The Finishing Touch – TRANSFER, not MERGE

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In this short article I introduce three arguments supporting the idea that the defining property for Linguistic Intelligence is TRANSFER, not MERGE. First, with MERGE present, any computational system would still need TRANSFER. Second, in addition to TRANSFER, the human Language Faculty has several other capabilities (such as Lexicon and Agreement) that likewise depend on MERGE. Third, since animals seem to be comfortable dealing with linear order (which in turn would imply that they have the ability to process transitive relations), it is likely that MERGE is already present in the natural intelligence precursor of Language.

Traditionally, it is assumed that the ability to process natural language appears at the time when the pre-existing intellectual capacity is combined with a new functionality called MERGE. If that is correct, then MERGE is the defining property of the uniquely-human Linguistic Faculty.

I would like to suggest that it is actually TRANSFER, not MERGE, that sets apart linguistic computational systems. After all, it is impossible to process natural language with MERGE alone, as long as the phase-by-phase TRANSFER is not there. Without TRANSFER and Externalization, Linguistic Intelligence is not complete.

Similarly, if a computational system has MERGE, it would still need Lexicon. How can Lexicon develop before MERGE, if there is no use for it? AGREE may be in place before MERGE, or vice versa, but in any case it is needed before the introduction of TRANSFER.

Not only MERGE is far from being the final step on the way towards natural language processing, but it is likely that MERGE is present even in animal intelligence. Being as good as they are at orientation in space, animals apparently have control of linear order. If so, from a purely mathematical point of view, the computational system at work in animals would seem to be able to manage Directed Acyclic Graphs.

Of course MERGE is plays a very central role in Language Faculty, but as explained above, it seems that there may be an additional step after it.

References

Chomsky, N., Á.J. Gallego and D. Ott (2017): "Generative Grammar and the Faculty of Language: Insights, Questions, and Challenges".   [http://ling.auf.net/lingbuzz/003507]