



Toward a Syntactic Singularity: The Rise of General and Special Merge

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Abstract

This research presents General Merge (GM) and Special Merge (SM) as the sole syntactic operations required for human language, replacing the traditional binary distinction between External Merge (EM) and Internal Merge (IM). We argue that EM and IM, while foundational in earlier minimalist theory, fail to provide an economical and unified derivation of key syntactic phenomena. GM and SM, by contrast, form a two-tier computational architecture that is mathematically optimal, cognitively realistic, and empirically well-supported across human languages. General Merge enables the combination of independently constructed syntactic objects across distinct workspaces, accounting for configurations previously derived through external selection. Special Merge introduces feature-driven filters—such as [+Generic], [+Spontaneous], or [+Passive]—that allow argument insertion and interpretation without resorting to movement or empty projections. This system eliminates the need for EM/IM by subsuming their functions under a more general and principled mechanism. The proposal is supported by cross-linguistic evidence, with Persian (Farsi), Kurdish, and Bakhtiari serving as primary case studies, particularly in non-active voices (passives, anticausatives, middles, and applicatives). At the same time, the universality of GM and SM is corroborated by parallels in English, Romance, Germanic, and Bantu languages. Crucially, this research integrates mathematical modeling, physical and quantum optimization principles, and neurocognitive evidence, demonstrating that GM and SM not only generate syntactic structures but also reflect the computational efficiency of the human mind.

Keywords: General Merge (GM), Special Merge (SM), Workspaces, Mathematical modeling, Quantum optimization principles, Computational efficiency

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