

## AGAINST PROTOLANGUAGE

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Since Hauser-Chomsky-Fitch (2002) the operation Merge has been taken to be the discriminating boundary between language and non-language. In our talk, we propose some reflections on the simplest stage of this syntactic mechanism, namely the so-called Head-head Merge (Primary Merge in Rizzi's 2010 Complexity Scale), showing that silent functional categories must be necessarily assumed in order to explain the realization of the most basic hierarchical structure. In this perspective the notion of 'protolanguage' turns out to be as contradictory as the notion of 'protogrammar'.

The notion of protolanguage (henceforth PL) has characterized the debate on language origin and evolution in the last decade. In particular, two different views about the design of PL have prevailed (cf. Arbib & Bickerton 2010): 1) the 'Holophrastic View', according to which PL emerged as grammarless 'protowords' which refer to recurrent but nevertheless complex events; 2) The 'Compositional View' that assumes that PL had grammatical units like nouns and verbs but it was devoid of syntax and syntactic operations.

Within the Compositional View, Rizzi (2010) has proposed to widen the range of the syntactic operation Merge which was first introduced as core device of the faculty of language (Chomsky 1995, Hauser-Chomsky-Fitch 2002) proposing a finer-grained articulation of it in a three-stage complexity scale:

1. Primary Merge (head-head Merge) = two words stage

2. Recursive Merge (head-phrase Merge) = head-complement stage
3. Phrasal Merge (phrase-phrase Merge) = specifier-head stage + movement

Conceiving Merge in terms of a complexity scale allows us to identify the first two stages as precursors of the human language faculty in a proper sense, making the notion of protolanguage theoretically compatible with the theory of grammar.

In our contribution we try to get into the finer-grained details of merge, not surprisingly ending up with the original question as to how the first step of this scale might look like. In our point of view it is the rise of Functional Categories that reveals as the pivotal point for the distinction between non-language and language revising and relativizing the concept of PL itself. In other words, if on the one hand Merge is taken to be the discriminating difference between what language is and what it is not, on the other hand ` even within a Merge-based complexity scale ` the simplest version of Merge must already imply grammar i.e. language. In doing so, we put forward a radically compositional view of the first stage in Rizzi`s system.

In fact, as regards Rizzi`s Primary Merge, we emphasize the fact that it basically `conceals` all core properties of Merge (hierarchical relations, feature-characterization, i.e. asymmetry between the two elements which combine). Crucially, even the two-word combination cannot be taken as a linear combination, i.e. a mere sum of two elements (as the Holophrastic view seems to suggest) since primary merge intrinsically involves hierarchical combination.

Therefore, even at this `early` stage, we are forced to assume a syntactic configuration that prevents merged heads from being symmetrical ` hence mutually c-commanding ` in the first place (see Moro 2000; Barrie 2005).

We propose that this configuration (i.e. Primary Merge) be thought of as a hierarchical structure with elements already containing a bunch of abstract/grammatical features. In turn, this entails that there be `more invisible structure` which guarantee an asymmetric configuration.

Even the second stage in Rizzi`s system (Head-phrase Merge) is problematic. It is taken to be the level where recursion emerges by simply adding another head to the already merged units; however, this notion of recursion is highly restricted and resembles the arithmetical instantiation of recursion, such as the Fibonacci sequence where the  $n^{\text{th}}$  element of the sequence results from the sum of the preceding two and not from the sum of the whole preceding elements, in other words 5 is not just  $0+1+1+1+1+1$  but  $2+3$  instead. The different 1`s ` from a mathematical viewpoint ` are identical, i.e. same status corresponds to same weight. On the contrary, human language operates on items having different

`loads` in terms of functional categories. Simple head recursion has no actual realization: as a matter of fact, linguistic recursion is never actualized as simple head recursion yielding something like arithmetical series).

Thus, we put forward that it is the role of the third element *per se* that forces the two-word configuration to make its hierarchical structure explicit with the rise of functional categories (and crucially movement) conflating the stage of Recursive Merge with Phrasal Merge.

To sum up, the notion of protolanguage is a mere speculative concept lacking any possibility of actualization. In our reconstruction of Language Origin there is no `in-between` i.e. no PL but just a `before` and an `after` i.e. non-language and language.

### References

- Arbib M. - Bickerton D., eds., (2010) *The emergence of protolanguage: holophrasis vs compositionality*, John Benjamins.
- Barrie, M. (2005), *On Unifying Antisymmetry and Bare Phrase Structure*, Proceedings of NELS 35.
- Chomsky (1995), *The Minimalist Program*, MIT Press.
- Hauser-Chomsky-Fitch (2002), `The faculty of language: what is it, who has it and how did it evolve?`, *Science* 298.
- Kayne, R. (1994), *The Antisymmetry of Syntax*, MIT Press.
- Moro, A. (1997) *The raising of predicates: predicative noun phrases and the theory of clause structure*, Cambridge University Press.
- Moro, A. (2000), *Dynamic Antisymmetry*, MIT Press.
- Rizzi, L. (2010), *On the nature of linguistic computations: complexity, development and evolution*. Paper presented at Summer Institute on the Origins of language, UQ` M, Montreal, Canada, June 21<sup>th</sup>-30<sup>th</sup> 2010.