

Purely Formal Apocalypses?

Gaëll Guibert, Benoît Sauzay

Independant, France

gaell.guibert@gmail.com, benoit.sauzay@gmail.com

Some texts use symbolic language, myths, embedding analogies between operations, to understand, for example the birth of the earth and the heaven (*toledot*, Genèse 1), or the fact they disappear. Other biblical texts, as apocalypse, describe the beginning and the end of a given universe. What about the text as an object? semiotic and analogical, but also logical and algebraic? Can we consider it as a series of combinations, and operations on some sorts or categories of thoughts, of transformations such as those manipulated by Combinatory Logic (LC) from H. Curry (1958)? LC uses a simple symbolism to compose and transform operators, by the application of an operator to an operand, and as such is called "Purely formal" or "Applicative only", as a logic of fundamental operations (Desclés & al. 2015, 2016).

In that picture, what are the "operators" of the text, without entering *de facto* a domain of interpretation? LC can be expressed through isomorphic algebraic "*treilles*" structures or bi-ordered computer trees to compose sorts as for example abstract places and transformations of these places or operators. Is a branch substitutable to another, as types, under which conditions? Can a formalism help to discover some intention of the text, a first thought or concept, beyond some understandings in defined times and places? Can the vocabulary be a clue or even a key to enter the categories, as the dragon or *kategor* accuses? Ancient texts use images, a semiotic construction. We compare and investigate the symbolic language and system, starting with that of Curry, sorts and operators. Based on linguistic methods, in particular for the analysis of markers (places, not only), we will highlight the functioning: Is the text really a formal system? Does it exhaust neither the method nor the possible interpretations? More over, can it be illogical?

Bibliography

Desclés J.-P. & al., *Logique combinatoire et Lambda-Calcul*. Toulouse, Cepadues, (2015).

Id., *Calculs de signification par une logique d'opérateurs*. Toulouse, Cepadues, (2016).

Sauzay B. & al., "Algebraic and Logical Operations on Operators One Application to Semantic Computation". *Logic in Question*, Beziau J.-Y & al. (eds). Switzerland, Birkhäuser, (2022).