

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

Laura Grestenberger
Laura.Grestenberger@univie.ac.at

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Diachrony of categorizing morphology

- ▶ How do the morphosyntactic properties/formal features of (verbal) derivational morphemes change? ... and (why) is this “syntactic change”?
- ▶ How do new categorizers arise diachronically?

Today's goals

- ▶ Discuss theoretical preliminaries for studying change in derivational/categorizing morphology
- ▶ Syntactic cycles/ upwards reanalysis in derivational morphology
- ▶ Propose two diachronic trajectories in the development of verbalizers (broadly)
 - ▶ denominal → unergative
 - ▶ deadjectival → inchoative/unaccusative
- ▶ Case studies from (older) Indo-European languages:
 - ▶ Case study I: Ancient Greek *-eu-* > Modern Greek *-ev-* ($n > v$)
 - ▶ Case study II: PIE **-eh₁-* > Lat. *-ē-*, Gk. *-ē-* ($-(\emptyset)\eta$ -aorist; $a/n > v$)
 - ▶ Case study III: German(ic) *-el-* (**-il(a)-*; nominal diminutive → verbal diminutive)
- ▶ Conclusion: generalizing and formalizing verbal stem-forming morphology in synchrony and diachrony

Cyclical change

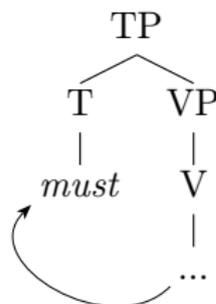
- ▶ A rich research tradition describes syntactic change as *cyclic*.
- ▶ Well-studied examples include the subject & object agreement cycle, the DP cycle, and the **negation cycle** (Jespersen 1917; cf. van Gelderen 2008, Jäger 2008, Breitbarth 2017 ...).
- ▶ The cyclic nature of syntactic change is grounded in general **economy principles** (van Gelderen 2004, 2009, 2013...)

- (1)
 - a. **Head Preference Principle (HPP):**
Be a head, rather than a phrase
 - b. **Late Merge Principle (LMP):**
Merge as late as possible

Syntactic cycles & reanalysis

The LMP \approx “**Upwards Reanalysis**” (UR, Roberts & Roussou 2003, Cournane 2014): (lexical) material in lower projections is reanalyzed as base-generated in higher functional projections, e.g., the “modal cycle”: reanalysis of lexical verbs/VP \rightarrow modal auxiliaries/TP.

(2) UR in the “modal cycle”



Reanalysis: A given surface string in grammar G_2 receives a different underlying representation than in the input grammar G_1 during L1 acquisition.

- ▶ Cf. Roberts and Roussou 2003, Roberts 2007, Hale 2007, Walkden 2014; specifically on argument structure: van Gelderen 2018

Cycles in derivational morphology?

Cause: a combination of L1 acquisition + “third factor” principles: given ambiguous input, acquirers will choose the derivation that requires as few steps (e.g., instances of movement) or formal features as possible → diachronically resulting in “upwards reanalysis”; cf.:

- ▶ “Maximise Minimal Means”, Biberauer 2017, 2019, Biberauer and Roberts 2017
- ▶ “Minimize Structure” (Cardinaletti and Starke 1999, Breitbarth 2017)

Economy-driven syntactic cycles cover many instances of change that are traditionally described as “grammaticalization” (second compound member > suffix, clitic > affix, lexical verb > functional verb ... cf. Hopper and Traugott 2003), but what about changes in “lexical categories”/derivational morphemes themselves?

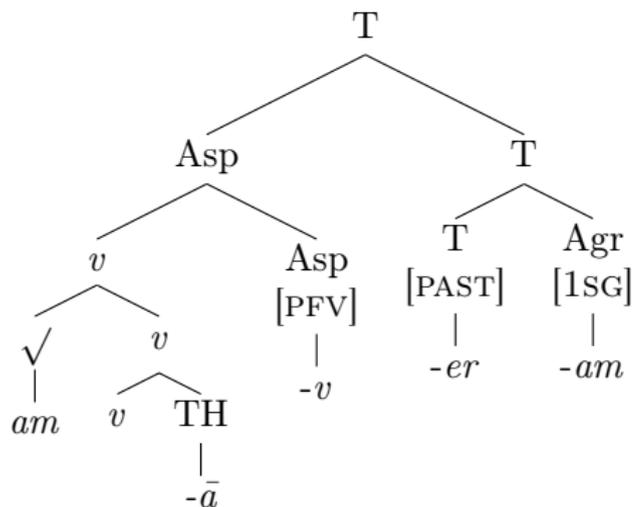
Morphological change and DM

- ▶ In lexicalist approaches, word formation happens in the lexicon and there is no *a priori* reason why word formation changes should mirror syntactic changes.
- ▶ But in non-lexicalist, realizational approaches like Distributed Morphology (DM) or Nanosyntax, diachronic **reanalysis** like UR should in principle apply to “morphological” and “syntactic” changes equally.
- ▶ The goal of this talk is to convince you that it is possible to study changes in derivational/categorizing morphology in the same way we study other instances of cyclic (syntactic) change, and that this may lead to interesting generalizations and predictions w.r.t. argument structure change.
 - ▶ ... cf. the talk by Elisabeth Gibert-Sotelo & Isabel Pujol Payet on Wednesday.

Verbal morphology in DM

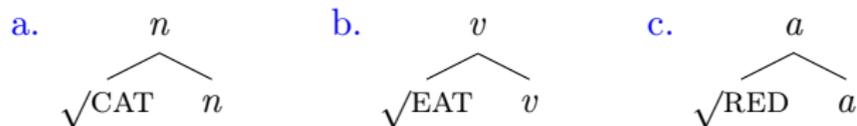
- ▶ Full decomposition
- ▶ Mirror principle
- ▶ Synthetic verb forms are complex heads built by cyclic head movement and left adjunction, e.g., (3) (Lat. pluperf. *amāveram* ‘I had loved’, cf. Embick 2000: 196–7).
 - ▶ Cf. Harley 2013, Bjorkman To appear on verb formation in DM

(3)



Categorizers in DM

Roots combine with categorizing heads “in the syntax”/via Merge.



Diachrony of categorizers? Where do new v 's, n 's, etc., come from?

- ▶ Nominal derivational morphology from grammaticalization of N's in compounds (It. *-mente*, Gm. *-heit/-keit*, etc.)
- ▶ What about verbalizers?
- ▶ Answering this question might give us insight into argument structure change as well → argument structure cycles (van Gelderen 2018)

Verbalizing morphology in DM

- ▶ verbal stem-forming morphology = verbalizer v with different features or “flavors” (Folli and Harley 2005; Harley 2005, 2009, 2013; Alexiadou and Lohndal 2017; Panagiotidis et al. 2017, etc.):
 - ▶ v_{CAUSE} : causatives
 - ▶ v_{BECOME} : anticausatives/inchoatives
 - ▶ $v_{\text{BE/STATE}}$: states
 - ▶ v_{DO} : unergatives
- ▶ Like other categorizers, v mediates between the root and higher functional projections
- ▶ Argument/event structure alternations (causative alternation, passivization, etc.) are due to the interaction of v and Voice (Alexiadou and Anagnostopoulou 2004; Alexiadou 2012; Alexiadou 2013; Harley 2013, 2017; Alexiadou et al. 2015; Schäfer 2017 ...)—e.g., depending on whether or not Voice introduces an external argument.

Verbalizing morphology and argument structure

Hale and Keyser 1998, 2002, Harley 2005, 2011:

- ▶ Unergative verbs are denominal verbs: a noun incorporates into (“conflates with”) a selecting verbal projection, v_{DO}

→ Evidence from light verb constructions with DO in, e.g., Basque, Tanoan, Hiaki, Farsi, Italian ...

- (4) Unergative verbs in Basque & Tanoan (Hale & Keyser 1998, cit. after Harley 2011: 431–2).

a. Basque			b. Tanoan	
<i>lo</i>	<i>egin</i>	‘sleep’	<i>se-’a</i>	‘speak’
sleep	do		speech-do	
<i>barre</i>	<i>egin</i>	‘laugh’	<i>sae-’a</i>	‘work’
laugh	do		work-do	

Verbalizing morphology and argument structure

- ▶ Unaccusatives/change-of-state verbs (of the causative alternation) are deadjectival verbs: an adjective incorporates into (“conflates with”)

v_{BECOME}

Evidence: Change-of-state verbs that are morphologically related to property concept adjectives.

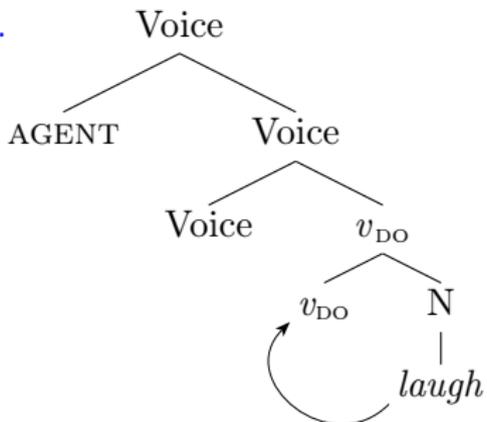
- (5) Hiaki (Yaqui, Uto-Aztecan) deadjectival verbs (Harley 2011: 433).

<i>siki</i>	<i>sikisi</i>	<i>awi</i>	<i>awia</i>	<i>bwalko</i>	<i>bwalkote</i>
‘red’	‘to redden’	‘fat’	‘to fatten’	‘soft’	‘to soften’

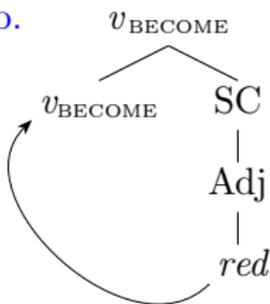
Summary: unergative vs. unaccusative verbs, H&K

(6) Unergative vs. unaccusative verbs

a.



b.



Verbalizing morphology and argument structure

Some diachronic predictions that follow from this analysis:

- In languages with rich *synthetic* 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.*
- Option 1) is reasonably well-studied in both cases (e.g., Germanic “weak preterite” dental suffix < *dōn* ‘do’; the Lat. imperfect suffix *-bā-*, etc.) and tends to give rise to TAM morphology.
- Option 2) is understudied.

Reanalysis of categorizing morphology

In DM, the same mechanism that gives rise to the reanalysis of, e.g., lexical verbs as auxiliaries (UR, LMP, MMM...) should equally apply to the reanalysis of morphemes— difference is epiphenomenal in DM.

We expect to see the following “cycles” of derivational morphology in the diachrony of highly synthetic, “fusional” languages (like Greek, Sanskrit, etc.):

- ▶ $n > v$ (denominal verbs/unergatives)
- ▶ $a > v$ (deadjectival verbs/unaccusatives)
- ▶ $v > \text{Voice/Asp}$ (reanalysis of verbalizers as Voice and/or aspectual markers)

→ FWF-Richter project V 850-G “Verbal categories and categorizers in diachrony”

Case study I: Greek *-eu-ō*

Ancient Greek (AG) verbs in *-éu-ō* were originally derived from agent nouns in *-éu-* with the verbalizers **-je/o-*, (7).

(7) AG verbs in *-éu-ō*

AG verb in <i>-éu-ō</i>		base	
<i>basil-eú-ō</i>	‘am king; rule’	<i>basil-eú-s</i>	‘king’
<i>khalk-eú-ō</i>	‘am a coppersmith’	<i>khalk-eú-s</i>	‘coppersmith’
<i>hipp-eú-ō</i>	‘am a horserider’	<i>hipp-eú-s</i>	‘horserider, knight’
<i>hier-éu-ō</i>	‘sacrifice’	<i>hier-eú-s</i>	‘sacrificer, priest’

► Initially intransitive states:

(8) *hós pot’ en humĩn toídessin basíleue*
 who once among you.DAT.PL. DEM.PRON.DAT.PL be.king.3SG.IPF
 “who once was king among you here.” (*Od.* 2.47)

Greek *-eu-ō*

At least one verb in *-eu-ō* is transitive in Homer already:

- (9) *kaì ennéa boũs hiéreusen*
 and nine oxen.ACC sacrifice.3SG.AOR
 “and he sacrificed nine oxen.” (*Il.* 6.174)

... and there are several whose derivational bases do not contain nominal *-eu-s* (Schwyzer 1939: 732).

- (10) AG verbs in *-éu-ō*

AG verb in <i>-éu-ō</i>		base	
<i>arkh-eú-ō</i>	‘command’	<i>arkhós</i>	‘commander, leader’
<i>aethl-eú-ō</i>	‘contend for a prize’	<i>aethlós</i>	‘contest for a prize’
<i>hēgemon-eú-ō</i>	‘lead the way’	<i>hēgemón</i>	‘leader’

Greek *-eu-ō*

The (originally nominal) suffix *-eu-* was reanalyzed as part of the verbal domain and subsequently became a productive verbalizer in Modern Greek (MG), where it can select nouns, adjectives, adverbs and loanwords, (11), (ex. from Panagiotidis et al. 2017).

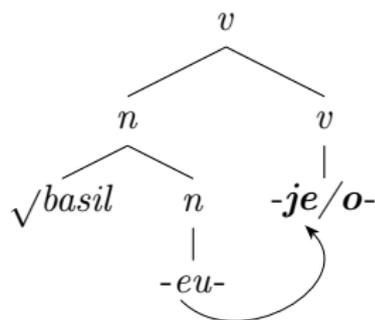
(11) Modern Greek verbs in *-ev-*

MG <i>-ev-o</i>		base	
<i>stox-év-o</i>	‘I aim at’	<i>stóx-os</i>	‘target’
<i>frónim-év-o</i>	‘I become prudent’	<i>frónim-os</i>	‘prudent’
<i>kont-év-o</i>	‘I approach’	<i>kontá</i>	‘near’
<i>xak-év-o</i>	‘I hack’	Engl. <i>hack</i>	

- Synchronically behaves as a verbalizer (Panagiotidis et al. 2017)

Greek $-eu-\bar{o}$: reanalysis

- (12) “Upwards reanalysis”: nominal $-eu-$ + verbalizer $(*)-je/o-$ → reanalyzed as part of v .



- ▶ The glide /j/ of the original verbalizing suffix was lost through regular sound change via palatalization of a preceding consonant. The attested shape $-eu-e/o-$ is due to analogical restitution of the originally nominal suffix.
- ▶ The same type of reanalysis gave rise to a number of MG verbalizers that Panagiotidis et al. 2017 discuss: $-ev$, $-iz$, $-(i)az$, $-on$, $-ar$, $-en$

Case study II: PIE $*-eh_1-$

Almost all branches of IE have a verbal stem-forming suffix $*-\bar{e}-$ ($< *-eh_1-$), but its distribution differs widely: denominal vs. deverbal; present vs. aorist stem (Jasanoff 1978, 2004, Harðarson 1998).

- (13) $*-\bar{e}-$: present/imperfective stem (ex. from Jasanoff 2004)
- Anatolian (Hittite): denominal/deadjectival presents in $-\bar{e}(\check{s})-z\bar{i}$, e.g., *maršē-zī* ‘become false’ (*marša(nt)-* ‘false, deceitful’), *šallēš-zī* ‘become great’ (*šalli-* ‘great’), etc.
 - Italic (Latin): *manēre* ‘stay’, *tacēre* ‘be silent’ ((de)verbal); *ārēre* ‘be dry’, *rubēre* ‘be red’ (denominal/deadjectival).
 - Germanic: deverbal/denominal presents, e.g., Goth. *habaiþ*, OHG *habēt* ‘has’; Goth. *munaiþ* ‘has in mind’; Goth. *fastaiþ*, OHG *fastēt* ‘fasts’ ($*fasta-$ ‘firm, fast’), etc.

Case study II: PIE *-eh₁-

- (14) *-ē-: aorist/perfective stem (ex. from Jasanoff 2004)
- a. Greek: primary (deverbal) “passive” aorists, e.g., *emánēn* ‘went mad’, *eágēn* ‘broke’ (itr.), *edámēn* ‘was tamed, subjugated’.
 - b. Slavic: OCS (Old Church Slavonic) primary (deverbal) infinitives/aorists in -ě- (< *-ē-), e.g., *bъděti* ‘be awake’, *mъněti* ‘think’; also deadjectival: *starěti* ‘become old’ (*starъ* ‘old’).
 - c. Baltic: like Slavic; Lith. *budėti* ‘be awake’ vs. *senėti* ‘grow old’ (*sėnas* ‘old’), etc.

**-ē-* in Latin

This **-ē-* gave rise to a subclass of the Latin 2nd conjugation stative verbs in *-ēre*, (15b), which have long been known to be associated with deadjectival verb formation (e.g., Watkins 1971), with a synchronic alternation with 1st conjugation factitive verbs (in Old Latin), (15a)).

(15) Lat. *-ēscō* (Watkins 1971: 47)

Factitive	Stative	Inchoative	Base
<i>clār-ā-re</i>	<i>clār-ē-re</i>	<i>clār-ē-sce-re</i>	<i>clār-us, -a, -um</i> ‘clear’
<i>-alb-ā-re</i>	<i>alb-ē-re</i>	<i>alb-ē-sce-re</i>	<i>alb-us, -a, -um</i> ‘bright, white’
<i>-nigr-ā-re</i>	<i>nigr-ē-re</i>	<i>nigr-ē-sce-re</i>	<i>nigr, -ra, -rum</i> ‘dark, black’
<i>liqu-ā-re</i>	<i>liqu-ē-re</i>	<i>liqu-ē-sce-re</i>	<i>liqu-idus, -a, -um; liq̃u-ēns</i> ‘fluid, wet’

*-ē- in Greek

AG *-ē-* (variant *-thē-* > MG perfective passive *-th(i)-*) in the Greek “passive aorist” actually a misnomer—originally, this was a (stative/inchoative) verbal stem-forming suffix, rather than a Voice marker.

(16) Non-passive *ē*-aorists:

- a. *e-rrú-ē-∅* ‘flowed, streamed’
A-flow-V.PFV-3SG.PAST.ACT
- b. *e-pág-ē-∅* ‘became fixed, coagulated’
A-become.fixed-V.PFV-3SG.PAST.ACT
- c. *e-mán-ē-∅* ‘went mad, became enraged’
A-rage-V.PFV-3SG.PAST.ACT

- ▶ originally expressed lexical aspect/“Aktionsart”, not Voice
- ▶ The distribution of passive vs. non-passive (anticausative/inchoative) (*th*)*ē*-aorists in Homer vs. Herodotus shows that the passive use gradually gained ground on the way to Classical Greek (cf. Tronci 2005)

Further arguments: AG $-(th)\bar{e}- \neq$ Voice

As for AG, $-(th)\bar{e}-$ does not realize Voice, but v in the context of Asp[+pfv] (Grestenberger 2016, 2021).

- ▶ $-(th)\bar{e}-$ co-occurs with active endings—even assuming these are default/elsewhere endings, this is incompatible with having Voice[nonact]/Voice[-ext.arg.] in the structure.
- ▶ It is in complementary distribution with other v -elements/verbalizers, (18). Even if these were to be analyzed as exponents of Asp, this distribution would not be predicted.
- ▶ It is only licensed in a particular aspectual environment (+PFV), like other verbalizers, but *unlike* Voice morphology on the endings, which is compatible with all “tense-aspect” stems.
- ▶ If structures with $-(th)\bar{e}-$ lacked Voice, we can derive the obligatory active endings as elsewhere endings, like in other active unaccusatives, cf. Alexiadou & Anagnostopoulou (2004)
- ▶ Confirmed by origin/diachrony of $-(th)\bar{e}-$: Homeric $-th\bar{e}-$ and especially its (older) allomorph $-\bar{e}-$ form mostly non-passive, usually stative or inchoative, aorists, (17).

(*)-ē- in Greek

-(*th*)ē is in complementary distribution with other verbal stem-forming morphology:

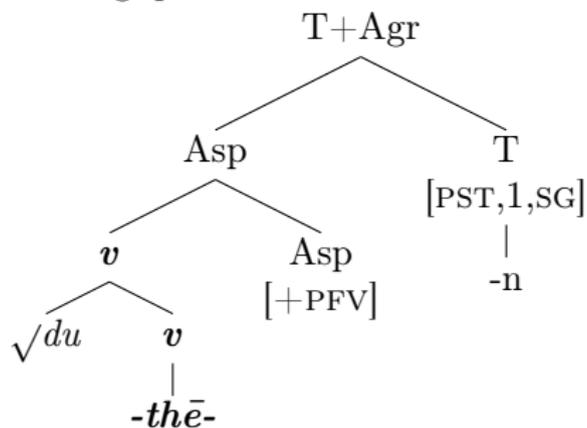
(17) -*thē*- in complementary distribution with other *v*'s:

- a. *dū̄-n-ō* 'sink' (sth.)
sink-**V**-1SG.PRES.ACT
- b. *é-dū̄-s-a* 'sank' (sth.)
A-sink-**V**-1SG.PST.ACT
- c. *e-dú-thē-n* 'was sunk'
A-sink-**PASS**-1SG.PST.ACT

→ *edúthēn* instead of **edústhēn* suggests a structure as in (18), with -(*th*)ē- spelling out *v*/ _ Asp[+pfv] (Grestenberger 2021)

Structure of the AG “passive aorist”

(18) AG 1sg. passive aor. *edúthēn* ‘I was sunk’



[Assuming “active” allomorphs of the endings are really Elsewhere allomorphs, we correctly predict the obligatory active morphology given (19).]

(19) Spell-Out condition on nonactive morphology (Embick 2004, Alexiadou et al. 2015)
 Voice → Voice[Nonact]/_ No DP specifier]

Adj. → inchoative/unaccusative (v_{Become})?

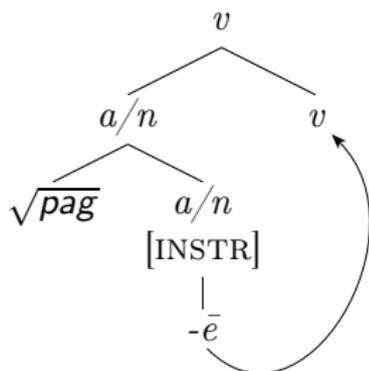
Proposal: *-ē- originated as a nominal suffix (Schindler 1980, Jasanoff 2004, García Ramón 2014)

- ▶ Old *-ē-verbs attested in IE languages are often associated with stative (“adjectival”) roots associated with the **Caland system**, a group of roots and primary adjectives expressing a **property concept** (in the sense of Francez and Koontz-Garboden 2017). (**h₁reud^h* ‘red’, **peh₂ĝ* ‘(become) fixed’, **h₂eh₁s* ‘dry’, **ters* ‘dry, thirsty’, etc.)
- ▶ Concretely, it’s been suggested that “verbal” *-ē- was originally identical to the instrumental singular ending of adjectival abstract nouns
 - ▶ Cf. analytic constructions like Vedic *guhā bhū-* ‘become hidden/with hiding’, Lat. *ārē-faciō* ‘make hot/with heat’, etc. (Schindler 1980, Jasanoff 2004, Balles 2006, 2009).

→ Suggests a reanalysis of *-ē- as an originally denominal/deadjectival stative-inchoative verbal stem-forming suffix

Diachrony of (*)-ē- in Greek

- (20) “Upwards reanalysis”: Nominal instr. *-ē- → stative/inchoative *v* (cf. AG *(e)πάγε* ‘became fixed’)



- Nominal, inflectional suffix → stative *v* → inchoative *v* → eventive *v* (→ Voice?)

Case study III: German diminutive verbs

(joint work with Dalina Kallulli)

Standard German forms “verbal diminutives” with umlauting suffix $-(e)l-$, a deadjectival, deverbal, and denominal “verbalizer”:

(21) Standard German verbal diminutives (Grestenberger and Kallulli 2019)

Base			Dim. verb	
a. A	<i>schwach</i>	‘weak’	<i>schwäch-el-n</i>	‘to be/act a little weak’
			weak-DIM-INF	
	<i>blöd</i>	‘silly’	<i>blöd-el-n</i>	‘to be/act a little silly’
			silly-DIM-INF	
b. V	<i>koch-en</i>	‘to boil’	<i>köch-el-n</i>	‘to simmer’
	boil-INF		boil-DIM-INF	
	<i>dräng-en</i>	‘to urge, push’	<i>dräng-el-n</i>	‘to jostle, push a little’
	urge-INF		urge-DIM-INF	
c. N	<i>Frost</i>	‘frost’	<i>fröst-el-n</i>	‘to shiver, be cold’
			frost-DIM-INF	
	<i>Herbst</i>	‘fall, autumn’	<i>herbst-el-n</i>	‘be fall-like’
			fall-DIM-INF	

Syntax of verbal diminutives

Verbal are (mostly) unergative activity verbs according to standard tests (most clearly seen with deverbal ones), e.g.:

- (22) Die Suppe hat zwei Stunden (lang) / *in zwei Stunden
 the soup has two hours long in two hours
 ge-köch-el-t
 PTCP-boil-DIM-PTCP

“The soup was simmering for two hours/*in two hours”

- (23) a. Die Livia nerv-t herum / nerv-el-t herum
 the Livia annoy-3SG.PRES around annoy-DIM-3SG.PRES around
 “Livia is/acts annoying”/“is/acts a little annoying”
- b. Die Livia nerv-t mich / *nerv-el-t mich
 the Livia annoy-3SG.PRES me annoy-DIM-3SG.PRES me
 “Livia annoys me”/*“annoys me somewhat”

German nominal diminutives

The same umlauting suffix *-el-* acts as nominal diminutive (lexicalized in Standard German); the Austro-Bavarian variant <-(er)l> /-(ɐ)l/ is productive & compositional.

(24) Standard German nominal diminutives

<i>Busch</i> m.	‘bush’	<i>Büsch-el</i> n.	‘bunch, tuft’
		bush-DIM	
<i>Bund</i> m.	‘bunch’	<i>Bünd-el</i> n.	‘bundle’
		bunch-DIM	

(25) Viennese nominal diminutives

<i>Sack</i> m.	‘sack, bag’	<i>Sack-erl</i> /sak-ɐl/	‘little sack, bag’
		sack-DIM	
<i>Suppe</i> f.	‘soup’	<i>Supp-erl</i> /sup-ɐl/	‘small amount of soup’
		soup-DIM	

Diachrony of *-el-*

- ▶ OHG *-il(a)* (< **-elo-*, **-ilo-*) forms diminutives from nouns and instrument nouns from verbs and triggers umlaut of the preceding vowel (non-umlauting variant: *-al(a)-* < **-ol(o)-*)
- ▶ PIE **-lo-*: one of many primary adjective-forming suffixes in PIE

(26) OHG *-il(a)* and *-a(la)* nouns

a.	Base		Diminutive	
	<i>busc, bosc</i>	‘bush’	<i>busk-ila</i>	NHG <i>Büschel</i> ‘tuft, bunch’
	<i>sack</i>	‘sack’	<i>seck-il</i>	‘small sack, bag’
	<i>(h)ring</i>	‘ring’	<i>(h)ring-ila/o</i>	‘little ring; marigold’
b.	Base		Instr. noun	
	<i>*tug/tuh-</i>	‘pull’	<i>*tug-ila-</i> ; OHG <i>zuhil</i>	NHG <i>Zügel</i> ‘rein’
	<i>slah/slag-</i>	‘slay’	<i>sleg-il</i>	NHG <i>Schlegel</i> ‘mallet’

Denominal and deadjectival verbs

Denominal/deadjectival verbs in *-il-ōn* and *-al-ōn* are found already in OHG (as well as in other NW Germanic languages & in Gothic)

(27) OHG denominal/deadjectival verbs in *-il-ōn*, *-al-ōn*

<i>rig-il</i>	‘bolt, bar’	<i>rig-il-ōn</i>	‘to protect with a bar, bolt’
<i>nag-al</i>	‘nail’	<i>nag-al-ōn</i> , <i>neg-il-ōn</i>	‘to nail’
<i>wort-al</i>	‘talkative’	<i>wort-al-ōn</i>	‘to be talkative, talk a lot’
<i>mihh-il</i>	‘great, big’	<i>mihh-il-ōn</i>	‘to make great, to praise’

→ Both diminutives and instrument nouns can and do become the basis for (descriptively zero-derived) denominal verbs throughout the history of German, e.g., *(be)äugel-n* ‘to eye sth.’, *würfel-n* ‘throw dice’, *zügel-n* ‘put reins on’, etc.

Deverbal *-il-ōn* in OHG?

The OHG (weak) verbal suffixes *-il-ōn*, *-al-ōn* are described as “iterative” or “diminutive” in the handbooks and are clearly based on diminutive/instrumental nominal *-il(a)-/-al(a)-*.

► E.g., Wilmanns 1896: 96ff., Wissmann 1932: 27ff., Krahe and Meid 1969: 263f.

However, *-il-ōn/-al-ōn* was undoubtedly also *deverbal* already in OHG, leading some scholars to posit *two* suffixes for OHG (Proto-Gmc.?).

(28) OHG deverbal *-il-ōn/-al-ōn* verbs, cf. (24b)

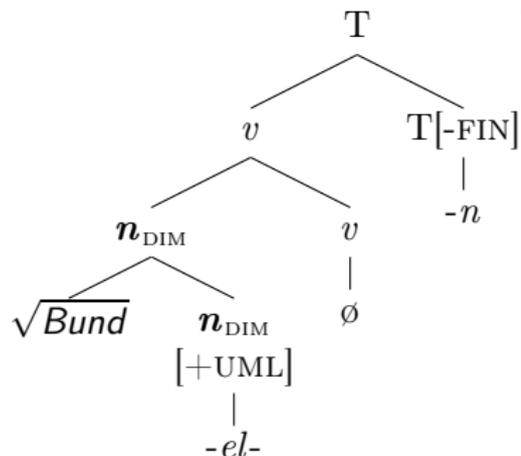
<i>kling-an</i>	‘to sound out, ring’	<i>kling-il-ōn</i>	‘to ring repeatedly’
<i>tūm-ōn</i>	‘to turn’	<i>tūm-il-ōn, -al-ōn</i>	‘to roar; to turn, roll’
<i>grab-an</i>	‘to dig’	<i>grab-il-ōn</i>	‘to dig at; to ponder’
<i>want-ōn</i>	‘to turn, change’	<i>want-al-ōn</i>	‘change; walk, stroll’

► ... but at least some of these also have a synchronic *-il(a)-* or *-al(a)-* diminutive or instrument noun, (e.g., *want-**al-ōn*** in (28) has *want-**al*** ‘contact, traffic’), so an ultimately denominal origin of this class seems plausible (note that it is not attested in Gothic)

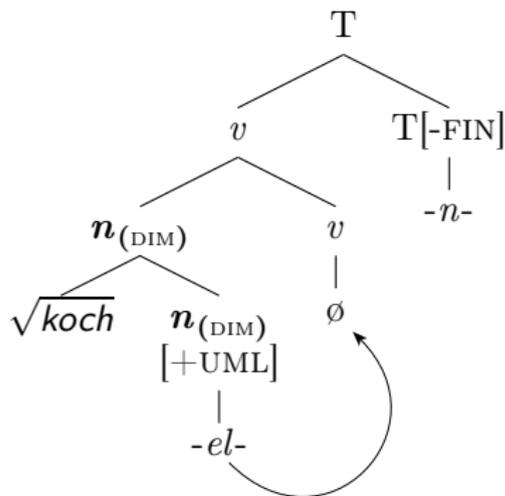
(Re)analysis

(29) (a.) *bünd-el-n* ‘to bundle’, (b.) *köch-el-n* ‘to simmer’

a.



b.



→ The “diminutive” feature of *-il-* and *-al-* was reanalyzed as part of the *v*/event domain.

(Re)analysis

- ▶ Semantics of n_{DIM} : individuation; creation of (countable) units
 - ▶ Borer 2005, Wiltschko 2006, De Belder et al. 2014, etc.
- ▶ Reanalyzed n_{DIM} in the verbal domain: **pluractionality** (“iterative”), Tovená 2010
- ▶ Formalized as v_{Act} (‘activity’); Rothstein 2004: semelfactives/activity predicates contain a set P_{MIN} that picks out the minimal events in their denotation; n_{DIM} delimits the minimal event in the domain of v_{ACT}
- ▶ → “Diminutive verbs” as a subtype of the denominal-to-unergative reanalysis.

Conclusion

- ▶ Case studies suggest regularities in the change of verbal derivational morphology and the rise of new verbalizers:
 - ▶ nominalizer → verbalizer
 - ▶ (different types of) denominal verbs > (different types of) unergatives
 - ▶ adjectival → stative/inchoative
 - ▶ adjectival morphology → participial morphology (Grestenberger 2020)
 - ▶ stative → eventive (Fellner and Grestenberger 2018)
- ▶ Typological parallels for reanalysis of adjectival morphology → participial morphology, nominalizers → verbalizers, adjectival/stative participles → verbal/eventive participles, inchoative/anticausative morphology → passive morphology etc. (e.g., Haspelmath 1990, 1994).
 - ▶ E.g., Gk. *-iz-*, *-ev-*: nominal suffixes → *v* (verbalizers); Ved. Skt. *-ín-*: possessive denominal adj. → deverbal adjectives, ptcp.; Ancient Greek *-(th)ē-*: inchoative/stative → passive, etc.

Implications & future work

- ▶ Generalization and formalization of morphosyntactic features of these formations makes it possible to identify regularities and possible diachronic developments through reanalysis
- ▶ ... even for developments that do not display traditional “grammaticalization” characteristics (loss of functional structure, semantic bleaching, etc.).
- ▶ Next steps:
 - ▶ Create a morphosyntactically annotated database of denominal/deadjectival verbs in selected IE languages to more accurately track their development
 - ▶ ... especially w.r.t. to valency alternations and voice morphology
 - ▶ Increase the number of case studies.
 - ▶ Role of phonological change? Does the verbalizer have to be \emptyset for the reanalysis to take place?

Thank you!

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