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Subject: *Preludes Series* **– Prelude VI**: **¿What is the** 'Gödelian Unsolvability Crisis' *of Today?*

Dear **www.dialectics.org Webmaster**,

Greetings to you from **Foundation** *Encyclopedia* *Dialectica*!

Background. This letter contains **Prelude VI**. of a series of Preludes to a forthcoming major manifesto by **Foundation** *Encyclopedia* *Dialectica*. The series title is – ***Portents &*** '***Pre-Vestiges***' ***of an Immanent Critique of the Ideology in Modern***, '***Mathematico-Science***' ***as a Totality***. This **6**th **Prelude** is entitled: **¿What is the** 'Gödelian Unsolvability Crisis' *of Today?*

Prelude VI: ¿What is the 'Gödelian Unsolvability Crisis' *of Today?*
No less than the founding problem of modern, '''mathematico-science''', a problem that was also a central focus and motivation of ancient science, today takes the form of a system of multiple ***nonlinear partial integro-differential equations*** which have, to this day, in both their Newtonian and Einsteinian versions, remained, except for special cases, unsolved -- unsolved in their general form, ***precisely because of*** their ***nonlinearity***.

This founding problem is the fundamental problem of astronomy, the problem of the mutual-determination, and of the other-objects-mediated-**self**-determination, of the motions of celestial objects, when any more than two such objects are admitted into the mathematical model of the celestial **cosmos**:

"The n-body problem is the name usually given to the problem of the motion of a system of many particles attracting each other according to Newton's law of gravitation. This is ***the classical problem of mathematical natural science***, the significance of which goes far beyond the limits of its astronomical applications. The n-body problem has been the main topic of celestial mechanics from the time of its inception as a science. The fundamental dynamical problem for a system of n gravitating bodies is the investigation and pre-determination of the changes in position and velocity that the [bodies] undergo as the time varies. However, this is a complex ***non-linear*** problem whose solution has not been possible under the present-day status of mathematical analysis." [G. F. Khilmi, ***Qualitative Methods in the Many-Body Problem***, Gordon **&** Breach (**1961**), page **v**., ***bold italics emphasis added by* F**.*E*.*D*.].

Indeed, the models of nature that modern mathematical science has favored are profoundly flawed and misleading in crucial aspects of their 'descriptics' of nature, due to this specific inadequacy of the mathematics that Terran humanity has evolved so far – it's inability to find and to express "closed-form", "analytical" [solution-]functions that model the ***nonlinear dynamics*** of the actual, empirical world:

"It is an often-stated truism that ***nature is inherently*** ***non-linear***. Biological systems particularly are full of... ***non-linearities***...The reason that we go to the trouble of building ***linear models*** when we are really interested in ***non-linear systems*** is that we then acquire the power to evaluate the dynamic performance of the system ***analytically***....In fact, we can ***analytically solve*** for the response of a ***linear system*** to any conceivable input function, however complicated." [B. C. Patten, ***System Analysis and Simulation in Ecology***, Academic Press (NY: **1971**), p. **288**, ***emphasis added by* F**.*E*.*D*.].

F.*E*.*D*. **Hypothesis**: ▮ Terran humanity today lives inside in that *'Gödelian epoch'* of the *'psycho-historical meta-evolution'* of its mathematics, and of its core *"'Phenome'"* of human cognitive powers generally, in which a **diophantine** generic version of the very **equations of** «**autokinesis**» -- i.e., of the best extant mathematical models of **dialectical process**, standardly **un**realized as such, namely, the **nonlinear integro-differential equations**, especially those which model our best current grasp of the "laws" of nature -- constitutes the *"unsolvable equation"* to which an incompleteness-asserting *"Gödel formula"* for the «**de facto**», implicit axioms-system of **contemporary** mathematics as a whole *"deformalizes"*. ▮

"'The Nonlinearity Barrier'" is today's stage of the Gödelian **psycho-historical dialectic of mathematics**.

The **F**.*E*.*D*. ideogram for the phenomenology of **nonlinearity** -- -- is a symbol connoting the rules /- patterns of a *'quanto-qualitatve disproportionality'* of cause **&** effect.

Dialogically yours,

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