

# A representational analysis of Czech palatalization

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# Outline

Introduction

Patterns of palatalisation

The analysis

Conclusion

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  - ▶ 'small', e.g. /k/ → /tʃ/ (vojá*k* 'soldier' → vojá*c*-i 'soldiers')

# Introduction

- ▶ Many suffixes trigger palatalisation of elements to their left
- ▶ The suffixes differ in the types of palatalisation they trigger
- ▶ Scheer (2001) distinguishes two types of palatalisation:
  - ▶ ‘small’, e.g. /k/ → /tʃ/ (*voják* ‘soldier’ → *vojác-i* ‘soldiers’)
  - ▶ ‘big’, e.g. /k/ → /tʃ/ (*plak-at* ‘to cry’ → *pláč-u* ‘I cry’)



## Two types of palatalisation (Scheer, 2001)

	small	LOC/DAT.F.SG -ě	big	PST.PASS.PTCPL -ěn
/k/	/ʦ/	<i>louka</i> – <i>louce</i> ‘meadow’	/tʃ/	<i>zatknout</i> – <i>zatčen</i> ‘arrested’
/g/	?/z/	<i>liga</i> – <i>lize</i> ‘league’	?/ʒ/	( <i>Olga</i> – <i>Olžin</i> )
/x/	/ʃ/	<i>střecha</i> – <i>střeše</i> ‘roof’	/ʃ/	<i>nadchnout</i> – <i>nadšen</i> ‘excited’
/h/	/z/	<i>knih</i> – <i>knize</i> ‘book’	/ʒ/	<i>táhnout</i> – <i>tažen</i> ‘pulled’
/t/	/c/	<i>máta</i> – <i>mátě</i> ‘mint’	/ʦ/	<i>nutit</i> – <i>nucen</i> ‘forced’
/d/	/ʧ/	<i>vláda</i> – <i>vládě</i> ‘government’	/z/	<i>uklidit</i> – <i>uklizen</i> ‘cleaned up’
/ʦ/	/ʦ/	( <i>Bystrica</i> - <i>Bystrice</i> ‘Bystrica’)	/tʃ/	<i>péci</i> – <i>pečen</i> ‘baked’
/s/	/s/	<i>mísa</i> – <i>míse</i> ‘bowl’	/ʃ/	<i>hlásit</i> – <i>hlášen</i> ‘reported’
/z/	/z/	<i>koza</i> – <i>koze</i> ‘goat’	/ʒ/	<i>ohrozit</i> – <i>ohrožen</i> ‘endangered’
/n/	/ɲ/	<i>vina</i> – <i>vině</i> ‘guilt’	/ɲ/	<i>ranit</i> – <i>raněn</i> ‘wounded’
/r/	/rʲ/	<i>sestra</i> – <i>sestře</i> ‘sister’	/rʲ/	( <i>Věra</i> – <i>Věřin</i> )
/p/	/pj/	<i>stoupa</i> – <i>stoup[j]ě</i> ‘rise’	/p/	<i>zatopit</i> – <i>zatopen</i> ‘flooded’
/b/	/bj/	<i>ryba</i> – <i>ryb[j]ě</i> ‘fish’	/b/	<i>rozzlobit</i> – <i>rozzloben</i> ‘angered’
/f/	/fj/	<i>karafa</i> – <i>karaf[j]ě</i> ‘decanter’	/f/	
/v/	/vj/	<i>hlava</i> – <i>hla[j]ě</i> ‘head’	/v/	<i>obarvit</i> – <i>obarven</i> ‘dyed’
/m/	/mj/	<i>zima</i> – <i>zim[j]ě</i> ‘winter’	/m/	<i>zlomit</i> – <i>zlomen</i> ‘broken’

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/f/	/fj/	<i>karafa</i> – <i>karaf[j]ě</i> ‘decanter’	/f/	
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  - ▶ Strict CV
  - ▶ Element Theory
- ▶ To explain the peculiar behaviour of the labials

# Acknowledgment

- ▶ Many thanks to Markéta Ziková, Anna Pořómská, Gabriela Složilová, Ora Matushansky, and the attendants of the NanoDays 2024 and of the Linglunch at LLF for help and discussion



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**Patterns of palatalisation**

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# Patterns of palatalisation

- ▶ small
- ▶ big
- ▶ CMPR -*ěj*-(*š*) (Caha et al., 2019)
- ▶ CAUS -*i* (Caha et al., 2023)

base			small		big	
/k/	<i>divoký</i>	'wild'	/ʦ/		/tʃ/	<i>divočejší</i>
/x/	<i>plachý</i>	'timid'	/ʃ/		/ʃ/	<i>plašejší</i>
/h/	<i>strohý</i>	'austere'	/z/		/ʒ/	<i>strožejší</i>
/t/	<i>kulatý</i>	'round'	/c/	<i>kulatější</i>	/ʦ/	
/d/	<i>hrdý</i>	'proud'	/tʃ/	<i>hrdější</i>	/z/	
/ʦ/			/ʦ/	—	/tʃ/	
/s/	<i>lysý</i>	'bald'	/s/	<i>lysejší</i>	/ʃ/	
/z/	<i>ryzí</i>	'pure'	/z/	<i>ryzejší</i>	/ʒ/	
/n/	<i>levný</i>	'cheap'	/ɲ/	<i>levnější</i>	/ɲ/	
/r/	<i>bujarý</i>	'merry'	/r̩/	<i>bujarejší</i>	/r̩/	
/p/	<i>hloupý</i>	'stupid'	/pj/	<i>hloup[j]ější</i>	/p/	
/b/	<i>blbý</i>	'stupid'	/bj/	<i>blb[j]ější</i>	/b/	
/f/			/fj/	—	/f/	
/v/	<i>hravý</i>	'playful'	/vj/	<i>hrav[j]ější</i>	/v/	
/m/	<i>lakomý</i>	'stingy'	/mj/	<i>lakom[j]ější</i>	/m/	

## CAUS -i

	base		small		big	
/k/	<i>trp</i> ký	'bitter'	/ʦ/		/tʃ/	<i>ztrp</i> čil
/x/	<i>tich</i> ý	'silent'	/ʃ/		/ʃ/	<i>ti</i> šil
/h/	<i>drah</i> ý	'expensive'	/z/		/ʒ/	<i>zdra</i> žil
/t/	<i>nejist</i> ý	'unsure'	/c/	<i>znejist</i> il	/ʦ/	
/d/	<i>hněd</i> ý	'brown'	/tʃ/	<i>zahněd</i> il	/z/	
/ʦ/			/ʦ/	—	/tʃ/	
/s/	<i>hlas</i> ý	'voice'	/s/	<i>hlás</i> il	/ʃ/	
/z/	<i>mráz</i>	'frost'	/z/	<i>zmraz</i> il	/ʒ/	
/n/	<i>levn</i> ý	'cheap'	/ɲ/	<i>zlevn</i> il	/ɲ/	
/r/	<i>moudr</i> ý	'wise'	/r̩/	<i>zmoudř</i> il	/r̩/	
/p/	<i>tup</i> ý	'blunt'	/pj/		/p/	<i>tup</i> il
/b/	<i>chab</i> ý	'weak'	/bj/		/b/	<i>ochab</i> il
/f/			/fj/		/f/	
/v/	<i>oškliv</i> ý	'ugly'	/vj/		/v/	<i>oškliv</i> il
/m/	<i>chrom</i> ý	'lame'	/mj/		/m/	<i>ochrom</i> il

## Patterns of palatalisation

	small	CMPR -ěj	CAUS -i	big
/k/	/ʦ/	/tʃ/	/tʃ/	/tʃ/
/x/	/ʃ/	/ʃ/	/ʃ/	/ʃ/
/h/	/z/	/ʒ/	/ʒ/	/ʒ/
/t/	/c/	/c/	/c/	/ʦ/
/d/	/tʃ/	/tʃ/	/tʃ/	/z/
/ʦ/	/ʦ/	?	?	/tʃ/
/s/	/s/	/s/	/s/	/ʃ/
/z/	/z/	/z/	/z/	/ʒ/
/n/	/ɲ/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/	/r̄/
/p/	/pj/	/pj/	/p/	/p/
/b/	/bj/	/bj/	/b/	/b/
/f/	/fj/	/fj/	/f/	/f/
/v/	/vj/	/vj/	/v/	/v/
/m/	/mj/	/mj/	/m/	/m/

## Patterns of palatalisation

	small	CMPR -ěj	CAUS -i	big
/k/	/t͡s/	/t͡ʃ/	/t͡ʃ/	/t͡ʃ/
/x/	/ʃ/	/ʃ/	/ʃ/	/ʃ/
/h/	/z/	/ʒ/	/ʒ/	/ʒ/
/t/	/c/	/c/	/c/	/t͡s/
/d/	/t͡ʃ/	/t͡ʃ/	/t͡ʃ/	/z/
/t͡s/	/t͡s/	?	?	/t͡ʃ/
/s/	/s/	/s/	/s/	/ʃ/
/z/	/z/	/z/	/z/	/ʒ/
/n/	/ɲ/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/	/r̄/

## Patterns of palatalisation

	small		big
/k/	/tʰ/	/tʃ/	/tʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/h/	/z/	/ʒ/	/ʒ/
/t/	/c/	/c/	/tʰ/
/d/	/t/	/t/	/z/
/tʰ/	/tʰ/	?	/tʃ/
/s/	/s/	/s/	/ʃ/
/z/	/z/	/z/	/ʒ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/

## Patterns of palatalisation

	small	medium	big
/k/	/tʰs/	/tʃ/	/tʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/h/	/z/	/ʒ/	/ʒ/
/t/	/c/	/c/	/tʰs/
/d/	/tʃ/	/tʃ/	/z/
/tʰs/	/tʰs/	?	/tʃ/
/s/	/s/	/s/	/ʃ/
/z/	/z/	/z/	/ʒ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/



## Patterns of palatalisation

	small	medium	big
/k/	/tʰs/	/tʃ/	/tʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/h/	/z/	/ʒ/	/ʒ/
/t/	/c/	/c/	/tʰs/
/d/	/ɟ/	/ɟ/	/z/
/tʰs/	/tʰs/	?	/tʃ/
/s/	/s/	/s/	/ʃ/
/z/	/z/	/z/	/ʒ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/

## Patterns of palatalisation

	small	medium	big
/k/	/tʰ/	/tʃ/	/tʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/t/	/c/	/c/	/tʰ/
/tʰ/	/tʰ/	?	/tʃ/
/s/	/s/	/s/	/ʃ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/

## Patterns of palatalisation

	small PAL <sub>1</sub>	medium PAL <sub>2</sub>	big PAL <sub>3</sub>
/k/	/t͡s/	/t͡ʃ/	/t͡ʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/t/	/c/	/c/	/t͡s/
/t͡s/	/t͡s/	?	/t͡ʃ/
/s/	/s/	/s/	/ʃ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/

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## Overview

- ▶ Palatalizers' 'strength' is a function of their elemental make-up
- ▶ Palatalizers are floating element expressions that seek to associate with the root-final C (or V) slot

		PAL <sub>1</sub> adds I	PAL <sub>2</sub> adds H.I	PAL <sub>3</sub> adds H. <u>I</u>		
/k/	?	/tʃ/	?.H.I	/tʃ/	?.H. <u>I</u>	
/x/	H	/ʃ/	H.I	/ʃ/	H. <u>I</u>	
/t/	?.A	/c/	?.A.I	/c/	?.H.A.I	
/tʃ/	?.I	/tʃ/	?.I	?	/tʃ/	?.H. <u>I</u>
/s/	H.A.I	/s/	H.A.I	/s/	H.A.I	
/n/	L	/ɲ/	L.I	/ɲ/	L.H.I	
/r/	A	/r̄/	A.I	/r̄/	A.H.I	

# Overview

- ▶ The surfacing of [j] with labials is not related to the strength of the palatalizer, but to the CV profile of the suffix

		PAL <sub>1</sub> adds I		CMPR -ěj adds H.I		CAUS -i adds H.I		PAL <sub>3</sub> adds H.I	
/p/	?U	/pj/	?U-I	/pj/	?U-H.I	/p/	?U	/p/	?U
/f/	H.U	/fj/	H.U-I	/fj/	H.U-H.I	/f/	H.U	/f/	H.U
/m/	L.U	/mj/	L.U-(L.)I	/mj/	L.U-(L.)H.I	/m/	L.U	/m/	L.U

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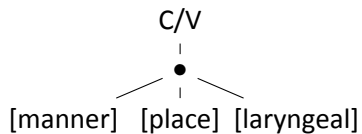


# Prerequisites

- ▶ Strict CV (Lowenstamm, 1996; Scheer, 2004)
- ▶ Element Theory (Backley, 2011)

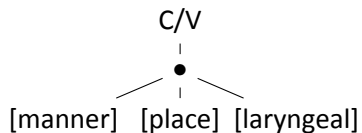
# Prerequisites

## a. General schema

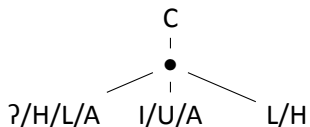


# Prerequisites

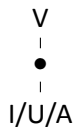
## a. General schema



## b. Consonants



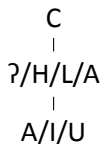
## c. Vowels



# Prerequisites

- ▶ For ease of exposition
  - ▶ we verticalise the geometry
  - ▶ we ignore the [laryngeal] node
  - ▶ we removed the root node (●)

## a. Consonants



## b. Vowels



## Prerequisites

- ▶ The **palatalizers** are floating structures: no C/V node
- ▶ They strive for association to an available C/V node
- ▶ Association starts from the leftmost available C/V node

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# Velars

		PAL <sub>1</sub> adds I	PAL <sub>2</sub> adds H.I	PAL <sub>3</sub> adds H.I
/k/	ʔ	/t͡s/ ʔ.I	/t͡ʃ/ ʔ.H.I	/t͡ʃ/ ʔ.H.I
/x/	H	/ʃ/ H.I	/ʃ/ H.I	/ʃ/ H.I

PAL<sub>1</sub>: /k/ → [tʰ] = ? → ?.l

▶ /k/-final ROOT

... C V  
|  
?

▶ -ě.LOC/DAT.F.SG

C V  
|  
e  
  
l



PAL<sub>1</sub>: /k/ → [tʃ] = ? → ?.l

▶ /k/-final ROOT

... C V  
|  
?

▶ l associates to root-final C\*

... C V - C V  
| |  
? e  
|  
l

▶ -ě.LOC/DAT.F.SG

C V  
|  
e  
|  
l

PAL<sub>1</sub>: /k/ → [tʰ] = ? → ?.l

▶ /k/-final ROOT

... C V  
|  
?

▶ l associates to root-final C\*

... C V - C V  
| | |  
? e  
|  
l

▶ -ě.LOC/DAT.F.SG

C V  
|  
e  
|  
l

▶ ...k-ě → [tʰ]

... C V  
| |  
? e  
|  
l

\* Empty VC deletion (Gussmann and Kaye, 1993)

PAL<sub>2</sub>: /k/ → [tʃ] = ʔ → ʔ.H.I

▶ /k/-final ROOT

... C V  
|  
ʔ

▶ -ěj-.CMPR

C V C V  
| |  
H e j  
|  
I

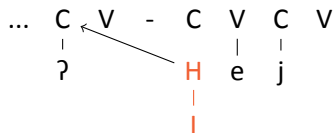
PAL<sub>2</sub>: /k/ → [tʃ] = ʔ → ʔ.H.I

▶ /k/-final ROOT

... C V  
|  
ʔ

▶ H.I associates to root-final C

... C V - C V C V  
| | | |  
ʔ H e j  
|  
I



▶ -ěj-.CMPR

C V C V  
| |  
H e j  
|  
I

# PAL<sub>2</sub>: /k/ → [tʃ] = ʔ → ʔ.H.I

## ▶ /k/-final ROOT

... C V  
|  
ʔ

## ▶ H.I associates to root-final C

... C V - C V C V  
| | | |  
ʔ H e j  
|  
I

## ▶ -ěj-.CMPR

C V C V  
| | | |  
H e j  
|  
I

## ▶ ...k-ěj → [tʃej]

... C V C V  
| | | |  
ʔ.H e j  
|  
I

PAL<sub>3</sub>: /k/ → [tʃ] = ʔ → ʔ.H.Ī

▶ /k/-final ROOT

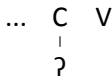
... C V  
|  
ʔ

▶ -ĕn-.P.PRT

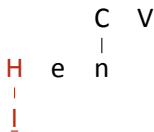
H e n  
|  
Ī

PAL<sub>3</sub>: /k/ → [tʃ] = ? → ?.H.I

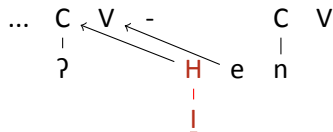
- ▶ /k/-final ROOT



- ▶ -*ěn*-.P.PRT

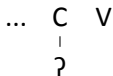


- ▶ H.I associates to root-final C
- ▶ e associates to root-final V

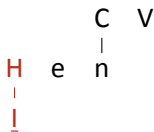


PAL<sub>3</sub>: /k/ → [tʃ] = ? → ?.H.I

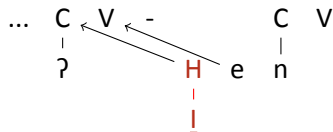
- ▶ /k/-final ROOT



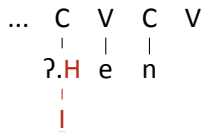
- ▶ -*ěn*-.P.PRT



- ▶ H.I associates to root-final C
- ▶ e associates to root-final V



- ▶ ...*k-ěn* → [tʃen]





# Velars

		PAL <sub>1</sub> adds I	PAL <sub>2</sub> adds H.I	PAL <sub>3</sub> adds H. <u>I</u>
/k/	?	/ts/ ?. <u>I</u>	/tʃ/ ?. <u>H.I</u>	/tʃ/ ?. <u>H.I</u>
/x/	H	/ʃ/ H. <u>I</u>	/ʃ/ H. <u>I</u>	/ʃ/ H. <u>I</u>

- ▶ Some similar-sounding segments have different URs
  - ▶ /tʃ/ = ?.H.I and ?.H.I
  - ▶ /ʃ/ = H.I and H.I

# Velars

		PAL <sub>1</sub> adds I	PAL <sub>2</sub> adds H.I	PAL <sub>3</sub> adds H.I
/k/	?	/ts/ ?.I	/tʃ/ ?.H.I	/tʃ/ ?.H.I
/x/	H	/ʃ/ H.I	/ʃ/ H.I	/ʃ/ H.I

- ▶ Some similar-sounding segments have different URs
  - ▶ /tʃ/ = ?.H.I and ?.H.I
  - ▶ /ʃ/ = H.I and H.I
- ▶ No UR has different phonetic interpretations

# Outline

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Velars

**Coronals**

Labials

Conclusion

# Coronals

		PAL <sub>1</sub> adds <u>I</u>	PAL <sub>2</sub> adds <u>H.I</u>	PAL <sub>3</sub> adds <u>H.I</u>
/t/	ʔ.A	/c/ ʔ.A. <u>I</u>	/c/ ʔ.H.A. <u>I</u>	/t͡s/ ʔ.H.A. <u>I</u>
/t͡s/	ʔ.I	/t͡s/ ʔ. <u>I</u>	ʔ	/t͡ʃ/ ʔ.H. <u>I</u>
/s/	H.A.I	/s/ H.A. <u>I</u>	/s/ H.A. <u>I</u>	/ʃ/ H.A. <u>I</u>
/n/	L	/ɲ/ L. <u>I</u>	/ɲ/ L.H. <u>I</u>	/ɲ/ L.H. <u>I</u>
/r/	A	/r̥/ A. <u>I</u>	/r̥/ A.H. <u>I</u>	/r̥/ A.H. <u>I</u>

► Some similar-sounding segments have different URs

- /c/ = ʔ.A.I and ʔ.H.A.I
- /t͡s/ = ʔ.I and ʔ.H.A.I
- /ɲ/ = L.I, L.H.I and L.H.I
- /r̥/ = A.I, A.H.I and A.H.I

# Coronals

		PAL <sub>1</sub> adds I	PAL <sub>2</sub> adds H.I	PAL <sub>3</sub> adds H. <u>I</u>
/t/	ʔ.A	/c/ ʔ.A.I	/c/ ʔ.H.A.I	/t͡s/ ʔ.H.A. <u>I</u>
/t͡s/	ʔ.I	/t͡s/ ʔ.I	ʔ	/t͡ʃ/ ʔ.H. <u>I</u>
/s/	H.A.I	/s/ H.A.I	/s/ H.A.I	/ʃ/ H.A. <u>I</u>
/n/	L	/ɲ/ L.I	/ɲ/ L.H.I	/ɲ/ L.H. <u>I</u>
/r/	A	/r̥/ A.I	/r̥/ A.H.I	/r̥/ A.H. <u>I</u>

- ▶ Some similar-sounding segments have different URs
  - ▶ /c/ = ʔ.A.I and ʔ.H.A.I
  - ▶ /t͡s/ = ʔ.I and ʔ.H.A.I
  - ▶ /ɲ/ = L.I, L.H.I and L.H.I
  - ▶ /r̥/ = A.I, A.H.I and A.H.I
- ▶ No single UR has different phonetic interpretations
  - ▶ H.A.I (/s/) ≠ A.H.I (/r̥/)
  - ▶ H.A.I (/ʃ/) ≠ A.H.I (/r̥/)

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# Labials

	PAL <sub>1</sub>	CMPR -ěj	CAUS -i	PAL <sub>3</sub>
/p/	/pj/	/pj/	/p/	/p/
/b/	/bj/	/bj/	/b/	/b/
/f/	/fj/	/fj/	/f/	/f/
/v/	/vj/	/vj/	/v/	/v/
/m/	/mj/	/mj/	/m/	/m/

- ▶ Why do some palatalizers fail to ‘palatalize’ labials?
- ▶ What determines whether they surface or not?

# Labials

## Assumptions

- ▶ Labials have U
- ▶ U and I are on the same tier
- ▶ Palatalizers contain I → no association with slots containing U



# Labials

## Assumptions

- ▶ Labials have U
- ▶ U and I are on the same tier
- ▶ Palatalizers contain I → no association with slots containing U

## Derivation

- ▶ PAL attempts to associate, from left to right
  - ▶ It first tries to associate to the root-final C
  - ▶ Failing that, it associates to the root-final V
  - ▶ Failing that, it associates to suffixal C
  - ▶ Failing that, it doesn't surface at all

Labials: /p/ → /pi/

▶ -ěj-.CMPR - CV slots

C	V	C	V
H	e	j	

## Labials: /p/ → /pi/

- ▶ -ěj-.CMPR - CV slots

C	V	C	V
H	e	j	

*... C	V	-	C	V	C	V
	←					
?	//		H	e	j	
U						

- ▶ H.I tries to associate to the leftmost available slot, but
- ▶ U prevents H.I from associating to the root-final C

## Labials: /p/ → /pi/

### ▶ -ěj-.CMPR - CV slots

C	V	C	V
H	e	j	

* ...	C	V	-	C	V	C	V
	?			H	e	j	
	U						

*Note: An arrow points from the H in the 5th slot to the V in the 2nd slot, with a double slash (//) indicating a blocked association.*

- ▶ H.I tries to associate to the leftmost available slot, but
- ▶ U prevents H.I from associating to the root-final C

...	C	V	-	C	V	C	V
	?			H	e	j	
	U						

*Note: An arrow points from the H in the 5th slot to the V in the 3rd slot, indicating a successful association.*

- ▶ H.I associates to the second left-most slot, i.e. the root-final V
- ▶ ...p-ěj → [piej]

## Labials: /p/ → /pi/

### Why *i* is a vowel I

(1)	PST	INF	gloss
a.	<i>nes-l</i> CVC-l	<i>nés-t</i> CVVC-t	'bear'
b.	<i>spě-l</i> CieC-l	<i>spě-t</i> CieC-t	'support'

- ▶ Vowels in infinitives undergo templatic lengthening (1-a)
- ▶ *ě* never lengthens (1-b)
- ▶ *ě* is already long (Ziková & Poříomská, p.c.)
- ▶ *i* is associated to V

## Labials/p/ → /pi/

### Why *i* is a vowel II

- (2)
- |    |        |               |          |
|----|--------|---------------|----------|
| a. | N.SG   | <i>bar∅va</i> | 'colour' |
| b. | G.PL   | <i>barev∅</i> | FEN      |
| c. | LOC.SG | <i>bar∅vě</i> | [barvie] |

- ▶ in (2-c), U forces **H.I** associated with *ě* into V
  - ▶ floating I being a V, it can license ∅ in a preceding alternation site
  - ▶ if floating I were a C, it could not do that

Labials: /m/ → [mɲ]

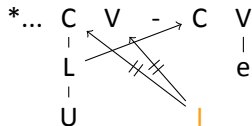
- ▶ -ě.LOC/DAT.F.SG - CV slots

C	V
	e

## Labials: /m/ → [mɲ]

- ▶ -ě.LOC/DAT.F.SG - CV slots

C V  
|  
e  
  
|



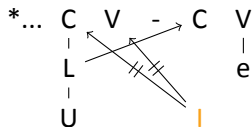
- ▶ U prevents | from associating to the stem-final C
- ▶ L association with the suffix's C prevents | from associating to V



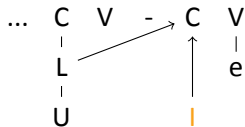
## Labials: /m/ → [mɲ]

- ▶ -ě.LOC/DAT.F.SG - CV slots

C V  
|  
e  
  
|



- ▶ U prevents | from associating to the stem-final C
- ▶ L association with the suffix's C prevents | from associating to V



- ▶ | associates to the second leftmost slot, i.e. the suffix-initial C
- ▶ ...*m-ě* → [mɲe]

Labials: /p/ → /p/

- ▶ *-i.CAUS* - no CV slots

H  
-  
I |

## Labials: /p/ → /p/

- ▶ *-i.CAUS* - no CV slots

H  
|  
I I

- ▶ U prevents H.I from associating to root-final C
- ▶ H.I associates to root-final V
- ▶ I also associates to root-final V ⇒ ...*p-i* → [pi]

... C V  
| |  
? H  
| |  
U I I

# Outline

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	small	medium	big
/k/	/t͡s/	/t͡ʃ/	/t͡ʃ/
/x/	/ʃ/	/ʃ/	/ʃ/
/t/	/c/	/c/	/t͡s/
/t͡s/	/t͡s/	?	/t͡ʃ/
/s/	/s/	/s/	/ʃ/
/n/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̄/	/r̄/	/r̄/

	PAL <sub>1</sub>	PAL <sub>1</sub>	PAL <sub>1</sub>
?	? <u>I</u>	? <u>H.I</u>	? <u>H.I</u>
H	H <u>I</u>	H <u>I</u>	H <u>I</u>
?A	? <u>A.I</u>	? <u>H.A.I</u>	? <u>H.A.I</u>
?I	? <u>I</u>	?	? <u>H.I</u>
H.A	H <u>A.I</u>	H <u>A.I</u>	H <u>A.I</u>
L	L <u>I</u>	L <u>H.I</u>	L <u>H.I</u>
A	A <u>I</u>	A <u>H.I</u>	A <u>H.I</u>

- ▶ Abstract segmental representations
  - ▶ Similar-sounding segments with different representations

- ▶ Abstract segmental representations
  - ▶ Similar-sounding segments with different representations
- ▶ Substance-free phonology
  - ▶ Focus on phonological behaviour rather than on phonetics



- ▶ Abstract segmental representations
  - ▶ Similar-sounding segments with different representations
- ▶ Substance-free phonology
  - ▶ Focus on phonological behaviour rather than on phonetics
- ▶ Strict modularity
  - ▶ Phonology and phonetics as two different modules

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# Outline

Comparative -š: assimilation

Adjectivising -í (God and animals)

Overview of patterns

## Comparative -š: assimilation

base			zero	small	big
/k/	<i>leh</i> ký	'light'	/k/	/ʦ/	/tʃ/ <i>lehč(š)í</i>
/h/	<i>dra</i> hý	'expensive'	/h/	/z/	/z/ <i>dražší</i>
/g/	—		/g/	/z/	?
/x/	<i>tich</i> ý	'silent'	/x/	/ʃ/	/ʃ/ <i>tišší</i>
/t/	<i>boh</i> atý	'rich'	/t/	/c/	/ʦ/
/d/	<i>tvrd</i> ý	'hard'	/d/	/tʃ/	/z/
/ʦ/			/ʦ/	/ʦ/	/tʃ/
/s/	<i>vyso</i> ký	'high'	/s/	/s/	/ʃ/ <i>vyšší</i>
/z/	<i>nízk</i> ý	'low'	/z/	/z/	/z/ <i>nižší</i>
/n/			/n/	/ɲ/	/ɲ/
/r/	<i>star</i> ý	'old'	/r/	/r/	/r/
/p/	( <i>dobr</i> ý)	'good'	/p/	/pj/	/p/
/b/	<i>slab</i> ý	'weak'	/b/	/bj/	/b/
/f/			/f/	/fj/	/f/
/v/	<i>tmav</i> ý	'dark'	/v/	/vj/	/v/
/m/			/m/	/mj/	/m/

## Comparative -š: assimilation

- ▶ drahý-dražší, tichý-tiší, but also vysoký-vyšší, blízký-blíží, úzký-uží, nízký-níží, krásný-kraší
- ▶ /j/ palatalizes both velar and coronal consonants, as long as they are fricative, but labials are still out
  - ▶ U repels !
  - ▶ Strong typological evidence for the resistance of labials to palatalize
- ▶ OCP effect

# Comparative -š: assimilation

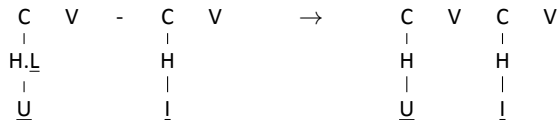
- ▶ Velar - /x-ʃ/ → [ʃ]



- ▶ Coronal - /s-ʃ/ → [ʃ] (I+I=I)



- ▶ Labial - /v-ʃ/ → [ʃ] (U ↔ I; /v/-devoicing → L-removal)



## Comparative -š: assimilation

- ▶ **PAL<sub>3</sub>** as fricative assimilation
  - ▶ OCP effect
  - ▶ Labials out because labial's U repels l
- ▶ Where does the difference between feature integration and assimilation come from?
- ▶ What drives the application of the two different processes?
- ▶ Tentative answer
  - ▶ **PAL<sub>1</sub>** l is 'manner-less' → it links to whatever 'manner' feature it finds, or to an empty C if repelled by U
  - ▶ **PAL<sub>3</sub>** l is bound to its 'manner' feature, and it follows its fate, unless repelled by U

# Outline

Comparative -š: assimilation

Adjectivising -í (God and animals)

Overview of patterns



## Adjectivising -í (God and animals)

	base		small		big	
/k/	<i>pták</i>	‘bird’	/tʃ/		/tʃ/	<i>ptačí</i>
/h/	<i>Bůh</i>	‘God’	/z/		/z/	<i>Boží</i>
/g/			/z/		?	—
/x/	<i>moucha</i>	‘fly’	/ʃ/		/ʃ/	<i>muší</i>
/t/	<i>mamut</i>	‘mammoth’	/c/	<i>mamutí</i>	/tʃ/	
/d/	<i>had</i>	‘snake’	/ʃ/	<i>hadí</i>	/z/	
/tʃ/	<i>ovce</i>	‘sheep’	/tʃ/		/tʃ/	<i>ovčí</i>
/s/	<i>husa</i>	‘goose’	/s/	<i>husí</i>	/ʃ/	
/z/	<i>koza</i>	‘goat’	/z/	<i>kozí</i>	/z/	
/n/	<i>havran</i>	‘raven’	/ɲ/	<i>havraní</i>	/ɲ/	
/r/	<i>vydra</i>	‘otter’	/r̩/	<i>vydří</i>	/r̩/	
/p/	<i>sup</i>	‘vulture’	/pj/		/p/	<i>supí</i>
/b/	<i>ryba</i>	‘fish’	/bj/		/b/	<i>rybí</i>
/f/			/fj/		/f/	—
/v/	<i>lev</i>	‘lion’	/vj/		/v/	<i>lví</i>
/m/			/mɲ/		/m/	—

# Outline

Comparative -š: assimilation

Adjectivising -í (God and animals)

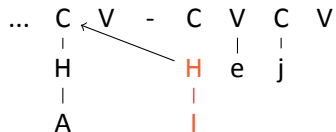
Overview of patterns

# Overview of patterns

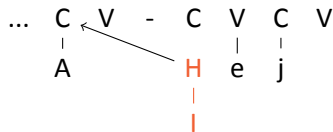
- ▶ Small
  - ▶ Nouns
    - ▶ case marker NOM.PL.M *-i*
    - ▶ case marker LOC/DAT.F.SG *-ě*
  - ▶ Adjectives
    - ▶ soft agreement marker *-í* (ROOT-*í*-{ $\emptyset$ /-ho/-mu/-m/-ch/-mi}))
- ▶ Medium
  - ▶ Adjectives
    - ▶ denominal *-í* (animals and God)
    - ▶ comparative *-ěj*
  - ▶ Verbs
    - ▶ causative *-i*
- ▶ Big
  - ▶ Verbs
    - ▶ past passive participle *-ěn*

H.A.I (/s/)  $\neq$  A.H.I (/r/)

► ...s-ěj-.CMPR



► ...r-ěj-.CMPR



► Output: [sej]

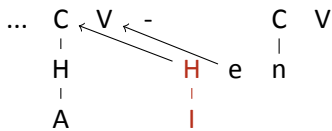


► Output: [rej]

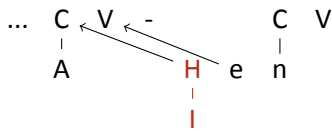


H.A.I (/ʃ/)  $\neq$  A.H.I (/r/)

► ...s-ěn-.P.PRT



► ...r-ěn-.P.PRT



► Output: [ʃen]



► Output: [rɛn]

