Two Types of Null Exponents: Locality and Serialization

Working within a strong hypothesis according to which the only operation for joining vocabulary items (VIs) in morphophonology is combination of directed graphs, we offer a phonological account of the two observed behaviors of phonologically-null-exponent heads (PNEHs) with regard to locality based on elementary graph theory.

Embick (2010) had to resort to stipulation on the issue of the behavior of PNEHs. Some PNEHs seem to be transparent to locality, while others behave like overt cyclic heads and are opaque. Embick had to resort to a rule of pruning in (1) that can, when needed to acount for the data, delete a PNEH.

(1)   Pruning Schema: $\sqrt{Root} \frown [x, -\emptyset], [x, -\emptyset] \frown Y \longrightarrow \sqrt{Root} \frown Y$

The interaction with phonology should be a hint that the solution is not purely morphosyntactic, but has to do with the detailed interaction of phonology and morphosyntax during cyclic spell-out.

Using the multiprecedence represention of morphophonology developed by Raimy (1999, 2000), along with minimal assumptions regarding the interaction of serialization and spell-out, it is straightforward to construct two different silent VIs that would derive the two possible behaviours of cyclic PNEH. One VI is a silent affix that attaches to a root and forces it to be vacuously serialized as in (3a), the other is a null graph in the graph-theoretic sense, with no node and no edges and does not involve any serialization as in (3b).

(2)   a. $\{LastSegment \rightarrow \#\}$
        b. $\{\ \}$

If this approach is correct, the two possible behaviors of PNEHs are facts about the graph geometry of VIs. While very speculative, this suggestion is an attempt at deriving facts from mathematical properties of presumed representations of language, which is an interesting avenue of research.

References

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