6. Background: Recursion vs. Prosodic Hierarchy

So far we have seen evidence for a strictly recursive system. However, it is commonly assumed that there is a finite number of different prosodic categories.

6.1 The Prosodic Hierarchy

A quite different approach: A universal hierarchy of prosodic constituents.

1. The Prosodic Hierarchy (Selkirk, 1986, 384)

   (__________________________) Utt
   (__________________________) IPh
   (__________________________) PPh
   (__________________________) PWd
   (__________________________) Ft
   (__________________________) Syl

   a. "[Prosodic Structure] consists of (prosodic) categories of different types, e.g. syllable, foot, prosodic word, phonological phrase, intonational phrase, utterance.
   b. For any prosodic category, the sentence is exhaustively parsed into a sequence of such categories.
   c. The prosodic categories are ordered in a hierarchy (in the order given above), and in phonological representation they are strictly organized into layers according to that hierarchy (cf. the Strict Layer Hypothesis—Selkirk (1984)), i.e., prosodic constituents of the same type are not nested.
   d. The hierarchical arrangement of prosodic categories forms a well-formed bracketing.


2. Evidence for this type of approach according to Inkelas (1990)

   a. Fewer Rule Domains than there are Rules. There is a small, fixed set of domains. This is explained by prosodic hierarchy, if we make the following additional assumption: Indirect Reference (going back to Selkirk (1972)). Phonological Rules/Constraints only refer to prosodic, not to syntactic or morphological structure.
   b. Exhaustive Parsing: Every utterance seems to be exhaustively parsed in those domains. Evidence: for each rule, every part of an utterance will be parsed into some domain where that rule applies.
c. **Strict Layering:** Each domain seems to be properly contained in a domain of the next higher level.

(3) a. **Transformational Cycle:** Phonological Domain of Rule Application = Cycle over syntactic constituent
b. **Prosodic Hierarchy:** Phonological Rule Domain = Prosodic Constituent

- ‘Indirect Reference’ is a crucial claim made by the theory of the prosodic hierarchy. It means that one cannot refer to syntactic features or constituents directly in order to condition rules/constraints.
- Syntactic information can only influence phonology by conditioning the building of prosodic structure.

(4) The prosodic domains are motivated by looking processes that....
   a. (i) ...refer to prosodic constituent edges;
   b. (ii) ...or apply within a certain type of prosodic constituent.

(5) How do we know it’s prosody and not something else? It is crucial to show that a process can really be explained without referring to syntactic or morphological information in the rule/constraint—ideally, the prosodic structure should be motivated independently (a number or phenomena that converge on a single prosodic structure).

### 6.2 Problems for the Prosodic Hierarchy and the Strict Layer Hypothesis

- Recursive Phrasing (evidence from pitch and boundary strength) in Coordination is incompatible with Strict Layering, unless one invents ad hoc categories to distinguish the different levels of embedding.
- Phonetic definition of different categories is often murky: different types of phrases (phonological, intonational) look similar.

### Further Reading


