Phonology-free Syntax

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ComSyn
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In a nutshell

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- We develop a theory of allomorphy in terms of root size

Introduction

Principle of Phonology-Free Syntax

"In the grammar of a natural language, rules of syntax make no reference to phonology" (Miller, Pullum & Zwicky 1997: 68)

Introduction

"No phonological properties of roots interact with the principles or computations of syntax" (Marantz 1996: 16)

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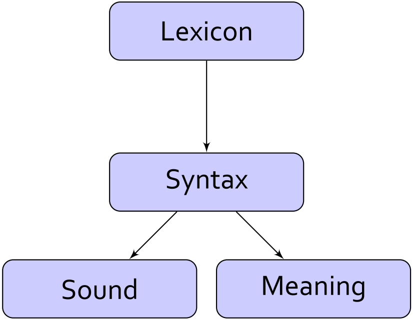

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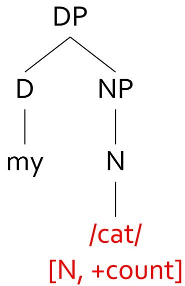

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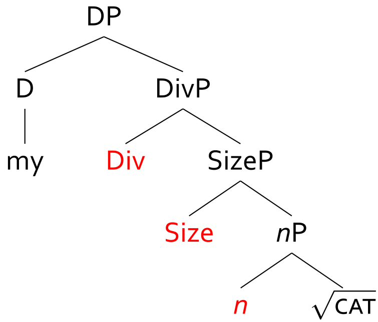

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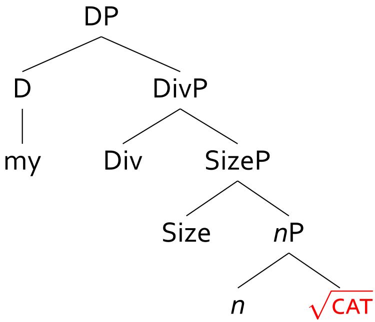

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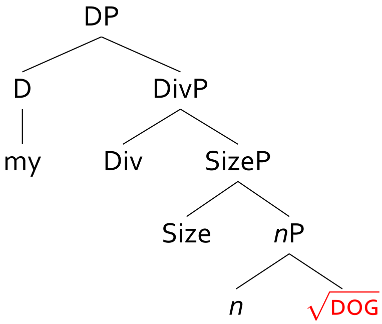

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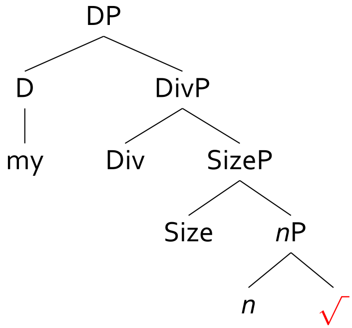

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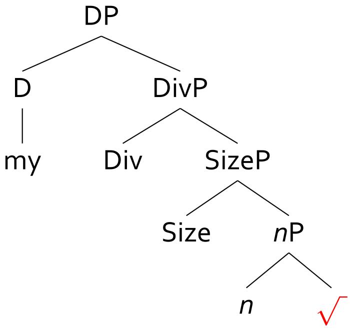

"A root is what is left when all morphological structure has been wrung out of a form" (Aronoff 1994: 40)

Introduction

Phonology-Free Syntax = Universal Syntax

"[I]t is assumed here that at LF, DS, and SS terminal nodes consist exclusively of morphosyntactic/semantic features and lack phonological features. The morphosyntactic features at these levels are drawn from a set made available by Universal Grammar (we are unaware of any arguments that language-specific features are necessary at these syntactic levels)." (Halle & Marantz 1993: 121)

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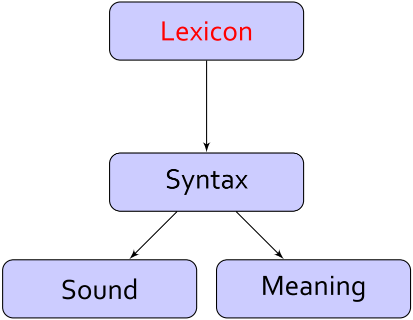

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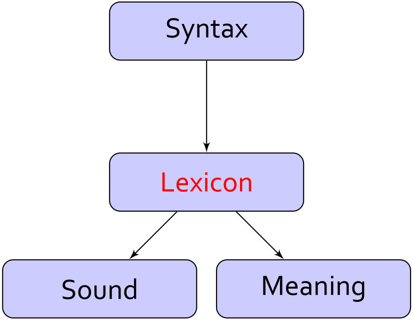

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The picture so far:

- There is only one $\sqrt{}$

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- There is only one $\sqrt{}$
- $\sqrt{}$ has no grammatical, phonological, or semantic properties
- Halle & Marantz (1993); Marantz (1996; 1997); De Belder & Van Craenenbroeck (2015)

Introduction

An alternative view:

- Roots need to be individuated, through the use of numerical indices (Pfau 2000; 2009; Harley 2014), or a phonological index (Borer 2013)

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An alternative view:

- Roots need to be individuated, through the use of numerical indices (Pfau 2000; 2009; Harley 2014), or a phonological index (Borer 2013)
- There is a potential infinity of different $\sqrt{}$s
- Technically, the syntax is phonology-free, but it's clear that the index merely serves to uniquely tie a particular $\sqrt{}$ (e.g. $\sqrt{532}$) to a particular lexical item (e.g. *cat*), including its phonology

This talk

- we make the single $\sqrt{}$ approach compatible with root suppletion

Key ingredients:

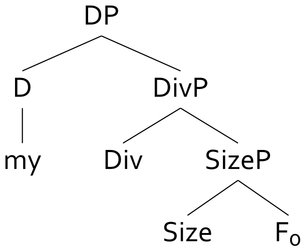
- phrasal spellout
- a distinction between
  - roots: lexical items (such as *book*, *smart*), which spell out multiple syntactic nodes
  - $\sqrt{}$: a root in narrow syntax

Parenthesis

- We use $\sqrt{}$ for easy comparability with existing proposals in the literature
- We don't believe the presyntactic lexicon contains a $\sqrt{}$, nor categorising heads
- Instead, it's features all the way down

Parenthesis

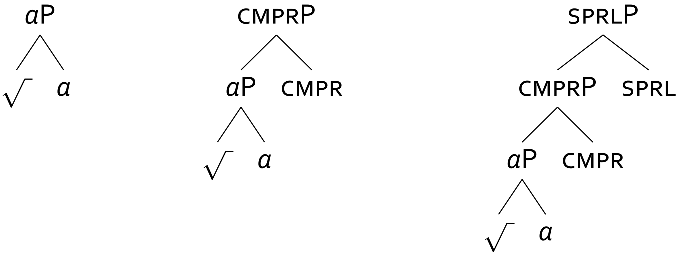
(3)



(4)

POS	CMPR	SPRL
good	better	best

(5)



(6) a. $\sqrt{}$ $\Leftrightarrow$ *bett-* / ___] *a*] CMPR]

b. $\sqrt{}$ $\Leftrightarrow$ *good*

(6) a. $\sqrt{\ }$ $\Leftrightarrow$ *bett-* / ___] *a*] CMPR]

b. $\sqrt{\ }$ $\Leftrightarrow$ *good*

(7) The *Elsewhere Condition* forces a contextually-restricted allomorph (6a) to block insertion of a context-free allomorph of the same root (6b), when the context for insertion is met (Bobaljik 2012: 10)

(8) a. $\surd$ $\Leftrightarrow$ *bett-* / ___] α] CMPR]

b. $\surd$ $\Leftrightarrow$ *good, nice, happy, small, intelligent, tall, ...*

Solution I

Root suppletion does not exist (Marantz 1997)

(9) a. GOOD $\Leftrightarrow$ *bett-* / ___] *a*] CMPR]

b. GOOD $\Leftrightarrow$ *good*

(10) $\sqrt{\ }$ $\Leftrightarrow$ *nice, happy, small, intelligent, tall, ...*

Solution II

There is an infinity of different $\sqrt{}$s

(11) a. $\sqrt{\text{GOOD}} \Leftrightarrow$ *bett-* / ___] *a*] CMPR]

b. $\sqrt{\text{GOOD}} \Leftrightarrow$ *good*

(12) a. $\sqrt{\text{NICE}} \Leftrightarrow$ *nice*

b. $\sqrt{\text{HAPPY}} \Leftrightarrow$ *happy*

c. $\sqrt{\text{SMALL}} \Leftrightarrow$ *small*

d. $\sqrt{\text{INTELLIGENT}} \Leftrightarrow$ *intelligent*

e. $\sqrt{\text{TALL}} \Leftrightarrow$ *tall*

f. ...

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f. ...

- Phonology sneaks in through the back door!

Phrasal spellout

(13) aP $\Leftrightarrow$ *bad*

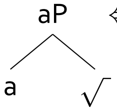
$$[_{aP}\ a\ \sqrt{\ }\ ]$$

(14) CMPRP $\Leftrightarrow$ *worse*

$$[_{CMPRP}\ \text{CMPR}\ [_{aP}\ a\ \sqrt{\ }\ ]\ ]$$

Phrasal spellout

(15)



$\Leftrightarrow$ *good, nice, kind, small, intelligent, bad, ...*

Phrasal spellout

How do we avoid that *worse* will be inserted in any comparative environment?

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- pointers

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(16) $[_{\text{CMPRP}}\ \text{CMPR}\ \ \textit{bad}\,]\ \Leftrightarrow\ \textit{worse}$

Phrasal spellout

How do we avoid that *worse* will be inserted in any comparative environment?

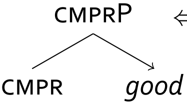
- pointers

(16) CMPRP $\Leftrightarrow$ *worse*

CMPR *bad*

- *worse* only gets inserted if *bad* was inserted at an earlier cycle

Phrasal spellout

(17)  ⇔ *bett*

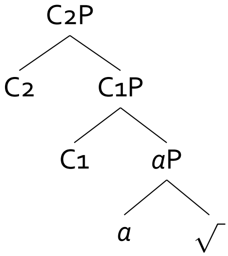
Root size variation

Root suppletion in a single $\sqrt{\ }$ theory

- roots vary in size
- suppletive roots are larger than nonsuppletive ones
- CMPR = C1 + C2

Root size variation

(18)



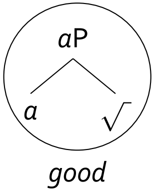
Root size variation

(19) C1P $\Leftrightarrow$ *bett*

C1 *good*

Root size variation

(20)



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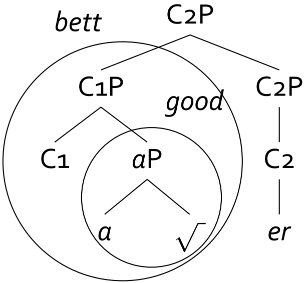
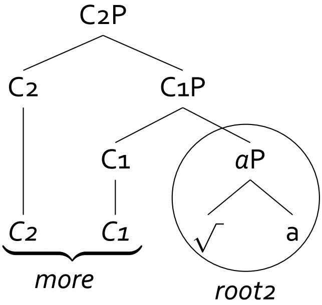


Root size variation

(22)



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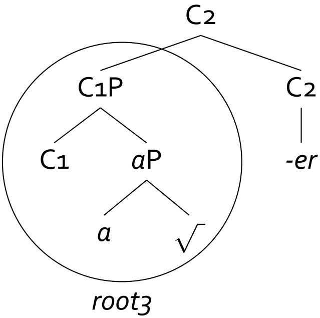

Root size variation

(24) a. *a*P $\Leftrightarrow$ *root2 (good, ill, apt, intelligent, gaunt, ...)*

a $\sqrt{}$

b. C1P $\Leftrightarrow$ *root3 (bett, old, nice, smart, great, ...)*

C1 *a*P

a $\sqrt{}$

c. C2P $\Leftrightarrow$ *-er*

C2

Root size variation

(25)

$\sqrt{}$	a	C1	C2
good			er
bett			er
old			er
intelligent		more	
intelligent			er

Root size variation

(26) *The 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

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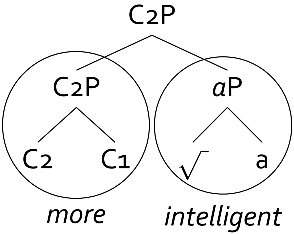
(27) *Faithfulness Restriction (FR)*
A spellout α may overwrite an earlier spellout β iff

a. α contains a pointer to β
b. $\alpha = \beta$

Root size variation

(28)



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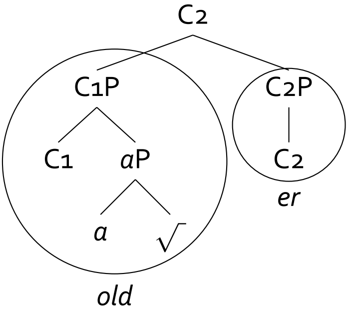


Root size variation

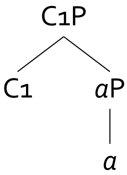
(30) *Root Suppletion Generalisation* (Bobaljik 2012: 3)
Root suppletion is limited to synthetic (i.e., morphological) comparatives.

Root size variation

(31)	lucky	happy
	slimy	dizzy
	crappy	silly
	arty	nifty
	windy	sloppy
	thorny	tidy
	healthy	pretty
	beardy	happy
	kinky	bonny
	bloody	busy
	cloudy	canny
	bony	bawdy
	touchy	phoney
	chirpy	horny
	dirty	cheeky

Root size variation

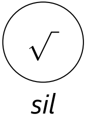
(32) a. $\sqrt{}$ ⇔ *root1 (luck, slime, hap, sil, slop, ...)*

b. 

⇔ *–y*

Root size variation

(33)



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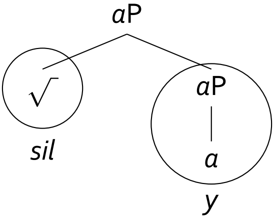
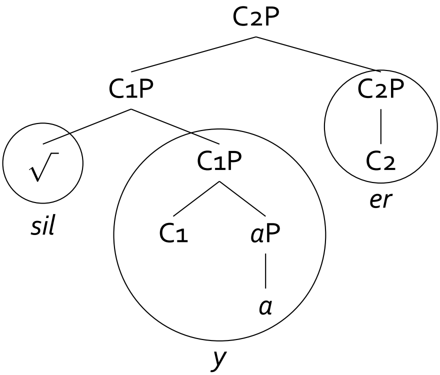


Root size variation

(35)



Root size variation

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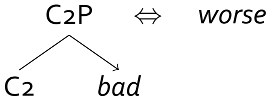

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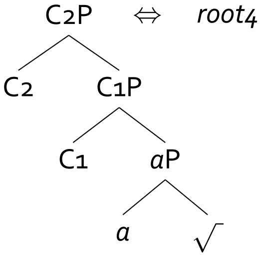
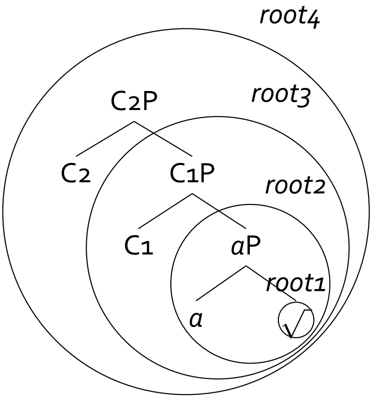


Root size variation

(38)



(39)
a. *root1*: appears with an overt *a* in the positive
b. *root2*: no overt *a*, full comparative marking
c. *root3*: no overt *a*, reduced comparative marking
d. *root4*: no overt *a*, no comparative marking

A prediction

Prediction

In cases where suppletion co-occurs with overt marking, the overt marking tends to be ‘reduced’, often a substring of a different, nonreduced marker.

A prediction

(40)

		POS	CMPR		
a.	*ějš-í*	chab-ý	chab-ějš-í	'weak'	*root2*
b.	*š-í*	slab-ý	slab- š-í	'weak'	*root3*
c.	*-í*	hez-k-ý	hez-č- -í	'pretty'	*root1*
d.	*-í*	ostr-ý	ostř -í	'sharp'	*root4*

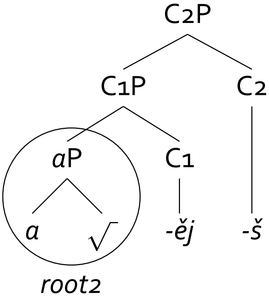
A prediction

(41)

CMPR ADJ	CMPR ADV	
chab-ěj-š-í	chab-ěj-i	'weak'
rychl-ej-š-í	rychl-ej-i	'fast'
červen-ěj-š-í	červen-ěj-i	'red'

A prediction

(42)



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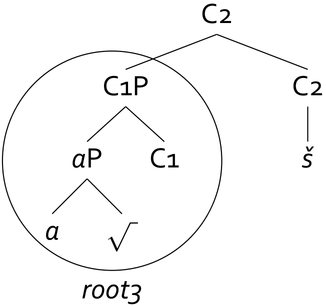


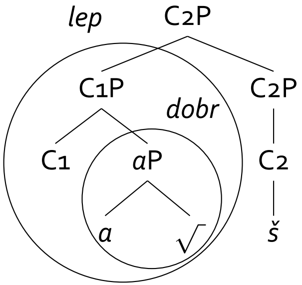
A prediction

(44)

POS	CMPR	
dobr-ý	lep-š-í	‘good’
velk-ý	vět-š-í	‘big’
dlouh-ý	del-š-í	‘long’
špatn-ý	hor-š-í	‘bad’
mal-ý	men-š-í	‘little, small’

A prediction

(45)

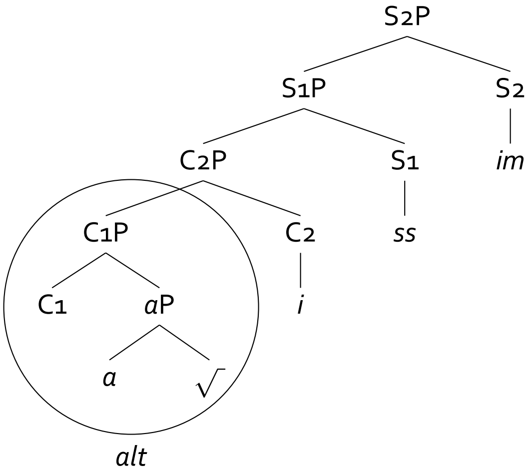


A prediction

	POS	CMPR	SPRL	GLOSS	marking in SPRL
a.	alt-us	alt-i-or	alt-i-ss-im-us	'tall'	full marking
b.	mal-us	pe- or	pe- ss-im-us	'bad'	SPRL lacks *-i*
c.	bon-us	mel-i-or	opt- im-us	'good'	SPRL lacks *-i-ss*
d.	magn-us	ma-i-or	max- im-us	'big'	SPRL lacks *-i-ss*
e.	parv-us	min- or	min- im-us	'small'	SPRL lacks *-i-ss*
f.	mult-us	plūs	plūr- im-us	'much'	SPRL lacks *-i-ss*

A prediction

(46)



A prediction

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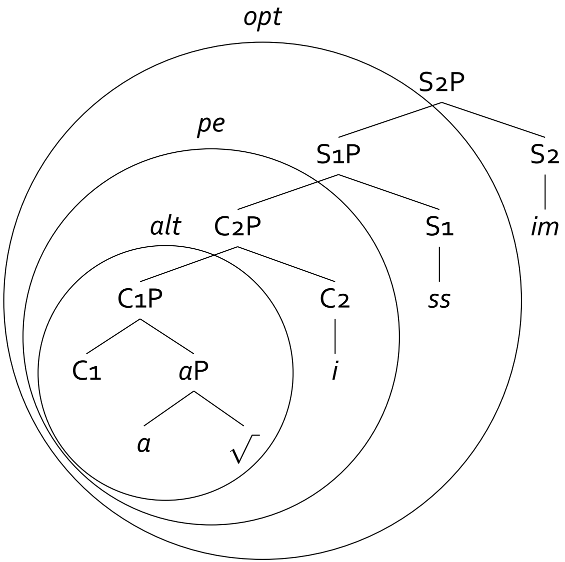

Conclusion

- Syntax is Phonology-Free
- Suppletion involves
  - phrasal spellout
  - a split CMPR
- Allomorphy is explained in terms of variations in root size

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