This abstract has been accepted for presentation at the Interdisciplinary Workshop “Sign Language Grammars, Parsing Models, & the Brain”, 6-7 November 2025, Max Planck Institute for Human Cognitive & Brain Sciences, Leipzig, Germany. For further information about the event visit: https://sign-language-grammars-parsers-brain.github.io

Challenging linearization: Temporally iconic simultaneity in complex predicates in DGS

The issue. This paper addresses a challenge posed by simultaneity and iconicity to theoretic modeling of sign language grammars. I focus on DGS resultative serial verb constructions (SVCs) with a temporal overlap between causing predicate and the resulting change of state (as in (1)). Bimanual classifier constructions (CCs) can depict this temporal overlap iconically, but they are difficult to model within Universal Grammar, because a) LF and PF don’t communicate directly and b) linearization of syntactic constituents is suspended. I propose that, given a particular syntactic configuration of verbal projections, the need for expressing temporal relations between subevents triggers a (post-syntactic) suspension of linearization that allows an iconic mapping from LF onto PF. **The data**. During an acceptability study, 28 DGS signers rated 48 simultaneous bimanual CCs depicting a caused change of state involving a press flattening different objects (on a 6-point Likert scale). As shown in (1), one hand (DH) in each sentence depicted the press lowering, while the other hand (NDH) depicted an object undergoing a flattening process. 60% of simultaneous constructions received a ≥5 rating, confirming that DGS allows iconic depictions of temporal simultaneity via the simultaneous production of classifier constructions on both hands. **Syntactic analysis**. Given that the sentences under investigation are monoclausal and contain 2 CCs ($CC_{manner\_\ of\_\ causation}$ + $CC_{change\_of\_state\ +\ result\_\ state}$), I analyse them as resultative SVCs and assume the underlying structure in Fig. 1 (based on Ramchand 2008). The causing event (CL:press_lowers) is represented via the upper init-proc1 structure. The press is both initiator and undergoer of the lowering process. The proc1 head takes a proc2P as its complement, modeling the intuition that the pumpkin-flattening subevent is caused by the lowering subevent. The CL:pumpkin_flattens predicate encodes both the proc2 process and its result, hence PUMPKIN is merged in the specifier of resP and proc2P as undergoer and resultee of the flattening event. **Modelling non-linearization via iconicity**. Here we address the observed non-linearized production of the init and proc2 heads in Fig.1 that leads to an iconic depiction of temporal relations between the subevents of (1). Previous work on simultaneity in sign languages has provided accounts of linearization of the manual and vocal channels in bimodal bilingual productions (Donati & Branchini 2013), of the manual and various non-manual channels (e.g. head, eyebrows; Kremers 2012), and of linearization of the two hands in weak hand holds (Kimmelman 2017). Like Donati & Branchini (2013) and Kimmelman (2017), I assume that syntactic structures do not determine linear order but that linearization is a post-syntactic phenomenon (Chomsky 2005 a.o.). Following Kremers (2012), I assume that the availability of several independent articulators in the visual modality allows mapping each onto independent but interrelated phonological tiers whose content can be produced at the same time (Goldsmith 1976). The crucial question is under what conditions linearization is suspended and simultaneous constructions may occur. Kremers (2012) and Kimmelman (2017) posit that a particular syntactic configuration serves as trigger, i.e. there is no semantic motivation for simultaneity. Simultaneity is triggered either by a) autosegmental morphemes such as non-manual negation needing a phonological word/phrase as a host (Kremers) or by b) External Remerge generating multidominated nodes (Kimmelman). Neither analysis covers the present data. Crucially, the intuition that we want to capture is that non-linearized productions may express temporal relations between (sub)events, be it via a weak-hand hold or via a simultaneous production of two classifier predicates. Li (2022) notes that cross-linguistically, the relevant semantic relation between subevents in SVCs is temporal, namely an ‘earlier-than’ relation. Since SVCs do not allow expressing this relation lexically, Li claims that iconicity as a cognitive mechanism separate from but capable of interacting with UG steps in to fill the void and map directly from LF to PF. The DGS data presented here show that suspension of linearization can reflect subevent order in SVCs. Bimanual simultaneity is comparatively rare in DGS and other sign languages, hence I assume that non-linearized structures that violate phonological constraints are not spelled out. I agree that diagrammatic iconicity must further be limited to certain syntactic configurations and add SVCs with recursive proc heads to the list of triggers. When a proc head takes a procP complement where

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the temporal order of the two dynamic subevents is only implied, iconicity may encode the temporal relation.

Examples

(1) DH: PRESS PUMPKIN CL(x):press_lowers
NDH: PUMPKIN CL()):pumpkin_flattens
‘The press flattens the pumpkin by lowering.’

Figures

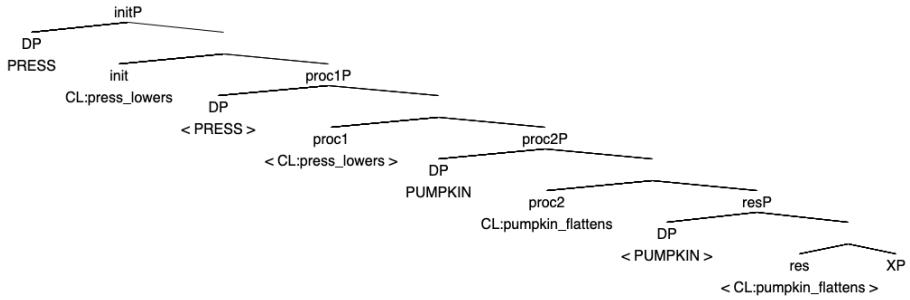

Figure 1: Proposed event structure tree for (1), based on Ramchand (2008)

Selected references

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