

## Do we jump on three, or is it one, two, three, go?

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### 1 Background

Linear dependency/reactions are *a priori* the easiest form of locality to compute, however, in syntax there are many phenomena where a tree-based, hierarchical computation of locality is actually required.

- (1) can<sub>(α)</sub> eagles [that fly<sub>(\*)α</sub>] swim<sub>(α)</sub>  
(2) Mary<sub>(a)</sub>'s sister<sub>(b)</sub> who saw Jill<sub>(c)</sub> likes herself<sub>(\*a/b/\*c)</sub>

It is not clear that there are any equivalents of these in syllable structure/metrical phonology (at or lower than the word level).<sup>1</sup>

The no crossing constraint (NCC) is a representational expression of a locality that is defined in linear terms (Goldsmith 1976). The NCC is predicated on the fact that (outside of clear caveats such as anchor to stressed syllable) there are no embedded pieces of syllable structure. There are simply no cases such as (3) where CV2 is 'embedded' leaving CV1 and CV3 hierarchically (but not linearly) local to each other. Thereby permitting V1 to seek feature valuation from V3 undisrupted by a relevant feature in V2.

- (3)
- |     |    |     |     |    |    |
|-----|----|-----|-----|----|----|
| *C1 | V1 | [C2 | V2] | C3 | V3 |
|     |    |     |     |    |    |
|     | 0F |     | +F  |    | -F |

Despite this, there are many analyses of syllable structure and foot structure that use trees (Selkirk 1984, Itô & Mester 2003 [1992]; Pöchtrager 2006, Kaye & Pöchtrager 2013; van der Hulst 2010; Nasukawa 2014, 2019; Den Dikken & van der Hulst under review). These are often wrongly taken to be ontologically equivalent or 'homologous' to syntactic trees. In fact, the classical prosodic hierarchy (Nespor & Vogel 1986), is a directed acyclic graph - not a syntactic tree (Pierrehumbert 2013). Unlike in syntax, there are many syllable structure/word-level analyses that *can* be formulated using Merge/recursive trees, but none that *have to be*. This makes such recursive structures redundant in phonology. Reducing this aspect of the analyses a preference (aesthetic or conceptual) rather than an analytical necessity.

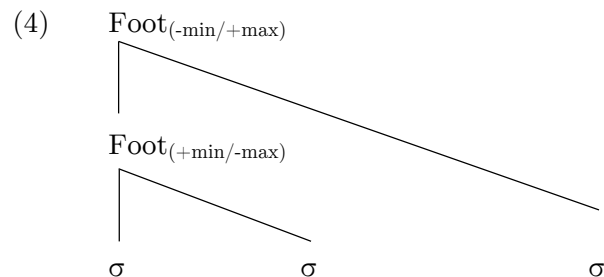
Keeping recursion in the syntax is beneficial due its modular restrictiveness (cf. the 'single engine hypothesis' (cf. Halle & Marantz 1993; Adger 2010)). This is something around which there is something a cross-discipline consensus forming (Neeleman & van der Koot 2006; Idsardi 2013; Samuels 2006; Scheer 2013; Newell to appear) and is being fleshed out in various flat models of word stress (Idsardi 2005; Scheer & Szigetvari 2005; Faust & Ulfsbjorninn 2018; Andersson 2019).

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<sup>1</sup> Above the word, the 'recursivity' comes from expounding the syntactic structure which **are** recursive (Scheer 2012).

## 2 Aim

This talk will present arguments against the use of recursive foot structure in phonology, so called Internally Layered Feet (ILF): Martínez-Paricio (2014); Martínez-Paricio & Kager (2016).



The principle objection is that ILF are not (*and must not be*) actually recursive. A neutral characterization of the phenomena motivating layered feet are all foot + 1 syllable (+1). For this reason, Martínez-Paricio & Kager (2015:465) include an arbitrary limit on GEN (it applies to all other IL work also): *Recursion (of feet) is minimal: feet display maximally one layer of recursion.*

Using the infinite power of Recursion to achieve +1 is overkill. It also does not accurately reflect the core representational fact about these ILF, that they're not nested feet at all. They are all characterized as a foot with an extra syllable somewhere in the mix.

## 3 Replacement

I will assume that the metrical computation operates over a flat CV skeleton. The inherent asymmetry of feet is ascribed to two strictly alternating metrical labels H(ead) and D(ependent). Feet are flat and defined through precedence: **any and all material between the label H and D.**

The core of the analysis is to assume that each label (H or D) can parametrically have an **edge (e)**.<sup>2</sup> Some of the possibilities (not fully exhaustive) are shown in (5).

- (5)
- |    |           |                |    |               |                  |
|----|-----------|----------------|----|---------------|------------------|
| a. | H → D     | (bába)ba       | b. | H → e → D     | (bá:ba)          |
| c. | H → D → e | (bába)ba(bá... | c. | H → e → D → e | (bá:ba)ba(bá:... |

This model captures the fact that the +1 of IL feet actually comprises two basic effects (conditions on the foot head 'foot head must branch' (Italian, Chugach, Munster Irish (Torres-Tamarit & Hermans 2017)), and non-exhaustive parsing (Chugach) (Hayes 1995; MP-K 2016).

Given that these effects are caused by a label having an edge in my model, **there will only be as many edges as labels.** For this reason, Heads will be limited to branching once (+1), and weak local parsing will be limited to one (+1). Their combination will lead to (descriptively) a head-branching language with weak local parsing (Hayes 1995): Chugach.

I will show a basic typology of the model using various metrical and syllable structure facts taken from English, Italian and Chugach.

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<sup>2</sup> Conceptually, this isn't too dissimilar to an 'appendix' (one per label).