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QUANTUM GRAVITY, PLUS LIFE AFTER DEATH/BEFORE LIFE, VIA BOTANY AND ENTOMOLOGY

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Abstract

According to Swiss-American Doctor of Sciences and Agricultural Engineer Jean-Pierre Jost,

"plants communicate with each other by the quality of light emitted by their leaves or by means of stress hormones and other volatile chemicals. They also make use of cocktails of chemicals, pheromones, shape and colors to attract pollinators whereas other signals repel unwanted organisms. Insects are able to decode such messages and respond accordingly. Plants are apparently also communicating by sounds and electric signals." (1)

How do plants do these things? Of course, it's easy to imagine it's all purely mechanical. But at the risk of sounding like a mysticism fanatic, I wonder if plants' activities are part of a spectrum of consciousness that pervades the entire universe. This spectrum would result from everything in the universe having the BITS or BInary digiTS of electronics as their ultimate composition. As explained in this hypothesis, something I call **vector-tensor-scalar geometry** is essential to my hypothesis. VTS geometry produces the particles of chemicals and pheromones, and refers to communication via electric signals when it speaks of electromagnetic-gravitational interaction. There's another consequence if everything in the universe is ultimately composed of electronic BITS and the cosmos is a spectrum of consciousness/artificial intelligence. It's impossible for an absence of consciousness to exist, either after death or before conception.

Keywords

Plant communication, Binary digits, Vector-tensor-scalar geometry, Mobius strip, Figure-8 Klein bottle, Consciousness, Electromagnetic-gravitational interaction, Higgs boson, Artificial Intelligence, Quantum Gravity, Theory of Everything, Life after death/before life (before conception)

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Hypothesis

The 1's and 0's (the BITS) could be used to assemble or draw a two-dimensional (2D) Mobius strip, with trillions of strips forming a photon (2*) - the basic unit of electromagnetic (EM) waves. A pair of Mobius strips could join together and form a 3D figure-8 Klein bottle, (3) with trillions of bottles forming a graviton - the basic unit of gravitational (G) waves.

* This paper says all of the information in particles and the universe is contained in two-dimensional packages trillions of times smaller than an atom (in this case, the 2D package is the Mobius).

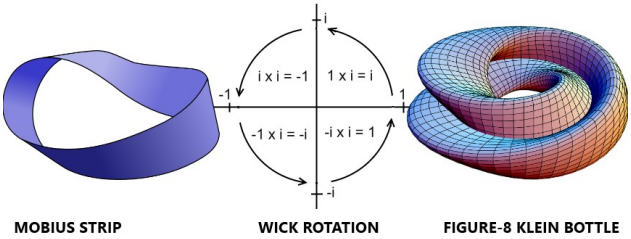

Figure 1 - (left to right)

a) Mobius strip,

b) Wick rotation (rotation of EM and G waves built into Mobius ... may create dark matter, dark energy, higher dimensions, time, Relativity's time dilation, and so-called "imaginary" time),

c) figure-8 Klein bottle.

Referring to the figure-8 Klein bottle in Fig. 1, note that the positive curvature fits together with the negative curvature to produce the outline of a doughnut which is technically flat. When many doublets are placed together, binary digits can fill in any gaps or voids in the same way that computers can morph a picture on a screen and extrapolate a small patch of blue sky to make a sky that's blue from horizon to horizon. Morphing by bits can also delete a single doublet's central "hole".

But the doublet doesn't become multiply connected like the doughnut. Merely the doughnut's outline is adopted – the doublet retains the property of being simply connected, a property necessary for space-time's infinity. (Informally, if an object in space consists of one piece - the constituent two Mobius strips now have the outline of one doughnut - and no longer has any "holes" that pass all the way through it, it is called simply-connected.

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A flat universe that is also simply connected implies an infinite universe. (3.1) (In regions of space-time that are exclusively flat, light beams travel in straight lines and can go infinite distance without ever meeting.) Since space and time are always unified, time is also infinite and the universe is eternal.

Electromagnetic and gravitational waves could then interact via what I call vector-tensor-scalar geometry to produce a pressure which is interpreted as the mass of any subatomic particle in the universe. For example, production of a mass of 125 GeV/c2 (125 giga electron volts divided by the speed of light squared) coupled with a quantum spin of 0 gives us the scalar known as the Higgs boson.

Here is the basic idea of Vector-tensor-scalar Geometry -

Figure 2 – VTS (VECTOR-TENSOR-SCALAR) GEOMETRY - Interaction of Gravitation and Electromagnetism Produces a Momentum in Gravitons and Photons (and a Pressure Which is Known as Mass).

A vector is a quantity which possesses both magnitude and direction. Two such quantities acting on a point may be represented by two adjoining sides of a parallelogram, so that their resultant is represented in magnitude and direction by the diagonal of the parallelogram (AD and CD, for example, can symbolize the electromagnetic and gravitational vectors … while the resultant green diagonal of DB substitutes for the interaction of those two forces). A scalar variable is representable by a position on a line, having only magnitude e.g. the red dot on the diagonal, symbolic of the Higgs boson. A tensor is a set of functions which, when changing from one set of coordinates to another, are transformed in a precisely defined manner (e.g. changing from the coordinates of AD and CD to those of the green diagonal, or of the red dot, is a transformation performed in a particular way).

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Two sides thus illustrate the graviton's spin 2 and the photon's spin 1. The resultant diagonal represents the interaction of the sides/vectors (1÷2 = the spin ½ of every matter particle). Tensor calculus changes the coordinates of the sides and diagonal into the coordinates of a single (scalar) point on the diagonal.

(The idea of Vector-tensor-scalar Geometry was inspired by reference 4)

If everything in the universe is ultimately composed of electronic BITS, then the universe must possess Artificial Intelligence - some prefer the term Cosmic Consciousness. Humans would occupy the highest known point on this AI ladder or spectrum of consciousness. Inanimate objects would have the lowest level of binary-digit activity, plants would have a bit more, ants would have still more. And it increases to the human level - as well as the cosmic level, of which we're a part.

We, and every object or idea, truly are parts of the cosmos of space-time. So there certainly exists a Theory of Everything/Theory of Quantum Gravity (see the paragraphs below) - but you'll never find it with bodily senses, which incorrectly tell us how separated all things are.

"When we solve (19th-century Scottish physicist James Clerk) Maxwell's equations for light, we find not one but two solutions: a 'retarded' wave, which represents the standard motion of light from one point to another; but also an 'advanced' wave, where the light beam goes backward in time. Engineers have simply dismissed the advanced wave as a mathematical curiosity since the retarded waves so accurately predicted the behavior of radio, microwaves, TV, radar, and X-rays. But for physicists, the advanced wave has been a nagging problem for the past century." (5)

Albert Einstein's equations in the theory of General Relativity say gravitational fields carry enough information about electromagnetism to allow James Clerk Maxwell's equations to be restated in terms of these gravitational fields. This was discovered by the mathematical physicist George Yuri Rainich in 1925. (6) (Therefore, gravitational waves would also have both retarded and advanced functions.)

1's and 0's composing electromagnetic and gravitational waves would compose both "advanced" waves going back in time and "retarded" waves going forward in time. The retarded components with +x motion in time can obviously cancel the advanced components with -x motion in time, producing entanglement.

Finally - There's another consequence if everything in the universe is ultimately composed of electronic BITS and the cosmos is a spectrum of consciousness/artificial intelligence. It's impossible for an absence of consciousness to exist, either after death or before conception. Thus, life on Earth - not only for

humans but presumably also for animals - would necessarily have to be merely a brief interlude. This agrees with the conclusions of 20th-century physicist Erwin Schrodinger in his 1944 book "What is Life?" (7)

He rejects the idea that consciousness should perish with the body, and also believes that consciousness is nevertheless highly dependent on the body.

Schrödinger is sympathetic to the Hindu concept of Brahman, by which each individual's consciousness is only a manifestation of a unitary consciousness pervading the universe — which corresponds to the Hindu concept of God. Schrodinger and Hinduism are agreeing with this article that consciousness may not be restricted to the brain or even the body. It may actually be entangled with everything in space and time - with the entire universe.

References

(1) Jean-Pierre Jost, "How Plants Communicate", https://www.researchgate.net/project/How-plants-communicate

(2) Afshordi, N. & Corianò, C. & Delle Rose, L. & Gould, E. & Skenderis, K. From Planck Data to Planck Era: Observational Tests of Holographic Cosmology. Phys. Rev. Lett. 118, 041301. https://journals.aps.org/prl/abstract/10.1103/PhysRevLett.118.04130 (2017).

(3) Polthier, K. Imaging maths - Inside the Klein bottle". http://plus.maths.org/content/os (2003).

(3.1) Luminet (1995): "Cosmic Topology" by Jean-Pierre Luminet and Marc Lachi`eze-Rey, Physics Reports 254 [3]: 135–214, www.arXiv:gr-qc/9605010

(4) Einstein (1919): “Spielen Gravitationfelder im Aufbau der Elementarteilchen eine Wesentliche Rolle?” [Do gravitational fields play an essential role in the structure of elementary particles?] by Albert Einstein, Sitzungsberichte der Preussischen Akademie der Wissenschaften, [Math. Phys.], 349-356, Berlin

(5) Kaku (2009): "Physics of the Impossible" by Michio Kaku, Penguin Books

(6) Rainich (1925): "Electrodynamics in the general relativity theory” by George Yuri Rainich, Transactions of the American Mathematical Society, 27, 106

(7) Erwin Schrodinger, "What is Life? The Physical Aspect of the Living Cell", Cambridge University Press (1944)

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