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General and special merge

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Abstract

Matrix syntax is a model of syntactic relations in language which grew out of a desire to understand chains (Martin, Orús, Uriagereka 2019). In MS, syntax acts on a Hilbert space, and sentences are modeled as vectors in a Hilbert space with a tensor product structure built from 2x2 matrices. A chain is also a linguistic version of Schrödinger's cat, based on the equally-weighted superposition of two (orthogonal) vectors in a Hilbert space. It is there as the system has to compress the dimensionality resulting from tensorization taking 2x2 matrices to 4x4. The present study argues that the tensorization, as mentioned earlier, results from an operation called General Merge, and the workspaces in the system are updated through an operation called Special Merge. In order to investigate the said claim, this research inspect a dozen axioms in MS, with special emphasis on axioms 3 and 4. It also seems reasonable to believe that General and Special Merge are better candidates than Chomsky's recent reformulation of Merge to MERGE (2019). This study assumes here the minimalist research program, which is arguably well-motivated in terms of learnability and the evolutionary concerns one may have on the very limited evidence of the origins of UG. This work also attempts to provide an MS framework within which (A and A') chain movements, copies, repetitions, and occurrences are investigated, which will be done by meticulously examining the phenomena in Persian and English. This study attempts to show how General and Special Merge do not allow other extensions like Parallel and Sidewards Merge to surface.

Keywords: General merge, Special merge, Matrix syntax, Tensorization, Workspace

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doi.org/10.30514/icss.25.0.14