Symmetry infringement in mathematical metrics of hydrogen atom as illustration of ideas by V.I. Vernadsky concerning origin of life and biosphere

A.E. Zlobin

V.I. Vernadsky State Geological Museum RAS, Moscow, Russia

The metrics was suggested by the author of abstract earlier (A.E.Zlobin, 2-nd International Congress "EurasiaBio-2010", April 13-15, Moscow). Latest paper was presented in 2013 (arXiv:1402.1408 [physics.gen-ph]). The author deduced mathematical metrics of atom of hydrogen on the base of Fibonacci sequence of numbers. Accurate view of the metrics is: (PxF)/(exp(F))=j. This mathematical expression links between themselves four constants: Ludolph number (P=3.1415...), Napier number (e=2.7182...), golden ratio (F=1.6180...) and so-called "irrational one number" (j=1.0079...). The term "irrational one number" was suggested for the first time by the author. The most wonderful property of this mathematical expression is that the factor j=1.0079... simultaneously coincides to the value of atomic mass of hydrogen with high accuracy. It is strongly demonstrated that the metrics of atom of hydrogen connects between each other characteristics of substance, form and number. Thus the expression may be used as universal system of measurements (metrics) for analysis of atoms.

In 1931 V.I.Vernadsky mentioned some aspects which are connected to problem of initiation of life and biosphere on the Earth. Among these aspects were ocean water, gas functions, pressure and temperature, climate etc. Also three interesting ideas were mentioned by V.I.Vernadsky. The first idea is known for a long time: "omne vivum e vivo" (it means that every living thing descends from living thing). The second idea means that all living things do not have strict symmetry, and left and right side of every living thing are different. Thus, all living things are characterized with the property of asymmetry. The third idea is that this asymmetry may be described mathematically as infringement of symmetry.

If to take into consideration the paper by V.I.Vernadsky, we can note good correspondence between obtained metrics of atom of hydrogen and V.I.Vernadsky's ideas concerning origin of life. In particular, infringement of symmetry is clearly expressed in such mathematical metrics. The metrics reflects the rule "omne vivum e vivo" too. The author of abstract considers that the metrics makes possible the working of pattern recognition algorithm at the level of atoms. This algorithm seems effective for transformation of inert organic substance into living things. Also the fact of deduction of the metrics from Fibonacci sequence of numbers must be taken into consideration. This may be theoretical hint on complicated internal logical structure of atom and reflection of logical properties of the atom too.