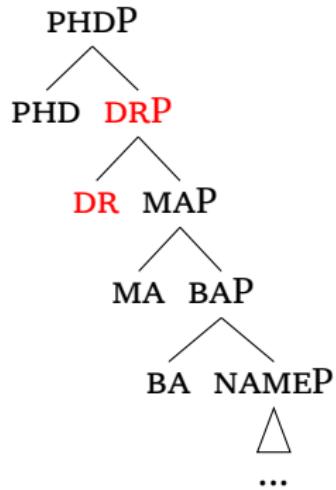
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- b. **Ing.** Jan Novák (Engineer, ~ master in technical sciences, economy, agriculture, forestry)
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- d. **doc.** **Ing.** Jan Novák, **Ph.D.**

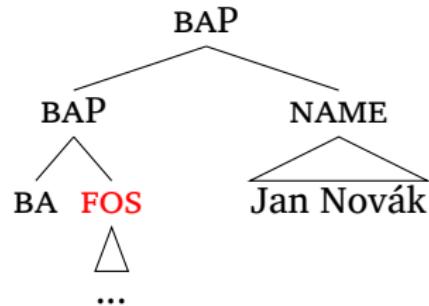
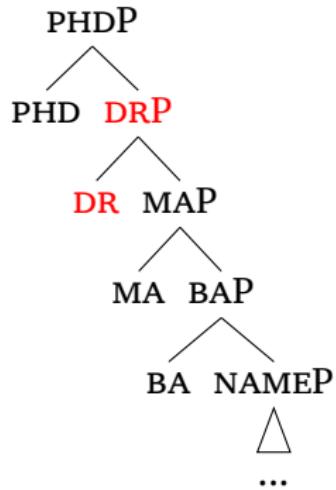
(12) Czech

- a. **Bc.** Jan Novák (~ bachelor)
- b. **Mgr.** Jan Novák (~ master)
- c. **MUDr.** Jan Novák (~ medical doctor)
- d. **MUDr.** Jan Novák, **Ph.D.** (~ PhD)

(13) The dr. titles

- a. **MUDr.** (medicinae universae doctor, medicine)
- b. **JUDr.** (juris utriusque doctor, law)
- c. **PhDr.** (philosophiae doctor, humanities)
- d. **RNDr.** (rerum naturalium doctor, natural sciences)





Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		Dr.

MAP \Leftrightarrow Mgr.



BA FOSP

...

BAP \Leftrightarrow Bc.



...

DRP \Leftrightarrow dr



MAP --> MA

...

BA

FOSP \Leftrightarrow MU.

...

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		Dr.

MAP \leftrightarrow Mgr.

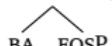


BA FOSP



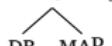
...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MAP
MA BAP



FOSP \leftrightarrow MU.



...

FOSP



...

(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		

MAP \leftrightarrow Mgr.



BA FOSP



...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MAP
MA BAP



fosp \leftrightarrow MU.



...

FOSP



...

(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		Dr.

MAP \leftrightarrow Mgr.



BA FOSP



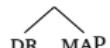
...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MA BAP



BA

FOSP \leftrightarrow MU.



...



MU

(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.	Dr.	

MAP \leftrightarrow Mgr.



BA FOSP



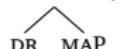
...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MA BAP

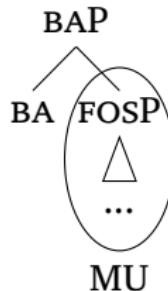
|

BA

FOSP \leftrightarrow MU.



...



(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.	Dr.	

MAP \leftrightarrow Mgr.



BA FOSP



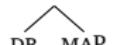
...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MA BAP



FOSP \leftrightarrow MU.



...



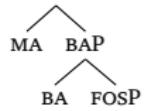
(14) Merge F

- lexicalise FP
- Evacuate closest, lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace



MAP \leftrightarrow Mgr.



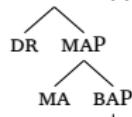
BA FOSP
△
...

BAP \leftrightarrow Bc.



...

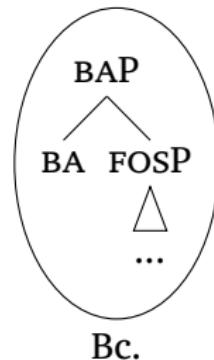
DRP \leftrightarrow dr



MA BAP
|
BA

FOSP \leftrightarrow MU.

△
...



Bc.

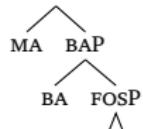
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		

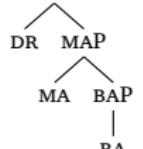
MAP \Leftrightarrow Mgr.



BAP \Leftrightarrow Bc.

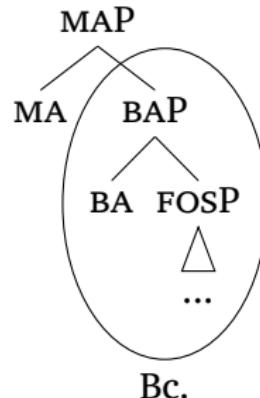
```
graph TD; BAP --> BA[BA]; BAP --> FOSPF[FOSP]; FOSPF --- triangle2(( ));
```

DRP \Leftrightarrow dr



FOSPF \Leftrightarrow MU.

```
graph TD; FOSPF --- triangle3(( ));
```



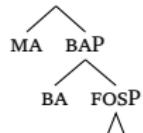
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

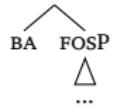
Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.	Dr.	

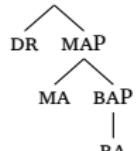
MAP \Leftrightarrow Mgr.



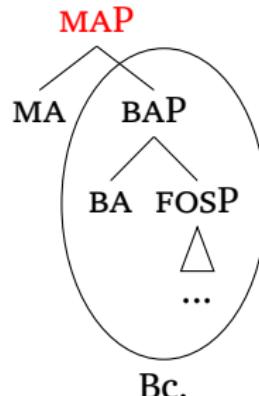
BAP \Leftrightarrow Bc.



DRP \Leftrightarrow dr



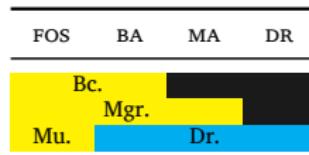
FOSP \Leftrightarrow MU.



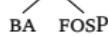
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace



MAP \Leftrightarrow Mgr.

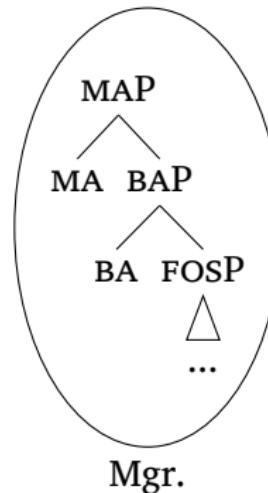


...

BAP \Leftrightarrow Bc.



...



Mgr.

DRP \Leftrightarrow dr



BA

FOSP \Leftrightarrow MU.

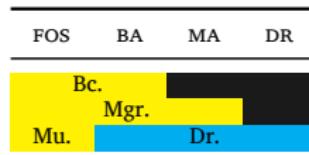


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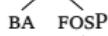
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

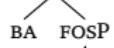


MAP \Leftrightarrow Mgr.



...

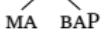
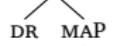
BAP \Leftrightarrow Bc.



...

...

DRP \Leftrightarrow dr

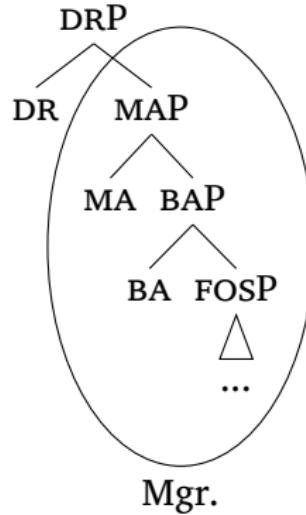


BA

FOSP \Leftrightarrow MU.



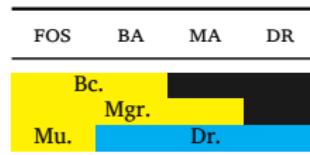
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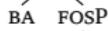
(14) Merge F

- lexicalise FP
- Evacuate closest, lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace



MAP \Leftrightarrow Mgr.



...

BAP \Leftrightarrow Bc.



...

...

DRP \Leftrightarrow dr

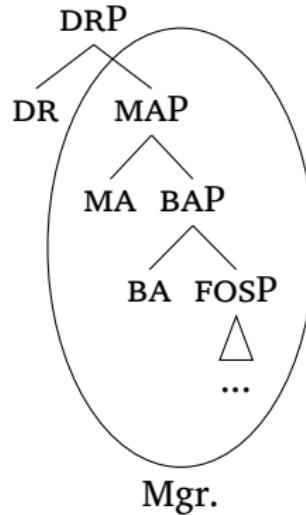


BA

FOSP \Leftrightarrow MU.



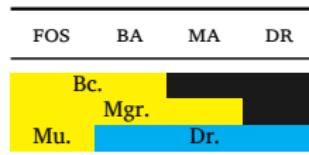
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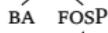
(14) Merge F

- lexicalise FP
- Evacuate closest, lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

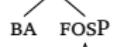


MAP \Leftrightarrow Mgr.



...

BAP \Leftrightarrow Bc.



...

...

DRP \Leftrightarrow dr

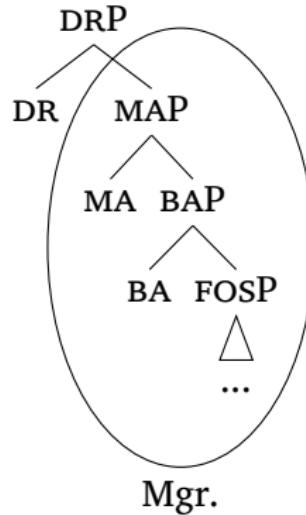


BA

FOSP \Leftrightarrow MU.



...

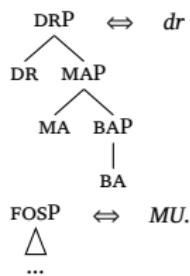
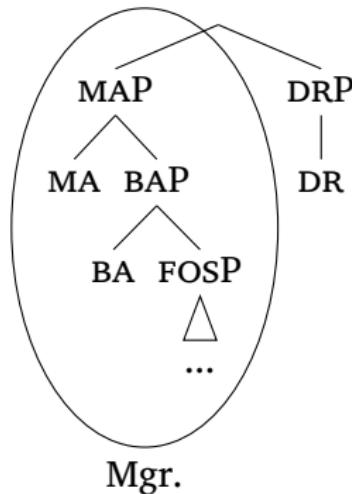
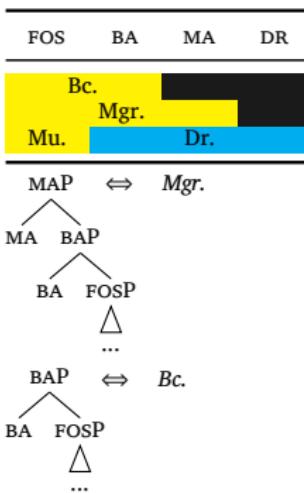


Mgr.

(14) Merge F

- lexicalise FP
- Evacuate closest, lexicalise FP**
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace



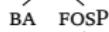
(14) Merge F

- a. lexicalise FP
 - b. Evacuate closest,
lexicalise FP
 - c. Pied-pipe, lexicalise FP
 - d. **Backtrack**

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		

MAP \Leftrightarrow Mgr.



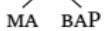
...

BAP \Leftrightarrow Bc.



...

DRP \Leftrightarrow dr



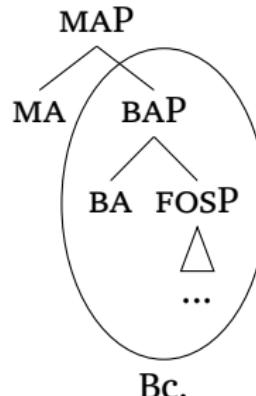
|

BA

FOSP \Leftrightarrow MU.



...



Bc.

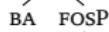
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		

MAP \Leftrightarrow Mgr.



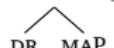
...

BAP \Leftrightarrow Bc.



...

DRP \Leftrightarrow dr

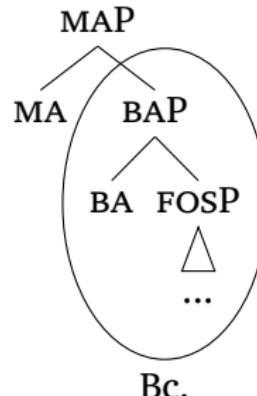


BA

FOSP \Leftrightarrow MU.



...



(14) Merge F

- lexicalise FP
- Evacuate closest, lexicalise FP**
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace



MAP \leftrightarrow Mgr.



BA FOSP



...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MA BAP

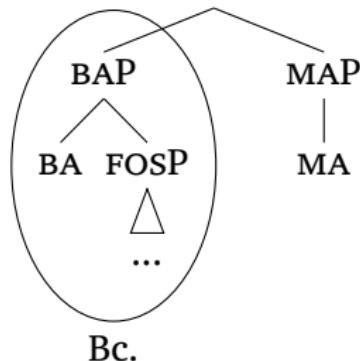


BA

FOSP \leftrightarrow MU.



...



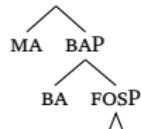
(14) Merge F

- lexicalise FP
- Evacuate closest,
lexicalise FP
- Pied-pipe, lexicalise FP
- Backtrack

Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.		

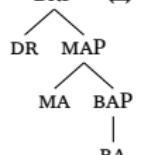
MAP \Leftrightarrow Mgr.



BAP \Leftrightarrow Bc.

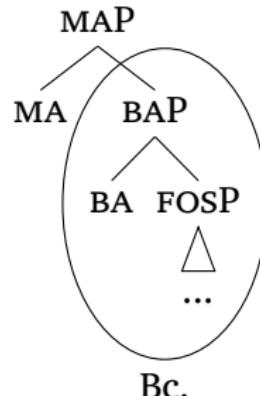
```
graph TD; BAP --> BA; BAP --> FOSP; BA --> triangle;
```

DRP \Leftrightarrow dr



FOSP \Leftrightarrow MU.

```
graph TD; FOSP --> triangle;
```



(14) Merge F

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Titles are derived in a separate workspace

FOS	BA	MA	DR
Bc.			
Mu.	Mgr.	Dr.	

MAP \leftrightarrow Mgr.



BA FOSP



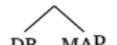
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BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



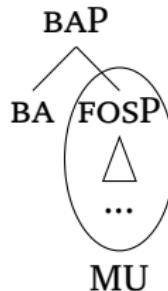
MA BAP



FOSP \leftrightarrow MU.



...



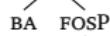
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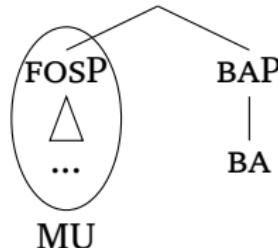
DRP \Leftrightarrow dr



BA

FOSP \Leftrightarrow MU.

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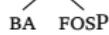
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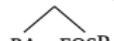
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MAP \Leftrightarrow Mgr.



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BAP \Leftrightarrow Bc.



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DRP \Leftrightarrow dr

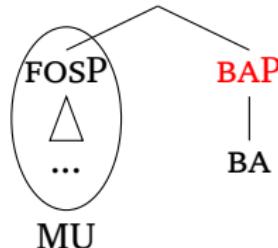


BA

FOSP \Leftrightarrow MU.



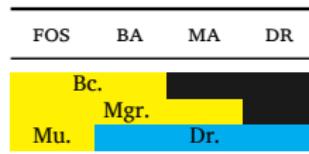
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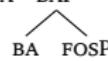
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Titles are derived in a separate workspace



MAP \leftrightarrow Mgr.



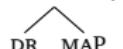
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BAP \leftrightarrow Bc.



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DRP \leftrightarrow dr

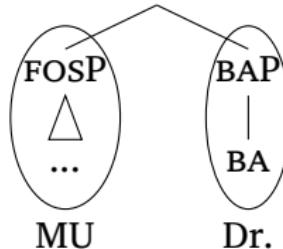


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BA FOSP



...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



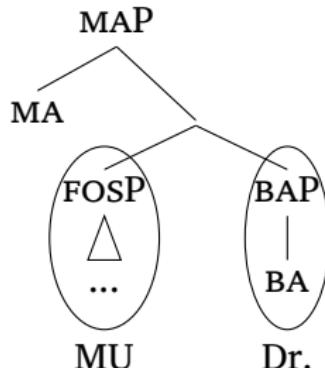
MA BAP

BA

FOSP \leftrightarrow MU.



...



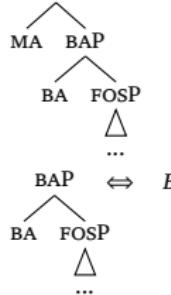
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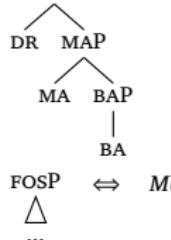
Titles are derived in a separate workspace

FOS	BA	MA	DR
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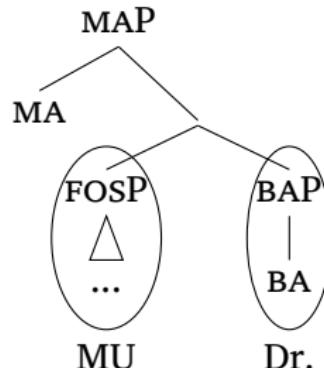
$\text{MAP} \Leftrightarrow \text{Mgr.}$



$\text{DRP} \Leftrightarrow dr$



$\text{FOSP} \Leftrightarrow MU.$



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MAP \leftrightarrow Mgr.



BA FOSP



...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr



MA BAP

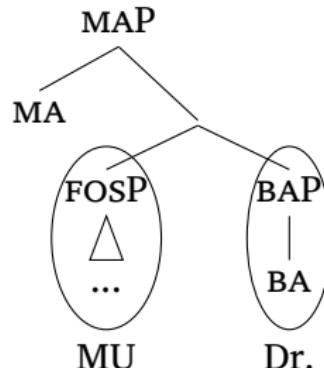


BA

FOSP \leftrightarrow MU.



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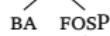
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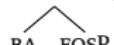
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Bc.			
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MAP \leftrightarrow Mgr.



...

BAP \leftrightarrow Bc.



...

DRP \leftrightarrow dr

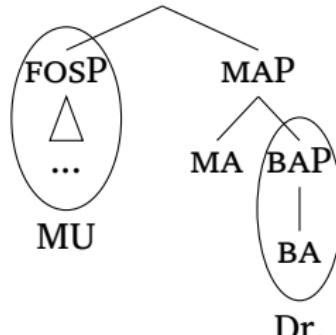


BA

FOSP \leftrightarrow MU.



...



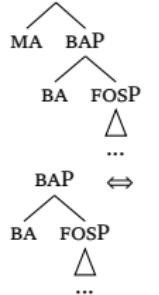
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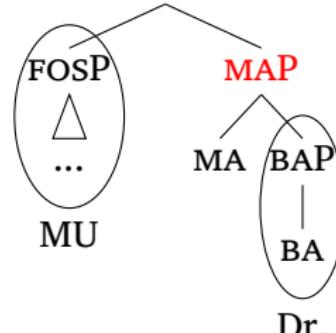
$\text{MAP} \Leftrightarrow \text{Mgr.}$



$\text{DRP} \Leftrightarrow dr$



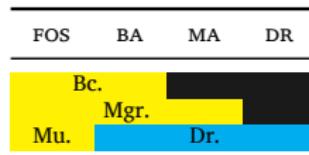
$\text{FOSP} \Leftrightarrow MU.$



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$\text{MAP} \Leftrightarrow \text{Mgr.}$



MA

BAP

BA

FOSP

△

...

$\text{BAP} \Leftrightarrow \text{Bc.}$



△

...

$\text{DRP} \Leftrightarrow dr$



DR

MAP

MA

BAP

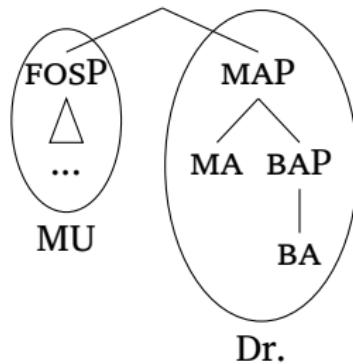
BA

$\text{FOSP} \Leftrightarrow MU.$



△

...



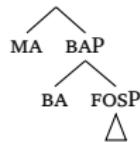
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MAP \Leftrightarrow Mgr.



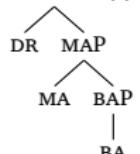
BAP \Leftrightarrow Bc.

```
graph TD; BA --> BAP; FOSP --> BAP; BA --- FOSP;
```

BA
FOSP

...

DRP \Leftrightarrow dr

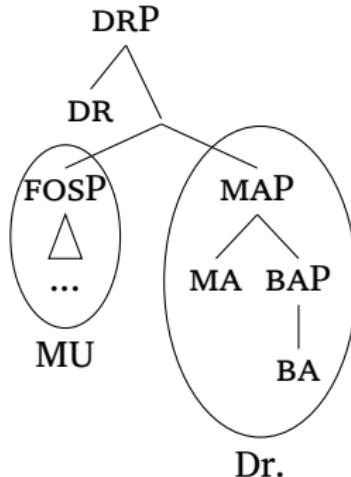


FOSP \Leftrightarrow MU.

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graph TD; FOSP --> MU; ...;
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FOSP

...



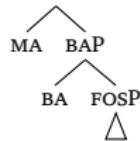
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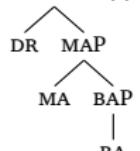
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BA
FOSP

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DRP \Leftrightarrow dr

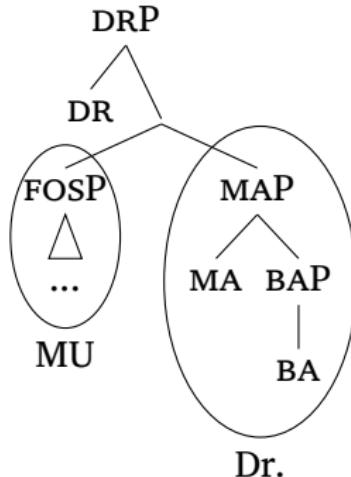


FOSP \Leftrightarrow MU.

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graph TD; FOSP --> MU; ...;
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FOSP

...



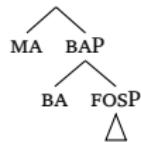
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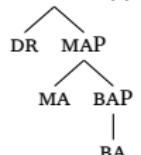


BAP \Leftrightarrow Bc.

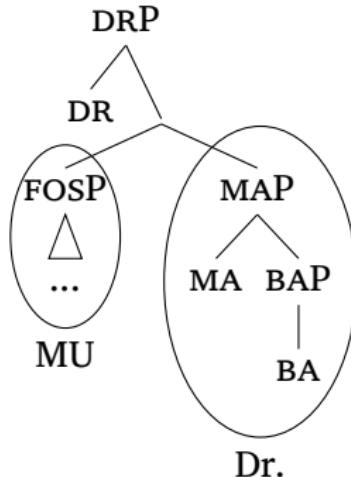
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graph TD; BA --> BAP; FOSP --> BAP; BA --- FOSP;
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BA FOSP
...

DRP \Leftrightarrow dr



FOSP \Leftrightarrow MU.
△
...



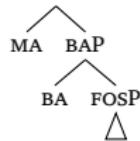
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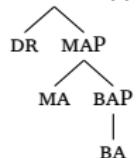
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BAP \Leftrightarrow Bc.

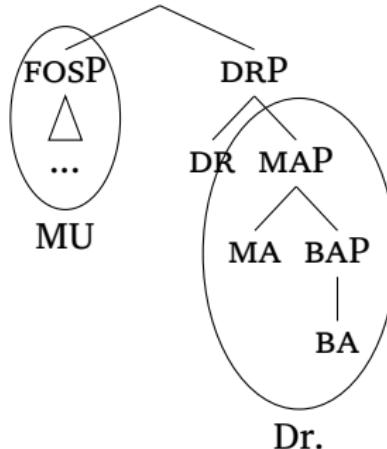
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FOSP \Leftrightarrow MU.

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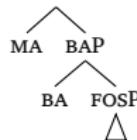
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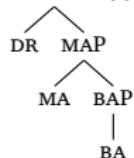
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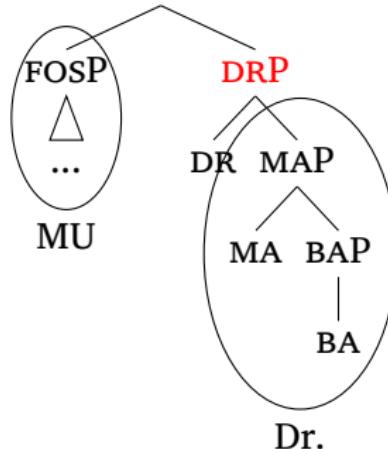
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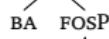
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MAP \Leftrightarrow Mgr.



...

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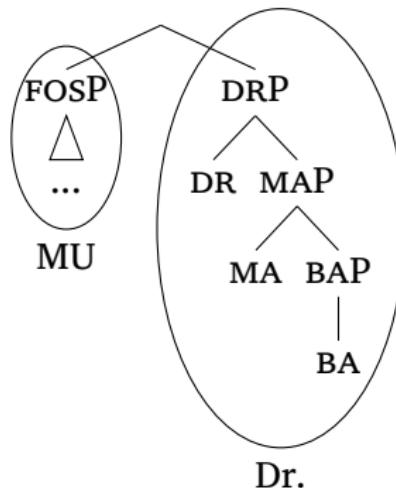
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BA

FOSP \Leftrightarrow MU.



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Outline

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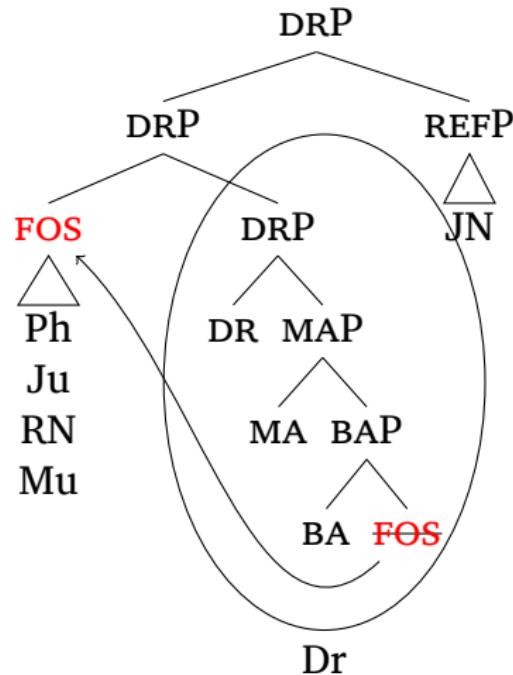
The main intuition

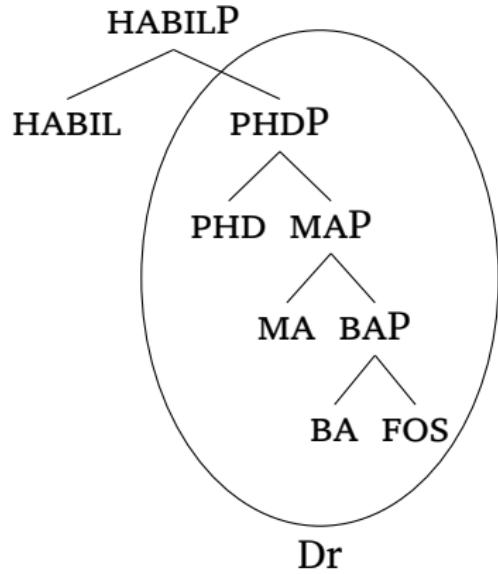
Polish

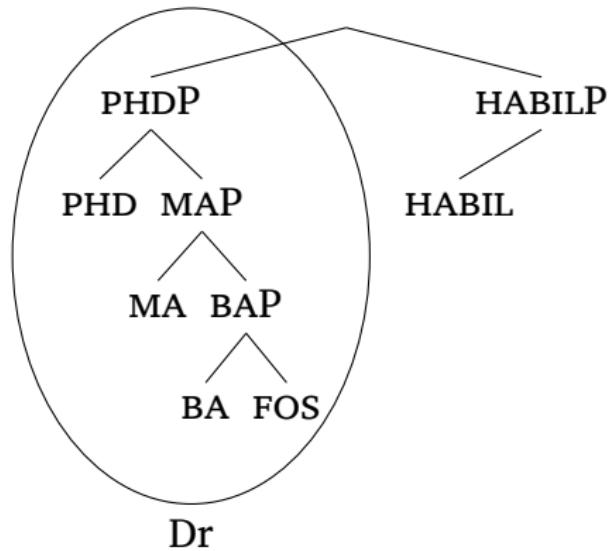
Constituent lexicalisation

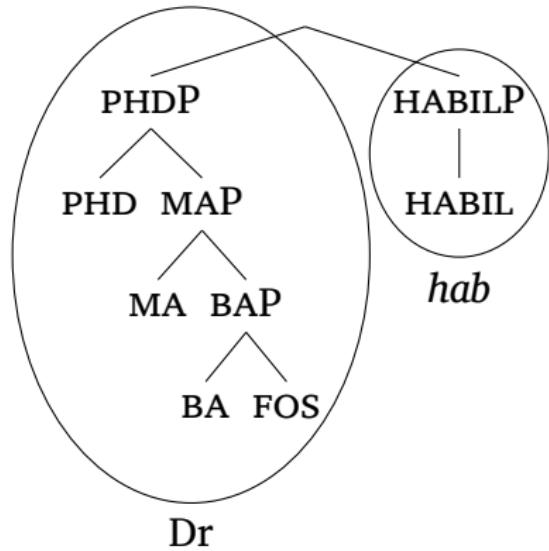
Taking stock

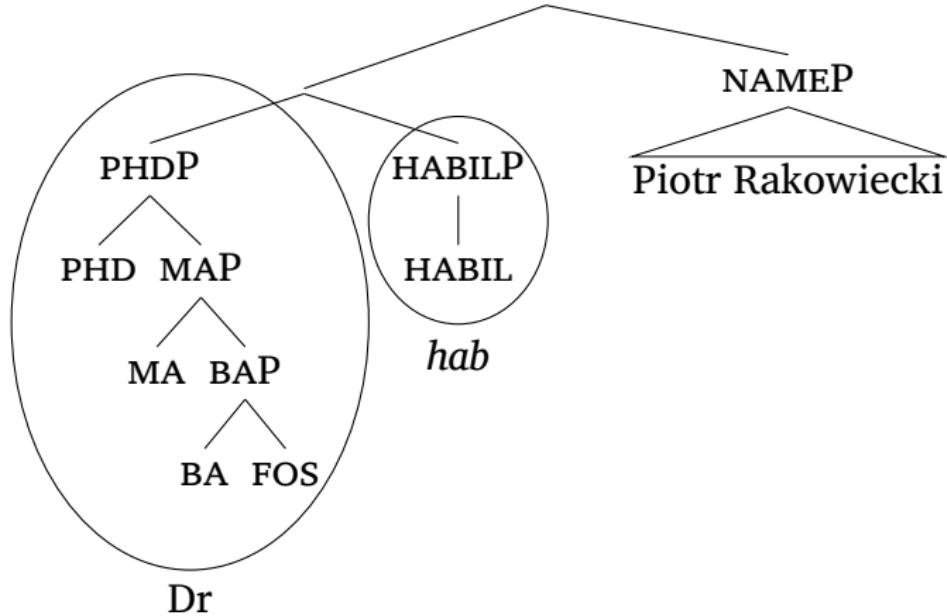
Conclusions











Outline

Intro

The main intuition

Polish

Constituent lexicalisation

Taking stock

Conclusions

- ▶ People have noticed that professor titles etc. behave as special grammatical elements, classifiers of sorts
- ▶ These have a rich internal structure
- ▶ Various degrees seem to be hierarchically arranged over the field-of-study projection
- ▶ Differences between different degree markers can be modelled by phrasal spellout

References