

Zero morphology and change-of-state verbs

Pavel Caha¹ Karen De Clercq² Guido Vanden Wyngaerd³

¹Masaryk University (Brno)

²Paris 7-Denis Diderot/CNRS

³KU Leuven (Brussels)

Linguistic Society of Belgium
16 October 2020

Outline

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Introduction

Claim

- ▶ Derivational 'zero affixes' do not exist
- ▶ 'silent' meaning components are pronounced cumulatively within overt morphemes \Rightarrow phrasal spellout

Introduction

Claim

- ▶ Derivational ‘zero affixes’ do not exist
- ▶ ‘silent’ meaning components are pronounced cumulatively within overt morphemes \Rightarrow phrasal spellout

Empirical domain

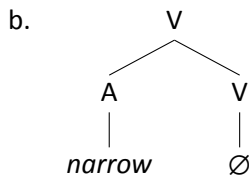
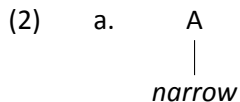
- ▶ Adjective-to-verb conversion
- ▶ Inchoative-causative alternation

Introduction

- (1) a. The road is narrow.
b. The road narrowed.

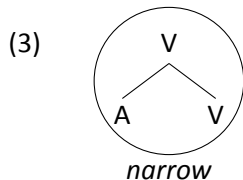
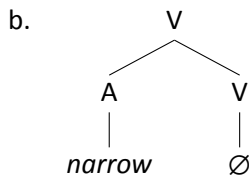
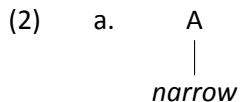
Introduction

- (1) a. The road is narrow.
b. The road narrowed.



Introduction

- (1) a. The road is narrow.
b. The road narrowed.



Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Data

∅	-en	-ify	-ise
cool	tighten	solidify	generalise
narrow	widen	prettify	formalise
open	shorten	simplify	americanise
thin	sharpen	humidify	sexualise
dim	slacken	acidify	christianise
tame	brighten	fluidify	commercialise
blind	cheapen	falsify	conceptualise
warm	coarsen	Frenchify	actualise
clean	dampen	intensify	annualise
empty	darken	uglify	grammaticalise
clear	deaden	diversify	brutalise
dry	deafen	mummify	centralise
quiet	lighten	fortify	criminalise
brown	fasten	modify	materialise

Data

(4)

INCHOATIVE

- a. The road **narrowed**
- b. Her stomach tight**ened**
- c. The mixture solid**ified**
- d. Forms and ideas material**ise**

CAUSATIVE

- The workers **narrowed** the road
- She tight**ened** the lid
- The company solid**ified** its position
- They material**ised** their ideas

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

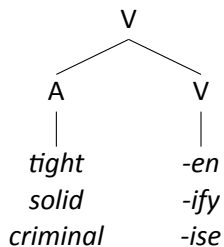
Appendix

The verb contains the adjective

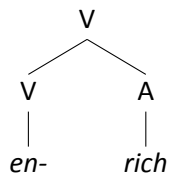
- ▶ morphologically
- ▶ semantically

Morphology: English

(5) a.



b.



Morphology: Dutch

(6)	A	V _{INCH/CAUS}	
	bleek	ver-bleek-en	'pale'
	warm	ver-warm-en	'warm'
	breed	ver-breed-en	'widen'
	smal	ver-small-en	'narrow'
	groot	ver-groot-en	'enlarge'
	klein	ver-klein-en	'become/make smaller'
	dik	ver-dikk-en	'thicken'
	dun	ver-dunn-en	'thin'
	arm	ver-arm-en	'become/make poor'

Semantics

(7) $[_V \text{open}] = [(\text{cause to}) \text{become } [_A \text{open}]]$

The causative contains the inchoative

- ▶ morphologically
- ▶ semantically

Morphology

(8) Haspelmath (1993)

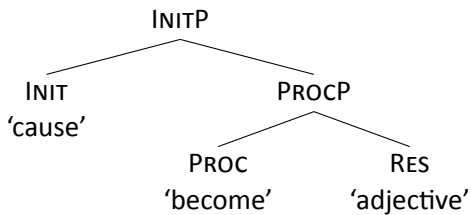
a.	Georgian	duy-s	'cook'	(INCH)
		a- duy - ebs	'cook'	(CAUS)
b.	French	fondre	'melt'	(INCH)
		faire fondre	'melt'	(CAUS)
c.	Arabic	darasa	'learn'	(INCH)
		darr asa	'teach'	(CAUS)

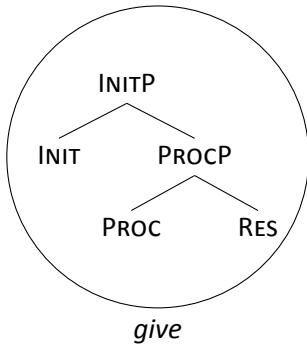
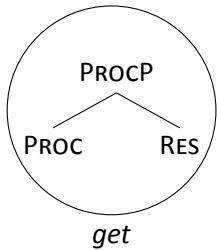
Semantics

(9) $[{}_V \text{open}]_{\text{CAUS}} = [\text{cause to } [{}_V \text{open}]_{\text{INCH}}]_{\text{CAUS}}$

Decomposing V (Ramchand 2008)

(10)

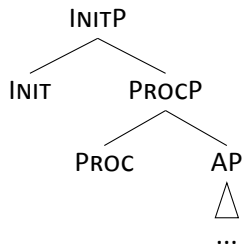




Putting A into V

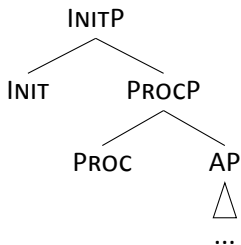
(11)

Causative

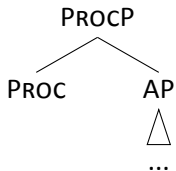


Putting A into V

(11) **Causative**



(12) **Inchoative**



Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

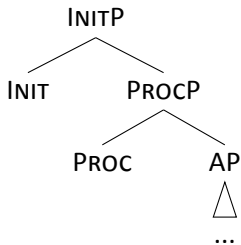
Three INCH/CAUS scenarios in Czech

Conclusions

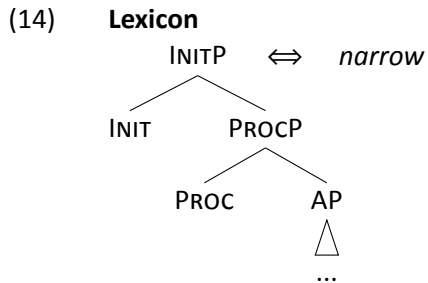
Appendix

Zero-marking is phrasal spellout

(13) **Syntax of causative verb**

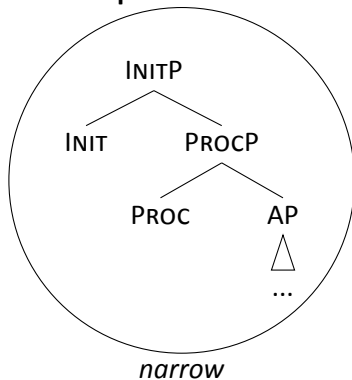


Zero-marking is phrasal spellout

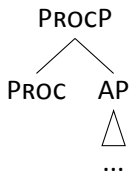


Zero-marking is phrasal spellout

(15) Phrasal Spellout



(16) a. **Inchoative verb**



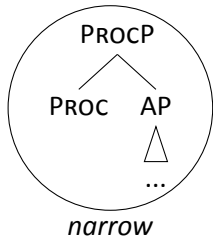
b. **Adjective**



(17) *Superset Principle* (Starke 2009)

A lexically stored tree L matches a syntactic node S iff L contains the syntactic tree dominated by S as a subtree

(18) a. **Inchoative verb**



b. **Adjective**



Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Suffixal marking

- (19) a. The workers narrowed/*wided the road.
b. The road narrowed/*wided.

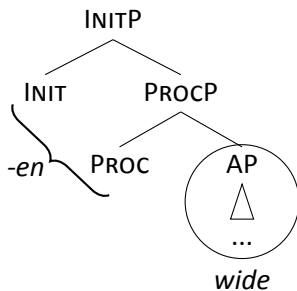
Suffixal marking

- (19) a. The workers narrowed/*wided the road.
b. The road narrowed/*wided.

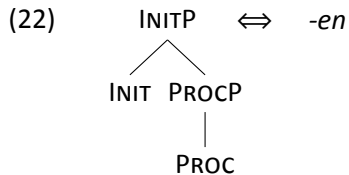
(20) AP \Leftrightarrow *wide*
△
...

Suffixal marking

(21)

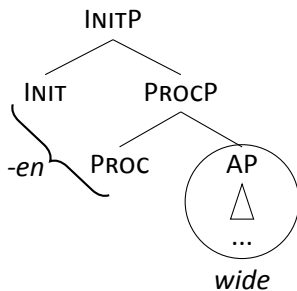


Suffixal marking



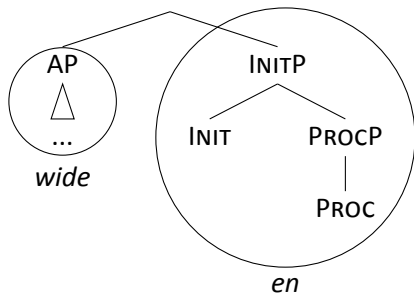
Suffixal marking

(23)



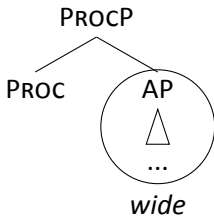
Suffixal marking

(24)

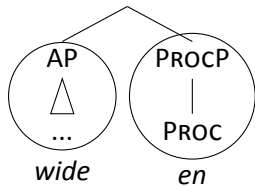


Suffixal marking

(25)



(26)



Possible scenarios

(27)

	A	PROC	INIT	
1.	root	suffix		<i>Eng. wid-en</i>
2.	root	suffix1		?
		suffix2		
3.	root		suffix	?
4.	root			<i>Eng. narrow</i>

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Causatives in Czech

(28) causative *-i*

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR

Causatives in Czech

(28) causative *-i*

a. **tup-ý**
blunt-AGR

b. **tup-i** -l
blunt-CAUSE -PAST

Causatives in Czech

(28) causative *-i*

a. **tup-ý**
blunt-AGR

b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

Causatives in Czech

(28) causative *-i*

a. **tup-ý**
blunt-AGR

b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

a. **tich-ý**
silent-AGR

Causatives in Czech

(28) causative *-i*

a. **tup-ý**
blunt-AGR

b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

a. **tich-ý**
silent-AGR

b. **tiš-i** -l
silent-CAUSE -PAST

Causatives in Czech

(28) causative *-i*

a. **tup-ý**
blunt-AGR

b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

a. **tich-ý**
silent-AGR

b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -l
easy-CAUSE -PAST

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -l
easy-CAUSE -PAST
- c. u- **snadn-i** -l
UP easy-CAUSE -PAST

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -l
easy-CAUSE -PAST
- c. u- **snadn-i** -l
UP easy-CAUSE -PAST

(31) allomorphy

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -I
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -I
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -I
easy-CAUSE -PAST
- c. u- **snadn-i** -I
UP easy-CAUSE -PAST

(31) allomorphy

- a. **tup-i** -I
blunt-CAUSE -PAST

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -I
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -I
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -I
easy-CAUSE -PAST
- c. u- **snadn-i** -I
UP easy-CAUSE -PAST

(31) allomorphy

- a. **tup-i** -I
blunt-CAUSE -PAST
- b. **tup-í** -m
blunt-CAUSE -1.SG

Causatives in Czech

(28) causative *-i*

- a. **tup-ý**
blunt-AGR
- b. **tup-i** -l
blunt-CAUSE -PAST

(29) palatalization

- a. **tich-ý**
silent-AGR
- b. **tiš-i** -l
silent-CAUSE -PAST

(30) prefixation

- a. **snadn-ý**
easy-AGR
- b. ***snadn-i** -l
easy-CAUSE -PAST
- c. u- **snadn-i** -l
UP easy-CAUSE -PAST

(31) allomorphy

- a. **tup-i** -l
blunt-CAUSE -PAST
- b. **tup-í** -m
blunt-CAUSE -1.SG
- c. **tup-e** -ní
blunt-CAUSE -NOM

Table 1: A sample of causatives derived from adjectives beginning with *p*

gloss	adjective	causatives with various prefixes
coulourful	pestr-ý	z-pestr-i-t
firm	pevn-ý	při-pevn-i-t, z-pevn-i-t, u-pevn-i-t
shy	plach-ý	po-plaš-i-t, vy-plaš-i-t
full	pln-ý	do-pln-i-t, na-pln-i-t, pře-pln-i-t, vy-pln-i-t
flat	plosk-ý	z-plošt-i-t
similar	podobn-ý	z-podobn-i-t, při-podobn-i-t, vy-podobn-i-t
substantial	podstatn-ý	o-podstatn-i-t
doubtful	pochybn-ý	z-pochybn-i-t
slow	pomal-ý	z-pomal-i-t
late	pozd-n-í	z-pozd-i-t, o-pozd-i-t, pozd-i-t, při-pozd-i-t
alert	pozorn-ý	u-pozorn-i-t
empty	prázd-ý	u-prázd-i-t, vy-prázd-i-t
flexible	pružn-ý	z-pružn-i-t
passable	průchodn-ý	z-průchodn-i-t
transparent	průhledn-ý	z-průhledn-i-t
passable	průjezd-ý	z-průjezd-i-t
preferential	přednostn-í	u-přednostn-i-t
synoptic	přehledn-ý	z-přehledn-i-t
exact	přesn-ý	z-přesn-i-t, u-přesn-i-t
pleasant	příjemn-ý	z-příjemn-i-t
straight	přím-ý	na-přím-i-t, vz-přím-i-t
strict	přísn-ý	z-přísn-i-t
accessible	přístupn-ý	z-přístupn-i-t
present	přítomn-ý	z-přítomn-i-t

Three INCH/CAUS scenarios in Czech

- ▶ We now focus on inchoative counterparts

Three INCH/CAUS scenarios in Czech

- ▶ We now focus on inchoative counterparts
 - ▶ not uniform

Three INCH/CAUS scenarios in Czech

- ▶ We now focus on inchoative counterparts
 - ▶ not uniform
 - ▶ we introduce three different classes

Three INCH/CAUS scenarios in Czech

- ▶ We now focus on inchoative counterparts
 - ▶ not uniform
 - ▶ we introduce three different classes
- ▶ We focus mainly on the past participle

Three INCH/CAUS scenarios in Czech

- ▶ We now focus on inchoative counterparts
 - ▶ not uniform
 - ▶ we introduce three different classes
- ▶ We focus mainly on the past participle
- ▶ All wordlists and example sentences from the Czech National Corpus (<https://www.korpus.cz>)

Czech Class I *i/i*

- ▶ CAUS and INCH are both marked by the *-i-* suffix (cf. English *wid-en*)

Czech Class I *i/i*

- ▶ CAUS and INCH are both marked by the *-i-* suffix (cf. English *wid-en*)

(32) *levn-ý*
cheap-AGR

Czech Class I *i/i*

- ▶ CAUS and INCH are both marked by the *-i-* suffix (cf. English *wid-en*)

(32) *levn-ý*

cheap-AGR

(33) Škoda Auto **z-** *levn* *-i* *-la* své dva hlavní modely
Škoda auto PREF- cheap -CAUS -PST its two main models
'The Škoda Auto company has made its two main models
cheaper.'

Czech Class I *i/i*

- ▶ CAUS and INCH are both marked by the *-i-* suffix (cf. English *wid-en*)

(32) *levn-ý*

cheap-AGR

(33) Škoda Auto **z-** *levn* **-i** **-la** své dva hlavní modely
Škoda auto PREF- cheap -CAUS -PST its two main models
'The Škoda Auto company has made its two main models
cheaper.'

(34) Vodka **z-** *levn* **-i** **-la**

vodka PREF- cheap -INCH -PST

'Vodka got cheaper.'

Czech Class I *i/i*

- ▶ CAUS and INCH are both marked by the *-i-* suffix (cf. English *wid-en*)

(32) *levn-ý*

cheap-AGR

(33) Škoda Auto *z-* *levn* *-i* *-la* své dva hlavní modely

Škoda auto PREF- cheap -CAUS -PST its two main models

‘The Škoda Auto company has made its two main models cheaper.’

(34) Vodka *z-* *levn* *-i* *-la*

vodka PREF- cheap -INCH -PST

‘Vodka got cheaper.’

(35)

A	PROC	INIT
	-i-	
root	-i-	

A list

Table 2: Causative-inchoative ambiguity (Czech National Corpus)

inchoative	gloss	adjective	causative
z-draž-i-t	expensive	drah-ý	z-draž-i-t
z-levn-i-t	cheap	levn-ý	z-levn-i-t
z-pevn-i-t	firm	pevn-ý	z-pevn-i-t
z-pomal-i-t	slow	pomal-ý	z-pomal-i-t
z-rychl-i-t	fast	rychl-ý	z-rychl-i-t
o-slab-i-t	weak	slab-ý	o-slab-i-t
z-mírn-i-t	calm	mírn-ý	z-mírn-i-t
z-intenzívn-i-t	intensive	intenzívn-í	z-intenzívn-i-t

Three INCH/CAUS scenarios in Czech

(36)

	A	PROC	INIT	
1.	root	suffix		Eng. <i>wid-en</i> Cz. Class I
2.	root	suffix1		?
		suffix2		
3.	root		suffix	?
4.	root			Eng. <i>narrow</i>

Czech Class II: *i/ě*

- ▶ Some verbs have a dedicated inchoative marker -*ě*

Czech Class II: *i/ě*

- ▶ Some verbs have a dedicated inchoative marker -*ě*

(37) *nervózn-í*
nervous-AGR

Czech Class II: *i/ě*

- ▶ Some verbs have a dedicated inchoative marker -*ě*

(37) *nervózn-í*
nervous-AGR

(38) Tento moment **z-** *nervózn -i* **-l** domácí hráče
this moment PEF- nervous -CAUS -PST home players
'This moment made the home players nervous.'

Czech Class II: *i/ě*

- ▶ Some verbs have a dedicated inchoative marker -*ě*

(37) *nervózn-í*
nervous-AGR

(38) Tento moment **z-** *nervózn -i* **-l** domácí hráče
this moment PREF- nervous -CAUS -PST home players
'This moment made the home players nervous.'

(39) Táta **z-** *nervózn -ě* **-l**
father PREF- nervous -BECOME -PST
'My father got nervous.'

Czech Class II: *i/ě*

- ▶ Some verbs have a dedicated inchoative marker -*ě*

(37) *nervózn-í*
nervous-AGR

(38) Tento moment *z-* *nervózn -i* *-l* domácí hráče
this moment PREF- nervous -CAUS -PST home players
'This moment made the home players nervous.'

(39) Táta *z-* *nervózn -ě* *-l*
father PREF- nervous -BECOME -PST
'My father got nervous.'

(40)

A	PROC	INIT
root	-i-	
	-ě-	

Table 3: A list of *i/ě* pairs

inchoative	gloss	adjective	causative
z- drsn-ě -t	coarse	drsn-ý	z- drsn-i -t
z- jasn-ě -t	clear	jasn-ý	z- jasn-i -t
z- jemn-ě -t	smooth	jemn-ý	z- jemn-i -t
z- hutn-ě -t	compact	hutn-ý	hutn-i -t
z- kapaln-ě -t	liquid	kapaln-ý	z- kapaln-i -t
košat-ě -t	bushy	košat-ý	roz- košat-i -t
z- krásn-ě -t	beautiful	krásn-ý	z- krásn-i -t
z- mohutn-ě -t	mighty	mohutn-ý	z- mohutn-i -t
z- mrtv-ě -t	dead	mrtv-ý	u- mrtv-i -t
z- nervózn-ě -t	nervous	nervózn-í	z- nervózn-i -t
z- něžn-ě -t	affectionate	něžn-ý	z- něžn-i -t
z- oškliv-ě -t	ugly	oškliv-ý	z- oškliv-i -t
z- pozorn-ě -t	alert	pozorn-ý	u- pozorn-i -t
z- průhledn-ě -t	transparent	průhledn-ý	z- průhledn-i -t
z- přesn-ě -t	exact	přesn-ý	z- přesn-i -t
z- přísn-ě -t	strict	přísn-ý	z- přísn-i -t
po- smutn-ě -t	sad	smutn-ý	roze- smutn-i -t
po- temn-ě -t	dark	temn-ý	za- temn-i -t
z- nehybn-ě -t	immobile	nehybn-ý	z- nehybn-i -t
z- nejist-ě -t	unsure	nejist-ý	z- nejist-i -t
z- neklidn-ě -t	uncalm	neklidn-ý	z- neklidn-i -t

Three INCH/CAUS scenarios in Czech

(41)

	A	PROC	INIT	
1.	root	suffix		Eng. <i>wid-en</i> Cz. Class I
2.	root	suffix1		Cz. Class II
		suffix2		
3.	root		suffix	?
4.	root			Eng. <i>narrow</i>

Czech Class III: *i/∅*

- ▶ Some verbs seem to have a zero inchoative

- ▶ Some verbs seem to have a zero inchoative

(42) *slep-ý*
blind-AGR

- ▶ Some verbs seem to have a zero inchoative

(42) *slep-ý*

blind-AGR

(43) Plyn Botonese *o-* *slep* *-i* *-l*
gas.NOM Botonese.ACC PREF blind -CAUSE PST
'The gas made Botonese blind.'

- ▶ Some verbs seem to have a zero inchoative

(42) *slep-ý*

blind-AGR

(43) Plyn Botonese *o-* *slep* *-i* *-l*

gas.NOM Botonese.ACC PREF blind -CAUSE PST

'The gas made Botonese blind.'

(44) Otec [...] téměř *o-* *slep* *-∅* *-l*.

father ... almost PREF blind -BECOME PST

'My father became almost blind.'

Czech Class III: i/\emptyset

(45)

A	PROC	INIT
root		-i-
root		

Czech Class III: i/\emptyset

(45)

A	PROC	INIT
root	-i-	
root		

Table 4: A list of *i/∅* pairs

inchoative	gloss	adjective	causative
bohat-∅-l	rich	bohat-ý	o-bohat-i-l
o-hluch-∅-l	deaf	hluch-ý	o-hluš-i-l
hněd-∅-l	brown	hněd-ý	za-hněd-i-l
o-chab-∅-l	weak	chab-ý	o-chab-i-l
z-chlad-∅-l	cold	chlad-n-ý	z-chlad-i-l
z-chrom-∅-l	lame	chrom-ý	z-chrom-i-l
z-chud-∅-l	poor	chud-ý	o-chud-i-l
z-krot-∅-l	tame	krot-k-ý	z-krot-i-l
na-mok-∅-l	wet	mokr-ý	na-moč-i-l
o-slep-∅-l	blind	slep-ý	o-slep-i-l
šed-∅-l	gray	šed-ý	za-šed-i-l
tich-∅-l	silent	tich-ý	tiš-i-l
tmav-∅-l	dark	tmav-ý	tmav-i-l
z-trpk-∅-l	bitter	trpk-ý	z-trpč-i-l
z-tuh-∅-l	tough	tuh-ý	z-tuž-i-l
tvrd-∅-l	hard	tvrd-ý	vy-tvrd-i-l
o-živ-∅-l	alive	živ-ý	o-živ-i-l

Three INCH/CAUS scenarios in Czech

(46)

	A	PROC	INIT	
1.	root	suffix		Eng. <i>wid-en</i> Cz. Class I
2.	root	suffix1		Cz. Class II
		suffix2		
3.	root		suffix	Cz. Class III
4.	root			Eng. <i>narrow</i>

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Conclusions

- ▶ Two analytical claims

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational 'zero affixes' do not exist)

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational ‘zero affixes’ do not exist)
 - ii Causatives contain inchoatives

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational 'zero affixes' do not exist)
 - ii Causatives contain inchoatives
 - iii Inchoatives contain adjectives

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational 'zero affixes' do not exist)
 - ii Causatives contain inchoatives
 - iii Inchoatives contain adjectives
- ▶ The empirical part

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational 'zero affixes' do not exist)
 - ii Causatives contain inchoatives
 - iii Inchoatives contain adjectives
- ▶ The empirical part
 - i Works well for deadjectival inchoative/causative verbs in English

Conclusions

- ▶ Two analytical claims
 - i Conversion arises as an effect of phrasal spellout (derivational 'zero affixes' do not exist)
 - ii Causatives contain inchoatives
 - iii Inchoatives contain adjectives
- ▶ The empirical part
 - i Works well for deadjectival inchoative/causative verbs in English
 - ii Allows us to capture the inchoative/causative alternation in Czech

Thank you!

References

- Haspelmath, Martin. 1993. More on the typology of inchoative/causative verb alternations. In Bernard Comrie & Maria Polinsky (eds.), *Causatives and transitivity*. 87–120. Amsterdam: Benjamins.
- Koontz-Garboden, Andrew. 2009. Anticausativization. *Natural Language & Linguistic Theory* 27(1). 77–138.
- Lundquist, Björn, Martin Corley, Mai Tungseth, Antonella Sorace & Gillian Ramchand. 2016. Anticausatives are semantically reflexive in Norwegian, but not in English. *Glossa* 1. 47.1–30.
- Ramchand, Gillian. 2008. *Verb meaning and the lexicon*. Cambridge: Cambridge University Press.
- Starke, Michal. 2009. Nanosyntax: A short primer to a new approach to language. *Nordlyd* 36. 1–6.

Introduction

Data

Prerequisites

Zero-marking is phrasal spellout

Suffixal marking

Three INCH/CAUS scenarios in Czech

Conclusions

Appendix

Appendix

1. Does the causative always contain the inchoative?
2. Czech *-nu*
3. Czech Present Tense

Does the causative always contain the inchoative?

- (47)
- a. L' enfant a ouvert la porte.
the child has opened the door
'The child opened the door.'
 - b. La porte s' est ouverte.
the door REFL is opened'
'The door opened.'

Does the causative always contain the inchoative?

- (47) a. L' enfant a ouvert la porte.
the child has opened the door
'The child opened the door.'
- b. La porte s' est ouverte.
the door REFL is opened'
'The door opened.'

- ▶ no dedicated (i.e. nonreflexive) derivational affix that does this
(see e.g. Koontz-Garboden 2009: 80)
- ▶ $V_{\text{ANTICAUS}} = \text{CAUSE}(x, \text{BECOME}(\text{Pred}(y)))$, with $x = y$

Does the causative always contain the inchoative?

- (48) Causational Entailment (Lundquist et al. 2016: 2)
 $\forall x \forall y [\text{CAUSE}(x, \text{BECOME}(\text{Pred}(y))) \rightarrow \text{BECOME}(\text{Pred}(y))]$

Does the causative always contain the inchoative?

- (48) Causational Entailment (Lundquist et al. 2016: 2)
 $\forall x \forall y [\text{CAUSE}(x, \text{BECOME}(\text{Pred}(y))) \rightarrow \text{BECOME}(\text{Pred}(y))]$
- (49) #John broke the glass, but the glass didn't break.

Does the causative always contain the inchoative?

- (50) No Causational Entailment with Anticausatives
 $\forall x \forall y [\text{CAUSE}(x, \text{BECOME}(\text{Pred}(y))) \not\rightarrow \text{CAUSE}(y, \text{BECOME}(\text{Pred}(y)))]$

Does the causative always contain the inchoative?

(50) No Causational Entailment with Anticausatives
 $\forall x \forall y [\text{CAUSE}(x, \text{BECOME}(\text{Pred}(y))) \nrightarrow \text{CAUSE}(y, \text{BECOME}(\text{Pred}(y)))]$

(51) Koontz-Garboden (2009: 117)

- a. #No **empeoró** ningún paciente. Los empeoró el
not worsened any patient them worsened the
tratamiento.
treatment
'No patient worsened. The treatment worsened them.'
- b. No **se rompió** ningún vaso; los rompió Andrés.
not REFL broke any glass them broke Andrew
'No glass broke; Andrew broke them.'

Does the causative always contain the inchoative?

Lundquist, Corley, Tungseth, Sorace & Ramchand (2016)

- ▶ experiment with English and Norwegian speakers
- ▶ E has no anticausatives
- ▶ N has both inchoatives and anticausatives
- ▶ N speakers are much more reluctant to accept the *Causational Entailment*, particularly with reflexive-marked causatives

Does the causative always contain the inchoative?

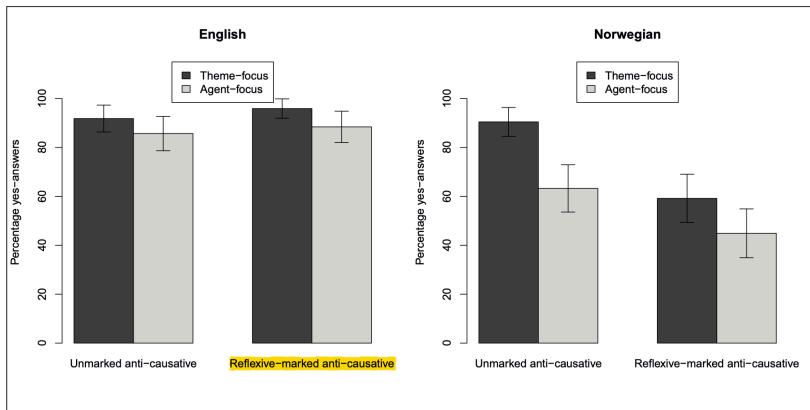


Figure 1: Percentage yes-responses for “unmarked” and “marked” anticausative verbs, by focus on theme or agent in the videos, for English and Norwegian respondents. Error bars represent two standard errors.

- ▶ In the infinitive of Class III verbs, we find *nou* in the inchoative:

(52) Sních tě může o- *slep -i* -t
snow you-ACC can PREF blind -CAUS INF
'The snow can make you blind.'

(53) Koza může dokonce o- *slep -nou* -t
goat can even PREF blind -BECOME INF
'The goat can even turn blind.'

- ▶ In the infinitive of Class III verbs, we find *nou* in the inchoative:

(52) Sních tě může **o-** **slep** **-i** **-t**
snow you-ACC can PREF blind -CAUS INF
'The snow can make you blind.'

(53) Koza může dokonce **o-** **slep** **-nou** **-t**
goat can even PREF blind -BECOME INF
'The goat can even turn blind.'

(54)

A	PROC	INIT
root	-i-	
	-nou-	

Czech *-nu*

- ▶ *-nu-* is optional in the past tense

(55) Plyn Botonese *o-* *slep* *-i* *-l*
gas.NOM Botonese.ACC PREF blind -CAUSE PST
'The gas made Botonese blind.'

Czech *-nu*

- ▶ *-nu-* is optional in the past tense

(55) Plyn Botonese *o-* *slep* *-i* *-l*
gas.NOM Botonese.ACC PREF blind -CAUSE PST
'The gas made Botonese blind.'

(56) Otec [...] téměř *o-* *slep* *-∅* *-l*.
father ... almost PREF blind -BECOME PST
'My father became almost blind.'

Czech *-nu*

- ▶ *-nu-* is optional in the past tense

- (55) Plyn Botonese *o-* *slep -i* *-l*
gas.NOM Botonese.ACC PREF blind -CAUSE PST
'The gas made Botonese blind.'
- (56) Otec [...] téměř *o-* *slep -∅* *-l*.
father ... almost PREF blind -BECOME PST
'My father became almost blind.'
- (57) Táta skoro *o-* *slep -nu* *-l*
dad almost PREF blind -BECOME PST
'My dad became almost blind.'

Czech *-nu*

- ▶ *-nu-* is optional in the past tense

(55) Plyn Botonese *o-* *slep -i* *-l*
gas.NOM Botonese.ACC PREF blind -CAUSE PST
'The gas made Botonese blind.'

(56) Otec [...] téměř *o-* *slep -∅* *-l*.
father ... almost PREF blind -BECOME PST
'My father became almost blind.'

(57) Táta skoro *o-* *slep -nu* *-l*
dad almost PREF blind -BECOME PST
'My dad became almost blind.'

- ▶ According to *Mluvnice Češtiny II* [The Grammar of Czech II], this is an ongoing change motivated by 'paradigm leveling'

Czech -nu

(58) Old system

A	PROC	INIT
root		-i-
root		

Czech -nu

(58) Old system

A	PROC	INIT
root		-i-
root		

(59) New system

A	PROC	INIT
root		-i-
	-nu-	

Czech *-nu*

(58) Old system

A	PROC	INIT
root		-i-
root		

(59) New system

A	PROC	INIT
root		-i-
	-nu-	

- ▶ Problem 1: *-nu-* is sometimes impossible in the inchoative reading

Czech *-nu*

(58) Old system

A	PROC	INIT
root		-i-
root		

(59) New system

A	PROC	INIT
root		-i-
	-nu-	

- ▶ Problem 1: *-nu-* is sometimes impossible in the inchoative reading

(60) ... že není úplně o- *slep* (**-nu*) -I -ý
... that he.is.not completely PREF blind -BECOME PST AGR
'... that he has not turned completely blind.'

Czech *-nu*

- ▶ Problem 2: the roots may have different shapes

- Problem 2: the roots may have different shapes

Table 5: Adjectives with mildly suppletive forms before -nu-

inchoative	gloss	adjective	causative
z- houst -nou-t	dense	hust -ý	za- hust -i-t
sch -nou-t	dry	such -ý	suš -i-t
o- mlád -nou-t	young	mlad -ý	o- mlad -i-t
ze- sláb -nou-t	weak	slab -ý	o- slab -i-t
zlát -nou-t	golden	zlat -ý	po- zlat -i-t
žlout -nou-t	yellow	žlut -ý	za- žlut -i-t
slád -nou-t	sweet	slad -k-ý	slad -i-t
z- křeh -nou-t	fragile	křeh -k-ý	z- křeh -č-i-t
měk -nou-t	soft	měk -k-ý	měk -č-i-t
vlh -nou-t	wet	vlh -k-ý	vlh -č-i-t

Czech *-nu*

(61)

New system

A	PROC	INIT
	-i-	
root	-nu-	

Czech *-nu*

(61) New system

A	PROC	INIT
root	-i-	
	-nu-	

(62) Je to **vy-** **sch** **-∅** **-l** **-ý** vodopád
is this PREF dry -BECOME PST AGR waterfall
'This is a dried-up waterfall.'

Czech -nu

(61) New system

A	PROC	INIT
root	-i-	
	-nu-	

(62) Je to **vy-** **sch** **-∅** -l -ý vodopád
is this PREF dry -BECOME PST AGR waterfall
'This is a dried-up waterfall.'

(63)

A	PROC	INIT
such	-i-	
sch		

'dry'

(64)

Old system

A	PROC	INIT	ASP	INFL	
sch			nou	t	'dry'
sch				l	
suš		i		l	
suš		i		t	

Czech -nu

(64) Old system

A	PROC	INIT	ASP	INFL	
sch			nou	t	'dry'
sch				l	
suš	i			l	
suš	i			t	

(65) New system

A	PROC	INIT	ASP	INFL	
sch			nou	t	'dry'
sch			nu	l	
suš	i			l	
suš	i			t	

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

(66) If a language were strictly agglutinative ...

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

- (66) If a language were strictly agglutinative ...
- a. A

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

(66) If a language were strictly agglutinative ...

- A
- A-V_{INCH}

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

(66) If a language were strictly agglutinative ...

- A
- A-V_{INCH}
- A-V_{INCH}-PROG

Czech *-nu*

- ▶ Independent evidence that *-nu-* is an aspect marker comes from progressive aspect marker *-(ov)a* (secondary imperfective).

(66) If a language were strictly agglutinative ...

- a. A
- b. A-V_{INCH}
- c. A-V_{INCH}-PROG

(67) This is not what we get for *-nu-*

- a. tich-ý silent
- b. u-tich-nou-t to become silent
- c. *u-tich-nou-a-t to be becoming silent
- d. u-tich-a-t to be becoming silent

Czech *-nu*

- ▶ causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

Czech *-nu*

- ▶ causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

(68) a. *tich-ý* silent

Czech *-nu*

- ▶ causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

- (68) a. *tich-ý* silent
b. *u-tiš-i-t* to make silent

- ▶ causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

- (68)
- a. *tich-ý* silent
 - b. *u-tiš-i-t* to make silent
 - c. *u-tiš-ova-t* to be making silent

- causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

- (68) a. *tich-ý* silent
 b. *u-tiř-i-t* to make silent
 c. *u-tiř-ova-t* to be making silent
- (69) a. *dech* breath
 b. *vy-dech-nou-t* to breathe out
 c. *vy-dech-ova-t* to be breathing out
 **vy-deř-ova-t* to be breathing out

- causative *-i-* behaves differently and is not eliminated by the progressive aspect marker

- (68) a. *tich-ý* silent
 b. *u-tiš-i-t* to make silent
 c. *u-tiš-i-ova-t* to be making silent
- (69) a. *dech* breath
 b. *vy-dech-nou-t* to breathe out
 c. *vy-dech-ova-t* to be breathing out
 **vy-deš-ova-t* to be breathing out

Czech *-nu*

- ▶ progressive *-(ov)a-* stacks onto causative *-i-*
- ▶ progressive *-(ov)a-* does not stack onto *-nu-*
- ▶ this suggests that *-nu-* is an aspect marker like *-(ov)a-*, not an inchoative marker

Czech Present Tense

Class II verb (*i/ě*)

- (70) Almin netečný tón Claudine z- *nervózn*
Alma's indifferent voice Claudine.ACC PREF- nervous
-í
-CAUS+PRS
'Alma's indifferent voice makes Claudine nervous.'

Czech Present Tense

Class II verb (*i/ě*)

(70) Almin netečný tón Claudine z- **nervózn**
Alma's indifferent voice Claudine.ACC PREF- nervous

-í

-CAUS+PRS

'Alma's indifferent voice makes Claudine nervous.'

(71) Lidé z- **nervózn -í**, když s nimi
people PREF- nervous -INCH+PRES if with then
nechcete pít.

not.want.you drink

'People get nervous if you don't want to drink with them.'

Czech Present Tense

- ▶ Each tense represents a system of causative/inchoative marking on its own.

(72) One possibility

A	PRS	PROC	INIT
root		-í	
	-í		

Czech Present Tense

- ▶ Each tense represents a system of causative/inchoative marking on its own.

(72) One possibility

A	PRS	PROC	INIT
root	-í		
	-í		

(73) Another possibility

A	PROC	INIT	PRS
root	-í		
	-í		-í