The diachrony of verbal categorizers in Indo-European: where does *v* come from?

Background The syntax, semantics, and ontological status of "categorizing" morphology have become pressing issues in recent work on argument structure and in realizational, "full decomposition" approaches to morphology such as DM. If roots are acategorial, we need to know how many and which kinds of *v*, *n*, and *a*-elements there are (universally/cross-linguistically), and what the constraints on their diachronic development are (cf. Iordăchioaia et al. 2013). This paper presents case studies from several Indo-European (IE) languages that document the rise of new verbalizers from nominal or adjectival categorizers and contends that the reanalysis of their formal features follows a regular pattern. In particular, there is evidence for a path of development from denominal → unergative and from deadjectival → unaccusative inchoative/stative verbs, suggesting that even in the domain of argument and event structure—the *v*-domain— diachronic reanalysis proceeds locally and, to a certain extent, regularly (as argued by van Gelderen 2018 for argument structure change).

Evidence Following, e.g., Folli & Harley 2004, 2007, Harley 2005, 2009, 2017, among many others, verbal stem-forming morphology is treated as exponence of a categorizing head *v* with varying "flavors" (v_{CAUSE}, v_{BECOME}, v_{DO}, etc.). The diachrony of these verbalizers is understudied both from a typological and a theoretical perspective. I discuss two types of changes that gave rise to unaccusative (stative/inchoative) and unergative verbalizers.

1. Inchoative/unaccusative (v_{BECOME}): Several older IE languages have a verbal stem-forming suffix (*)-*ē*- which makes denominal and/or "primary" (de)verbal formations and is restricted to a particular tense-aspect stem (pres./aor.). Most of these verbs are prototypical (stative/inchoative) unaccusatives, (1).

(1) *ē*-verbs in IE (deadjectival/deverbal), Jasanoff 2002 (Goth. *ai* = /ɛ̄/, OCS *ě* = /ʲɛ̄/)

		deadjectival	deverbal/$\sqrt{}$-derived
Pres.	Hittite	*marš-**ē**-zi* 'become false' (*marš-a(nt)-* 'false')	
	Latin	*rub-**ē**-re* 'be red' (*rub-er* 'red')	*man-**ē**-re* 'stay'
	Gothic	*fast-**ai**-þ* 'fasts' (**fast-a-* 'firm, fast')	*hab-**ai**-þ* 'has'
Aor.	Greek		*emán-**ē**-n* 'went mad'
	OCS	*star-**ě**-ti* 'become old' (*star-ъ* 'old')	*bъd-**ě**-ti* 'be awake'

The suffix -*ē*- has been argued to have originated in adjectival abstracts from roots and primary adjectives expressing a (change of) state. Analytic constructions involving such adjectival abstracts (Lat. *ārē-faciō* 'make hot/with heat', etc.), suggest that -*ē*- reflects an instrumental singular ending (Jasanoff 2002, Balles 2006), which was reanalyzed as originally denominal/deadjectival stative-inchoative verbal stem-forming suffix. In some IE languages like Ancient Greek, such verbalizers are licensed only in particular aspectual contexts (Asp[±pfv]), hence occur either in the aorist or the present stem. Greek also provides evidence that -*ē*- behaves synchronically like a verbalizer rather than a Voice marker (its allomorph -*thē*- later becomes the productive "passive aorist"): 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. *e-rrú-**ē*** 'flowed, streamed', *e-pág-**ē*** 'became fixed, coagulated', etc. The reanalysis of the instrumental ending as verbalizer is illustrated in (2).

(2) *-*(ē)*-: **pag-ē* (cf. Gk. 3sg.aor. *epágē*): 1. $[_{\text{n}}\ \sqrt{pag}\ [_{\text{n[INSTR]}}\ \text{-}\bar{e}_{\text{INSTR}}\ ]\ ]$
→ 2. $[_{\text{T/AGR}}\ [_{\text{Asp}}\ [_{v}\ [_{\text{n}}\ \sqrt{pag}\ \text{-}\bar{e}\text{-}_{\text{n}}\ ]\ \emptyset_{v}\ ]\ \emptyset_{\text{Asp[+pfv]}}\ ]\ \emptyset_{\text{T[3SG,+PAST]}}\ ]$
→ 3. $[_{\text{T/AGR}}\ [_{\text{Asp}}\ [_{v}\ \sqrt{pag}\ \text{-}\bar{e}\text{-}_{v}\ ]\ \emptyset_{\text{Asp[+pfv]}}\ ]\ \emptyset_{\text{T[3SG,+PAST]}}\ ]$

2. 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 (productive in Austro-Bavarian German), Dutch, Italian, and Catalan. Standard German diminutive verbs are formed from adjectives, nouns, and verbs by adding the suffix *-el-* to the base, (3).

(3) Standard German verbal diminutives (Grestenberger & Kallulli 2019)

Base			Dim. verb	
a. adj.	*schwach*	'weak'	*schwäch-**el**-n*	'to be/act a little weak'
b. verb	*koch-en*	'to boil'	*köch-**el**-n*	'to simmer'
c. noun	*Herbst*	'fall, autumn'	*herbst-**el**-n*	'be fall-like'

The same suffix originally formed diminutive nouns, e.g., *Bund* 'bunch': *B**ü**nd-**el*** 'bundle' (cf. the umlaut on the root vowel to (3)); *Busch* 'bush': *B**ü**sch-**el*** 'tuft', etc.

A second type concerns unergatives from agent nouns: Ancient Greek verbs in *-éuō* were originally derived from agent nouns in *-éus*, (4). Their agent feature was reanalyzed as part of the verbal domain, giving rise to the "act-like" semantics of these verbs (v_{do}), and subsequently became a productive verbalizer in Modern Greek, where it can select adjectives and adverbs as well, (5), cf. Panagiotidis et al. 2017.

(4) Ancient Greek *-éuō*	(5) Modern Gk. *-ev-*
*basil-**eú**-ō* 'am/act as king' (*basil-**eú**s*)	*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')

In both cases, the features of the nominal in question, "diminutive" (count/unit, cf. de Belder 2011)) and agent, respectively, were reanalyzed as belonging to the (originally zero) verbalizer, cf. the (simplified) illustration (6). In Standard German, this is still seen in the umlaut of the nominal base that was retained, as well as in the fact that the supposedly "deverbal" diminutives in (3-b) differ from their base verbs in terms of argument structure and Aktionsart: they pattern as unergatives irrespective of the event structure of the supposed verbal base.

(6) Reanalysis of n_{DIM} in denominal verbs: 1. $[_{\text{T/AGR}}\ [_{v}\ [_{n_{\text{DIM}}}\ \sqrt{}\text{-}el\text{-}_{n_{\text{DIM}}}\ ]\ \emptyset_{v}\ ]\ \text{-}n_{\text{T/AGR}}\ ]$
→ 2. $[_{\text{T/AGR}}\ [_{v}\ ([_{n_{\text{DIM}}})\ \sqrt{}\ (\emptyset_{n_{\text{DIM}}}\ ])\ \text{-}el\text{-}_{v_{\text{DO}}}\ ]\ \text{-}n_{\text{T/AGR}}\ ]$

Implications Changes in root meaning often seem idiosyncratic and unpredictable. However, if it can be shown that the categorizers they are merged with develop in particular diachronic pathways, this would go some way towards establishing regularities in argument and event structure changes. It would furthermore be expected under an approach that takes the categorizer inventory to be universal in the same way the morphosyntactic feature inventory is. Moreover, in both types of reanalysis (deadjectival → unaccusative, denominal → unergative), the features of a lower functional category are reanalyzed as belonging to a higher functional category. This is reminiscent of syntactic "upwards reanalysis" (cf. van Gelderen's Late Merge Principle).

Selected References: **Folli**, R. & H. **Harley**. 2004. Flavors of *v*: consuming results in Italian and English. *Aspectual inquiries*, 95–120. Kluwer. **Grestenberger**, L., & D. **Kallulli**. 2019. The largesse of diminutives: suppressing the projection of roots. *Proceedings of NELS 49*. **Harley**, H. 2017. The "bundling" hypothesis and the disparate functions of little v. *The verbal domain*, 3–28. OUP. **Iordăchioaia**, G. et al. 2013. *Categorization and category change*. Cambridge Scholars. **Panagiotidis**, Ph., V. **Spyropoulos**, & A. **Revithiadou**. 2017. Little *v* as a categorizing verbal head: evidence from Greek. *The verbal domain*, 29–48. OUP.