

Between Noether and Planck, the Math-Physics mirror

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A mirror built here, by virtue of an iterative process, a geometry from a conceptual object. This dynamic, served by the Noether's theorem, generates the universal constants.

The surface of the mirror on which the observer is located is comparable to that of a knot of symmetries : the inseparable coupling **principle**[**image** like $e = mc^2$ for example. The dynamic of the image towards its antecedent is born inescapably from the imbalance of the attributes of the faces of the mirror which remains one. The resulting "in-form-ation", intrinsically an interaction, is therefore both absence and presence of limits, dimensions. The relativity of the observation is thus the result of the severe constraints of the coupling and its constancy on the attributes at the same time imaginary and real of this mirror.

The alpha of the physicist, fine structure of this trio, is a quantum (number) and a ratio (order) which generates the elementary duality wave][corpuscle ; this report is also that of their movement.

Let @, function of alpha, that quantum of interaction associated with the space/time (geometry) of the observer ; @ is at the center of this interlacing according to the slogan "*order + number = geometry*" [1] taking into account the theorem of David Malament [2]. At the Planck scale his transformations, inherited from the mirror's attributes, loop in an iterative mode ; the information @, avatar duo q^2 , defines the geometric sequence:

$$c^0@ = ml \quad c^1@ = \hbar \quad c^2@ = Gm^2$$

In this Borromean knot descended from the only constant of fine structure, there is equivalence of relations [3] ; the numerical values with homogeneous quantities depend only on the invariant $@ = f(\alpha)$, the length and the time of Planck [4] since $@ = q^2/10^7$ [a] = ml/c^0 [b] = \hbar/c^1 [c] = Gm^2/c^2 [d]. It is an economy of means [5] sealed by the Noether's theorem.

Consequently :

- *To say that the mass deforms the space-time which is energy ($\acute{\epsilon}\nu\acute{\epsilon}\rho\gamma\epsilon\alpha$, force in action) would be to say that the mass is deformation of space-time.
- * Gm^2 would be a quantum.
- * From metaphor to metonymy, from the mirror stage q^2 [ml to identity, there is dynamic of [referent], of signifiers [c^0 , c^1 , c^2] in exponential evolution, of signifieds [particle, action, gravitation] .
- * An iteration builds here a geometry from a conceptual object ; still should it be perceived as such ! Privileged by its nature, the observer is well linked to the singularity QM][GR, as well as to the report time][space.

References :

- [1] Sorkin Rafael D. Syracuse University - "Geometry from order: causal sets" 2006 http://www.einstein-online.info/spotlights/causal_sets/index.html@searchterm=None.html
- [2] Malament David B. "The class of continuous timelike curves determines the topology of spacetime" 1977 <https://aip.scitation.org/doi/10.1063/1.523436>
- [3] Noether's theorem 1915 https://en.wikipedia.org/wiki/Noether%27s_theorem
- [4] Planck Units https://en.wikipedia.org/wiki/Planck_units
- [5] Mirror symmetry [https://en.wikipedia.org/wiki/Mirror_symmetry_\(string_theory\)](https://en.wikipedia.org/wiki/Mirror_symmetry_(string_theory))

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