"Strict" adjacency and voice allomorphy in Classical Greek passives

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Introduction Recent research in morphosyntax has focused on the importance of adjacency and the linearization of terminal nodes for allomorphy, but the proposed adjacency conditions vary (cp. Embick 2012, Svenonius 2012, Arregi & Nevins 2012). Merchant 2015 and Merchant & Pavlou 2016 argue that allomorphy is triggered by adjacent spans (defined as a set of ordered terminal nodes of a given extended projection; each terminal node itself is a span) rather than by strict node adjacency. They focus on cases of "outward sensitivity", in which a structurally higher span conditions allomorphy in a lower span. I argue that the unexpected voice allomorphy in the Classical Greek (CG) passive can be explained through *inward* sensitivity, in which a structurally lower span conditions allomorphy in a higher span. Crucially, both the phonological and the morphosyntactic content of lower spans becomes relevant for inward-sensitive allomorphy.

The puzzle CG passives famously display an aspectual split: in imperfective stems (present, imperfect, perfect), passive is expressed as part of the verbal endings through "middle" (non-active, NAct) voice morphology (together with Tense and Agr). In perfective stems (aorist, future), passive is expressed as a separate morpheme *-(th)ē-* that appears in the slot usually occupied by stem-forming suffixes next to the root (glossed as PFV.PASS):

(1)

	aorist type	meaning
a. sigmatic	é-dū-**s**-a PAST-sink-**PFV**-1SG.PAST.ACT	'I sank sth.'
b. **passive**	e-dú-**thē**-n PAST-sink-**PFV.PASS**-1SG.PAST.ACT	'I was sunk'

"Passive" *-thē-* expectedly co-occurs with the voice morphology of the verbal endings (e.g., active in (1b)), but there is a puzzling distributional split: While *-thē-* triggers obligatory active endings in the aorist, (2a-c), it triggers obligatory NAct endings in the future, (2d-e).

(2)

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-s-oí-mēn wash-PASS.PFV-FUT-OPT-1SG.PAST.**NACT**	'I might be washed'

This cannot be due to the intervening future suffix *-so-/-s-* in (2d-e), since this by itself can take either active or NAct morphology, (3c), like most other stem-forming suffixes, (3a-b).

(3)

	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'

I argue that the voice allomorphy of the CG passive is rather due to the combination of the passive/perfective suffix *-thē-* and the future suffix *-se/o-*. Crucially, it is not the morphosyntactic feature content of the underlying heads that triggers the unexpected NAct morphology in (2d-e) (*-thē-* obligatorily triggers active; *-se/o-* by itself can take either active or NAct), but the phonological content of the heads that intervene between *-thē-* and T/Agr (FUT in (2d) and FUT+OPT in (2e)).

Analysis I propose that CG *-thē-* realizes Asp[pfv] in the absence of the agentivity/event-introducing head Voice. I assume (following Embick 1998, 2004) that active/non-active morphology in Greek is "postsyntactic" allomorphy conditioned by the presence or absence of an agent argument introduced by Voice. "Active" is Elsewhere morphology that surfaces in the absence of such an agent argument. Since non-active morphology in T/Agr is sensitive to this property of Voice, active morphology also emerges as a default whenever Voice is missing, as in unaccusative and stative predicates (Kallulli 2013). Therefore *-thē-* is predicted to occur only in contexts where Voice is missing and to co-occur with default/"active" T/Agr morphology, as in the aorist passive, (2a-c), and its co-occurrence with NAct morphology in (2d-e) is unexpected.

The future passive is always perfective, so *-thē-* also realizes Asp[pfv] in the absence of Voice there. The future marker *-se/o-*, originally a stem-forming suffix, has developed into a marker of future modality in CG and realizes the node Mod (cp. Giannakidou 2014 for an analysis of future as modality; future and subjunctive cannot co-occur in CG). Crucially, it is not Mod alone that triggers the realization of T/Agr as non-active in the future passive, but the span Asp[pfv]+Mod. Since this is a case of "inward sensitivity", the phonological content of this span is expected to become relevant, and this exactly what happens: Spellout of T/Agr as active cannot proceed because a node with with phonological content intervenes between T/Agr and Asp[pfv], unlike in the aorist passive where nothing intervenes phonologically (the reverse case of "pruning" of phonologically empty nodes, cp. Embick 2010, 2012). That inward sensitive allomorphy cannot "see across" a lower node with phonological content also predicts the interaction of *-thē-* with modality once one accommodates fusion of nodes. If Asp[PFV] undergoes fusion with Mod, as in the aorist subjunctive and aorist optative where the two cannot easily be segmented into different morphemes, (2b-c), Mod does not act as an intervener and the expected active morphology surfaces. If Asp and Mod do not fuse, as in the future and future optative, (2d-e), the phonological content of Mod intervenes and triggers NAct morphology.

Implications Outward sensitive allomorphy in CG and Modern Greek has been shown to be triggered by spans of ordered terminal nodes rather than strict node adjacency. "Strict" adjacency, however, does play a role in inward sensitive allomorphy, that is, when lower nodes have already been linearized and have phonological content: In the CG future passive, it is the combination of Asp[pfv]+Mod that causes non-active morphology to surface on T/Agr, since neither node by itself obligatorily demands non-active morphology. This is line with recent research that suggests that linearization influences the realization of morphosyntactic features, including agreement and allomorphy (e.g., Arregi & Nevins 2012, Marušič et al. To appear) and could be extended to similar cases in closely related languages with the same voice system.

Selected references: **Arregi**, Karlos and Andrew **Nevins**. 2012. *Morphotactics: Basque auxiliaries and the structure of Spellout*. Springer. **Embick**, David. 1998. Voice systems and the syntax/morphology interface. *Papers from the Penn/MIT Roundtable on Argument Structure and Aspect* (MITWPL). —. 2004. Unaccusative syntax and verbal alternations. *The Unaccusativity puzzle*, 137–58. —. 2012. Contextual conditions on stem alternations: Illustrations from the Spanish conjugation. *Romance Languages and Linguistic Theory 2010*, 21–40. **Giannakidou**, Anastasia. 2014. The futurity of the present and the modality of the future: a commentary in Broekhuis and Verkuyl. *NLLT* 32/3: 1011-32. **Kallulli**, Dalina. 2013. (Non-)canonical passives and reflexives: deponents and their like. *Non-canonical passives*, 337–58. **Marušič**, Franc, Jana Willer Gold, Boban Arsenijević and Andrew Nevins. To appear. Can agreement with the linearly closest conjunct be derived in syntax proper? Proceedings of NELS 2015. **Merchant**, Jason. 2015. How much context is enough? Two cases of span-conditioned stem allomorphy. *LI* 46/2:273–303. **Merchant**, Jason, and Natalia **Pavlou**. 2016. A surprising allomorphic span in Cypriot Greek. Ms., University of Chicago.