Child learners in morphosyntactic change: derivational morphology beyond analogy and productivity

Introduction The importance of child acquirers in driving syntactic change has recently been vindicated from a generative perspective (Cournane 2017, 2019; Biberauer 2019; etc.). The goal of this contribution is to extend this framework to morphological/morphosyntactic changes, in particular in argument- and event structure changing derivational morphology, and to argue that these changes are fully compatible with the directional reanalyis model that is at the core of child learner-driven syntactic change. Implications for testing this model experimentally in the domain of morphosyntactic change will also be discussed.

Background In generative approaches, the reanalysis or "misparsing" of properties of the input (selectional properties, features, etc.) by L1 acquirers is considered a core driving force of syntactic change. Domain-general cognition or "third factor" principles like the "Late Merge Principle" (LMP, van Gelderen 2011 & passim) or "Maximise Minimal Means" (Biberauer 2017) are assumed to allow children to generalize and extend the use of lexical material beyond the input grammar. Specifically, (lexical) material in lower functional projections can become reanalyzed as base-generated in higher functional projections due to these principles, thus descriptively moving upwards on the syntactic tree. An example of this kind of "Upwards Reanalysis" (UR, Roberts & Roussou 2003, Cournane 2014, 2015) that is attested both in the historical record and for which there is evidence from L1 acquisition studies (Cournane 2014) is the "modal cycle", in which lexical verbs base-generated in V are reanalyzed as modal auxiliaries base-generated in T. In non-lexicalist approaches to word formation like DM or Nanosyntax, this model should also be applicable to changes within complex word forms, since morphology and syntax are not considered to be discrete domains in these frameworks. In particular, it should be able to capture changes in synthetic word forms that are usually treated as "morphological change", but are not straightforwardly analyzable as "grammaticalization", e.g., instances of analogical extension, resegmentation or "affix telescoping" (Haspelmath 1995). The goal is to show that the directional, child acquirer-centric generative model can be extended to such cases, aligning syntactic with morphological/morphosyntactic change and predicting directionality in the diachronic reanalyis of derivational, argument-changing morphology.

Data & discussion I discuss two types of UR in synthetic derivational morphology and their formalization. The first type can be characterized as category change in the context of cross-categorial derivation, namely **a)** reanalysis of a nominal affix as a verbalizer in the context of denominal verbs, and **b)** reanalysis of a verbal stem-forming affix as a nominalizer in the context of deverbal nouns. Type Ia) is instantiated by the reanalysis of the Ancient Greek (AG) agent noun/person noun forming suffix -*eu*- as a verbalizing suffix in the context of "de-agentive verbs", (1a), to a verbalizer from nouns other than agent nouns, (1b), and subsequently into an all-purpose verbalizer in Modern Greek (MG), (1c) (Panagiotidis et al. 2017); the UR is given in (2) (reanalyzed material is **bold**).

(1) a. AG *basil-**eú**-s* 'king' → *basil-**eú**-ō* 'am king; rule'
     b. AG *aethlós* 'contest (for a prize)' → *aethl-**eú**-ō* 'contend for a prize'
     c. MG *stóx-os* 'target' → *stox-**év**-o* 'I aim at, target'; Engl. *hack* → *xak-**év**-o* 'I hack'

(2) $[_{\text{T/Agr}} [_v [_n \sqrt{} \textbf{-\textit{eu}-}_\textbf{\textit{n}}] \textbf{\textit{-(y)e/o-}}_v] \textbf{\textit{-ō}}_{\text{T/Agr}}] \rightarrow [_{\text{T/Agr}} [_v ([_n) \sqrt{} (\varnothing_n)] \textbf{-\textit{ev}-}_\textbf{\textit{v}}] \textbf{-\textit{o}}_{\text{T/Agr}}]$

Type Ib) is exemplified by the historical development of the MG action noun-forming suffix

-ismos from earlier *-is-* (aorist verb stem) + noun-forming *-mos* (Manolessou & Ralli 2015).

The second type leaves the category of the suffix intact, but changes its derivational basis by adding intermediate functional categories (and thus arguably instantiating UR) in semantically "enriched" or polysemous contexts. Type IIa) changes a denominal nominalizer to a deverbal nominalizer, as, for example in the development of Vedic Sanskrit (VS) *-ín-*, originally a possessive denominal suffix, (3a), that was reanalyzed as a deverbal (participial) suffix to morphologically characterized verbal stems (including preverbs), (3c), starting from contexts that were ambiguous between a denominal and a deverbal (state-denoting) interpretation, (3b). The reanalyzed deverbal class is also attested with direct objects in the accusative (or the inherent/lexical case of the verbal base), confirming its participial status. The corresponding UR is illustrated in (4).

(3)   a. $\boldsymbol{n} \rightarrow \boldsymbol{n}$: *dhána-* 'prize' $\rightarrow$ *dhan-**ín**-* 'possessing prizes, riches'; *parṇá-* 'wing, feather' $\rightarrow$ *parṇ-**ín**-* 'winged, feathered'; *rátha-* 'chariot' $\rightarrow$ *rath-**ín**-* 'charioteer'

      b. $\boldsymbol{n?}/\boldsymbol{v?} \rightarrow \boldsymbol{n}$: *kārá-* 'praise song' or *kir/kar* 'to praise' $\rightarrow$ *kār-**ín**-* 'praising'; *vi-rapśá-* 'abundance' or *vi rapś* 'to abound' $\rightarrow$ *vi-rapś-**ín**-* 'having abundance'

      c. $\boldsymbol{v} \rightarrow \boldsymbol{n}$: *ví*$_{\text{PRVB}}$ *car* 'wander off' $\rightarrow$ *vi-cār-**ín**-* 'wandering off'; *ní*$_{\text{PRVB}}$ *ram* + loc. 'stay at' $\rightarrow$ *ni-rā́m-**ín**-* + loc. 'staying at'; *prá*$_{\text{PRVB}}$ *sakṣ* 'conquer' $\rightarrow$ *pra-sakṣ-**ín**-* 'conquering'

(4) $[_n \ [_n \ \sqrt{} \ n \ ] \ \textbf{\textit{-ín-}}_n \ ] \rightarrow [_n \ ([_{\text{Voice}}) \ [_v \ \sqrt{} \ v \ ] \ (\text{Voice} \ ]) \ \textbf{\textit{-ín-}}_n \ ]$

Type IIb) concerns cases where a root- or *v*-selecting verbal suffix is extended to include higher functional projections on the verbal spine, e.g., the AG inchoative/passive suffix *-(th)ē̆-*, which turned from a root-selecting verbalizer to a *v*-selecting one (realizing a fused Voice/Asp head in MG, Christopoulos & Petrosino 2018). I argue that all four (sub)types instantiate UR/the LMP, parallel to their better-studied syntactic parallels like the modal cycle. Moreover, these changes cannot be reduced to the extension of productive forms, "analogy", or the need for "compensation of phonological reduction" (Haspelmath 1995), since they exhibit properties that are incompatible with such mechanisms. Rather, the directional overextension (both in terms of category and of selection) attested in the historical record fits into the typology of child acquirer-driven syntactic change.

Implications Few studies of changes in derivational morphology explicitly combine evidence from the historical record with evidence from L1 acquisition, e.g., Meibauer et al. 2004, Werner et al. 2020. Meibauer et al. report that German-acquiring children extend the use of the agent-noun forming suffix *-**er*** to new and more complex verbal bases (e.g., *Train-ier-**er*** 'trainer' from *train-ier-en* 'to train', instead of Standard *Train-**er***), a development that is mirrored by the historical record of the suffix. However, experimental studies using production and preference tasks (rather than longitudinal studies) are rare. I conclude by sketching out several different tasks by which the generalizations presented here could be tested with L1 acquirers, based on the caveats discussed in Cournane (2017) concerning synchronic vs. diachronic innovation.

Selected References: Cournane, A. 2014. In search of L1 evidence for diachronic reanalysis: Mapping modal verbs. *Language Acquisition* 21(1):103–17. —. 2017. In defence of the child innovator. *Micro-change and macro-change in diachronic syntax*, 10–24. OUP. van Gelderen, E. 2011. *The linguistic cycle: language change and the language faculty*. OUP. Haspelmath, M. 1995. The growth of affixes in morphological reanalysis. *Yearbook of Morphology 1994*: 1–29. Meibauer, J., A. Guttropf & C. Scherer. 2004. Dynamic aspects of German -er-nominals: a probe into the interrelation of language change and language acquisition. *Linguistics* 42(1):155–93.