

# Nanosyntax: state of the art and recent developments

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NanoDays  
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# Outline

Introduction

Shape matters

Simplifying the Lexicalisation Algorithm

A case of Subextraction

Conclusion

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Two important developments since 2018

1. size matters, but **shape** matters, too

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1. size matters, but **shape** matters, too
2. the formulation of the Lexicalisation Algorithm

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Inverse marking

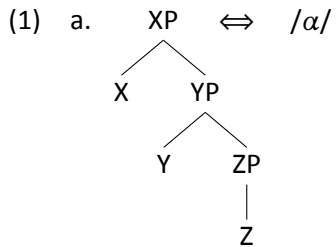
ABA patterns

Simplifying the Lexicalisation Algorithm

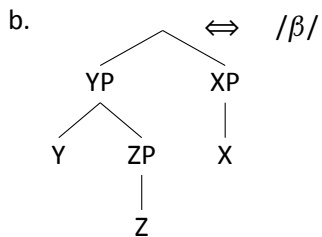
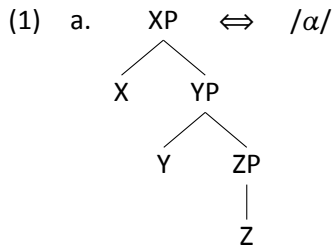
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- ▶ Kouneli (2019; 2021); Blix (2022)

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II.	pata-yaan	pat-een	'duck'
III.	peel-yaan	peel	'elephant'

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	NP	SG	PL
I.	kipaw		
	kipaw		tiin

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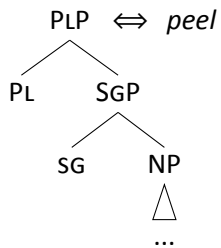
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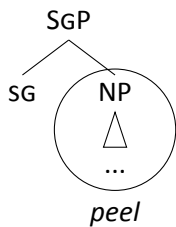
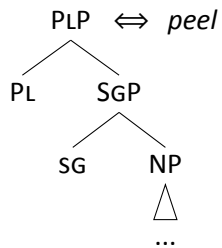
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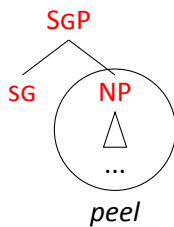
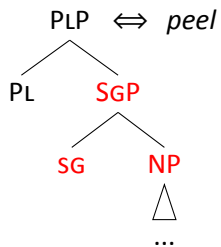
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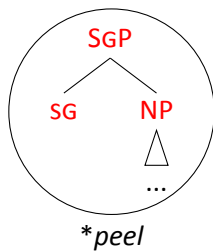
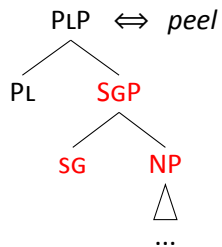
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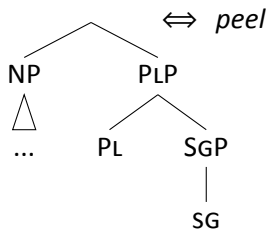
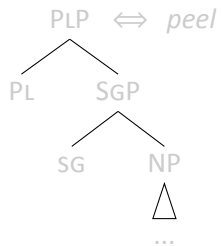
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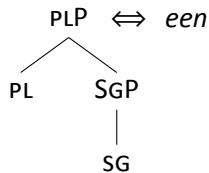
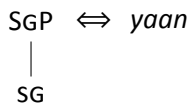
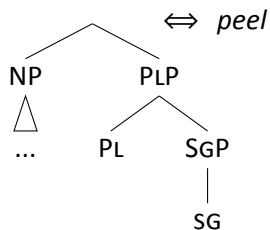
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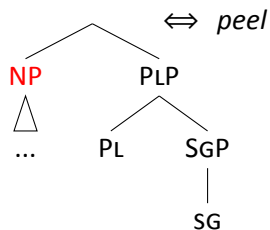
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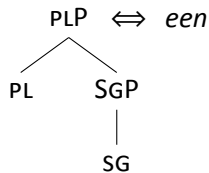
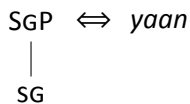
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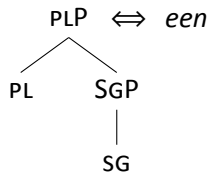
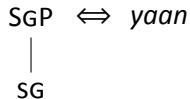
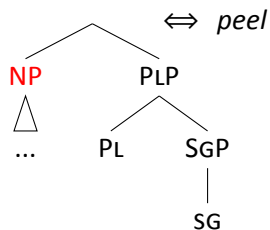
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NP  
△  
...

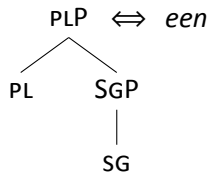
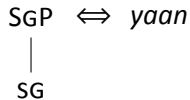
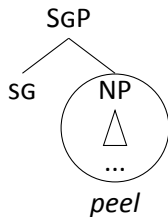
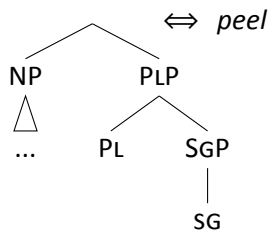


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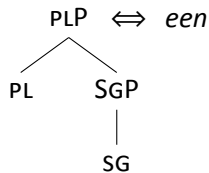
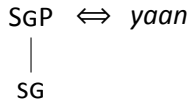
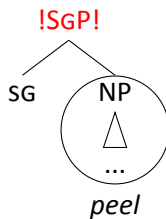
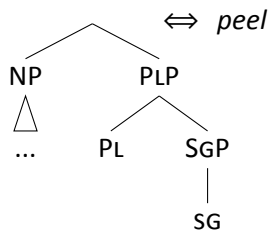




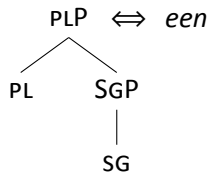
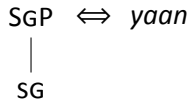
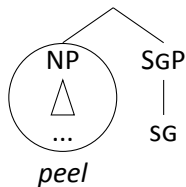
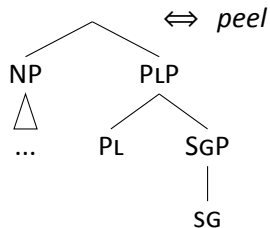
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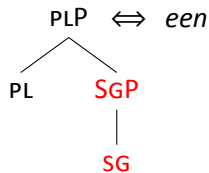
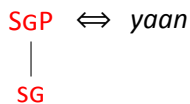
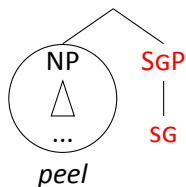
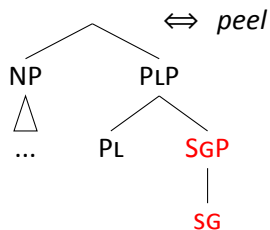
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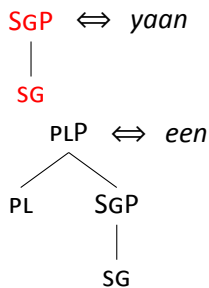
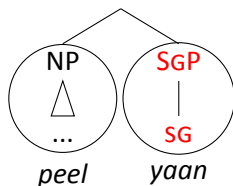
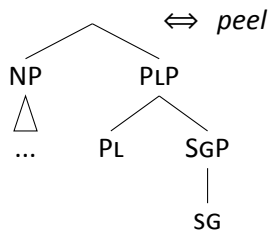
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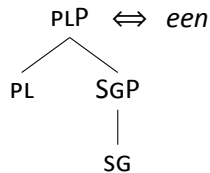
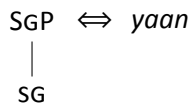
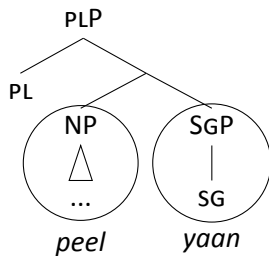
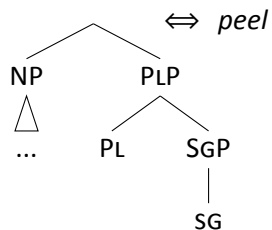
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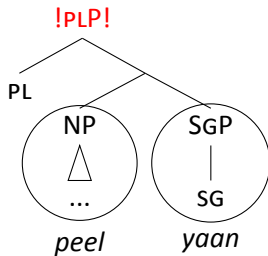
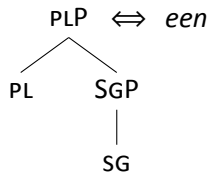
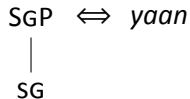
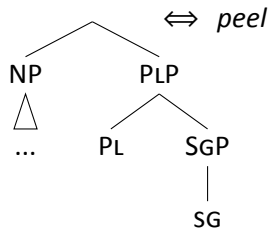
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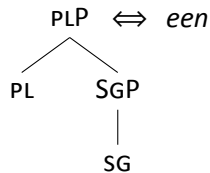
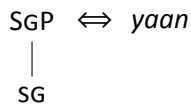
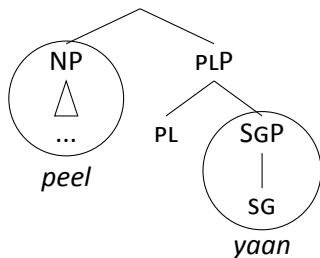
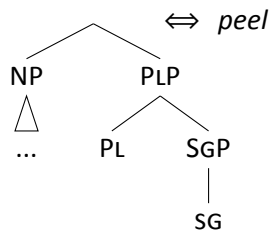
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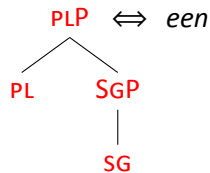
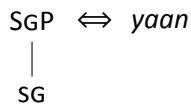
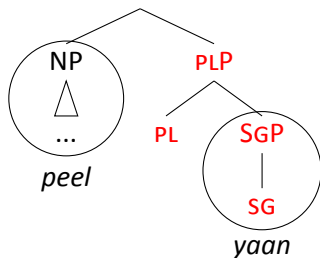
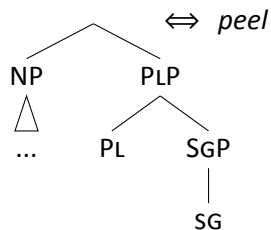


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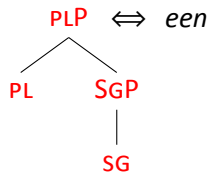
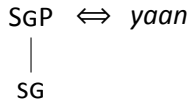
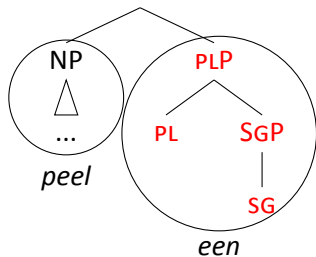
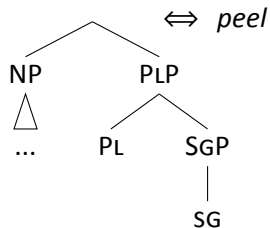




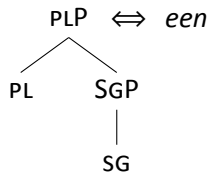
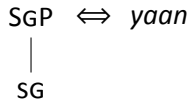
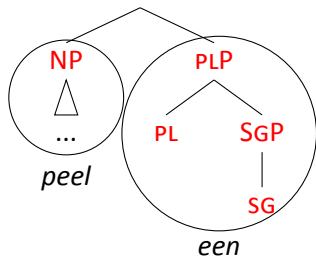
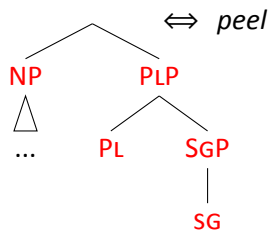
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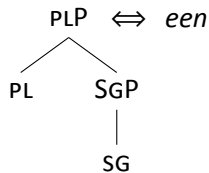
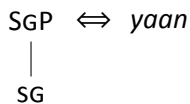
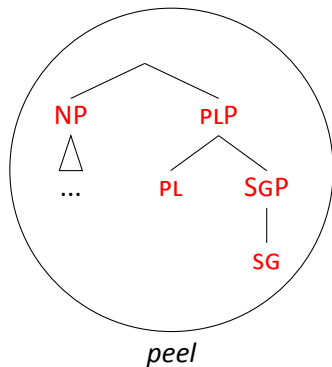
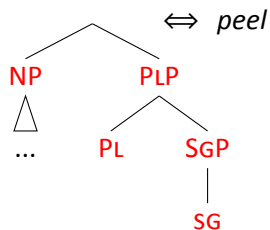
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# Inverse marking

- ▶ the larger structure (more heads) requires less morphemes than the smaller structure (less heads)

F1	F2	F3	F4
root		sfx	
root		*	

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**ABA patterns**

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# ABA patterns

- ▶ a particular type of ABA pattern: A-Ax-A

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F1	F2	F3	F4
root			
root	sfx		
root	*		

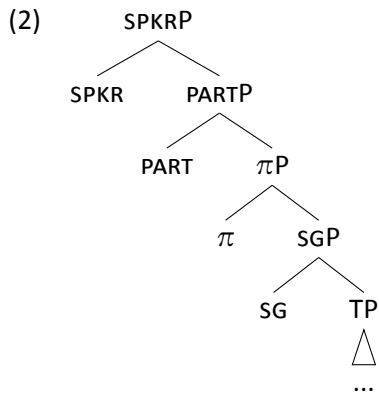


# ABA patterns

- ▶ attested in the verbal inflection of Tualis Friulian (Cortiula 2023)

		Friulian <i>bati</i> 'hit'	Bulgarian <i>četa</i> 'read'
		PRS	AOR
SG	1	bat	čet-ox
	2	bat-s	čet-e
	3	bat	čet-e

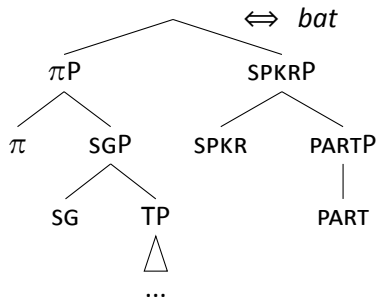
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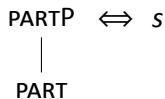
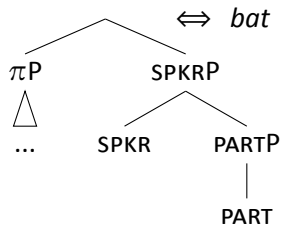
# ABA patterns

		TP	SG	$\pi$	PART	SPKR
SG	3	bat				
	2	bat			s	
	1	bat			*	

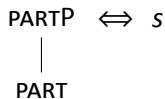
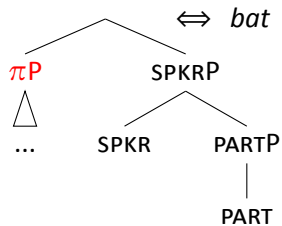
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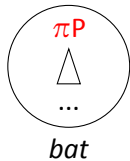
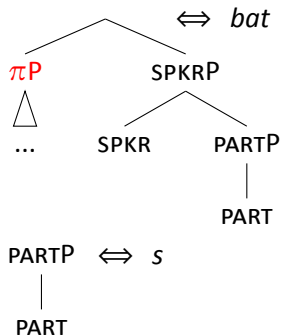
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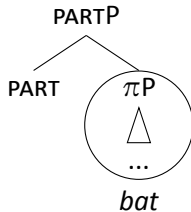
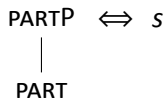
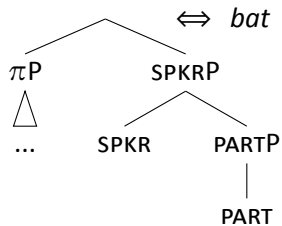
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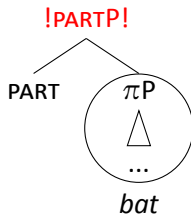
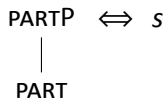
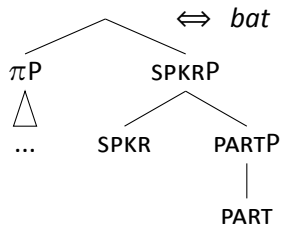


# ABA patterns

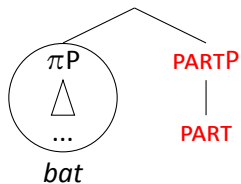
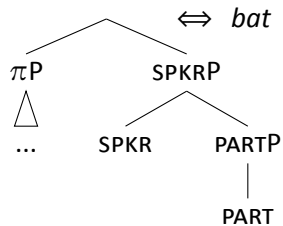




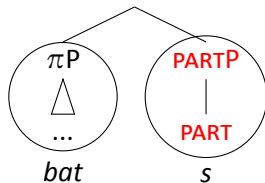
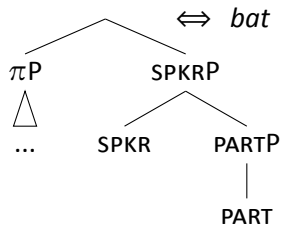
# ABA patterns



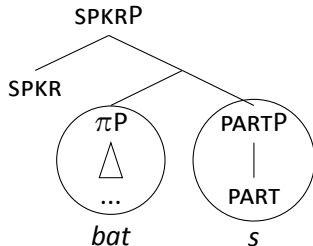
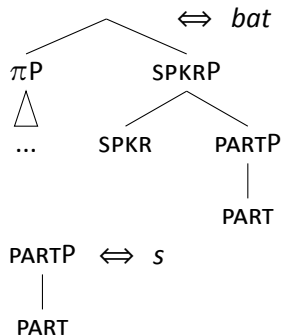
# ABA patterns



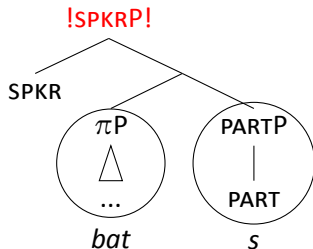
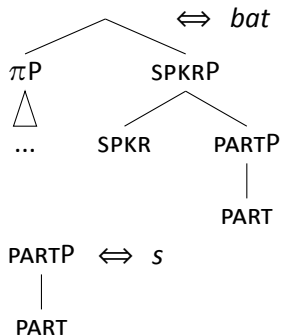
# ABA patterns



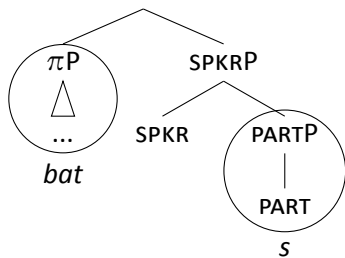
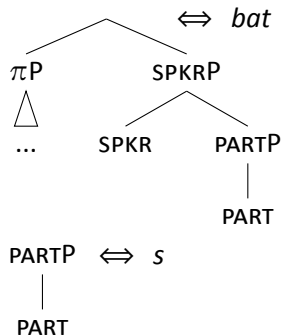
# ABA patterns



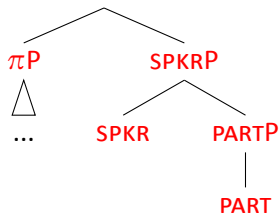
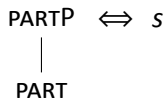
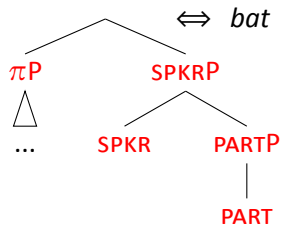
# ABA patterns



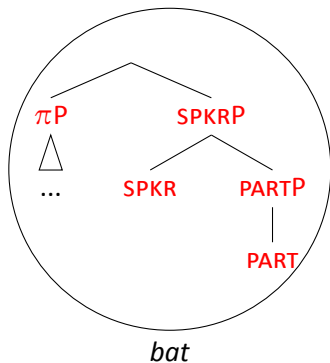
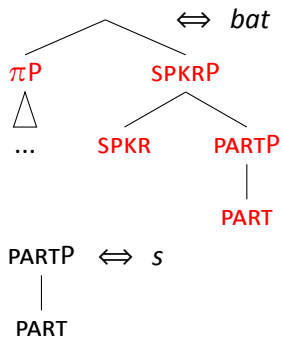
# ABA patterns



# ABA patterns



# ABA patterns





# ABA patterns

		TP	SG	$\pi$	PART	SPKR
SG	3	bat				
	2	bat			s	
	1	bat			*	

# Outline

Introduction

Shape matters

**Simplifying the Lexicalisation Algorithm**

A case of Subextraction

Conclusion

# Simplifying the Lexicalisation Algorithm

- 1 Move the SPEC of the complement

# Simplifying the Lexicalisation Algorithm

- 1 Move the SPEC of the complement
- 2 Move the complement

# Simplifying the Lexicalisation Algorithm

- |   |                                 |   |         |
|---|---------------------------------|---|---------|
| 1 | Move the SPEC of the complement | 1 | Move XP |
| 2 | Move the complement             |   |         |

# Simplifying the Lexicalisation Algorithm

- 1 Move the SPEC of the complement
- 2 Move the complement

- 1 Move XP
- 2 Pied-pipe

# What is XP?

‘the closest labelled constituent inside the previous merge cycle’

# What is XP?

‘the closest labelled constituent inside the previous merge cycle’

‘the closest labelled non-remnant constituent’



# Simplifying the Lexicalisation Algorithm

- 1 Move the the closest labelled non-remnant constituent
- 2 Pied-pipe (recursive)

# Outline

Introduction

Shape matters

Simplifying the Lexicalisation Algorithm

**A case of Subextraction**

Conclusion

## A case of Subextraction

- ▶ a particular type of ABA pattern:  $Ax-Axy-Ax$

## A case of Subextraction

- ▶ a particular type of ABA pattern: Ax-Axy-Ax

F1	F2	F3	F4
root	sfx1		
root	sfx1	sfx2	
root	sfx1	*	

## A case of Subextraction

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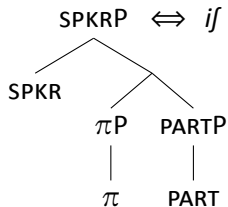
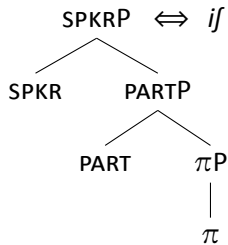
		Friulian	
		<i>bati</i> 'hit'	<i>finî</i> 'finish'
SG	1	bat	fin-ij
	2	bat-s	fin-ij-s
	3	bat	fin-ij

---

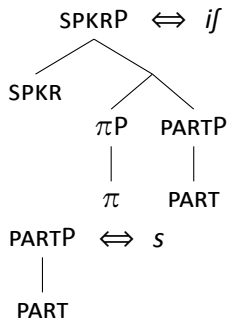
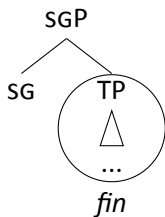
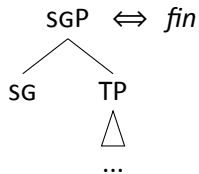
## A case of Subextraction

		TP	SG	$\pi$	PART	SPKR
SG	3	fin		ij		
	2	fin		ij	s	
	1	fin		ij	*	

# A case of Subextraction

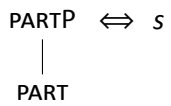
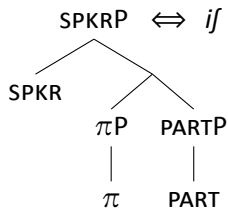
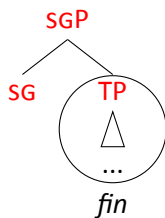
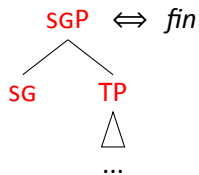


## A case of Subextraction

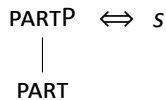
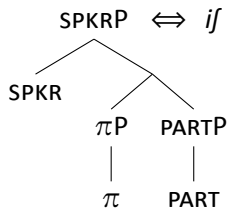
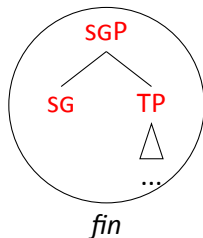
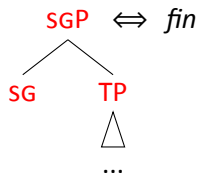




# A case of Subextraction

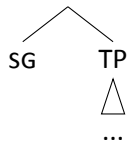


# A case of Subextraction

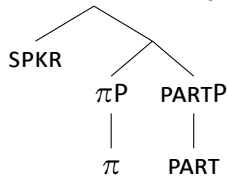


# A case of Subextraction

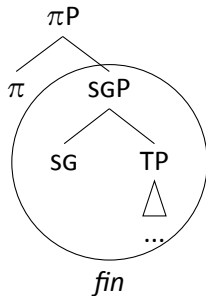
SGP  $\Leftrightarrow$  *fin*



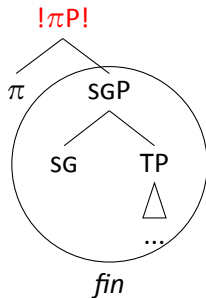
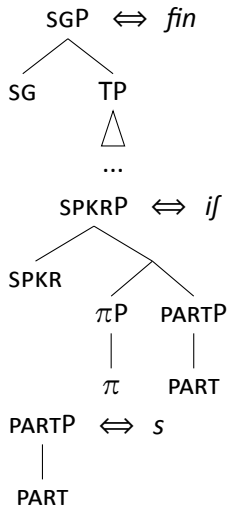
SPKRP  $\Leftrightarrow$  *if*



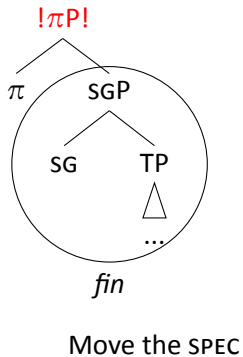
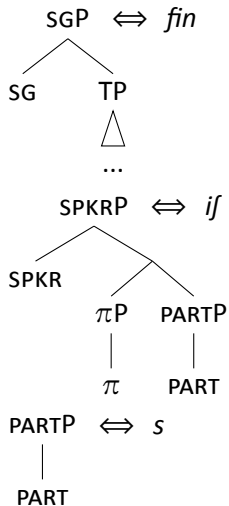
PARTP  $\Leftrightarrow$  *s*



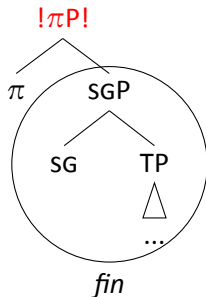
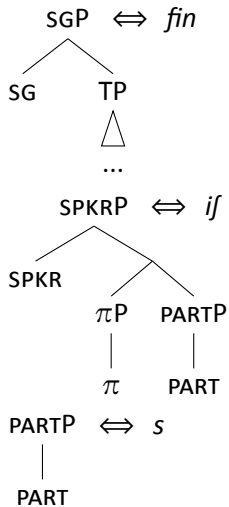
# A case of Subextraction



# A case of Subextraction



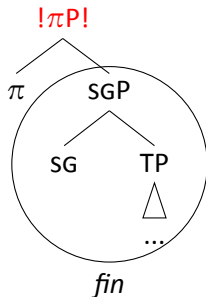
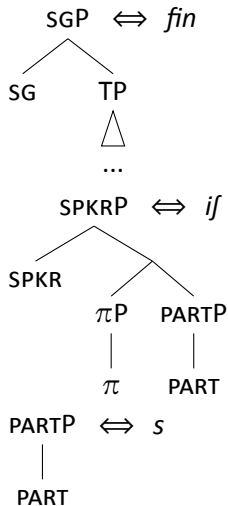
# A case of Subextraction



Move the SPEC

Move the complement

## A case of Subextraction



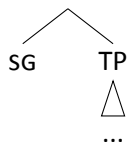
Move the SPEC

Move the complement

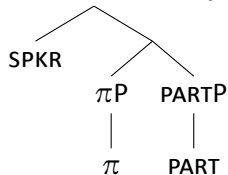
Move the closest labelled  
nonremnant constituent

# A case of Subextraction

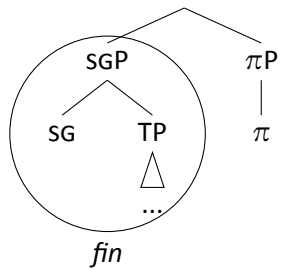
SGP  $\Leftrightarrow$  *fin*



SPKRP  $\Leftrightarrow$  *if*

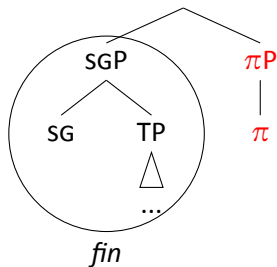
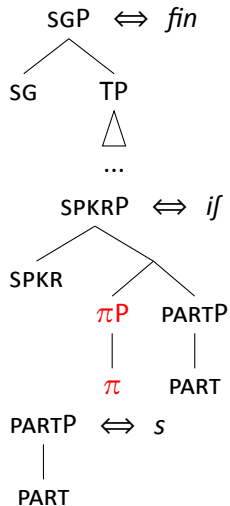


PARTP  $\Leftrightarrow$  *s*

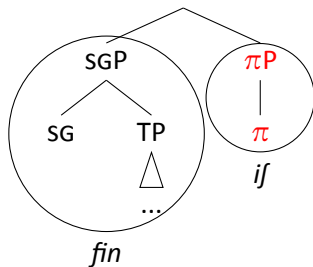
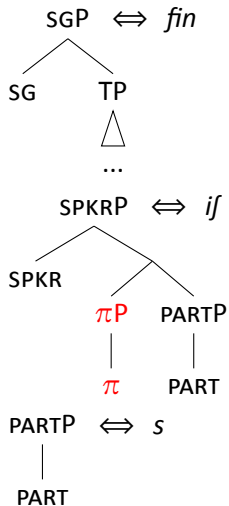




# A case of Subextraction

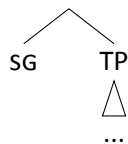


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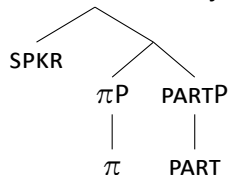


# A case of Subextraction

SGP  $\Leftrightarrow$  *fin*



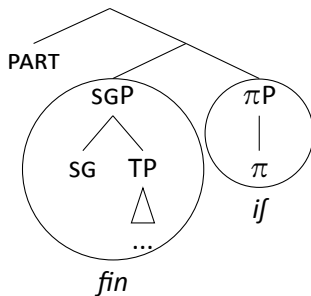
SPKRP  $\Leftrightarrow$  *if*



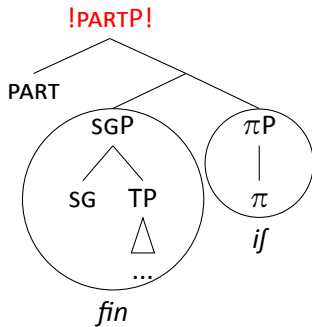
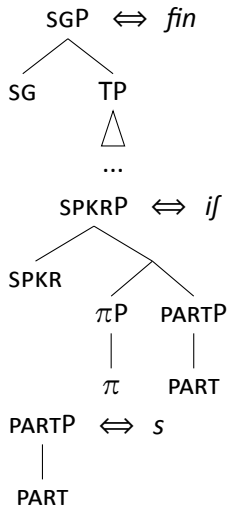
PARTP  $\Leftrightarrow$  *s*



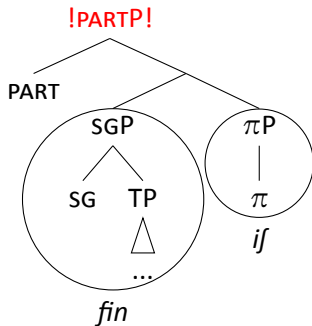
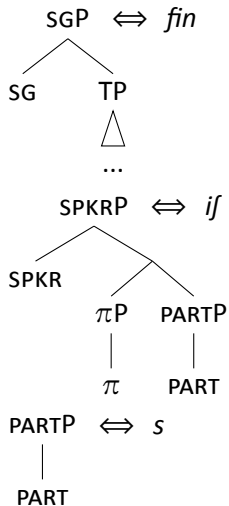
PARTP



## A case of Subextraction

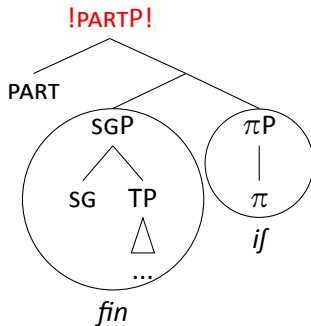
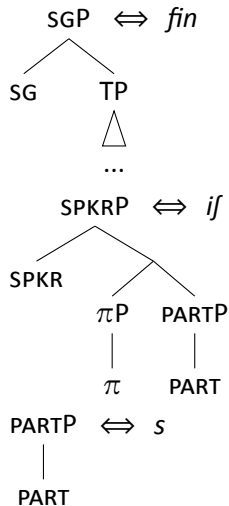


# A case of Subextraction



Move the SPEC

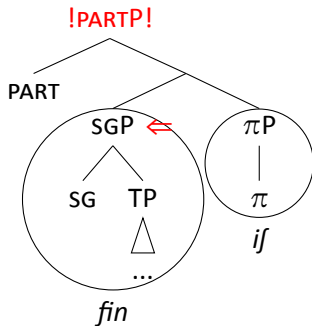
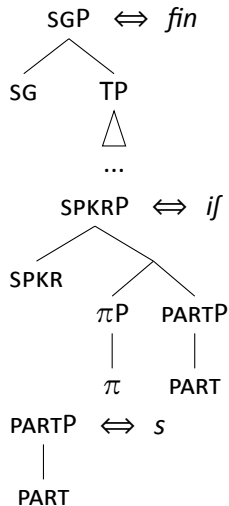
## A case of Subextraction



Move the SPEC

Move the closest labelled  
nonremnant constituent

# A case of Subextraction

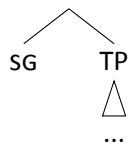


Move the SPEC

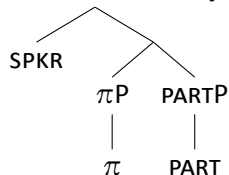
Move the closest labelled  
nonremnant constituent

# A case of Subextraction

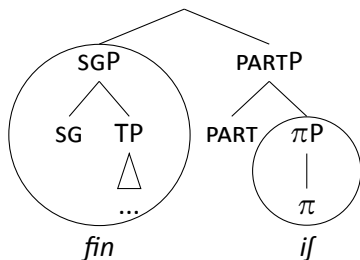
SGP  $\Leftrightarrow$  *fin*



SPKRP  $\Leftrightarrow$  *if*

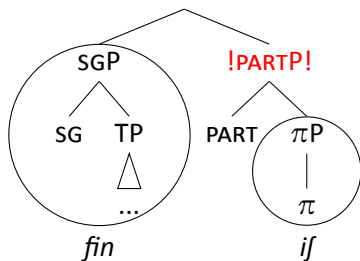
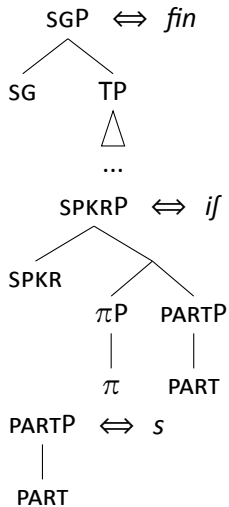


PARTP  $\Leftrightarrow$  *s*



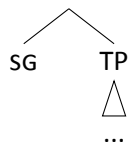


# A case of Subextraction

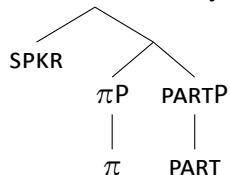


# A case of Subextraction

SGP  $\Leftrightarrow$  *fin*



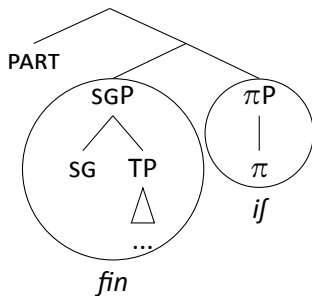
SPKRP  $\Leftrightarrow$  *if*



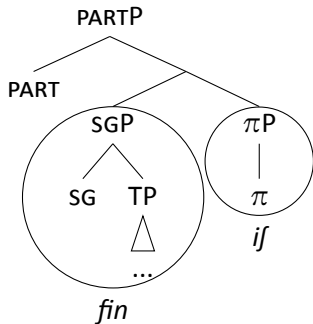
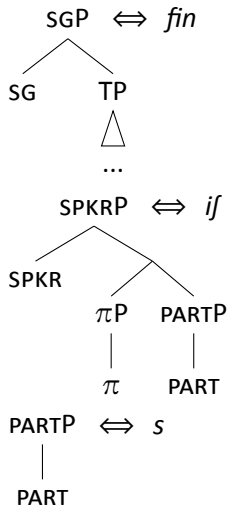
PARTP  $\Leftrightarrow$  *s*



PARTP

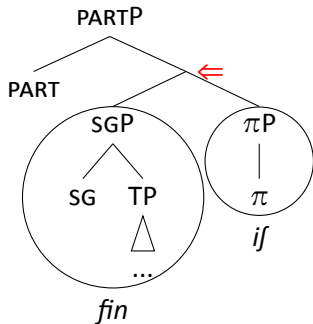
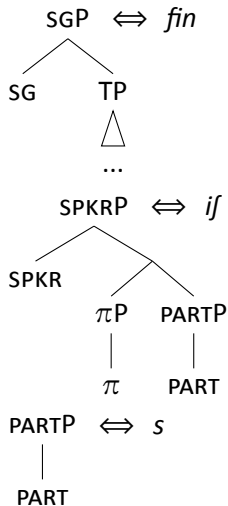


# A case of Subextraction



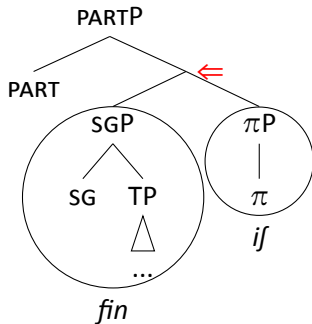
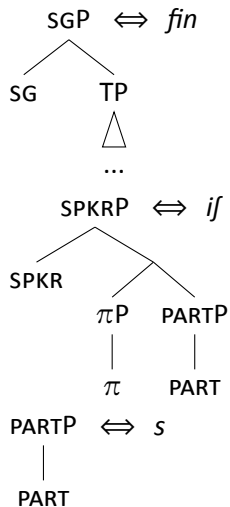
Move the complement

# A case of Subextraction



Move the complement

## A case of Subextraction

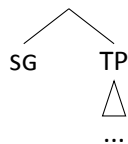


Move the complement

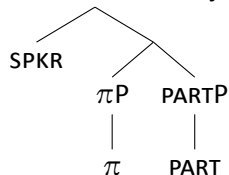
Move the immediately  
dominating constituent

# A case of Subextraction

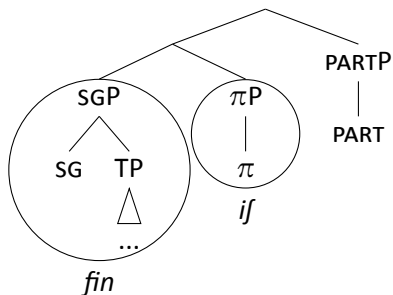
SGP  $\Leftrightarrow$  *fin*



SPKRP  $\Leftrightarrow$  *if*

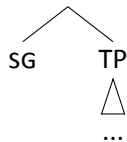


PARTP  $\Leftrightarrow$  *s*

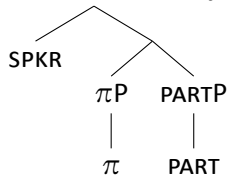


# A case of Subextraction

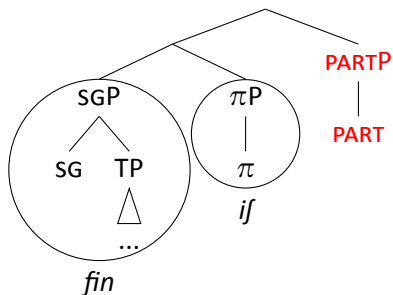
SGP  $\Leftrightarrow$  *fin*



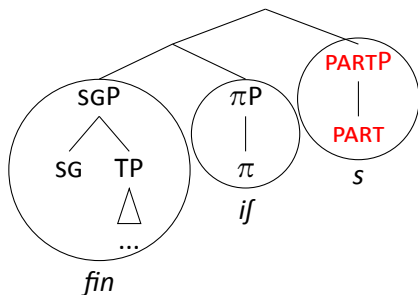
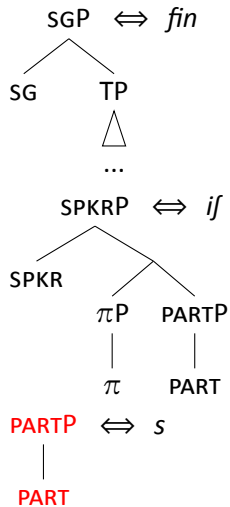
SPKRP  $\Leftrightarrow$  *if*



PARTP  $\Leftrightarrow$  *s*



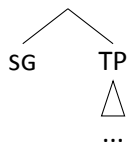
# A case of Subextraction



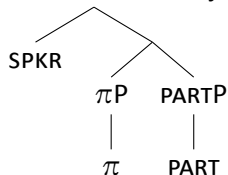


# A case of Subextraction

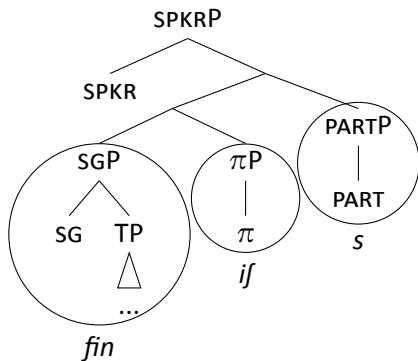
SGP  $\Leftrightarrow$  *fin*



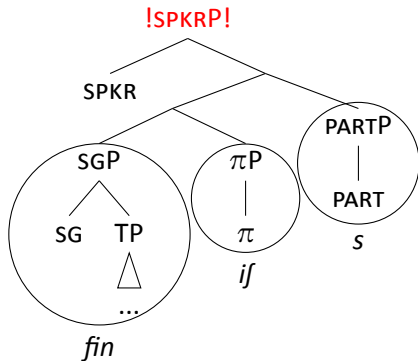
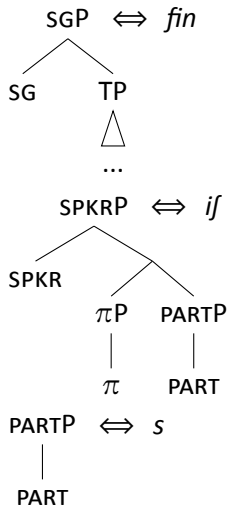
SPKRP  $\Leftrightarrow$  *if*



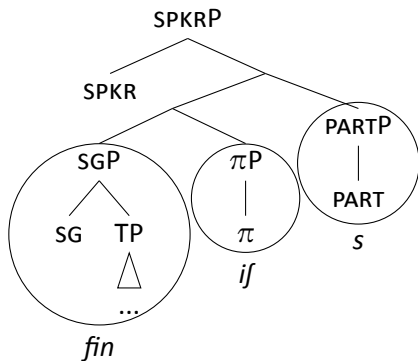
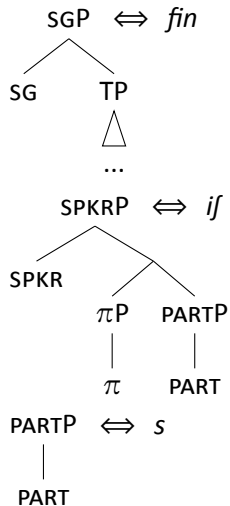
PARTP  $\Leftrightarrow$  *s*



# A case of Subextraction

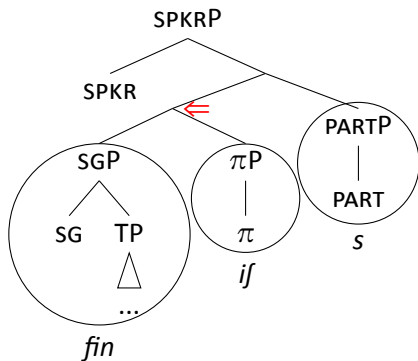
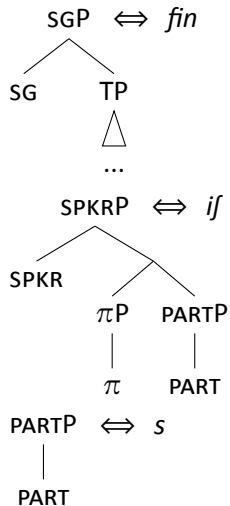


## A case of Subextraction



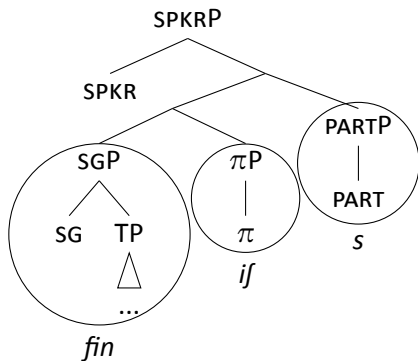
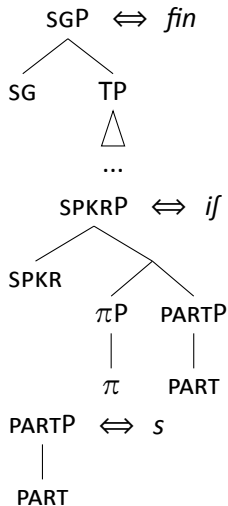
Move the SPEC

## A case of Subextraction



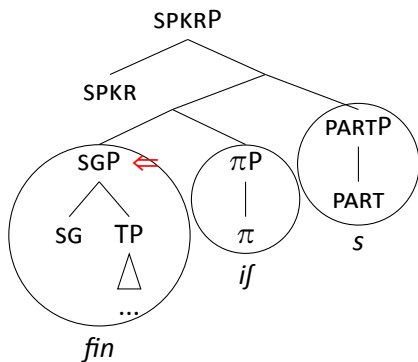
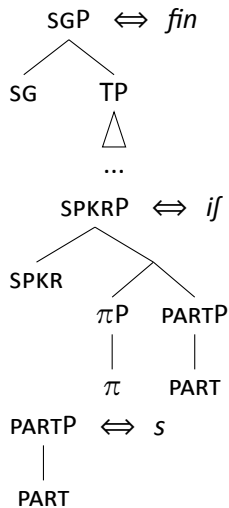
Move the SPEC

## A case of Subextraction



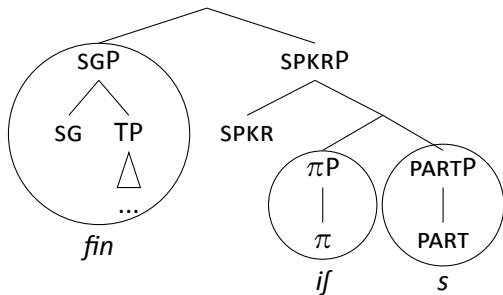
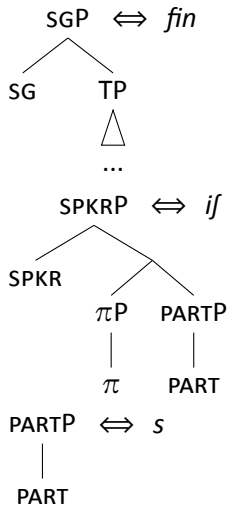
Move the closest labelled non-remnant constituent

## A case of Subextraction

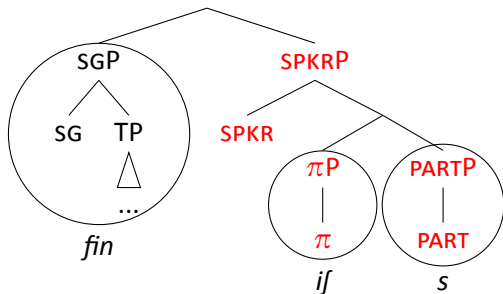
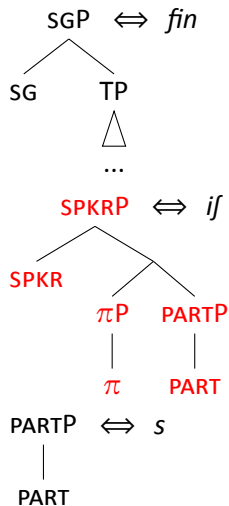


Move the closest labelled non-remnant constituent

# A case of Subextraction

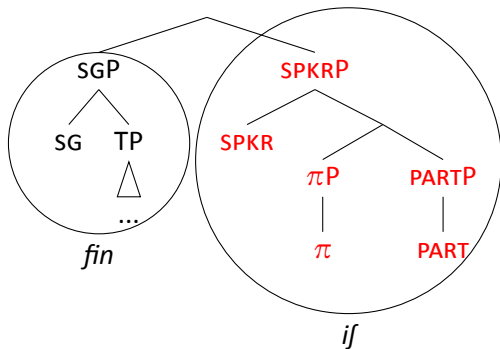
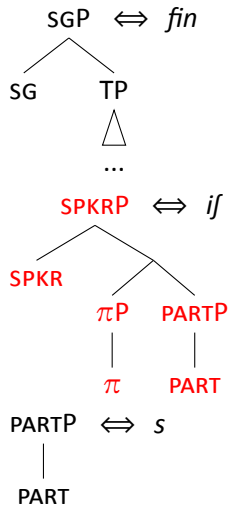


# A case of Subextraction





# A case of Subextraction



## A case of Subextraction

		TP	SG	$\pi$	PART	SPKR
SG	3		fin	ij		
	2		fin	ij	s	
	1		fin	ij	*	

## A case of Subextraction

F1	F2	F3	F4
root	sfx1		
root	sfx1	sfx	
root	sfx1	*	

# Outline

Introduction

Shape matters

Simplifying the Lexicalisation Algorithm

A case of Subextraction

**Conclusion**

# Conclusion

- ▶ Shape matters

# Conclusion

- ▶ Shape matters
- ▶ The Lexicalisation Algorithm

# Conclusion

- ▶ Shape matters
- ▶ The Lexicalisation Algorithm
  1. Move the the closest labelled non-remnant constituent

# Conclusion

- ▶ Shape matters
- ▶ The Lexicalisation Algorithm
  1. Move the the closest labelled non-remnant constituent
  2. Pied-pipe (recursive)



Thank you!

## References

- Blix, Hagen. 2022. Interface legibility and nominal classification: A nanosyntactic account of Kipsigis singulatives. *Glossa* 7(1). 1–46.
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