Gödelizing Fine Structure

RICHARD L. AMOROSO

Noetic Advanced Studies Institute,
Los Angeles, CA 90025 USA
amoroso@noeticadvancedstudies.us

Abstract. We can measure what physicists call the Fine Structure Constant (FSC) but its fundamental origin remains a profound mystery. Bowdlerizing the original usage of the term 'Gödelization' to mean in general instead, that 'nothing can be fully understood in terms of itself'; but that one must go 'out of bounds' to obtain a holistic picture, i.e. a pollywog submersed in the sea has little hope of comprehending ocean waves without being able to understand lunar cycles and wind. Our understanding of the physical world has progressed from Classical to Quantum; and now to the brink of the 3rd regime of the Unified Field Mechanics (UFM). We present a review of 3rd regime cosmology within its current stage of development. We review and discuss relevant 3rd regime properties such as an empirical protocol violating QED by producing three new spectral lines in Hydrogen and allowing experimental access to the 3rd regime. We find most interesting in terms of Occam's razor curious formulations such as $\alpha^{-1} = 4\pi^3 + \pi^2 + \pi = \left(\pi\left(4\pi^2 + \pi + 1\right)\right) = 137$. Without knowing the "accepted" probably most accurate values (considering just the 137.03… value of FSC), the following formula for the general (synchronistic) definition of the inverse fine structure constant was proposed by Stanbury:

$$\alpha^{-1} = 4\pi^3 + \pi^2 + \pi^1 = \pi = \pi\left(4\pi^2 + \pi + 1\right) = 137.0363037... = \alpha^{-1}\left(\pi\right)$$

The 2006 CODATA Recommended value 1/137.035 999 679(94). *If alpha [the fine-structure constant] were bigger than it really is, we should not be able to distinguish matter from ether [the vacuum, nothingness], and our task to disentangle the natural laws would be hopelessly difficult. The fact however that alpha has just its value 1/137 is certainly no chance but itself a law of nature. It is clear that the explanation of this number must be the central problem of natural philosophy* - Max Born. It is also obvious, that from the point of view of life, the value of the FSC cannot change arbitrarily. Were its value very different, carbon atoms would not be stable and organic life, as we know it, would not be possible. This evidence increasing underlines the significance of 137 as an integer and, at the same time, as a mediator or controlling number. While the circle cannot be squared in Euclidean space, it *can* in Gauss-Bolyai-Lobachevsky Space (Gray 1989). The criticism that 'piety' FS doesn't calculate to observed 137 codata is easily got around. The standard usage of π is for Euclidean space. The last Planck satellite observations were not set for observing flatness of space but geared more for observing CMB spectra. But the data still did apply to the curvature of space in that it did not rule out an AdS_5 dodecahedral wrap-around universe. In Riemann space π is smaller & in Lobachevsky space larger, point being that π can equal 3 in these spaces. In cosmology small fluctuations in Lambda and the Planck constant around zero is possible. It is easy to likewise predict a similar oscillation for the FSC around a 3 based piety for zero flatness or &c. It may be possible to predict the curvature of wrap-around space based on piety while we wait for ~ 10 years for Planck satellite observations to be realigned. We also briefly ruminate on relevant aspects of the Fibonacci Spiral, Golden Ratio, Kepler Triangle and other symbiotic curiosities.

*Keywords***:** AdS_5 space, Fine structure constant, Gauss-Bolyai-Lobachevsky space, Gödelization, Semi-quantum limit, Unified field mechanics

References

[1] Amoroso, R. L. & Rauscher, E. A. (2009) The Holographic Anthropic Multiverse: Formalizing the Complex Geometry of Reality, London: World Scientific.
[2] Amoroso, R.L. & Vigier, J-P (2013) Evidencing 'Tight Bound States' in the Hydrogen Atom: Empirical Manipulation of Large-Scale XD in Violation of QED, in R.L. Amoroso, L.H. Kauffman & P. Rowlands (eds.) Physics of Reality: Space, Time, Matter, Cosmos, Hackensack: World Scientific, preprint at: http://vixra.org/pdf/1305.0053v1.pdf.
[3] Amoroso, R. L. (2010) Simple Resonance Hierarchy for Surmounting Quantum Uncertainty, in AIP Conference Proceedings, Vol. 1316, p. 185, reprint at: http://vixra.org/pdf/1305.0098v1.pdf .
[4]
[5] Péter Várlaki, Imre J. Rudas (2009)Twin Concept of Fine Structure Constant as the 'Self Number-Archetype' in Perspective of the Pauli-Jung Correspondence Part I: Observation, Identification and Interpretation *Acta Polytechnica Hungarica* Vol. 6, No. 2.
[6] Stanbury, P. (1983) The alleged ubiquity of pi. Nature, 304, 11.
[7] Max Born, A.I. Miller (2009) Deciphering the Cosmic Number: The Strange Friendship of Wolfgang Pauli and Carl Jung. W.W. Norton & Co. p. 253. ISBN 978-0-393-06532-9
[8] Gray, J. (1989) Ideas of Space: Euclidean, Non-Euclidean, and Relativistic, 2nd ed. Oxford, England: Oxford Univ. Press.