Computational Memory?

In a recursive system, as the Minimalist Grammar is, a computational object, say a feature, can be merge multiple times into a derivation. Empirical studies confirm this by showing that the same feature (or class of features) merging into the derivation at varies levels of the derivation (or the functional sequence).Travis (2010) for instance, has shown that Aspect could merge twice in the functional sequence: in the lexical (VP) domain, well as in the functional (TP) domain. This is true of Gender in some languages, Halkomelem and Amharic Steriopolo & Wiltschko (2008). Gender in these languages display two properties:

- **it is syntactic**: in the sense that no distinction can be made in its distribution from other well-established features such as number and case
- **merges twice into the derivation**–in the first instance, it merges as part of the lexical noun while in the second instance, just like Aspect, as a syntactic feature, Kramer (2014), Steriopolo & Wiltschko (2008).

(1) Addis-it-u näč' bazra
New-Fem-Def white mare.Fem
'The new white mare'

(2) * Addis-u näč' bazra
New-Def white mare.Fem
'The new white mare'

(3) Addis-it-u näč' bäg
New-Fem-Def white sheep
'The new white ewe'

In (1), the inflectional gender marker merges at D while the inherently gender marked noun merges at the base of the DP projection. Then, the question is how the computational system controls the two instances of the feature, one at the base of the tree, other higher in the functional projection. That is, under the computational system,what makes sure that a conflicting values of the features do not merge into derivation, as in (2). Under the standard Minimalism derivation, the derivation –call it First Merge, Select, Edge feature or C-select–runs under strict locality Baltin (1989), Chomsky (2001, 1995). In the strictly local Merge, there is no, in principle, way of avoiding conflicting feature values of the same feature merging at different stages of the derivation. In the above example,(2), Merge has no way of looking back to the lexical noun when merging the conflicting value (Masculine) into the derivation.

In this presentation I will argue that the standard derivational tools, Merge, Agree and Move, are not sufficient to handle contradicting values merging at different stages of the derivation. Some mechanism of keeping a memory of what has already been introduced into the derivation is necessary. I will propose rather a broader version of Agree, which has a capacity to carry a memory buffer to the major derivational system (Merge) to refer to in the course of derivation to avoid conflicting results. I will attempt to show that the modified version of Agree better handles the than the standard Agree.

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