

## ON GENERAL PURPOSE UNIFYING AUTOMATA

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The Theory of Heteroautomata and its chapter, the Theory of Automata with respect to set theoretical bases, are applications of semigroups generated over the heterogeneous field of theory constructing constituents. A theory is a physical one if at least one physical constituent is present in the set of its basic constituents. Such a set is renamed "heteroset". If a heteroset includes operations required for theory construction, we use for it the term 'agglomerate'. The possible agglomerates are partially ordered into a well stratified "array", interpreted in its totality as a genetic theory with respect to bases for theory construction. Over the same given stratification of bases the following theories were constructed: a) The Generalized Dimensional Analysis; b) the "Genetically Extended Dimensional Analysis" covering the different basis-strata of the genetic array; c) a generalized approach to the Theory of Automata; d) a unifying commonmeta machine-code based on the Theory of Interdisciplinary Unification and suitable to be the machine language for General Purpose Artificial Intelligences. Attention is being directed to the replacement of the current bases and to the subsumptive interrelation of the occurring theories. The solution for the problems of General Purpose Automata has been transferred a) from the set theoretical basis to a physical heterobasis; b) from the usual singular logic to the interrelation of logics with respect to a metaschema for commonmeta logic; c) from unilevel treatment to stratified multilevel treatment.

An automaton, as seen by the present-day theory constructeur, is basically a set of rules with respect to indecomposable ultimate elements, including one for the interconnection of them. We intend to refer to such a totally abstract basis as the "set theoretical basis".

The definition of various mathematical automata by M. Rabin-D. Scott

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