Are (Ancient Greek) theme vowels verb(alizer)s?

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Introduction The status of verbal theme vowels has become contested in recent work on argument structure and verbal morphology—are theme vowels adjuncts to functional projections (Oltra-Massuet 1999, Oltra-Massuet & Arregi 2005), verbalizers (Panagiotidis et al. 2015) or light verbs (Fábregas 2017)? This contribution will approach this problem from a diachronic perspective and argue that at least some elements that have been called theme vowels are verbalizers, and that there is a regular diachronic path by which noun- and adjective-forming morphology is reanalyzed as verbalizing morphology. We will discuss evidence from Ancient Greek (AG) and other closely related older Indo-European (IE) languages in the framework of Distributed Morphology (DM).

Background In much of the DM literature (e.g., Folli & Harley 2007; Harley 2005, 2009, 2013; Alexiadou & Lohndal 2017; Panagiotidis et al. 2017), verbal stem-forming morphology is assumed to realize the verbalizing head v in its varying "flavors", e.g., v_{CAUSE}, v_{DO}, etc. The diachrony of such verbalizers is understudied, especially w.r.t. a possible connection with aspect and argument structure properties such as unergativity and unaccusativity. Following Hale & Keyser (1998, 2002), the difference between unergatives and unaccusatives reduces to the incorporation of either a noun or an adjective into a selecting verbal projection: Incorporation of a noun into an agentive v_{DO} results in unergative verbs, while unaccusative change-of-state verbs consist of an adjective that incorporates into ("conflates with") v_{BECOME}. This approach is based on the observation that in many languages unergatives are expressed through analytic constructions consisting of a light verb DO and a noun, while change-of-state verbs (inchoatives) are often morphologically similar to adjectival roots or stems. It follows that in languages with rich derivational morphology and overt verbalizers, synthetic unergatives should be formed either 1) with verbalizers that are historically related to light verbs like DO or 2) with verbalizers that are historically related to nominal derivational morphology, while synthetic unaccusative change-of-state-verbs should be formed either 1) with verbalizers that are historically related to light verbs like BECOME or 2) with verbalizers that are historically related to adjectival derivational morphology. This paper discusses several case studies that provide evidence for 2), the development of verbalizers from nominal and adjectival stem-forming morphology.

Verbalizers and theme vowels in Ancient Greek The first piece of evidence concerns the rise of **unergative v_{DO}**. Unergative verbalizers can arise from different types of denominal constructions. Iterative, attentuative, or pluractional verbs ("diminutive verbs") arose from verbalized nominal diminutives in, e.g., German, Italian, and Catalan. A second type concerns unergatives from agent nouns: AG verbs in -*éu-ō* were originally derived from agent nouns in -*éu-*, (1). Their agent feature was reanalyzed as part of the verbal domain, giving rise to the "act-like" semantics of these verbs (v_{do}), and the (originally nominal) suffix -*eu-* subsequently became a productive verbalizer in Modern Greek (MG), where it can select adjectives and adverbs as well, (2), (MG ex. from Panagiotidis et al. 2017).

(1) Ancient Greek -*éuō*	(2) Modern Gk. -*ev-*
*basil-**eú**-ō* 'am king; rule' (*basil-**eú**-s* 'king')	*stox-**év**-o* 'aim at' (*stóx-os* 'target')
*khalk-**eú**-ō* 'am a coppersmith' (*khalk-**eú**-s*)	*fronim-**év**-o* 'become prudent' (*frónim-os* 'prudent')
*hipp-**eú**-ō* 'am a horserider' (*hipp-**eú**-s*)	*kont-**év**-o* 'approach' (*kontá* 'near')

This reanalysis is illustrated in (3): The nominal suffix -*eu-* that is the base for a denominal verb formed with the verbalizer (*)-*ye/o-* is reanalyzed as part of the "verbal spine" of this form.

(3)
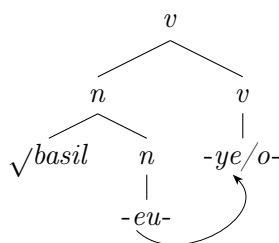
Descriptively, this reanalysis is reminiscent of examples of "upwards reanalysis" (or "Late Merge") in syntactic change (Roberts & Roussou 2003, van Gelderen 2011, etc.).

As for the development of **inchoative/unaccusative ($v_{\textbf{Become}}$)**, this is exemplified by the development of the verbal-stem forming suffix *-$\bar{e}$- < Proto-Indo-European (PIE) *-eh_1-, which forms denominal and/or "primary" (de)verbal formations and is restricted to a particular tense-aspect stem (pres./aor.) in many older IE languages. Most of these verbs are prototypical (stative/inchoative) unaccusatives, e.g., Hitt. *marš-$\bar{e}$-^{zi}* 'become false' (*marš-a(nt)-* 'false'), Lat. *rub-$\bar{e}$-re* 'be red' (*rub-er* 'red'), AG *emán-$\bar{e}$-n* 'went mad', OCS *star-ě-ti* 'become old' (*star-ъ* 'old'), etc. There is some evidence that this -$\bar{e}$-suffix reflects the instrumental singular ending of adjectival abstracts (Jasanoff 2004, Balles 2006), which was reanalyzed as (originally) deadjectival stative-inchoative verbal stem-forming suffix. AG moreover provides evidence that -$\bar{e}$- behaves synchronically like a verbalizer rather than a Voice marker: it cannot co-occur with other verbalizers, it co-occurs with Voice morphology on the endings, and it is mostly used in anticausative/inchoative (rather than passive) contexts in Homer, e.g., 3sg. *errú$\bar{e}$* 'flowed, streamed', *epág$\bar{e}$* 'became fixed, coagulated', etc. This suffix is also found in (some of) the Latin 2nd conjugation stative verbs in -$\bar{e}re$, (4b), which have long been known to be associated with deadjectival verb formation (e.g., Watkins 1971), cf. (4), with a synchronic alternation with 1st conjugation factitive verbs, (4a).

(4)
	a. Factitive	b. Stative	c. Inchoative	d. Base
	clār-$\bar{a}$-re	*clār-$\bar{e}$-re*	*clār-$\bar{e}$-sce-re*	*clārus, -a, -um* 'clear'
	-alb-$\bar{a}$-re	*alb-$\bar{e}$-re*	*alb-$\bar{e}$-sce-re*	*albus, -a, -um* 'bright, white'

To summarize, these case studies suggest a reanalysis path **denominal → unergative** and **deadjectival → unaccusative**, confirming that at least some "conjugational class markers" (or "theme vowels") are genuine verbalizers associated with particular *Aktionsart* properties (cf. Panagiotidis et al. 2017, Kastner & Martin 2020).

The second part of the paper will address the issue of "'complex thematic suffixes" that appear to consist of a verbalizer + theme vowel, e.g., AG/PIE -*ye/o*- in (3), AG -*an-e/o*- (*punth-**án-o**-mai* 'I perceive'), AG (Ion.) -*esk-e/o*- (*pheúg-**esk-o**-n* 'I kept escaping'), etc. The theme vowel -*e/o*- in these complex suffixes seems like an obvious case of a *v*-adjunct in the sense of Oltra-Massuet 1999, Oltra-Massuet & Arregi 2005, etc. However, we will discuss evidence from the Greek participial system that suggests that these cases may be analyzed as allomorphs of *v*, following the analysis of Fábregas (2017) of apparently complex verbalizers like -*ifica*- in Spanish.

Implications Although argument structure change often seems idiosyncratic, there is some evidence for regularity even in this domain (van Gelderen 2018). If it can be shown that the development of categorizers follows regular diachronic pathways, this would go some way towards establishing that the associated argument and event structure changes are also regular, and that the categorizer inventory is universal (to some extent) in the same way the morphosyntactic feature inventory is. Moreover, in both types of reanalysis to be discussed (deadjectival → unaccusative, denominal → unergative), the features of a lower functional category are reanalyzed as belonging to a higher functional category. This parallels well-known instances of "upwards reanalysis" in the syntactic domain and is thus fully expected in an approach like DM in which morphological structure essentially reflects syntactic structure.

Selected references: **Fábregas**, A. 2017. Theme vowels are verbs. *Rivista di Grammatica Generativa* 39: 79–89. **Folli**, R. & H. **Harley**. 2004. Flavors of *v*: consuming results in Italian and English. *Aspectual inquiries*, 95–120. Kluwer. **van Gelderen**, E. 2011. *The linguistic cycle: language change and the language faculty*. OUP. —. 2018. *The diachrony of verb meaning: Aspect and argument structure*. Routledge. **Jasanoff**, J. H. 2004. "Stative" *-$\bar{e}$- revisited. *Die Sprache* 43:127–70. **Kastner**, I. & F. **Martin**. 2020. Dissolving the French conjugation classes. Talk delivered at *Going Romance* 34 (Paris 8), 27.11.2020. **Oltra-Massuet**, I. & K. **Arregi**. 2005. Stress-by-structure in Spanish. *LI* 36(1): 43–84. **Panagiotidis**, Ph., V. **Spyropoulos**, & A. **Revithiadou**. 2017. Little *v* as a categorizing verbal head: evidence from Greek. *The verbal domain*, 29–48. OUP. **Watkins**, C. 1971. Hittite and Indo-European studies: The denominative statives in -$\bar{e}$-. *Transactions of the Philological Society* 70(1):51–93.