"Strict" adjacency and voice allomorphy in Classical Greek passives

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1 Introduction

In Classical Greek (CG) perfective stems (aorist, future), passive = suffix *-(th)ē-* (glossed as PFV.PASS), which appears in the slot usually occupied by stem-forming suffixes next to the root (NPAST = non-past, NACT = non-active; "middle".
The puzzle: *-thē-* triggers obligatory *active* endings in the aorist (1a–c), but obligatory *non-active* morphology in the future (1d–e):

(1) Classical Greek passives

stem	passive	meaning
a. aor.	e-loú-thē-n PAST-wash-PASS.PFV-1SG.PAST.**act**	'I was washed'
b. aor.subj.	lou-thô wash-PASS.PFV.SUBJ.1SG.NPAST.**act**	'I may have been washed'
c. aor.opt.	lou-theíē-n wash-PASS.PFV.OPT-1SG.PAST.**act**	'I might have been washed'
d. fut.	lou-thḗ-so-mai wash-PASS.PFV-FUT-1SG.NPAST.**NAct**	'I will be washed'
e. fut.opt.	lou-thē-soí-mēn wash-PASS.PFV-FUT.OPT-1SG.PAST.**NAct**	'I might be washed'

The intervening future suffix *-so-/-s-* by itself can take either active or NAct morphology, (2c), like most other stem-forming suffixes, (2a-b).

(2) Classical Greek: stem-formation + voice alternations

	active	non-active
a. pres.	loú-Ø-ō wash-IPFV-1SG.NPAST.ACT 'I wash (sth.)'	loú-o-mai wash-IPFV-1SG.NPAST.NACT 'I wash myself'
b. aor.	é-lou-s-a PAST-wash-PFV-1SG.PAST.ACT 'I washed (sth.)'	e-lou-sá-mēn PAST-wash-PFV-1SG.PAST.NACT 'I washed myself'
c. fut.	loú-s-ō wash-FUT-1SG.NPAST.ACT 'I will wash (sth.)'	loú-so-mai wash-FUT-1SG.NPAST.NACT 'I will wash myself'

- **Proposal**: The unexpected voice allomorphy in the CG passive is due to the "intervention" of the future suffix *-se/o-* between the pfv.pass. suffix *-thē-* (Asp) and the endings (Agr)
- It is not the *morphosyntactic* feature content of these heads that triggers the unexpected NAct morphology in (1d-e), but the *phonological* content of the heads that intervene between *-thē-* and T/Agr (FUT in (1d) and FUT+OPT in (1e)).
- T/Agr is sensitive to whether or not the *span* PFV.PASS+FUT is spelled out as portmanteau

2 Background: spans

Merchant 2015, Merchant and Pavlou 2016: allomorphy is triggered by adjacent **spans** (= sets of ordered terminal nodes of a given extended projection; each terminal node itself is a span), *not* by strict node adjacency

- **Outward sensitivity**: allomorphy is triggered by a structurally higher span; only the *morphosyntactic content* of the higher span is relevant (Embick 2010, Merchant 2015)
- **Inward sensitivity**: a structurally lower span conditions allomorphy in a higher span

Prediction: For inward sensitivity, both the phonological & the morphosyntactic content of the lower span can become relevant (Embick 2012) → linearization matters!

3 Background: Voice in CG

(3) Spell-Out of non-act. morphology (Alexiadou et al. 2015: 101–2; see Embick 1998, 2004)
Voice → Voice[NonAct]/_ No DP specifier

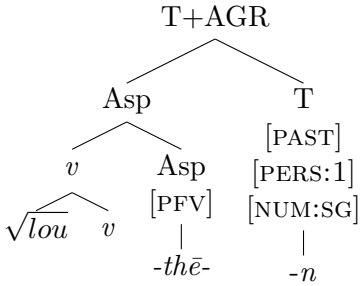
(Non-)active morphology = portmanteau with T/Agr, sensitive to Voice[+/-ext.arg.]; active morphology = "elsewhere" (also emerges when Voice is missing, e.g., in unaccusatives & statives, Kallulli 2013).

4 Analysis: aorist stem → ACT, future stem → NACT

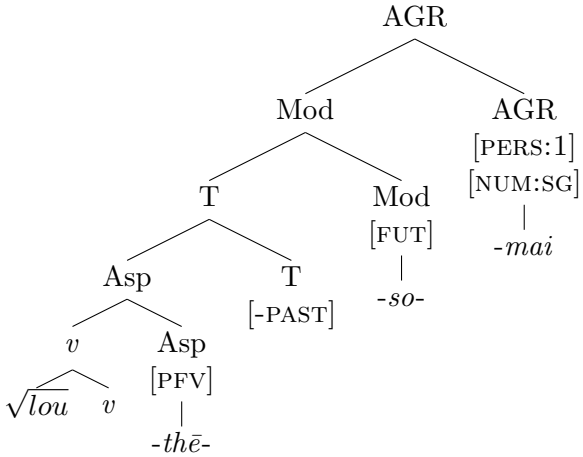
If CG *-thē-* realizes Asp[pfv] in the absence of Voice, it is predicted to occur only when Voice is missing & to co-occur with default ("act.") T/Agr morphology → aorist passive

(4) a. aorist passive, b. future passive

a.



b.



- *-thē-* spells out Asp[pfv] in the absence of Voice in the future (like in the aorist) → The **future passive** is always perfective (Smyth and Messing 1956, Allan 2003)
- the future marker *-se/o-* realizes Mod (fut. & subj. cannot co-occur → different values of epistemic Mod, cp. Cinque 1999); Opt. = deontic mod., can co-occur with future
- But *-se/o-* by itself alternates. So why does ⌢Asp[thē]⌢Mod[so] trigger NAct?

5 Inward sensitivity

Observation: default act. morphology surfaces in the passive whenever Asp+Mod form a *portmanteau* (or Mod is missing → aor.pass.), (5-a–c). NAct surfaces when Asp & Mod are spelled out separately, (5-d–e) (illustrated with 1pl.).

(5) Spell Out of Mod

a.	1pl.aor.pass	*-thē-men*	-pfv.pass-1pl.past.act
b.	1pl.aor.subj.pass	*-thô-men*	-pfv.pass.subj-1pl.nonpast.act
c.	1pl.aor.opt.pass	*-theĩ-men*	-pfv.pass.opt-1pl.past.act
d.	1pl.fut.pass	*-thē-só-metha*	-pfv.pass-fut-1pl.nonpast.**NAct**
e.	1pl.fut.opt.pass	*-thē-soí-metha*	-pfv.pass-fut.opt-1pl.past.**NAct**

(6) Linearization for (6-b) vs. (6-e):

a. $\sqrt{lou}$⌢Asp.Mod[thô]⌢Agr[-men] (Asp+Mod: portmanteau)
b. $\sqrt{lou}$⌢Asp[thē]⌢Mod[so]⌢Agr[-metha] (Asp+ Mod: no portmanteau, cp. (7))

Why 4-b? → The future also triggers NAct morphology in many verbs that are otherwise active → **semi-deponents**: active in the present/aor., but non-active in the future.

(7) CG semi-deponents

Pres.: act.	Fut.: NAct	Meaning	Pres.: act.	Fut.: NAct	Meaning
akoú-ō	*akoú-so-mai*	'(will) hear'	*hamartán-ō*	*hamartḗ-so-mai*	'(will) miss, fail'
baín-ō	*bḗ-so-mai*	'(will) walk, go'	*aeíd-ō*	*aeí-so-mai*	'(will) sing'

- Kemmer 1993: (inherently) desiderative & volitional verbs take NAct morphology cross-linguistically
- Mod_{FUT} selects Voice without an external argument → condition on non-active voice applies (ex. 3), obligatory NAct in the future
- **Semi-deponents** suggest that Mod[FUT]⌢Agr = *always* Mod[*so*]-Agr[NAct]
- ... even if there is a lower *-thē-*: Mod has phonological content and *intervenes*

6 Additional evidence: the Doric future

In **Doric Greek**, the future passive = ACT

- The "Doric future": a theme vowel intervenes between *-se/o-* and the endings

(8) Doric future

	Doric	Attic-Ionic
fut.	lou-s-é-ō	loú-s-ō
	wash-FUT-THEME-1SG.ACT	wash-FUT-1SG.ACT
fut.pass.	lou-thē-s-e-ō	lou-thē-so-mai
	wash-PFV.PASS-FUT-THEME-1SG.ACT	wash-PFV.PASS-FUT-1SG.NACT

- Fut & Agr not directly adjacent: Mod[*so*]-THEME-Agr → future pass. does not trigger obligatory NAct in Doric
  - Status of semi-deponents in Doric?

7 Implications

- Linearization influences the realization of morphosyntactic features, including agreement and allomorphy (e.g., Arregi and Nevins 2012, Marušič et al. to appear)
- The CG passive suggests that linearization (or "strict" adjacency?) also plays a role in inward sensitive allomorphy, when lower nodes have been linearized and have phonological content
- In the CG future passive, it is the combination of Asp[pfv]+Mod that causes NAct morphology to surface on T/Agr, since neither node by itself obligatorily demands NAct.
- Examples from other languages?

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