Non-linear blocking of portmanteaus: a case study on Laz

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1 Introduction

- This talk deals with (verbal) root allomorphy patterns in Laz (South Caucasian).
  - In particular, we will investigate **how prefixes interact with root allomorphy.**
- Background on the morphotactics of the Laz verb: (Öztürk and Pöchtrager, 2011)
  - exhibits a concatenative character: prefixes & suffixes
  - follows the (partial) template in (1)

(1) $\ldots$ DIR + AGR + PRV + $\sqrt{}$ + ASP + TNS + AGR $\ldots$

APPL CAUS PASS MODAL

$*$ PRV = pre-root-vowel. the trickiest part of the Laz verb!

  - selection/ co-occurrence restrictions are abundant

(2) some examples:

a. $\ldots$ AGR + PRV + $\boxed{\sqrt{}}$ + $\boxed{\text{ASP}}$ + TNS + AGR $\ldots$

b. $\ldots$ AGR + $\boxed{\text{PRV}}$ + $\sqrt{}$ + $\boxed{\text{ASP}}$ + TNS + AGR $\ldots$

Today's focus

- $\sqrt{}$+ASP portmanteaus
- Trying to make sense of when $\sqrt{}$+ASP portmanteaus are blocked.

2 A (very) brief background on ASP marking in Laz

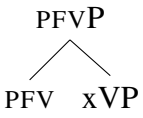
- Laz marks imperfective overtly but lacks overt perfective marking.

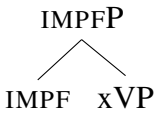
(3) t'ax **-um** -an
break IMPF PRS.3PL
'They (are) break(ing) it.' IMPERFECTIVE+PRESENT

(4) t'ax -es
break PST.3PL
'They broke it.' PERFECTIVE+PAST

(5) t'ax **-um** -t' -es
break IMPF AUX PST.3PL
'They were breaking it.' IMPERFECTIVE+PAST

  - I take past forms that lack imperfective marking to be perfective.
  - I pretend that possibly many ASP features are simply IMPF and PFV features.

(6) 

(7) 

- **There is a huge complication!** imperfective marking is variant: {-um, -am, -er, -ur}

(8) a. k'i -es
scream PST.3PL
'They screamed.'

b. k'i **-am** -an
scream IMPF PRS.3PL
'They are screaming.'

(9) a. ğur -es
die PST.3PL
'They died.'

b. ğur **-ur** -an
die IMPF PRS.3PL
'They are dying.'

(10) a. a- t'ax -es
ABIL break PST.3PL
'They were able to break (it).'

b. a- t'ax **-er** -an
ABIL break IMPF PRS.3PL
'They are able to break (it).'

- I want to keep the story simple, even though there is obviously more to it. Hence, I entirely put aside the variation in the realization of IMPF. But see Section 6.

3 $\sqrt{}$ + ASP portmanteaus: Description

(I use the -eri marked participle forms to show the 'elsewhere' forms.)

- EAT+IMPF portmanteau

(11) **imxor** -an
EAT.IMPF PRS.3PL
'They are eating.' cf. t'ax-um-an

(12) şk'om -es
EAT PST.3PL
'They ate.' cf. t'ax-es

(13) **imxor** -t' -es
EAT.IMPF AUX PST.3PL
'They were eating.' cf. t'ax-um-t'-es

(14) şk'om -eri
EAT PRTCP
'having eaten' cf. t'ax-eri

(15) a. *şk'om-an, *şk'om-er-an, *şk'om-um-an, *şk'om-ur-an, *şk'om-am-an
b. *imxor-es
c. *imxor-eri

- MOVE+PFV portmanteau 'Cvu → Cu' is regular phonology

(16) mo- l -ur -an
TWRD-SPKR MOVE IMPF PRS.3PL
'They are coming.' IMPERFECTIVE+PRESENT

(17) mo- **xt'** -es
TWRD-SPKR MOVE.PFV PST.3PL
'They came.' PERFECTIVE+PAST

(18) mo- l -ur -t' -es
TWRD-SPKR MOVE IMPF AUX PST.3PL
'They were coming.' IMPERFECTIVE+PAST

(19) mo- lv -eri
TWRD-SPKR MOVE PRTCP
'having come' PARTICIPLE

(20) *mo-xt'-ur-an, *mo-lv-es, *mo-xt'-eri

- SAY+IMPF portmanteau & SAY+PFV portmanteau

(21) **it'ur** -an
SAY.IMPF PRS.3PL
'They are saying.' IMPERFECTIVE+PRESENT

(22) **t'k'v** -es
SAY.PFV PST.3PL
'They said.' PERFECTIVE+PAST

(23) **it'ur** -t' -es
SAY.IMPF AUX PST.3PL
'They were saying.' IMPERFECTIVE+PAST

(24) **zit'** -eri
SAY PRTCP
'having said' PARTICIPLE

(25) a. *t'k'v-an, *t'k'v-eri
b. *it'ur-es, it'ur-eri
c. *zit'-am-an, *zit'-um-an, *zit'-ur-an, *zit'-er-an, zit'-an
d. *zit'-es

Q: Why don't we take *it'ur* to be *it'*+*ur* where -ur is a regular IMPF marker?

(26) a. t'ax -um -an
break IMPF 3PL.PRS
'They are breaking (it).'

b. t'ax -um -s
break IMPF 3SG.PRS
'3SG is breaking (it).'

(27) a. ğur -ur -an
die IMPF 3PL.PRS
'They are dying.'

b. ğur -**un**
die IMPF.3SG.PRS
'3SG is dying.'

(28) a. it'ur -an
say.IMPF 3PL.PRS
'They are saying.'

b. it'ur -**s**
say.IMPF 3SG.PRS
'3SG is saying.'

- -ur+3SG.PRS is always -un
- it'ur+3SG.PRS $\neq$ *it'un.

Q: Did we find the right 'elsewhere' forms?

- Let's look at the 'causativized' forms.
- Laz can 'causativize' transitive verbs, too.

(29) t'ax -es
break PST.3PL
'They broke (it).'

(30) o- t'ax **-ap** -es
CAUS break CAUS PST.3PL
'They made him break (it).'

- Both EAT and SAY have -ap causative forms. (MOVE has a distinct portmanteau)

(31) a.

	PFV portmanteau	IMPF portmanteau	'elsewhere'
EAT	-	**imxor**	şk'om

b. **imxor** -an
EAT.IMPF PRS.3PL
'They are eating.'

(32) a. o- şk'om -**ap** -es
CAUSEE EAT CAUS PST.3PL
'They made him eat.'

b. o- şk'om -**ap** -am -an
CAUSEE EAT CAUS IMPF PRS.3PL
'They are making him eat.' ⇐ portmanteau loses

c. *o-imxor-**ap**-am-an, *o-imxor-**ap**-an

(33)

	PFV portmanteau	IMPF portmanteau	'elsewhere'
SAY	**t'k'v**	**it'ur**	**zit'**

(34) a. o- zit' -**ap** -es
CAUSEE SAY CAUS PST.3PL
'They made him say.' ⇐ portmanteau loses

b. o- zit' -**ap** -am -an
CAUSEE SAY CAUS IMPF PRS.3PL
'They are making him say.' ⇐ portmanteau loses

c. *o-t'k'v-**ap**-es, *o-it'ur-**ap**-(am)-an

4 $\sqrt{}$ + ASP portmanteaus: LSTs

SUMMARY

	PFV portmanteau	IMPF portmanteau	'elsewhere'
EAT	-	**imxor**	şk'om
MOVE	**xt'**	-	lv
SAY	**t'k'v**	**it'ur**	zit'

- I assume Phrasal Spell-out (Caha, 2009; Starke, 2009).
  - In particular, following Caha et al. (2019a) and Caha et al. (2019b), I assume that a root portmanteau is a lexically stored tree (LST) that contains a particular restriction on what got inserted in the previous cycle:

(35) *mice* $\Longleftrightarrow$ pluP

plu *mouse*

  - Accordingly, our LSTs for the $\sqrt{}$ + ASP portmanteaus in Laz:

(36) *t'k'v* $\Longleftrightarrow$ PFVP

PFV *zit'*

(37) *xt'* $\Longleftrightarrow$ PFVP

PFV *lv*

(38) *it'ur* $\Longleftrightarrow$ IMPFP

IMPF *zit'*

(39) *imxor* $\Longleftrightarrow$ IMPFP

IMPF *şk'om*

- For concreteness, I will also sometimes refer to the decomposition in Ramchand (2008). (Nothing I will say hinges on this, though.)

(40) . . . , şk'om, zit' $\Longleftrightarrow$ initP

init procP

proc

(41) . . . , lv, t'ax $\Longleftrightarrow$ initP

init procP

proc resP

res

5 What can and cannot block these portmanteaus?

- Linearly intervening morphemes block portmanteaus (Embick, 2010).[1]
  - Broadly speaking, this is ambiguously a structural effect or a linear effect.
  - **Disambiguation:** Can linearly uninvolved morphemes block portmanteaus?
    - If portmanteaus are inserted into a *stretch* of linearly adjacent nodes (Ostrove 2018), we do not expect linearly uninvolved morphemes to block portmanteaus.
    - If portmanteaus are inserted into phrases, we do expect to find such *non-linear* blocking effects.
- And we do find such non-linear blocking effects in Laz!
  - linearly uninvolved morphemes *can* block portmanteaus,
  - but perhaps the more important question: which ones can?

5.1 What does not block $\sqrt{}$ portmanteaus?

- There are four preverbal 'slots':
  POLARITY + SPATIAL + AGREEMENT + PRV + $\sqrt{}$ + . . .

(42) va- ce- v- o- çum -ap -i
NEG DOWN 1 CAUS HIT CAUS PST
'I didn't let them beat him.'

5.1.1 Polarity Markers

- Polarity markers NEG and AFF do not block portmanteaus

(43) do- t'k'v -es
AFF SAY.PFV PST.3PL
'They *did* say.' elsewhere *zit'*

(44) var- imxor -an
NEG EAT.IMPF PRS.3PL
'They are not eating.' elsewhere *şk'om*

(45) va- mo- xt' -es
NEG TWRD-SPKR MOVE.PFV PST.3PL
'They did not come.' elsewhere *lv*

[1] Apparently there are exceptions (Gouskova and Bobaljik, 2019).

- I have no direct evidence that locates NEG in the fseq.
  - The only thing that can precede it is a run-of-the-mill subordinator na-

    (46) [dişk'a **na**- var- çit -u] t'k'u
    wood C NEG CHOP PST.3SG he.said
    'He said he didn't chop wood.'

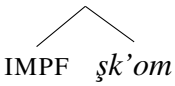
  - But there is some variation in the realization of NEG contingent on **mood**.

    (47) va t'ax -i
    NEG BREAK PST.2SG
    'You didn't break it.'

    (48) vati t'ax -i -k'o
    NEG.IRR BREAK PST.2SG IRR
    'You wouldn't break it'
    'You weren't gonna break it.'

    (49) mot t'ax -um
    NEG.IMP BREAK IMPF
    'Don't cry!' grammaticalized from 'Lit: why(=mot) are you crying?'

  - Given that NEG has an irrealis form and IRR is apparently above tense, I will assume that NEG is at least above ASP in the fseq.
  - Then, it has no way of blocking AspP portmanteaus like *imxor* $\Longleftrightarrow$



5.1.2 Prefixal Person Agr

- Prefixal agreement does not block portmanteaus, either.

(50) v- imxor
1 EAT.IMPF
'I am eating.'

(51) p'- t'k'v -i -t
1 SAY.PFV PST PL
'We said.'

  - I cannot get into the notoriously complex agreement system of South Caucasian.
  - I will follow Blix (2020) who takes (person and number) agreement features to be just below the tense features in the f-seq.
    - suffixal agreement is clearly located around the tense region, e.g. -es: PST.3.PL
    - crucially, there is evidence that suffixal and prefixal agreement together spell out a contiguous region in the f-seq. See Blix (2020) for details.

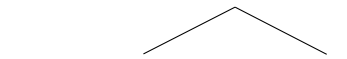
– In support of this, I will mention an additional portmanteau (?):[2]

(52) a. lv → MOVE
b. xt' → MOVE+PFV
c. ft' → MOVE+PFV+1

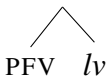
(53) gama- ft' -i
OUT MOVE.PFV.1 PST
'I went out.'

– The insertion of ft' is contingent on the successful insertion of xt' (i.e. a PFVP)

(54) *ft'* ⟺



(55) *xt'* ⟺



– In short: (I assume) tense features > agreement features > asp features

– If so, prefixal agreement has no way of blocking AspP portmanteaus containing a root.

5.1.3 Spatial Markers

- Spatial markers (which form a large set consisting of simplex and complex forms) do not block portmanteaus, either.

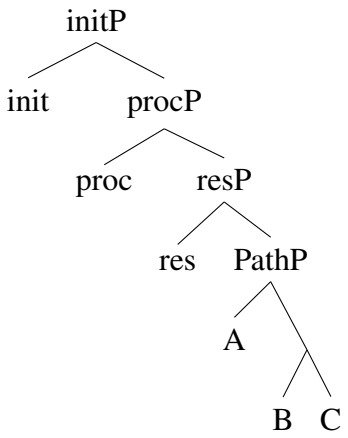
(56) oxori-şe gama- xt' -es
house-ABL OUT MOVE.PFV PST.3PL
'They went out of the house.' elsewhere *lv*

(57) livadi-s do+lo- xt' -es
garden-DAT INTO.DOWN MOVE.PFV PRS.3PL
'They went down into the garden.'

[2]To my knowledge, pxt' → ft' is not a regular phonological process in Laz. But this may turn out to be wrong.

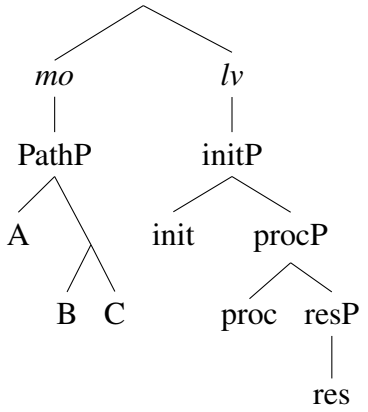
– I assume that spatial markers spell-out a PathP at the very bottom of the f-seq.
See Eren (2016) on spatial markers in Laz.

(58)

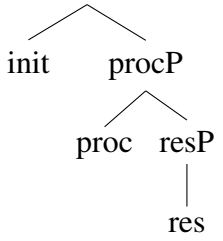


– Following Starke (2018), I assume that the PathP is moved to the left of the verb via comp-to-spec movement in order to create a constituent for inserting the root.

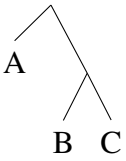
(59)



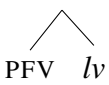
(60) *lv* ⟺



(61) *mo* ⟺



– Recall that the existence of a PathP in the structure does not block *xt'* ⟺

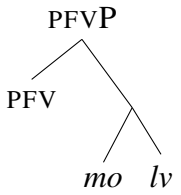


(62) mo- xt' -es
TWD-SPKR MOVE.PFV PST.3PL
'They came.'

elsewhere *lv*

– This is predicted:

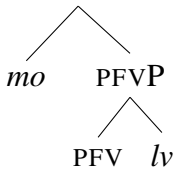
– When PFV is merged, there is no match for



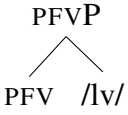
– PathP has been comp-to-spec moved, hence it is **not a projecting specifier** (Starke, 2018; Caha, 2019).

– Therefore, it *can* be moved out of the way, which allows for insertion of (64).

(63)



(64) xt' $\Longleftrightarrow$



5.2 What <u>does</u> block $\sqrt{}$ portmanteaus?: PRVs

- We're left with pre-root-vowels, and they all block $\sqrt{}$ portmanteaus!
- The PRV is a slot that can host one of these vowels: {o, u, i, a} (Demirok, 2011, 2013; Öztürk, 2013; Taylan and Öztürk, 2014)
  - o- occurs with an additional overt suffix. So, I focus on {u, i, a} here.

(65) t'ax -u
BREAK PST.3SG
'She broke it.'

(66) **o-** t'ax **-ap** -u
CAUS BREAK CAUS PST.3SG
'She made him break it.' causative

(67) **u-** t'ax -u
APPL BREAK PST.3SG
'She broke it for him.' applicative (nonreflexive)

(68) **i-** t'ax -u
DEFC BREAK PST.3SG
'(Someone) broke it.' impersonal passive
'She broke it for herself.' reflexive-applicative

(69) **a-** t'ax -u
APPL+DEFC BREAK PST.3SG
'(Someone) broke it for her.' impersonal passive+applicative
'She was able/had to break it.' agentive ability/compulsion modal

- All PRVs block $\sqrt{\ }$+ASP portmanteaus!

  - The MOVE.PFV portmanteau is blocked by the prefix a-.

    (70) mo- xt' -u
    TWRD-SPKR MOVE.PFV PST.3SG
    'She came.'

    (71) mv- **a-** l -u
    TWRD-SPKR APPL+DEFC MOVE PST.3SG
    'She was able to come.'

    (72) *mv-a-xt'-u, *mo-l-u

  - EAT.IMPF portmanteau is blocked by the prefix u-.

    (73) imxor -an
    EAT.IMPF PRS.3PL
    'They are eating.'

    (74) **u-** şk'om -am -an
    APPL EAT IMPF PRS.3PL
    'They are eating something that belongs to him.'

    (75) *uimxoran, *umxoran

  - Notably, we are *not* dealing with some kind of Phonological Selection:

    (76) a. **t'k'** -u
    SAY.PFV PST.3SG
    'She said it.'
    b. *i-t'k'-u, *a-t'k'-u, *u-t'k'-u

    (77) **i-** zit' -u
    DEFC SAY PST.3SG
    'It was said.'/(Someone) said it.

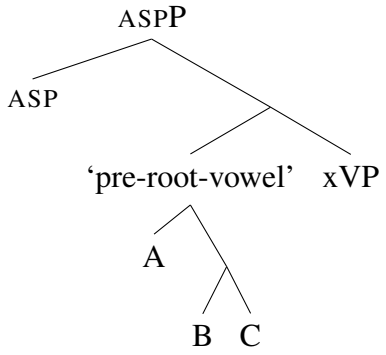
    (78) **a-** zit' -u
    APPL.DEFC SAY PST.3SG
    'She was able to say it.'

    (79) **u-** zit' -u
    APPL SAY PST.3SG
    'She said something about him.'

But, where are PRVs?

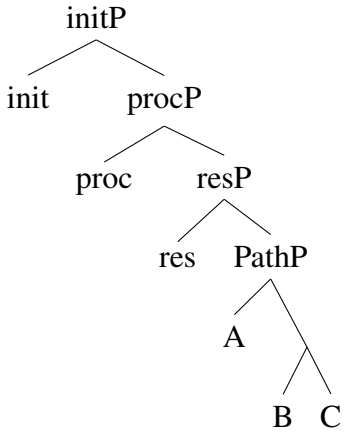
- PRVs deserve a PhD dissertation. But I think it is safe to say this much:
  In plausible logical forms, causative, passive, applicative and root modal projections, in particularly ability modals, compose with event predicates
  (Hacquard, 2006; Pylkkänen, 2002; Demirok, 2018)
- If so, they must be lower in the f-seq than aspect and tense nodes.
- I assume that they all spell-out **complex left branches** in the 'VP zone', and are lower in the f-seq than ASP nodes.

(80)



- Crucially, they are different from spatial markers, which are non-projecting specifiers!

(81)



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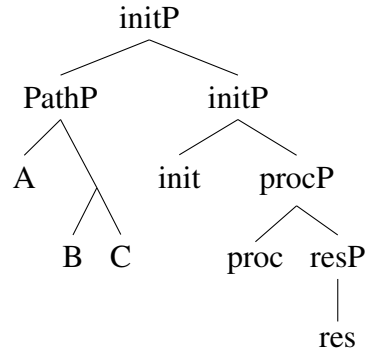
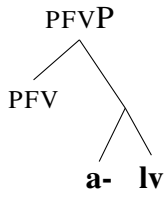


- Assuming that they are built in a newly spawned workspace, they are merged into the main derivation **as projecting specifiers** (Starke, 2018).
  - ∗ Consequence:
    they cannot be spec-to-spec moved to give way to $\sqrt{}$+Asp portmanteaus!

(83) mo- xt' -u
TWRD-SPKR MOVE.PFV PST.3SG
'She came.'

(84) mv- **a-** l -u
TWRD-SPKR APPL+DEFC MOVE PST.3SG
'She was able to come.'

(85)



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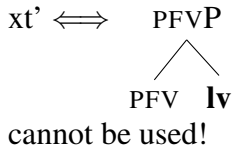


cannot be used!

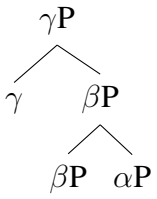
5.3 Summary

When does a prefix block a portmanteau?

A prefix that spells out βP will block a portmanteau LST

in (87) but not in (88).

(87)



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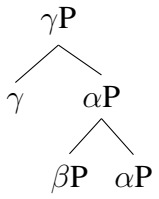

If what I have been saying about Laz is right:

- PRVs are on par with the βP in (87). They cannot be moved out, and therefore they 'non-linearly' block portmanteaus.
- Spatial prefixes are on par with the βP in (88). They can be spec-to-spec moved (out of the way).
- The features that polarity and agreement markers spell out are higher in the f-seq than γ. So, they are irrelevant.

6 What's beyond the simple story (& left to future work)

6.1 The variation in the realization of the IMPF

- The semantics of the root largely determines which IMPF marker will surface:
  (Taylan and Öztürk, 2014; Demirok, 2014; Öztürk and Taylan, 2017)

(89) a. -ur — unaccusatives (*fall*, *die*, . . . but also *stay at*)

b. -um — (mostly +*res*) transitives ((*break*, . . . but also *drink*, *want*))

c. -am — unergatives, some transitives, with overt causative suffixes (*scream, shine, kill, . . .)*

d. -er — always co-occurs with PRV i- or a- (psych verbs, passives, anticausatives)

(90) a. -u**m** & -a**m** say there is an ERG marked external argument
b. -u**r** & -e**r** say there is no ERG marked external argument

– In Demirok (2014), I present a preliminary attempt in characterizing the LSTs for these IMPF variants

(91) a. -um $\Longleftrightarrow$ [IMPFP IMPF [initP init [procP proc [resP res]]]]
b. -am $\Longleftrightarrow$ [IMPFP IMPF [initP init [procP proc]]]
c. -ur $\Longleftrightarrow$ [IMPFP IMPF [procP proc [resP res]]]

– problems:

∗ Requires a separate DM-like $\sqrt{}$ node.

∗ There are apparent exceptions

∗ How does -um win over -am when it should

- PRV also affects which IMPF marker will surface: (Demirok, 2011, 2013)
  - -um ⇒ -am when APPL is in the structure

    (92) t'ax **-um** -an
    break IMPF PRS.3PL
    'They are breaking it.'

    (93) u- t'ax **-am** -an
    APPL break IMPF PRS.3PL
    'They are breaking it for her/him.'

    (94) i- t'ax **-am** -an
    REFL.APPL break IMPF PRS.3PL
    'They are breaking it for themselves.'

  - {-um, -ur} ⇒ -am when CAUS is in the structure

    (95) t'ax **-um** -an
    melt IMPF PRS.3PL
    'They are breaking it.'

    (96) o- t'ax -ap **-am** -an
    CAUS break CAUS IMPF PRS.3PL
    'They are making him break it.'

  - {-um, -am, -ur} ⇒ -er when passive i- or modal a- is present.

(97) i- t'ax **-en**
DEFC break IMPF.PRS.3SG
'It is breaking.'

(98) a- t'ax **-en**
DEFC.APPL break IMPF.PRS.3SG
'She can break it.'

6.2 Competition between PRVs

- Only one PRV can surface, i+u, i+i, a+i, etc. no combination works.
  - When there is both causative (o-) and ability marking (a-), a- wins.

    (99) a. a- t'ax -ap -en
    DEFC.APPL break CAUS IMPF.PRS.3SG
    'She can make him break it.'

    b. *o-t'ax-ap-en

– When there is both passive (i-) and applicative (u-), a- surfaces (which suggests it is bigger than both)

(100) a- t'ax -en
DEFC.APPL break IMPF.PRS.3SG
'Someone breaks it for her.'

6.3 Order of preverbal elements

- There are four preverbal slots:
POLARITY + SPATIAL + AGREEMENT + PRV + $\sqrt{}$ + . . .

(101) va- ce- v- o- çum -ap -i
NEG DOWN 1 CAUS $\sqrt{\text{HIT}}$ CAUS PST
'I didn't let them beat him.'

– It seems plausible that agr $>$ prv order reflects the f-seq.

– It also makes sense that spatial prefixes would keep getting spec-to-spec moved and reach a peripheral position.

– Why polarity markers have to precede spatial markers, I do not know.

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