

Locality within and across words

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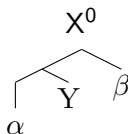
Acknowledgments

- ▶ collaborators: Paula Fenger, Heidi Harley, Jungmin Kang, Beata Moskal, Peter Smith, Ting Xu
- ▶ Language assistance: many people, see esp. Bobaljik (2012).
- ▶ Funding: NSF, A. von Humboldt Stiftung, UConn, American Philosophical Society

Locality in X^0

(1) β may condition α iff there is no Y , such that ...

$\alpha \dots Y \dots \beta$



- (1) β may condition α iff there is no Y , such that ...
 $\alpha \dots Y \dots \beta$
- (2) a. Y is any node (Super Strict Locality, Adger et al)
b. linear adjacency: Y is overt (Embick 2010)
c. Y is a 'cyclic' node (Bobaljik 2012)
d. Y is a (cyclic) node dominating a cyclic node (Embick 2010, Moskal in press)
e. Y is a word boundary

Part I:

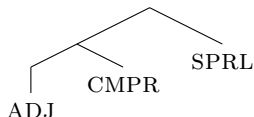
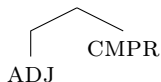
Suppletion as a Structure Detector

Bobaljik 2012: Comparative Suppletion

(3)	POS	CMPR	SPRL	
a.	A	A	A	<i>big – bigger – biggest</i>
b.	A	B	B	<i>good – better – best</i>
c.	A	B	C	<i>bonus – melior – optimus</i>
d.	A	B	A	<i>*good – better – goodest</i>
e.	A	A	B	<i>*good – gooder – best</i>

cf. Ultan 1972; apparent counterexamples to *ABA: %Basque 'good', %Karelian 'many', Bulgarian/Macedonian 'many' – see Bobaljik 2012

*ABA



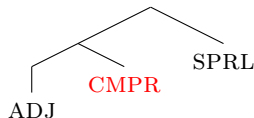
(2) Suppletion as Contextual Allomorphy

- a. GOOD → be(tt)- / ____] CMPR]
- b. GOOD → good

(3) Latin

- a. GOOD → opt- / ____] CMPR] SPRL]
- b. GOOD → mel- / ____] CMPR]
- c. GOOD → bon-

*AAB - Locality



(2) **good – gooder – best*

- a. GOOD → be(tt)- /] ... SPRL]
- b. GOOD → good

Excluding *AAB while admitting ABC is tricky. See Bobaljik 2012, Bobaljik & Wurmbrand 2013.

Part II:

Locality in Words:

Pronominal Suppletion

with Beata Moskal, Peter Smith, Ting Xu, Jungmin Kang

Pronominal Suppletion

Suppletion for case and number in pronouns (cf. Moskal, 2015a,b)

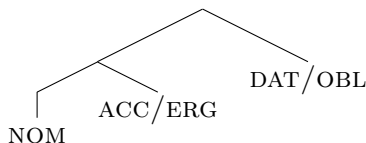
(6)	Icelandic	NOM	ACC	DAT	GEN	
	1SG	ég	mig	mér	mín	ABBB
	2SG	þú	þig	þér	þín	AAAA
	1PL	við	okkur	okkur	okkar	ABBB
	2PL	þið	ykkur	ykkur	ykkar	ABBB

Smith, Moskal, Xu, Kang, & Bobaljik: Case in Pronouns

(7) Case Hierarchy (cf. Blake 2001, Caha 2009)

a. $NOM > ACC/ERG > DATIVE/OBLIQUE$

(8)



(9) Specific prediction: *ABA

Smith, Moskal, Xu, Kang, & Bobaljik: Case in Pronouns

- ▶ Original sample: 160 languages
 - ▶ 76 have no suppletion for case
 - ▶ 19 have suppletion, but < 3 cases (AB)

(10) Suppletive Cognate Triples

ABB	42
AAB	9
ABC	1?
ABA	(1)

Cognate Triple

► Indo-European 1sg

(11)	Form	Nominative	Accusative	Dative	Other
	Lithu	àš	manè	mán	man-
	Russian	ja	menja	mnje	mn-
	Germ	ich	mich	mir	
	Latin	ego	mē	mihi	m-
	Greek	egō	eme	emoi	
	etc.				

As with Germanic *good* ~ *bett-*, this is 1 cognate triple.

(12)

Pattern	Prediction	Attested?	Representative Languages
AAA	✓	✓	Lezgian, W. Greenlandic, etc.
ABB	✓	✓	Indo-European, Evenki, Xakass, Chuvash, Itelmen
ABC	✓	?	Khinalug ?
AAB	✓	✓	Krongo, Hunzib, Wardaman
ABA	✗	✗	Archi 2pl ?

ABA is virtually unattested as expected. (On Archi, see paper)

AAB

► German

(13)

	Nominative	Accusative	Dative
3.sg.m	er	ihn	ihm
3.sg.f	sie	sie	ihr
3.pl	sie	sie	ihnen

► Krongo

(14)

Form	Subject	Object	Dative	Ablative	Locative
1sg	àʔàŋ	àʔàŋ	àʔàŋ	nkàtí	kàtí
2sg	ùʔùŋ	ùʔùŋ	ùʔùŋ	nkòtú	kòtú
1ex	óow	óow	óow	nkòtíg	kòtíg

AAB

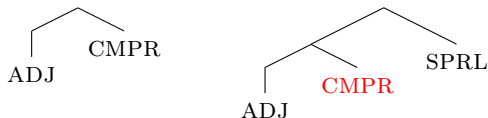
► Nakh-Daghestanian 2sg

(15)

	ABSOLUTIVE	ERGATIVE	DATIVE	
Agul	wun	wun	was	A=AA
Tsez	mi	mi	deb-er	A=AB
Hinukh	me	me	ded-ez	A=AB
Archi	un	un	wa-s	A=AB
Andi	mín	min	du-j	AAB (tone)
Chamalal	mì:	mín	du-ła	AAB
Inxokvar	mó	me	dub-ul	AAB
Xinalug	vì	va	oX(ir)	AAB
Avar	mun	du-la	du-r	ABB

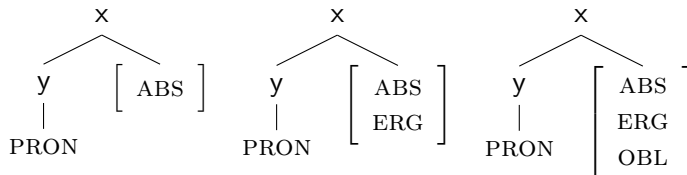
Locality: *AAB

(16) *The Containment Hypothesis*



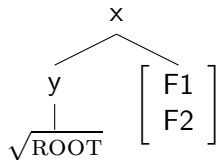
(17) *good – gooder – best

- a. GOOD → be(tt)- / ___] ... SPRL]
- b. GOOD → good

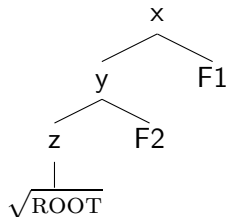
(18) Case Containment (Smith et al., *NELS*)

(19) Bundling and Containmentment

a.

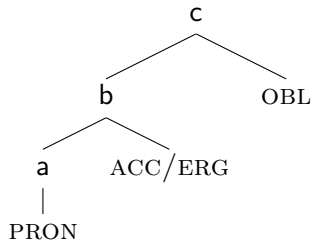


b.



Root Allomorphy conditioned by F1 ? a - yes, b - no

(??)



ACC/ERG is not (always) an intervener

II: Case in Pronouns

(20) Khakass (SMG)

	NOMINATIVE	ACCUSATIVE	DATIVE ...
3SG	ol	ani	agaa
3PL	o-lar	o-lar-ni	o-lar-ga

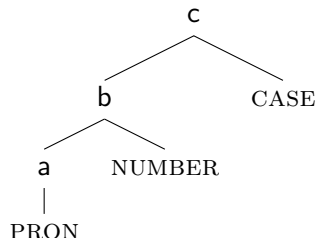
⇒ In Khakass, overt number marking between the pronominal stem and case appears to block case-driven suppletion.

Tamil pronouns

(21)	DIRECT	GEN/OBL	DATIVE
1SG	naan	en	en-akku
1PL.EX	naan-ga(!)	en-ga(!)	en-ga!-ukku
2SG	nii	on	on-akku
2PL	niin-ga(!)	on-ga(!)	on-ga!-ukku

See Moskal (2015); Moskal & Smith (2015), for further discussion.

(22)



NUMBER is not always an intervener

⇒ Interim conclusion: no strict linear adjacency condition on suppletion (contra Embick 2010, others).

Linear adjacency?

(23) Khakass

a. 3 → an / ____] CASE]

b. 3 → ol

(24) Tamil

a. 2 → on / ____] ... CASE]

b. 2 → niin

Preamble: *ABA
oooo

Case
ooooo
oooooooooooo

ReCycling
●ooooo

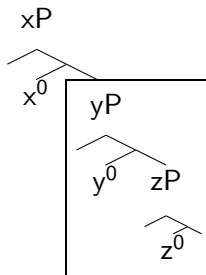
Number
oooooooooooo
oooooooooooo

Across Words
oooooo
oooooooooooooooooooo

Part III: Cyclic Nodes and Syntactic Phases Domains in Words

Spell Out as Transfer

(25) a. Syntax

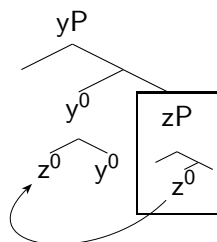


b. Spell-Out_{Transfer}

If x^0 is a cyclic (phase) head, then its sister yP is a cyclic (spell-out) domain. PIC: moving elements must leave YP before YP is 'Spelled Out'.

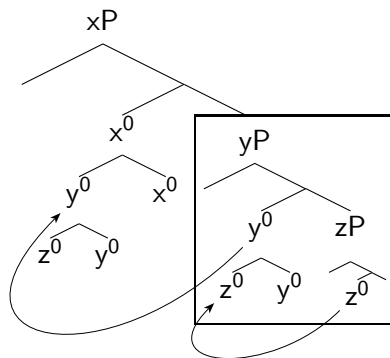
The Recycling problem

(26)



The Recycling problem, again

(26)



advantage Locality domains in complex X^0 in the same way as in phrases

advantage portmanteaus (Radkevich, contra Haugen & Siddiqi)

(dis)advantage Spell-Out Domains in phrasal and X^0 syntax are partly independent

- Domain extension need not extend domains in parallel across morphology and syntax (cf. Bobaljik & Wurmbrand (2013))

Preamble: *ABA
oooo

Case
ooooo
oooooooooooo

ReCycling
oooooo

Number
●ooooooooo
oooooooooooo

Across Words
oooooo
oooooooooooooooooooooooooooo

Part III: Locality in Words: Number

- Like case suppletion, number suppletion in pronouns is ubiquitous, but by no means universal.

(27)	Icelandic		NOM	ACC	DAT	GEN
	1SG	ég	mig	mér	mín	
	1PL	við	okkur	okkur	okkar	
	2SG	þú	þig	þér	þín	
	2PL	þið	ykkur	ykkur	ykkar	

(28)	Mandarin		SG	PL
	1	wǒ	wǒ-men	
	2	nǐ	nǐ-men	
	3	tā	tā-men	

III: Number in Pronouns

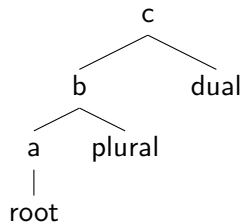
- (29) ~80 languages, few with 3 number values and pronominal suppletion for number.
- (30) SINGULAR > PLURAL > DUAL (Corbett, 2000)
- (31) No language has a dual unless it has a plural. (Greenberg, Universal 34)

III: Number in Pronouns

(32) Manam containment (demonstrative)

	SG	PL	DU
'that'	ɲára-Ø	ɲára-di	ɲara-dí-a-ru

(33)



(34)

Pattern	Prediction	Attested?	Languages
AAA	✓	✓	Mapuche, Dumi
ABB	✓	✓	Kayardild, Kham, Jingulu
ABC	✓	✓	Yimas, Kham
ABA	✗	✗	n/a
AAB	?	✗	n/a

ABB Patterns

(35) Lavukaleve (du = pl + /)

	SG	PL	DU
1INCL		me	me-l
1EXCL	ngai	e	e-l
2	inu	imi	imi-l

(36) Hua (du = pl + a'a)

	SG	PL	DU
1	d-gai	r-gai	r-a'a-gai
2	h-gai	p-gai	p-a'a-gai
3	Ø-gai	p-gai	p-a'a-gai

ABC Patterns

► Yimas

(37)		SINGULAR	PLURAL	DUAL
	1st	ama	ipa	kapa
	2nd	mi	ipwa	kapwa

► Kham possessive, reflexive pronouns (Takale)¹

(38)		SINGULAR	PLURAL	DUAL
	3rd poss	o-/u-	ya-	ni-
	3rd refl	ol	ya:	ni:

¹h/t Kenyon Branen

ABA: Unattested

We did not find any instances of ABA patterns in number in pronouns. When the plural form is suppletive, so too is the dual form.

But...

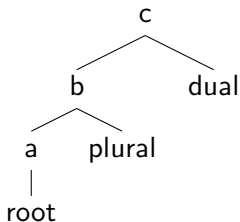
Nouns

(39)

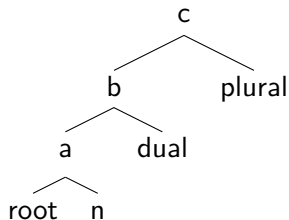
Language	Singular	Dual	Plural	Gloss
Hopi	wùuti	wùutit	momoyam	'woman'
Lavukaleve	vo'vou	vo'voul	tulav	'boy'
Yimas	panmal	panmalc-rm	pay-um	'man'
Slovenian	člóvek	člóvek-a	ljudj-e	'person'

Containment

(40) Pronouns



(41) Nouns (some pronouns)



III: Number in Nouns

Confirming evidence - in Hopi, containment supports the alternative embedding.

Du: -m or -t

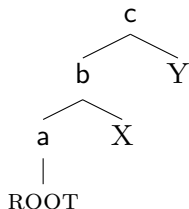
Pl: Dual + partial reduplication

(42) Hopi (SG > DU > PL)

	SG	DU	PL
'person'	sino	sino-t	sino-m
'horse'	kawayo	kawayo-t	kawayo-m
'donkey'	mooro	mooro-t	moo-moro-t
'child/young'	tsay	tsaayo-m	tsaa-tsayo-m
'woman'	wùuti	wùuti-t	momoyam

- The core predictions are contingent:

(43)



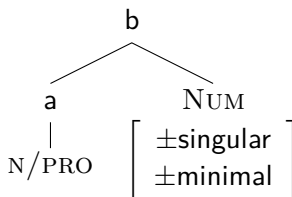
(44)

- ROOT $\rightarrow$ B / $__$] X
- ROOT $\rightarrow$ A

- If Y contains X (contains unmarked), then *ABA

Number: Harbour_{Lite}

(45)



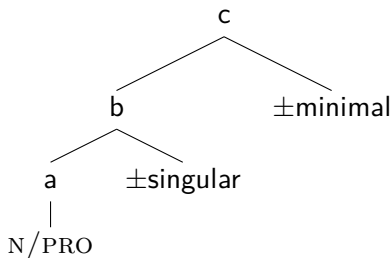
(46)

	SG	MIN
singular	+	-
dual	-	-
plural	-	+

Number - Harbour

- ▶ $\pm$ singular must combine first

(47)

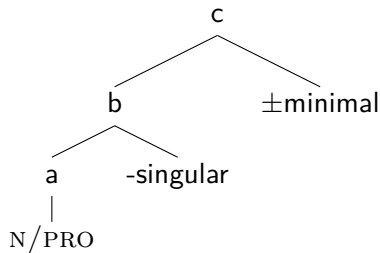


- ▶ Greenberg's U 34: no language can make a subdivision of the non-singulars unless it first makes a division into $\pm$ singular

Number - Harbour

- ▶ $\pm$ minimal is only contrastive with [-singular]

(48)

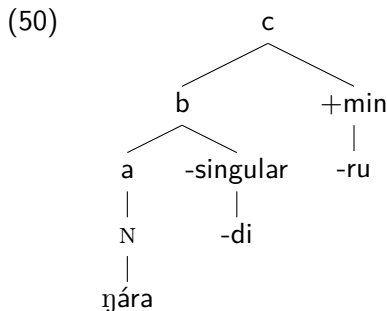


(49)

	SG	MIN
singular	+	
dual	-	-
plural	-	+

- ▶ representation: sufficient to mark only one value of [$\pm$ min]

Marked Dual: Manam



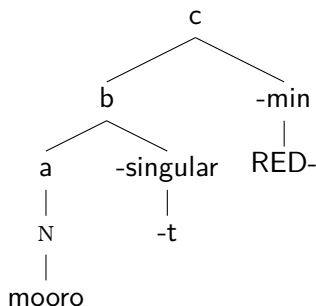
(51) 'that'

SG	ɤ́ára
PL	ɤ́ára-di
DU	ɤ́ara-dí-a-ru

- Dual does not contain "plural"
- Dual contains "unmarked non-singular"

Marked Plural: Hopi

(52)



(53) 'donkey'

SG	mooro
DU	mooro-t
PL	moo-mooro-t

- Plural does not contain “dual”
- Plural contains “unmarked non-singular”

► Universal_{Number} 1

(54) No language has a dual unless it has a plural.

(55) SINGULAR > NON-SINGULAR > DUAL (Corbett, 2000)

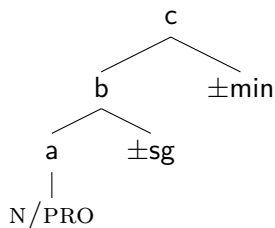
► Universal_{Number} 2

(56) Suppletion tracks structure

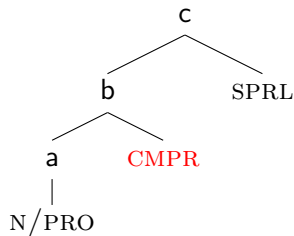
singular = dual $\neq$ plural	$\leftrightarrow$	root] -sg] plural]
singular = plural $\neq$ dual	$\leftrightarrow$	root] -sg] dual]
singular $\neq$ plural = dual		root] -sg ...

Number: Harbour_{Lite}

(57)



(58)



- (59) Hopi a. WOMAN → moya- / ____] ... +MIN]
b. WOMAN → wùuti
- (60) N/A a. GOOD → be- / ____] ... SPRL]
b. GOOD → good

Preamble: *ABA
oooo

Case
ooooo
oooooooooooo

ReCycling
oooooo

Number
oooooooooooo
oooooooooooo

Across Words
●ooooo
oooooooooooooooooooo

Part IV: Suppletion across words?

Root Suppletion Generalization

(61) Locality II: (first pass)

β may condition α in (a), not (b):

a. $\alpha \dots]_{X^0} \dots \beta$

b. $*\alpha \dots]_{XP} \dots \beta$

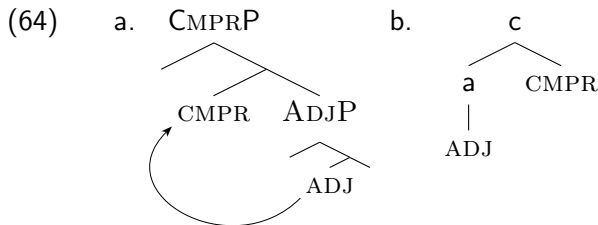
Root Suppletion Generalization

- (62)
- | | POS | CMPR | SPRL |
|----|-----|----------|----------|
| a. | A | B-er | B-est |
| b. | A | * more B | * most B |

- (63) Modern Greek

- | | POS | CMPR | SPRL |
|----|----------------|-----------------------|-------------------------------|
| a. | kak -ós | cheiró -ter-os | o cheiró -ter-os 'bad' |
| b. | kak -ós | pjo kak -ós | o pjo kak -ós 'bad' |

Root Suppletion Generalization



- (65) Greek
- a. BAD → cheiró / ____] CMPPR]
- b. BAD → kak-
- c. CMPPR → -ter /]_{ADJ} ____]
- d. CMPPR → pjo

Locality: words and phrases (w/ Heidi Harley)

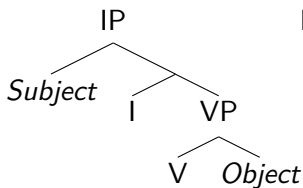
(66) Number-governed suppletion in Hiaki (Yaqui; Harley et al. (2009)

- a. vuite ~ tenne 'run sg. ~ pl.'
- weana ~ rehte 'wander sg. ~ pl.'
- b. mea ~ sua 'kill sg.obj. ~ pl.obj.'

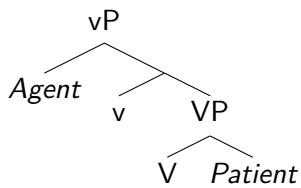
(67) a. Aapo weye. b. Vempo kate.
 3SG walk.SG 3PL walk.PL
 'He/she/it is walking.' 'They are walking'

Locality: words and phrases (w/ Heidi Harley)

(68) a.



b.



Locality I

(61) Locality:

β may condition α in (a), not (b):

a. $\alpha \dots]_{X^0} \dots \beta$

b. $*\alpha \dots]_{XP} \dots \beta$

$\neq$ suppletion is fundamentally word-internal.

since words (normally) don't contain phrases, the syntactic boundary is close to, but not the same as, a 'word' vs. phrase distinction

(But see Thornton 2015 on suppletion vs. reduplication)

Suppletion or semantic relatedness?

- (69)
- a. *kill* vs. *massacre*
 - b. *drive* a car, *pilot* a boat/plane
 - c. German 'eat': *essen* vs. *fressen* (of animals)

Suppletion or semantic relatedness?

- (70) a. Leo likes Minecraft, and I think I will ~~like~~^{love} eventually.
b. Nós sempre compá-va-mos aqui, mas eles não.
we always buy-PAST-1PL here but they not
[compra-va-m]
buy-PAST-3PL
'We used to shop here, but they didn't.' (Zocca, 2003)

Suppletion or semantic relatedness?

- (71) a. A Carol é bonit-a ...
the C. is beautiful-FEM ...
'Carol is beautiful ...'
- b. # A Carol é atr-iz ...
the C. is actr-FEM ...
'Carol is an actress ...'
- ... e o Fernando também é ~~bonit-o/ator~~
... and the F. also is beaut.-MASC
'and Fernando is too.'

Suppletion or semantic relatedness?

- (72) a. The pigs, we will kill, but the chicken, we won't.
b. # The soldiers were massacred, and the general was too.

Suppletion or semantic relatedness?

- (73) # Der Rex hat eine Wurstsemmel gefressen, und die
 The Rex has a roll eaten, and the
 Ursula Strauss ein Stück Sachertorte.
 Ursula Strauss a piece cake.
 'Rex (a dog) has eaten a sausage roll, and Ursula
 Strauss – a piece of cake.'

Hiaki: H. Harley

- (74) a. Itepo ume toto'im hiva **suak**,
We the chickens just **kill**.PL.PRF,
... kaa uka kowita. (mea ~ sua 'kill')
... not theACC pigACC
'We only killed the chickens, not the pig.'

Georgian: L. Nash, pc

- (75) isini-c balax-ze **sxed-an**,
they-also grass-on sit.PL-PL,
...da magati deda-c ~~zi-s~~ / *~~sxed-s~~
...and their mother-also sit.SG-3SG / sit.PL-SG
'They are sitting on the grass, and their mother too.'

Person/Number in Italian; R. Petrosino

- (76) Lui **va** al negozio e noi ~~andiamo~~ al cinema
He goes to.the store and we go to.the cinema
'He's going to the store and we're going to the cinema.'

Aspect in Serbian - Neda Todorović 2015

- (77) Jovan je to bacaio više puta,
J. AUX it threw.IMPRF more times,
a Milan je ~~to bacio~~ samo jednom.
but M. AUX it threw.PERF only once
'J. was throwing it many times, but M. [threw it] only once.'
- (78) *Jovan je to govorio više puta
J. AUX it say.IMPRF more times
a Milan je ~~to rekao~~ samo jednom.
but M. AUX it say.PERF only once
'J. was saying it many times, but M. [said it] only once.'

Aspect in Slovenian - P. Fenger, A. Stegovec

- (79) * Jaka je to stalno pravil,
J. AUX it always said.IMPRF
Kaja pa je ~~to~~ samo enkrat ~~reka~~.
K. but AUX it only once said.PERF
'J. was constantly saying that, while K. did only once.'
- (80) Jaka je cel čas govoril tisto kletvico,
J. AUX all time said.IMPRF that cuss
Kaja pa (jo je) samo enkrat ~~reka~~.
K. but it AUX only once said.PERF
'J. was constantly saying that swearword, while K. did only once.'

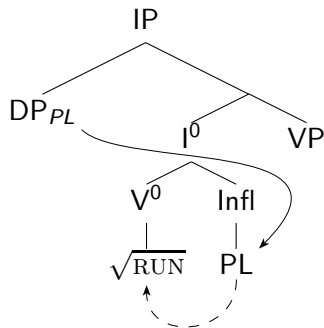
Aspect in Slovenian - P. Fenger, A. Stegovec

- (81) Jaka je stalno metal žogo v zid,
J. AUX it always threw.IMPRF ball in wall
Maja pa (jo je) samo enkrat ~~vrzla~~ ~~v zid~~.
M. but it AUX only once threw.PERF in wall
'J. was constantly throwing a ball against the wall, while
M. did only once.'

jemal ~ *vzela* 'took'; *tolkel* ~ *udarila* 'hit'; *delal* ~ *naredila* 'did';
počenjal ~ *storila* 'took';

Suppletion via agreement?

(82)



Suppletion via agreement?

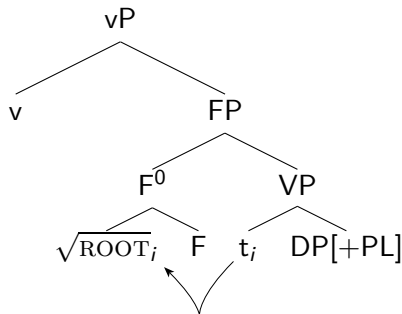
- (83) Georgian: [num + noun] = singular agreement, but plural suppletion:

Čem-i sam-i megobar-i še-mo-vid-a da
my-AG three-AG friend.SG-NOM PRV-PRV-enter-3SG and
da-**sxd**-a.
PRV-sit.PL-3.SG

‘My three friends entered and sat down.’ Aronson (1989)

Participant or verbal number? Thornton 2015

(84)



- ▶ B&H: DP conditions root
- ▶ Th15: F is verbal number / aspect?
- ▶ F overt? Redupl

Nieuan participant number

- (85) a. To **fano** a au.
FUT go ABS I
- b. To **ō** a tautolu.
FUT go.PL ABS we
'I/we will go.'
- (86) a. Ne **hoko** mai a Sione.
PST arrive there ABS Sione
- b. Ne **ho-hoko** mai a laua.
PST PL-arrive there ABS they
'Sione/they arrived there.'

Locality

(1) β may condition α iff there is no X, such that ...

$\alpha \dots X \dots \beta$

- (73) a. ~~X is any node (Super Strict Locality, Adger et al)~~
b. ~~linear adjacency: X is overt (Embick 2010)~~
c. X is a 'cyclic' node (Bobaljik 2012)
d. X is a word boundary: unresolved

Conclusions

► * ABA: structure

adj positive < comparative < superlative

case unmarked < dependent < oblique

num bare < [-singular] < [$\pm$]minimal

► (*)AAB: locality

adj positive < comparative < superlative (*AAB)

case unmarked < dependent < oblique (AAB OK)

num bare < [-singular] < [$\pm$]minimal (AAB OK)

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