

# Tree of life theory, on how homo sapiens improve their cognitive system to consciousness

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**Abstract.** The consciousness is a natural product of evolution, this paper will present a theory based on Alkaloids having an important role over the process due it's crosstalk effect. This would permit the complexification of the information structures processed by early gender Homo brains, allowing by natural selection consciousness to arise on effective forms.

**Keywords.** Evolution, Consciousness, alkaloids, Baldwin effect, Crosstalk, Logics.

## 1. The evolution landscape

The idea is that full developed Homo gender specimens, started to consume psychoactive alkaloids, that would open the brain to different experiences due to the crosstalk, commonly known synesthesia, provided by these substances. That would start to change human behavior, in some cases to a more efficient pattern.

Then natural selection favored that behavior and consequently copy the alkaloid induced structure into the genetics of the Neural system.

This plasticity with the environment, on actually changes of phenotypes and its further assimilation on the genome, is very known by science. This phenom, of phenotype plasticity, in social populations thru learning is well documented in the Baldwin effect. [1]

Here is a graphic that represent the relations in biological concepts.

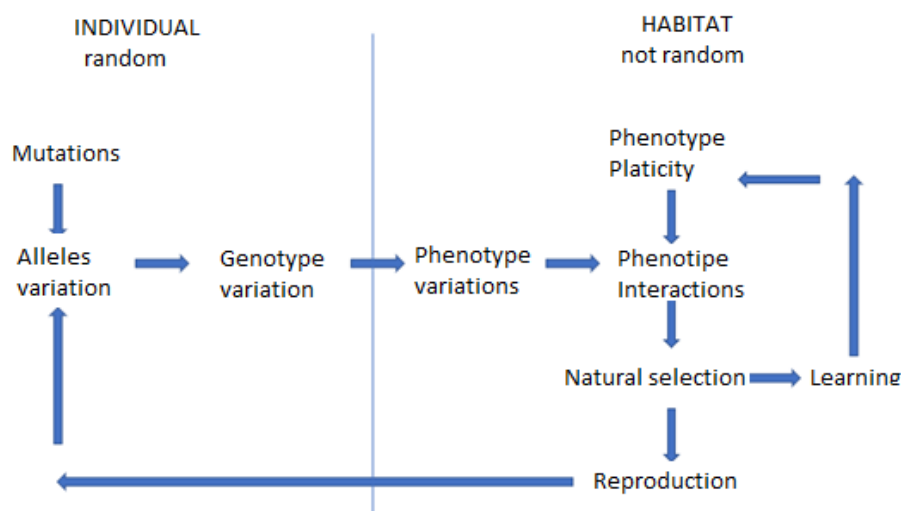


Fig.1. Baldwin Effect evolutionary learning

By the assumptions of a system with this evolution process, we could assume its operational forms.

## 2. The Evolution achieved

There are different degrees of language possibilities, as there are different norms for information processors, these mathematical rules can be presented with a similar hierarchy, as the logic possibilities for sentenced information.

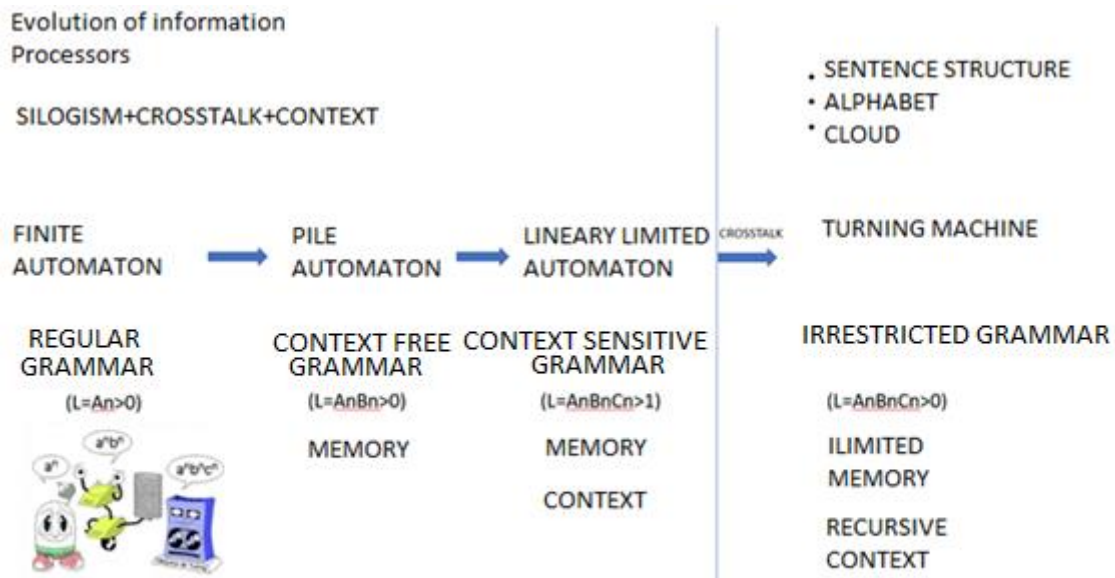


Fig.2. Information Processors Hierarchy

As logic forms, we can describe 3 categories: Deduction, induction and abduction.

$AnBnCn > 0$

These would be a universe ruled by abduction, were we would not have grammatical rules of limitation.

$AnBn > 0$

These would be a universe ruled by induction, has the limitation of the monotonic logic on the value of a sentence. We are able to use functions of variables with quite complex information, as performed by computers. But we can only manage contradictory information with rules of hierarchy.

$An > 0$

These would be a universe ruled by deduction, with capability just of a formal language ruled by a regular grammar. We are just able to use a variable.

The break throw made by the use of the psychoactive alkaloids would be to overcome the restriction of monotonic logic, a restriction rule, that any substitution on a sentence should respect its length [2], which brings a limitation to this environment that any sentence must be unique, and have an appropriated form, so no different values are able to be represented with the same sentence. This is a rule of consistency, and any default on this premise made on this environment must be resolved with rules of hierarchy.

The conclusion is that being able to overcome the monotonic logic restriction, the Homo Sapiens overruled its natural instincts and was capable of increasing dramatically its scope of information management. On these resources the rise of consciousness began to develop as we know it today.

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