

## Voice allomorphy and Voice syncretism in Classical and Modern Greek passives

**Background** The Modern Greek (MG) verb is at the center of a recent debate on the locality conditions on allomorphy: is allomorphy conditioned by strict node adjacency or by spans of ordered terminal nodes (Svenonius 2012)? Merchant 2015 argues for the latter, based on evidence from stem allomorphy in MG that appears to be triggered by a combination of features of the higher heads Voice and Asp—a “span”. The MG passive(/)perfective suffix *-th(i)-* plays a crucial role in this analysis: Merchant argues that *-th-* spells out the nonactive Voice head Voice[-act] in the context Asp[+pfv], and that together these heads trigger “stem” allomorphy of the root+*v*, (1a), while Christopoulos & Petrosino 2018 argue that Modern Greek *-th-* spells out a *fused* Voice/Asp head, that phonologically empty heads like *v* in (1) are “pruned” (Embick 2010, 2012), and that therefore strict linear adjacency is sufficient to account for MG root (rather than stem) allomorphy, (1b).

- (1) MG *sirthike* ‘was dragged’ (3sg.pfv.pass. of *serno* ‘I drag’)
- Merchant 2015:  $\mathbf{sir}_{\sqrt{+v}}\mathbf{-th}_{\text{Voice[-act]}}\mathbf{-ik}_{\text{Asp[+pfv]}}\mathbf{-e}_{\text{T[3sg,+past]}}$
  - Christopoulos & Petrosino 2018:  $\mathbf{sir}_{\sqrt{+v}}\mathbf{-th}_{\text{Voice[-act],Asp[+pfv]}}\mathbf{-ik}_{\text{T[+past]}}\mathbf{-e}_{\text{AGR[3sg]}}$

However, both accounts fail to derive the fact that act./nonact. Voice morphology is also expressed on the *endings* in MG verbs like (1), and that these verbs moreover select the *active* set of endings, i.e., the set of endings that is usually found in the context [-nonact] according to the standard analysis of MG “voice syncretism” (e.g., Embick 2004, Alexiadou et al. 2015) in (2):

- (2) Spell-Out condition on nonactive morphology  
Voice → Voice[Nonact]/\_ No DP specifier

“Active” endings are Elsewhere allomorphs inserted when (2) does not apply (including in unaccusatives without Voice, cf. Alexiadou & Anagnostopoulou 2004, Schäfer 2008). Assuming that Voice[nonact] in (2) = Voice[-act] in (1), we would expect the nonactive set of endings in both accounts in (1), independent of whether the “Voice features” on the endings are analyzed as realizations of Voice or as contextually conditioned allomorphs of T/Agr. Moreover, Merchant’s analysis assumes at least four different ways of realizing Voice in MG (as *-th-* in the context Asp[+pfv], as part of the span Voice[+act]+Asp[+pfv] in the active perfective nonpast, etc.), which runs counter to the distributional generalization captured by (2). The goal of this paper is to reassess this problem from the perspective of Classical Greek (CG) *-thē-* (the ancestor of MG *-th(i)-*), which likewise co-occurs with the active endings, to propose an analysis with uniform exponence of Voice and of *-thē-*, and sketch out how this analysis may contribute to understanding the MG situation.

**Proposal** I assume the order of functional projections in (3) for CG finite verbs, based on previous work and general, typological considerations (projections in brackets may be absent):

- (3)  $\sqrt{-v}\text{-(Voice)-Asp-(Mod}_{\text{fut}}\text{)-(Mod}_{\text{subj/opt}}\text{)-T/Agr}$

I argue that CG *-thē-* realizes *v* in the context of Asp[+pfv], providing evidence that *-thē-* behaves synchronically like a “verbalizer” (or “flavor of *v*”) and corroborating diachronic evidence. I moreover argue that the other aorist or present “stem-forming” suffixes of CG (*-e/o-*, *-s(a)-*, *-n-*, *-nū-*, etc.) are, despite their designations as “aorist” and “present” suffixes, realizations of low, event-related *v*+Voice that are licensed in the context of either Asp[pfv] (“aorist stem”) or Asp[-pfv] (“present” or “imperfective” stem). This accounts for their behavior als “low” verbalizers on the one hand (including their ability to trigger root allomorphy), and their relation to syntactic aspect on the other hand. What makes CG *-thē-* special is that it realizes *only v*, while other verbalizers realize a span *v*—Voice (irrespective of whether Voice has a DP specifier, i.e., is [+ext.arg.] or [-ext.arg.]). The reason *thē-* realizes *v* under (strict) adjacency to Asp[pfv] is that it developed diachronically from a stative/inchoative unaccusative verbal stem forming suffix without a specifically “passive” meaning. It therefore lacks a Voice head and is predicted to co-occur with *active* T/Agr morphology

according to (2). This analysis derives the finite act./nonact. present, aorist, and perfect indicative and subjunctive, partially illustrated in (4a-e), and the aorist passive indicative, subjunctive, and optative in *-thē-*, (4f-h), which are now correctly predicted to surface with active endings. This analysis also derives various non-finite forms of the CG verb, such as the participles: the act./nonact. participial suffixes *-nt-* and *-men(os)* realize Asp when movement to/agreement with higher verbal functional projections is blocked, along the lines of Embick 2000, Alexiadou et al. 2015, (4i-j). These act./nonact. allomorphs are conditioned by Voice([+/-ext.arg.]) like the finite forms, accounting for their parallelism in aspectual semantics and valence.

(4) Partial paradigm of CG *lūō* ‘release’ (past prefix “augment” excluded), nonactive = NAct

stem	structure & exponence
a. pr.act.	$\text{lū}_{\sqrt{-}\text{o}}\text{v}\text{-Voice}[+\text{ext.arg.}]\text{-}\emptyset_{\text{Asp}[\text{-pfv}]\text{-}\bar{\text{o}}}_{\text{T}/\text{Agr}[\text{1sg, -past}]}$ ‘I release’ [lūō]
b. pr.NAct.	$\text{lū}_{\sqrt{-}\text{o}}\text{v}\text{-Voice}[\text{-ext.arg.}]\text{-}\emptyset_{\text{Asp}[\text{-pfv}]\text{-}\mathbf{mai}}_{\text{T}/\text{Agr}[\text{1sg, +NAct, -past}]}$ ‘I release for myself’
c. aor.act.	$\text{lū}_{\sqrt{-}\mathbf{s(a)}}\text{v}\text{-Voice}[+\text{ext.arg.}]\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{a}}_{\text{T}/\text{Agr}[\text{1sg, +past}]}$ ‘I released’ [(e)lūsa]
d. aor.NAct.	$\text{lū}_{\sqrt{-}\mathbf{s(a)}}\text{v}\text{-Voice}[\text{-ext.arg.}]\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{mēn}}_{\text{T}/\text{Agr}[\text{1sg, +NAct, +past}]}$ ‘... for myself’
e. pr.subj.NAct.	$\text{lū}_{\sqrt{-}\text{o}}\text{v}\text{-Voice}[\text{-ext.arg.}]\text{-}\emptyset_{\text{Asp}[\text{-pfv}]\text{-}\mathbf{o}}_{\text{Mod}[\text{subj}]\text{-}\mathbf{mai}}_{\text{T}/\text{Agr}[\text{1sg, +NAct, -past}]}$ ‘shall ...’
f. aor.pass.	$\text{lu}_{\sqrt{-}\mathbf{thē}}\text{v}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{n}}_{\text{T}/\text{Agr}[\text{1sg, +past}]}$ ‘was released’
g. aor.pass.subj.	$\text{lu}_{\sqrt{-}\mathbf{thē}}\text{v}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{o}}_{\text{Mod}[\text{subj}]\text{-}\bar{\mathbf{o}}}_{\text{T}/\text{Agr}[\text{1sg, -past}]}$ ‘may have been released’ [luthō]
h. aor.pass.opt.	$\text{lu}_{\sqrt{-}\mathbf{thē}}\text{v}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{iē}}_{\text{Mod}[\text{opt}]\text{-}\mathbf{n}}_{\text{T}/\text{Agr}[\text{1sg, +past}]}$ ‘might have been released’
i. aor.ptcp.NAct.	$\text{lū}_{\sqrt{-}\mathbf{sa}}\text{v}\text{-Voice}[\text{-ext.arg.}]\text{-}\mathbf{men}\text{-Asp}$ ‘releasing for oneself’
j. aor.pass.ptcp.	$\text{lu}_{\sqrt{-}\mathbf{the}}\text{v}\text{-}\mathbf{nt}\text{-Asp}$ ‘released’

The only forms not derived by this account are those of the future passive, which is also built on *-thē-* but which unexpectedly takes the *nonactive* endings, (5) (in Attic-Ionic; other dialects vary).

(5) Future passive forms of CG *lūō* ‘release’

stem	structure & exponence
a. fut.pass.	$\text{lu}_{\sqrt{-}\mathbf{thē}}\text{v}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{so}}_{\text{Mod}[\text{fut}]\text{-}\mathbf{mai}}_{\text{T}/\text{Agr}[\text{1sg, +NAct, -past}]}$ ‘will be released’
b. fut.pass.opt.	$\text{lu}_{\sqrt{-}\mathbf{thē}}\text{v}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{so}}_{\text{Mod}[\text{fut}]\text{-}\mathbf{i}}_{\text{Mod}[\text{opt}]\text{-}\mathbf{mēn}}_{\text{T}/\text{Agr}[\text{1sg, +NAct, -past}]}$ ‘might be ...’

This unexpected behavior only occurs in the (pfv.) future passive and future optative passive (the ipfv. future indicative and optative alternate between active and nonactive just like the stems in (4a-e)) and must therefore be a case of inward-sensitive, span-conditioned allomorphy, since it only occurs when  $\text{-thē}_{\text{v}}\text{-}\emptyset_{\text{Asp}[+\text{pfv}]\text{-}\mathbf{so}}_{\text{Mod}[\text{fut}]}$  are adjacent.

**Implications** The present account operates with a uniform exponence of Voice in CG and a single, locally restricted environment for the “passive” suffix *-thē-*. Both root allomorphy (e.g., *lū* and *lu* in (4)) and Voice allomorphy on the endings are locally conditioned (assuming pruning of the empty Asp head in the finite forms). However, “non-local”, span-conditioned allomorphy is still necessary to account for the aberrant behavior of deponents (Grestenberger 2016) and the future passive in (5), suggesting that it should be treated as a last resort mechanism for synchronically “irregular” forms. Assuming with, e.g., Alexiadou et al. 2015 that (2) holds for MG moreover means that MG *-th(i)-* should not be analyzed as an exponent of Voice.

**Selected references:** Alexiadou, A., E. Anagnostopoulou, & F. Schäfer. 2015. *External arguments in transitivity alternations: a layering approach*. OUP. Christopoulos, C. & R. Petrosino. 2018. Greek root-allomorphy without spans. *Proceedings of WCCFL 35*, 151–60, Cascadilla. Embick, D. 2000. Features, syntax, and categories in the Latin perfect. *LI* 31/2:185–230. Embick, D. 2012. Contextual conditions on stem alternations: Illustrations from the Spanish conjugation. *Romance Languages and Linguistic Theory 2010*, 21–40. Benjamins. Merchant, J. 2015. How much context is enough? Two cases of span-conditioned stem allomorphy. *LI* 46/2:273–303. Svenonius, P. 2012. *Spanning*. Ms., CASTL/University of Tromsø.