We address insights, questions and challenges associated with the notion of recursion in the computational procedure of the language faculty.

Recursion is a property of Merge along with binarity. Merge reapplyes to its own output and may give rise to the embedding of categories of the same type. We distinguish direct recursion as the merger of syntactic objects of the same type, (1), and indirect recursion as the merger of syntactic objects of the same type through an intermediate derivational step. A syntactic object first merges with a functional element F, before merging with a syntactic object of the same type, (2).

(1) [ X [ X X ]]
(2) [ X F [ X [F X]]]

With Free Merge, (1) and (2) are possible derivations.

The distinction between direct and indirect recursion bare on the derivation and the interpretation of linguistic expressions both in the nominal and in the verbal domains, including (3)-(7).

(3) Complex numerals
(4) DP conjunction and disjunction
(5) PP, AP and ADVP recursion
(6) CP recursion
(7) Reconstruction

Indirect recursion ensures structural asymmetry in the derivation of linguistic expressions including syntactic objects of the same kind. We provide further evidence that the silence of intermediate functional elements, sometimes observed in languages, may follow from principles of efficient computation relevant in syntactic derivations and in the transfer to morpho-phonological derivations.

Indirect recursion has consequences for the interpretation of linguistic expressions. Intermediate functional elements may provide information to the conceptual-intentional system on the asymmetrical relations relating predicates and arguments, modifier and modified, operator and variables. Their presence in the derivation and at the interfaces may follow from principles of efficient computation, relevant to syntax-semantic derivations.

We add to the syntactic discussion insights, questions and challenges associated with the notion of indirect recursion in language processing and parsing, in language acquisition and diachrony, as well as in language specificity.

Selected references


