Zero morphology and change-of-state verbs

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Outline

Introduction

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

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- ▶ 'silent' meaning components are pronounced cumulatively within overt morphemes ⇒ phrasal spellout

Empirical domain

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

Introduction

    (1)   a.   The road is narrow.

               b.   The road narrowed.

Introduction

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       b.   The road narrowed.
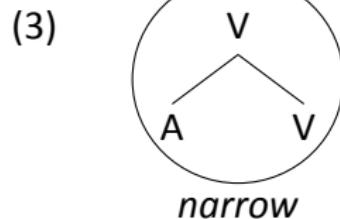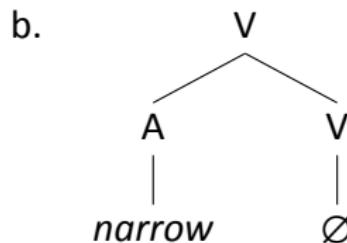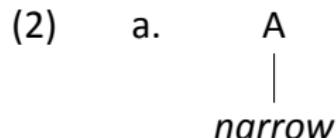
(2)   a.

```
      A
      |
   narrow
```

    b.

```
        V
       / \
      A   V
      |   |
  narrow  ∅
```

Introduction

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

(2) a.

A
|
narrow

b.

V
A — V
|
narrow
|
∅

(3)

V
A — V
narrow

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	CAUSATIVE
a.	The road narrowed	The workers narrowed the road
b.	Her stomach tightened	She tightened the lid
c.	The mixture solidified	The company solidified its position
d.	Forms and ideas materialise	They materialised their ideas

The verb contains the adjective

- morphologically
- semantically

Morphology: English

(5)   a.

```
          V
        /   \
       A     V
       |     |
     tight  -en
     solid  -ify
    criminal -ise
```

b.

```
       V
      /  \
     V    A
     |    |
    en-  rich
```
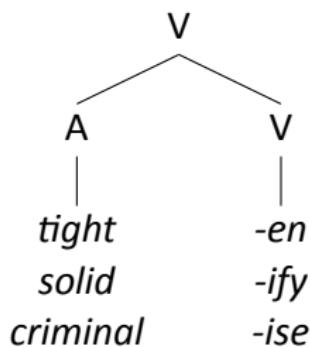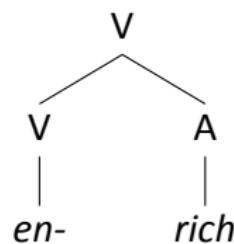
Morphology: Dutch

(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) $[_V$ open$]$ = $[$(cause to) become $[_A$ open$]]$

The causative contains the inchoative

- morphologically
- semantically

Morphology

(8)   Haspelmath (1993)

    a. Georgian   duɣ-s   'cook'   (INCH)

                   a-duɣ-ebs   'cook'   (CAUS)

    b. French   fondre   'melt'   (INCH)

                   faire fondre 'melt'   (CAUS)'

    c. Arabic   darasa   'learn' (INCH)

                   darrasa   'teach' (CAUS)

Semantics

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

Decomposing V (Ramchand 2008)

(10)

```
          INITP
         /    \
      INIT    PROCP
             /    \
          PROC    RES
```
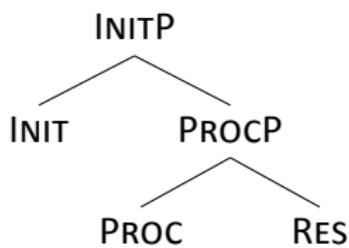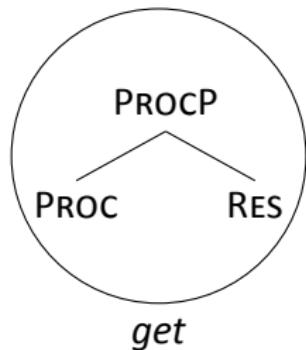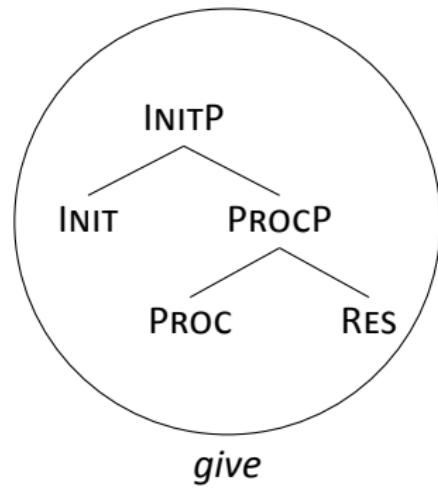
Putting A into V

(11) **Causative**

Putting A into V

(11) **Causative**
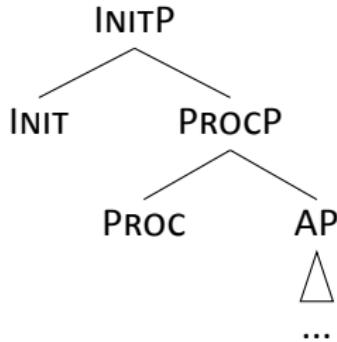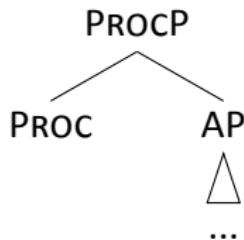
```
              INITP
             /    \
          INIT    PROCP
                 /    \
              PROC    AP
                      /\
                     /__\
                      ...
```

(12) **Inchoative**

```
           PROCP
          /    \
       PROC    AP
               /\
              /__\
               ...
```

Zero-marking is phrasal spellout

(13) **Syntax of causative verb**

```
              InitP
             /    \
          Init    ProcP
                  /    \
               Proc    AP
                        △
                        ...
```
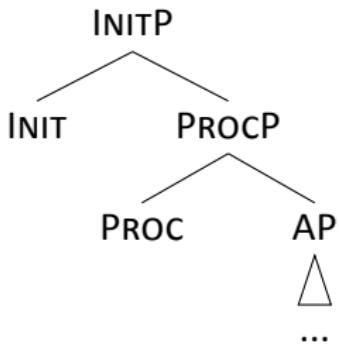
Zero-marking is phrasal spellout

(14) **Lexicon**

$$
\begin{array}{c}
\text{INITP} \quad \Longleftrightarrow \quad \textit{narrow} \\
\diagup \quad \diagdown \\
\text{INIT} \qquad \text{PROCP} \\
\diagup \quad \diagdown \\
\text{PROC} \qquad \text{AP} \\
\triangle \\
...
\end{array}
$$
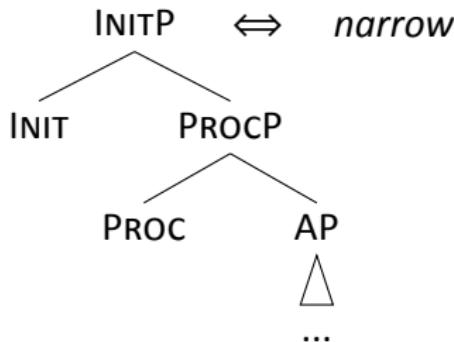
Zero-marking is phrasal spellout

(15) **Phrasal Spellout**
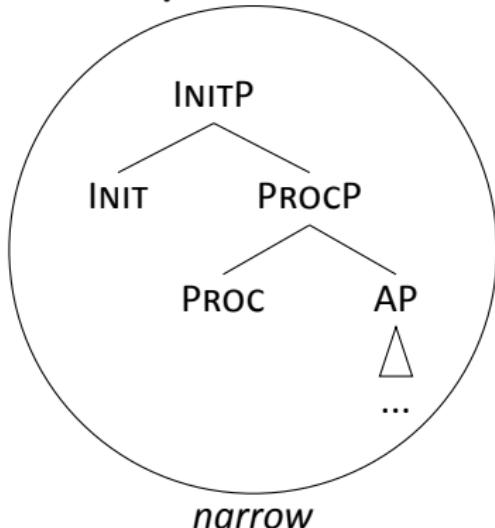
(16) a. **Inchoative verb**

PROCP

PROC   AP

...

b. **Adjective**

AP

...
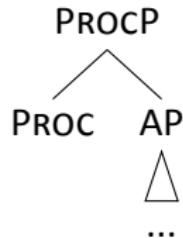
(17)　*Superset Principle* (Starke 2009)
　　　A lexically stored tree L matches a syntactic node S iff L
　　　contains the syntactic tree dominated by S as a subtree

(18) a. **Inchoative verb**
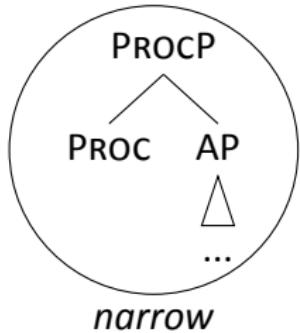
PROCP

PROC   AP

...

narrow

b. **Adjective**

AP

...

narrow

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 ⟺ *wide*
      △
      ...

Suffixal marking

(21)

Suffixal marking

(22)   InitP   ⟺   *-en*

     Init ProcP
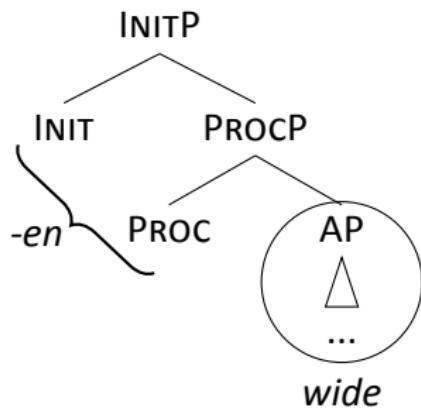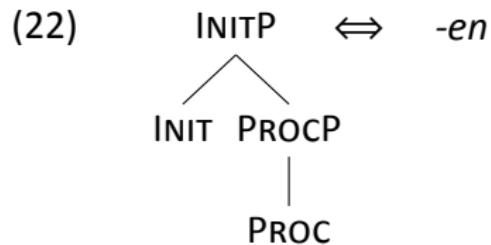
          Proc

Suffixal marking

(23)

Suffixal marking

(24)

wide

en

Suffixal marking

(25)

PROCP
PROC   AP
△
...
wide

(26)

AP   PROCP
△   │
...   PROC
wide   *en*
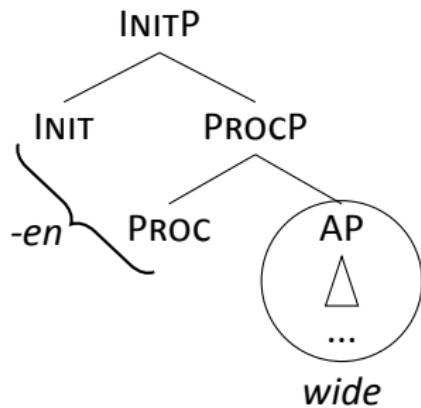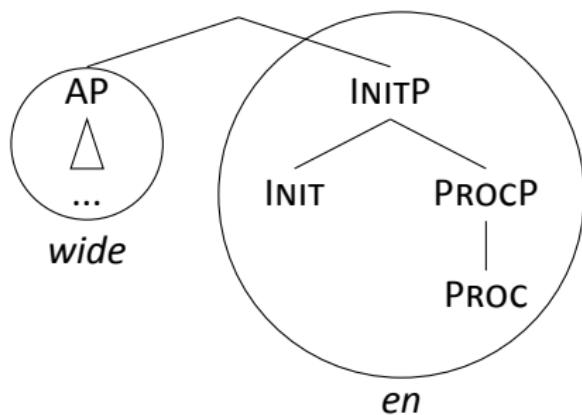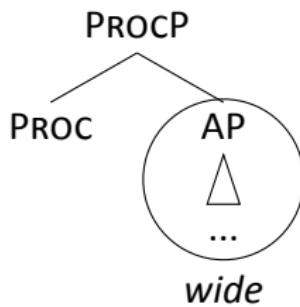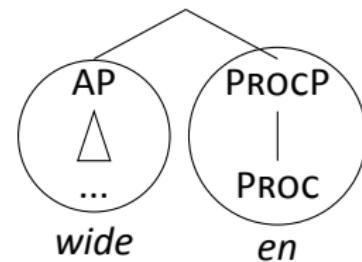
Possible scenarios

(27)

	A	PROC	INIT	
1.	root	suffix		Eng. *wid-en*
2.	root	suffix1		?
		suffix2		
3.	root		suffix	?
4.	root			Eng. *narrow*

Causatives in Czech

(28) causative *-i*

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    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*   (29)   palatalization

    a.   tup-ý
        blunt-AGR

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

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(29)   palatalization

      a.   tich-ý
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      a.   snadn-ý
           easy-AGR

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(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**   -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

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

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-pestř-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	prázdn-ý	u-prázdn-i-t, vy-prázdn-i-t
flexible	pružn-ý	z-pružn-i-t
passable	průchodn-ý	z-průchodn-i-t
transparent	průhledn-ý	z-průhledn-i-t
passable	průjezdn-ý	z-průjezdn-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	prím-ý	na-prím-i-t, vz-prím-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 ɪɴᴄʜ/ᴄᴀᴜs 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*

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(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*
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        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*
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      '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
root	-i-	
	-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	intenzivn-í	z-intenzívn-i-t

Three INCH/CAUS scenarios in Czech

(36)

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

Czech Class II: *i/ě*

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

Czech Class II: *i/ě*

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(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 PREF- 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
	-i-	
root		
	-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. *wid-en* Cz. Class I
2.	root	suffix1 suffix2		Cz. Class II
3.	root		suffix	?
4.	root			Eng. *narrow*

▶ Some verbs seem to have a zero inchoative

Czech Class III: *i/∅*

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(42)   ***slep*-ý**
        blind-AGR

Czech Class III: *i/∅*

▶ 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.'

Czech Class III: *i/∅*

▶ 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*/∅

▶ 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* -Ø   -*l***.
       father ...   almost PREF blind -BECOME PST
       'My father became almost blind.'

(45)
A	PROC	INIT
	root	-i-
	root	

Czech Class III: *i*/∅

▶ 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.'

(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 ɪɴᴄʜ/ᴄᴀᴜs scenarios in Czech

(46)

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

Conclusions

- Two analytical claims

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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!

Czech Class II: Present tense

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

Czech Class II: Present tense

(47) Almin netečný tón Claudine **z**- **_nervózn_** -**_í_**
Alma's indifferent voice Claudine.ACC PREF- nervous -CAUS+PRS
'Alma's indifferent voice makes Claudine nervous.'

(48) 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 Class II: Present tense

(47)   Almin   netečný   tón   Claudine   ***z*-**   ***nervózn*** **-*í***
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▶ Each tense represents a system of causative/inchoative marking
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(49) Present tense

A	PROC	INIT
root	-í	
	-í	

Czech Class II: Present tense

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

(48)   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.'

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

(49)   One possibility (approximation)

A	PRS	PROC	INIT
root	-í		
	-í		

Introducing -nu-

► In the infinitive of Class III verbs, we find *nou*:

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

Introducing -nu-

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

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

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

Introducing -nu-

► In the infinitive of Class III verbs, we find *nou*:

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

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

(52)

A	PROC	INIT
root	-i-	
	-nou-	

-*nu*- in the past tense

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

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

-*nu*- in the past tense

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

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

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

-nu- in the past tense

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

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

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

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

-nu- in the past tense

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

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

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

(55) 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'

-nu- in the past tense

(56)　　Old system

A	PROC	INIT
root	-i-	
root		

-*nu*- in the past tense

(56) Old system

A	PROC	INIT
root	-i-	
root		

(57) New system

A	PROC	INIT
root	-i-	
	-nu-	

-nu- in the past tense

(56) Old system

A	PROC	INIT
root	-i-	
root		

(57) New system

A	PROC	INIT
root	-i-	
	-nu-	

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

-nu- in the past tense

(56) Old system

A	PROC	INIT
root	-i-	
root		

(57) New system

A	PROC	INIT
root	-i-	
	-nu-	

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

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

Why *-nu-* is not PROC (2)

- ▶ Problem 2: the roots may have different shapes

Why *-nu-* is not PROC (2)

▶ 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-hluch-nou-t	deaf	hluch-ý	o-hluš-i-t
o-**mlád**-nou-t	young	mlad-ý	o-mlad-i-t
ze-**sláb**-nou-t	weak	slab-ý	o-slab-i-t
slád-nou-t	sweet	slad-k-ý	slad-i-t
zlát-nou-t	golden	zlat-ý	po-zlat-i-t
žlout-nou-t	yellow	žlut-ý	za-žlut-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

Why -*nu*- is not PROC

(59) New system

A	PROC	INIT
root	-i-	
	-nu-	

Why -*nu*- is not PROC

(59) New system

A	PROC	INIT
root	-i-	
	-nu-	

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

Why -*nu*- is not PROC

(59) New system

A	PROC	INIT
root	-i-	
	-nu-	▨

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

(61)

A	PROC	INIT
such	-i-	'dry'
sch		▨

(62)   Old system

A	PROC	INIT	ASP	INFL
sch			nou	t	'dry'

(62) Old system

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

(62) Old system

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

(62) Old system

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

(62) Old system

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

(63) New system

A	PROC	INIT	ASP	INFL	
sch			nou	t	'dry'

(62) Old system

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

(63) New system

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

(62) Old system

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

(63) New system

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

(62)   Old system

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

(63)   New system

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

Support for the proposal (I)

▶ Independent evidence that *-nu-* is an aspect marker comes from what corresponds to progressive aspect in English (secondary imperfective).

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

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

      a.   A

Support for the proposal (I)

► Independent evidence that *-nu-* is an aspect marker comes from what corresponds to progressive aspect in English (secondary imperfective).

(64)   If a language were strictly agglutinative …

    a.   A

    b.   A-V$_{INCH}$

Support for the proposal (I)

▶ Independent evidence that *-nu-* is an aspect marker comes from what corresponds to progressive aspect in English (secondary imperfective).

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

    a.   A

    b.   A-V_{INCH}

    c.   A-V_{INCH}-PROG

Support for the proposal (I)

▶ Independent evidence that *-nu-* is an aspect marker comes from what corresponds to progressive aspect in English (secondary imperfective).

(64)   If a language were strictly agglutinative …
   a.   A
   b.   A-V$_{INCH}$
   c.   A-V$_{INCH}$-PROG

(65)   This is not what we get for *-nu-*
   a.   tich-ý   silent
   b.   u-tich-nou-t   to become silent
   c.   u-tich-a-t   to be becoming silent

Support for the proposal (II)

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

Support for the proposal (II)

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

(66)   a.   tich-ý   silent

Support for the proposal (II)

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

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

Support for the proposal (II)

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

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

Support for the proposal (II)

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

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

(67)   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

Support for the proposal (II)

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

(66) a. tich-ý   silent

   b. u-tiš-i-t   to make silent

   c. u-tiš-i-ova-t   to be making silent

(67) 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

Support for the proposal (II)

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

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