



# Coding by Quantum Entanglement Entropy

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## ABSTRACT

In our view, the Universe can be described as having two forms of energy: one related to attractive gravitational forces, which is negative, and the other related to mass according to Einstein's formula  $E = mc^2$ , which is positive. The generation of nonequilibrium structures (such as Bénard vortices or chemical oscillations), where energy is conserved, also corresponds to a free lunch, for the price of nonequilibrium structures is entropy, and not energy. In this context, we can specify the origin of negative gravitational energy and its transformation into positive matter-energy. The idea of the Cartesian Theater is that somewhere in the brain, there is a perceptual space that contains the contents of consciousness. Implied by the supposition of this space is that there must also be a viewer (or viewing process) that is the experience of this content. Contrary to this we think that consciousness can be explained without the Cartesian Theater.

**Key Words:** Conformal factor, gravitational forces, Planck's scales, the holographic principle, string theory, quantum entanglement entropy, reincarnation, simulation

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## Introduction

The standard model associated with Alexander Friedmann, Hovard Robertson, and Arthur Walker is founded on the cosmological principle that the Universe, when viewed on a large scale, may be considered homogenous and isotropic (Prigogine, 1997). The metrics thus take on the simpler form  $ds^2 = c^2 dt^2 - R(t)^2 dl^2$  (the so-called Friedmann interval). To give an idea of the range of values involved here, it is useful to define Planck's scales, which measures the length, time, and energy obtained by using three universal constants:  $h$ , Planck's constant,  $G$ , the gravitational constant, and  $c$ , the velocity of light. We then obtain: Planck's length,  $l = (Gh/c^3) \sim 10^{-33}$  cm, Planck's time on the order of  $10^{-44}$  seconds, Planck's energy on order of  $10^{32}$  degrees.

## The Conformal factor

The Friedmann space-time interval can be written (when we consider the case of Euclidean three-

dimensional geometry) as  $ds^2 = \Omega^2(t) (dt_c^2 - dl^2)$ , where  $t_c$  is the conformal time. This is the Minkowski space-time interval multiplied by the function  $\Omega^2$ , which is called the conformal factor (Prigogine, 1997).

The conformal factor (subordinate) as a function of space-time relates to a field in the same way as do other fields such as the electromagnetic field. (The field is a dynamical system characterized by a well-defined energy and therefore a Hamiltonian). As shown by Robert Brout, this factor has a unique quality in that it corresponds to a negative energy (that is energy unbounded from below), while the energy of any given matter field is positive. As a result, the gravitational field described by the conformal factor play the role of a reservoir of negative energy from which the energy to create matter is extracted (Prigogine, 1997).

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This is the theoretical basis of the “free lunch” model, where the total energy (gravitational field plus matter) is conserved, while the gravitational energy is transformed into matter. Brout have proposed a mechanism for this extraction of positive energy. (Prigogine, 1997) In addition to the conformal field, he has introduced a matter field, and demonstrated that Einstein’s equations lead to a cooperative process involving the simultaneous appearance of matter and a curved space-time starting from the Minkowski space-time (containing zero gravitational and mass energy). This model shows that such a cooperative process causes the exponential growth of the radius of the Universe over the course of time. (It is known as the de Sitter Universe.)

These conclusions are interesting as they indicate the possibility of an irreversible process transforming gravitation into matter (Prigogine, 1997).

The birth of our Universe is no longer associated with a singularity, but rather with an instability that is analogous to a phase transition or bifurcation. Brout have used a semiclassical approximation in which the matter field is quantized and the conformal field is treated classically (Prigogine, 1997). The quantum vacuum is associated with a flat geometrical background indeed unstable in the presence of gravitational interactions. In this semiclassical approximation we need an initial fluctuation of a cloud of heavy particles of mass on the order of 50 Planck masses ( $\sim 50 \cdot 10^{-5}g$ ) in order to start the process. These results can be incorporated into a macroscopic thermodynamic approach, where the Universe has to be treated as an open system. We can observe matter and energy being created at the expense of gravitational energy (Prigogine, 1997).

### **The transformation of space-time into matter**

Since entropy is specifically associated with matter, the transformation of space-time into matter corresponds to a dissipative, irreversible process producing entropy. The question is if the inverse process of transformation of matter in to space-time is impossible? The birth of our Universe may be the result of a burst of entropy. The interaction of the gravitational field and matter leads to divergences caused by brief times and short distances in quantum theory corresponding to high values of energy and momentum. These so called ultraviolet

divergences have led to a procedure known as the renormalization program.

Universes appear at sites where the amplitudes of the gravitational and matter fields have high values (they are associated with quantum fluctuations of the fields). Certain fields (such as gravitation) play different roles from others (such as matter). It means that unification is not enough. We need a more dialectical view of nature.

### **The quantum theory of gravity**

Lately scientists have begun to question the old conventional thinking and speculate that space and its extension according to general relativity, spacetime is actually composed of tiny chunks of information. These chunks might interact to create spacetime and give rise to its properties, such as the concept of curvature in spacetime causes gravity. The quantum theory of gravity may be based on general relativity and quantum mechanics. We can use the quantum bit as the smallest possible amount of information: a computer bit on a quantum scale. The Universe is than built up from some underlying code (Gates, 2008), and by cracking this code we finally have a way to understand the quantum nature of the events in the Cosmos. If the link with quantum information theory proves as successful, it could very well spark the next revolution in our understanding of space and time (Maldacena, 2005).

### **The phenomenon known as quantum entanglement**

When space-time has bits and is made up of anything, it’s a departure from the traditional picture according to general relativity. The key to this organization of bits may be the strange phenomenon known as quantum entanglement: a weird kind of correlation that exists between particles and fields, with actions performed on one particle affect the other even on a great distance separates them. A 2006 paper of S. Ryu & T. Takayanagi showed a connection between entanglement and the geometry of spacetime. In 2013, J. Maldacena and L. Susskind found that if two black holes became entangled, they would create a wormhole (a shortcut in spacetime), predicted by general relativity. This discovery (nicknamed ER=EPR, after physicist shorthand for wormholes and entanglement). It could entangle multiple particles of certain kind at one location with particles of a different kind at the same location. A theory that describes gravity from a



quantum perspective is known as the holographic principle. This principle suggests that some physical theories are equivalent to simpler theories that work in a lower-dimensional Universe. In the same way that a 2-D postcard with hologram of a unicorn on it can contain all the information necessary to describe and portray the 3-D shape of the unicorn.

One of the most successful embodiments of the holographic principle is a discovery known as the AdS/CFT correspondence, found by Maldacena in 1997 within the framework of string theory. He had showed that one can completely describe a black hole purely by describing what happens on its surface. It is the physics of the inside: the 3-D bulk, corresponds to the physics of the outside: the 2-D boundary.

Gravity and spacetime is just another way of looking at the end product of the entanglement. The entanglement might somehow encode the information from the 3-D bulk into bits stored on the 2-D boundary.

### Quantum error-correcting codes

Quantum information theory may be able to help with quantum error-correcting codes, which could be at work in the AdS/CFT correspondence. AdS/CFT stands for Anti-de Sitter/Conformal Field Theory. It relates two very different theories and states that there is a duality between theories of gravity in five dimensions and quantum fields theories (QFTs) in four dimensions. The gravitational side involved a particular extension of gravity (type IIB supergravity) on a particular geometry (5-dimensional Anti-de-Sitter space). The QFT is a unique theory with the largest possible amount of supersymmetry. (Gates *et al.*, 2008) There is a specific dictionary that translates between the theories. AdS/CFT is more generally referred to as the gauge-gravity correspondence. This is the statement that gravitational theories in (N+1) dimensions can be equivalent to non-gravitational quantum field theories in N dimensions.

In quantum computers, quantum error-correcting codes are a method devised to help protect information from being lost if the entanglement between particular bits gets broken. Rather than using single bits to encode information, quantum computers use highly entangled states of multiple bits. There is an underlying mathematical structure common to the error-correcting codes and AdS/CFT. In computers that redundancy is being used to correct errors, but in AdS/CFT it may be able to

encode the bulk physics into an entangled state on the boundary. You can also find quantum error-correcting codes inside black holes.

It from Qubit will ultimately achieve a position of the holy grail of a unified theory and the relation between quantum information and quantum gravity is of fundamental importance. The wormhole is probably a quantum circuit. Combining quantum information science with string theory may help in deriving a theory of quantum gravity.

### The Universe as a consciousness hologram

We are probably living in a fractal holographic matrix. The edges of our Universe are two dimensional plains that form a three-dimensional dodecahedron that is projecting the holographic fractals of which we are a part of and in which your spirit is currently trapped in. The spirit is outside of this space-time model and is being broadcast in like a radio frequency. None of us are actually here. This third dimensional matrix appears to be a type of Temporal Consciousness Prison (TCP). Thus, what we see or think of as a solid reality is a hologram created through thought, light and sound. Everything in this material world is here because our Higher Light Frequency of Self (HLFS) has called them into being. Like in a video game the next frame of graphics appears as the characters on the screen need them too. We are a Collective Consciousness of Everything Created (CCFS). Our particles instantaneously communicate with one another regardless of distance. Thanks to Quantum Entanglement Entropy (QEE) each particle seems to know what the others is doing. All information is possessed by the Whole despite we think we are separate from this Whole, in reality we are not. Separation is an illusion, thanks to the QEE, we cannot be separated from the Whole. We are a part of a fractal of light that makes up this entire 3<sup>rd</sup> dimension and this Holographic Universe (HU). The consciousness wave function collapses electromagnetic energy into digitalized quantified bits of information we call matter.

The Universe is a consciousness hologram. Reality is projected illusion within the hologram. It is virtual experiment created in linear time to study emotions. Our hologram is composed of grids created by a source consciousness brought awareness by electromagnetic energy at the physical level. The hologram is created and linked through web, or grid matrixes based on the patterns of Sacred geometry. As the grid collapse,



everything within the hologram will end, helping to understand what is going on in the world today.

### **Physical reality is made up of sub-atomic particles**

Physical reality is made up of sub-atomic particles, but when we get down to this level, the laws of Physics change. Rather than finding something we would expect (something ultimately solid), we find PARTICLES that are able to exist in different locations at the same time. That's because everything has been SIMULATED to give the impression it is here in this solid world when in fact it's not. Including You and I.

Just because a piece of computer code (Gates *et al.*, 2008) has been discovered within Super Symmetry equations, doesn't necessarily conclude that we are actually living within a computer simulation. It may just be a very lucky coincidence. But if more and more computer code keeps cropping up in physics equations, then it may indeed suggest that we are. If our Universe is the result of our future ancestors formulating a computer simulation, then the majority of computer code from which this simulated Universe is based on, will likely not (yet) have been discovered. It may actually be String Theorists who invent, or rediscover some of the code that gets used in creating the Simulate Universe in which we may be living (Carson, 2016).

### **Quantum Mechanics could be even weirder**

Why doesn't the World make sense? Probably the reason is that the recent science is based only on study of the molecular level. But from the beginning of the quantum physics it is proved evidence that the fundamental level moving the things around is the level of atoms and subatomic particles. Despite these facts for example the life science, especially the medicine is not studying the sub-molecular levels of the living organisms. This is the cause of the recent situation in which for example cancer research is not able formulate exactly the whole mechanisms leading to carcinogenesis, mutagenesis. Big part of the schools in the developed industrial countries are seeing the discipline of quantum physics, variable topology, epigenetics, etc. as too paradoxical sciences and it can lead to not enough relevant knowledge base after finishing the study at the best universities of the World.

At the fundamental level of atoms and subatomic particles, the familiar "classical" physics that accounts for how objects move

around gives way to quantum physics, with new rules that need to understand a big extent of intuition. Traditionally these are expressed as paradoxes: particles that can be in two places at once, cats that are simultaneously alive and dead, apparently impossible faster-than-light signaling between distant particles. But quantum rules are perfectly logical and consistent – the "paradoxes" are result of our trying to impose on them the everyday reasoning of classical physics.

Over the past several decades we've come to understand that the classical and quantum worlds don't exactly operate by "different" rules. Rather, the classical world emerges from the quantum in a comprehensible way: you might say that classical physics is simply what quantum physics looks like at the human scale.

All the same, we're confronted with the question: why is the quantum world the way it is? Why do fundamental particles dictate this set of rules and not some other? Normally that question carries an implication that quantum particles are being a bit perverse by not behaving like billiard balls, reassuringly solid and definite and thing-like. But that might be the wrong way to think about it. Romanian-British physicist Sandu Popescu of Bristol University in England declared that things could have been even stranger than quantum. We are not even completely sure that things aren't even stranger. Maybe we just haven't detected this extra strangeness yet. This hypothetical "super-quantum" world comes into view by thinking about what now seems to be the defining characteristic of quantum theory: the nonlocality.

Increasingly, it looks as though we have come at quantum mechanics from the wrong direction. At first it seemed to be about how energy is not continuous but is divided up into discrete chunks (quanta). Then it seemed to be about how quantum objects have to be described by smeared-out, wavelike mathematical entities called wave functions. Then, the question became how all the possible states of an object encapsulated by a wave function get crystallized into just one state when we measure it using classical apparatus.

### **Quantum Entanglement**

But in 1935, Einstein and two younger colleagues unwittingly stumbled upon what looks like the strangest quantum property of all, by showing that, according to quantum mechanics, two particles can be placed in a state in which making an observation on one of them immediately affects



the state of the other—even if they're allowed to travel light years apart before measuring one of them. Two such particles are said to be ENTANGLED, and this apparent instantaneous action at distance" is an example of Quantum Nonlocality.

Erwin Schrödinger, who invented the quantum wave function, discerned at once that what later became known as nonlocality is the Central Feature of Quantum Mechanics, the thing that makes so different from classical physics. How, then can travel faster than light the entangled particles apparently? We know that entanglement and nonlocality don't violate relativity. Although a measurement here does seem to instantly affect what happens there, you can't actually send any faster-than-light signal or information this way—because you can only verify the effect of the measurement elsewhere by exchanging information classically. You could say that two entangled particles aren't really two particles at all, but have actually become one single, nonlocalized quantum entity.

Alternatively, nonlocality can be regarded as an indication that the properties of a quantum object needn't all be located on the object itself. There is no classical analogue: it doesn't really mean anything to say that the speed or color of a tennis ball are not entirely situated on the ball itself. But that's what the quantum world is like!

### **Quantum Mechanics as Theory of Information**

Quantum nonlocality seems almost ingeniously designed, then, to allow an event at one place to have instant consequences elsewhere without violating relativity.

What if A and B boxes can communicate using quantum nonlocality? Now box B can instantaneously use some information about what box A has done to switch its output. It's possible to show that these quantum rules raise the possible success rate to about 85% success—not perfect, but good. Can we get 100% success? Yes, Popescu and Rohrlich showed, we can—if we allow the boxes even more nonlocal exchange of information than the rules of quantum mechanics permit. That's possible, they say, still without violating relativity. These super-quantum boxes have become known as Popescu-Rohrlich (PR) boxes. The question becomes not so much why nature isn't completely classical, but why it's not more quantum. This improved performance comes down to the efficiency of sharing information between PR boxes. In general, communications are very inefficient because they involve exchanging lots of

information that doesn't actually feature in the final answer.

Quantum nonlocality can reduce some of this redundancy of information, but not all. But if we have PR boxes, they can remove it all. For certain types of information, there is a sharp boundary between what can be done in quantum mechanics and what can be done with super-quantum PR boxes. So they tell us that quantum nonlocality is actually a measure of the efficiency with which different systems can communicate and share information. Quantum mechanics is a set of rules with which some outcomes of information sharing and processing are possible, while some are not.

Given their super-efficiency, PR boxes could do computation even faster than quantum computers. Sure, the World looks quantum-mechanical, not super-quantum. The question becomes not so much why nature isn't completely classical, but why it's not more quantum! All this fits with a growing conviction among many physicists that quantum mechanics is at root a theory not of tiny particles, but of information!

### **Computer codes embedded in string theory**

The idea that we live in a holographic universe that uses a form of quantum computer code to create the physical reality is not a new idea. In the 1940s, several physicists suggested that we live in a computer generated universe. Physicist James Gates talks today about this form of computer code: which he refers to as "adinkras" (Gates, 2008). It is interesting to hear that physicists of today are finding evidence that the Universe is a giant hologram.

How this reality works at the fundamental levels? When we paint a picture or model a three dimensional object using computer software, all the instructions are processed by the Central Processing Unit (CPU) and its counterparts before they are projected onto the screen. This process happens almost instantaneously and it shows that instructions are processed by the CPU before they are used to create the computer generated object. In sense, our picture or three-dimensional model is nothing more than a perception of the CPU. (Günhan, 2014)

At this level, our artwork will look like flashes of electrical currents. This analogy of how a computer works is similar to how our minds and consciousness create our illusionary external reality! It is at this moment we are tricked into believing that our reality made of solid materials. We do not see our picture as ones and zeros,



because the CPU and its counterpart process the binary codes as colors and shapes.

The simple process of using binary codes to create things within the hardware of computers is similar to how Creation creates our external reality or material world. The material world works very similar to virtual reality! At its core, the material world is made of only light (energy) that flashes on and off to create energy codes. The idea that we live in a holographic universe is very real! With the invention of quantum computers, we can be able to prove this beyond a reasonable doubt. It means that the Universe was created by an intelligent creator, and therefore it was not created by accident. In other words, the Prime Creator exists!

Working on a branch of physics called supersymmetry, James Gates Jr., discovered what he describes as the presence of codes in the laws describing physics. Specifically, within the equations of supersymmetry he has found, quite unexpectedly, what are called “doubly-even, self-dual, linear-binary error-correcting block codes” (Gates, 2008). J. Gates explains: “This unsuspected connection suggests that these codes may be ubiquitous in nature, and could even be embedded in the essence of reality. If this is the case, we might have something in common with the Matrix science-fiction films, which depict a world where everything human being’s experience is the product of a virtual reality-generating computer network.” (Chang, 2015; Carson, 2016).

### Is the Universe a fantastically complex Simulation?

David Chalmers, a philosopher at New York University regularly questions the reality that conscious minds perceive. The problem is that any evidence we could ever get would be also simulated...James Gates Jr. pointed out that such a simulation would mean reincarnation was possible-the simulation could always be run again bringing everybody back to life! It starts to break down a very funny barrier between what people often think is the conflict between science and faith. Whether we are actually simulated or not, we must go out there and live really interesting lives, and do unexpected things, so the Simulators don’t get bored and shut us down (Lewin, 2016).

### The twofaced new main law of Nature

The quantum entanglement is a basis of twofaced reality in which we are living our lives. From this reality are outgoing also the science and healthcare too. Although metastasis is important for systemic

correlations expansion (as in tumors), it is a highly dichotomous process, with millions of cells being required to disseminate to allow for the selection of cells-correlates aggressive enough to survive the metastatic cascade. To quantify the dynamics of metastasis of correlations development, we need look at the incidence of metastases in terms of co-occurrence at every point of time. To quantify co-occurrence we can use the  $\varphi$ -correlation between dichotomous variables defined as:

$$\frac{N_X(t)C_{ij}(t) - m_i(t)m_j(t)}{\sqrt{m_i(t)m_j(t)[N_X(t) - m_i(t)][N_X(t) - m_j(t)]}}$$

where  $C_{ij}(t)$  is the number of co-occurrence at time t. Than i and j represent particular site of metastasis, X represents the primary correlations type. The pair-wise correlations between metastasis network links for every primary correlations types and lead to the correlation coefficient matrix.

The dichotomous correlations of the adaptation may be caused also by the Quantum Entanglement Relative Entropy as a measure of distinguishability between two quantum states in the same Hilbert space. The relative entropy of two density matrices  $P_0$  and  $P_1$  is defined as  $S(P_1|P_0) = tr(p_1 \log p_1) - tr(p_1 \log p_0)$ . When  $P_0$  and  $P_1$  are reduced density matrices on a spatial domain D for two states of a quantum field theory (QFT), implies that  $S(P_1|P_0)$  increases with the size of D. Than  $\Delta S_{EE} = -tr(p_1 \log p_1) + tr(p_0 \log p_0)$  is the change in entanglement entropy across D as one goes between the states.

When the states under comparison are close, the positivity is saturated to leading order:  $S(P_1|P_0) = \Delta \langle H_{mod} \rangle - \Delta S_{EE} = 0$ .

The problem of conventional adaptation may be given by a definition of static, deterministic world. The proliferative correlations lead to the resonances between the degrees of freedom. When we increase the value of energy, we increase the regions where randomness prevails. For some critical value of energy, chaos appears: over time we observe the exponential divergence of neighboring trajectories. For fully developed chaos, the cloud of points generated by a trajectory leads to diffusion. (Prigogine, 1997) Here we must as first formulate



a new *Main Natural Law: the Quantum Entanglement Entropy (QEE)* (Skopec, 2015). Through above resonances the QEE is causing a *metastasis of correlations*, antagonistically intertwining all types of potentially *conflicting interests* (Skopec, 2016).

### Examples of the QEE codes

The National Institutes of Health (NIH) has made a major push to fund translational medicine, especially within biomedical research, with a *focus on cross-functional collaborations* (e.g., between researchers and clinicians); leveraging new technology and data analysis tools; and increasing the speed at which new treatments reach patients (Skopec, 2016).

Another *masked* problem of *dichotomous correlations in cancer* arose from conflicting effects of *E-cadherin* and *p120, adhesion proteins* that are essential for normal epithelial tissues to form, and which have long been considered to be *tumor suppressors*. New study has found that this hypothesis didn't seem to be true, since both E-cadherin and p120 are still present in tumor cells and required for their progression. That led researchers to believe that these molecules *have two faces: a good one*, maintaining the *normal behavior* of the cells, and *a bad one*, that drives *tumorigenesis*. It uncovers a *new strategy* for cancer therapy (Kourtidis *et al.*, Mayo Clinic, 2015). This finding represents *an unexpected New Biology* that provides *the code, the software* for *turning off cancer*.

The new study, published in the journal Nature brings the result that cancer is mostly caused by factors like environmental influences. Such extrinsic factors cause amount to 70 percent to 90 percent of all cancers, said researchers at Stony Brook University in New York. Yusuf A. Hannun was the study's senior author, and Song Wu was the study's first author. The current epidemiological evidence strongly supports an important role of environmental factors in the development of cancer. For example, people who stop smoking at 55 years would cut their lung cancer risk by half compared with those who continue smoking by 85 years of age. HBV vaccine has resulted in the reduction of hepatocellular carcinoma incidence by 70%. These results demonstrate that large proportion of cancer is caused by environmental factors and are preventable if their underlying environmental causes are identified. (Wu *et al.*, 2016)

### Conclusions

If two black holes became entangled, they would create a wormhole (a shortcut in spacetime), predicted by general relativity. This discovery (nicknamed ER=EPR, after physicist shorthand for wormholes and entanglement). It could entangle multiple particles of certain kind at one location with particles of a different kind at the same location.

A theory that describes gravity from a quantum perspective is known as the holographic principle. This principle suggests that some physical theories are equivalent to simpler theories that work in a lower-dimensional Universe. In the same way that a 2-D postcard with hologram of a unicorn on it can contain all the information necessary to describe and portray the 3-D shape of the unicorn.

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Working on a branch of physics called supersymmetry, James Gates Jr., discovered what he describes as the presence of codes in the laws describing physics. Specifically, within the equations of supersymmetry he has found, quite unexpectedly, what are called "doubly-even, self-dual, linear-binary error-correcting block codes". There is a growing body of literature on error-detecting/correcting codes, which focuses on codes containing code-words. The very definition implies that we need learn also codes consisting only of doubly-even code-words, i.e., the Hamming weight of every code-words.

Binary  $[N, \mathcal{K}(N)]$ -codes are maximal in the information-theoretic sense guaranteed by Shannon's theorem: the fraction  $k/N$  is called the information rate of an  $[N, k]$ -code and measures how much of the information is being transmitted. The maximal  $\mathcal{K}(N)$  therefore corresponds to the maximal information rate (Doran *et al.*, 2008).

A similar error-correcting process works during the replication of DNA; organisms whose genetic material got too mangled would not survive. That led researchers to believe that these molecules *have two faces: a good one*, maintaining the *normal behavior* of the cells, and *a bad one*, that drives *tumorigenesis*. It uncovers a *new strategy* for cancer therapy (Kourtidis *et al.*, Mayo Clinic,



2015). This finding represents *an unexpected New Biology* that provides *the code, the software* for *turning off cancer*.

The Theory of Connectivity proposes that the origin of intelligence is rooted in developmentally pre-configured power-of-two-based permutation coding logic ( $N = 2^i - 1$ ), producing specific-to-general cell-assembly architecture capable of generating specific perceptions and memories, as well as generalized knowledge and flexible actions. Several observations suggest that the brain's basic computational algorithm is indeed organized by the power-of-two-based permutation coding logic (Xie *et al.*, 2016).

David Chalmers, a philosopher at New York University regularly questions the reality that conscious minds perceive. The problem is that any evidence we could ever get would be also simulated. James Gates Jr. pointed out that such a simulation would mean reincarnation was possible-the simulation could always be run again bringing everybody back to life! It starts to break down a very funny barrier between what people often think is the conflict between science and faith.

Philosopher Daniel Denett coined the term "the Cartesian Theater", what is a metaphor for the view of dualism, originated by Descartes (inventor of the Cartesian coordinate system). The idea of the Cartesian Theater is that somewhere in the brain, there is a perceptual space that contains the contents of consciousness. Implied by the supposition of this space is that there must also be a viewer (or viewing process) that is the experience of this content. So we think that coded by "God's Code" means a selection, much more complex than Darwinian one, through the coding by Quantum Entanglement Entropy, lead to consciousness explained without over-simulation of the Cartesian Theater.

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## References

- Carson B. <http://theawakening.com/theoretical-physicist-james-gates-finds-computer-code-in-string-theory-equation/#sthash.Zz55rSjf.dpuf>. 2016.
- Doran CF, Faux MG, Gates SJ Jr., *et al.* Relating Doubly-Even Error-Correcting Codes, Graphs, and Irreducible Representations of N-Extended Supersymmetry. arXiv:0806.0051v1 [hep-th] 31 May 2008.
- Günhan AC. A Toy Model For Memory: Memory Can be Represented by a Quantum Mechanical Wave Function. SDU Journal of Science, 2014; 9(1): 125-129.
- Chang PL. <http://www.sott.net/article/301611-Living-in-the-Matrix-Physicist-finds-computer-code-embedded-in-string-theory-.2015>.
- Lewin S. Is the Universe a Simulation ? Scientists Debate. <http://www.space.com/32543-universe-a-simulation-asimov-debate.html>. 2016.
- Maldacena J. The Illusion of Gravity. Scientific American 2005; 293: 5, p. 33-39.
- Mayo Clinic. Discovery of new code makes reprogramming of cancer possible. ScienceDaily. [www.sciencedaily.com/2015/08/150824064916.htm](http://www.sciencedaily.com/2015/08/150824064916.htm). 2015.
- Prigogine I. The End of Certainty. Time, Chaos, and the New Laws of Nature. The Free Press, New York, 1997, p. 175-179
- Skopec R. Intelligent Evolution, Complexity and Self-Organization. NeuroQuantology 2015; 13: 299-303.
- Skopec R. Translational Biomedicine and Dichotomous Correlations of Masking. Translational Biomedicine 2016; Vol. 7, No. 1: 47.
- Smith TT, Stephan SB, Stephan MT, *et al.* In situ programming of leukemia-specific T cells using synthetic DNA nanocarriers. Nature Nanotechnology 2017; doi:10.1038/nnano.2017.57.
- Xie K, Fox GE, Tsien JZ *et al.* Brain Computation Is Organized via Power-of-Two-Based Permutation Logic. Front. Syst. Neurosci. 2016; 10:95. doi: 10.3389/fnsys.2016.00095
- Wu S, Powers S, Hannun YA. Substantial contribution of extrinsic risk factors to cancer development. Nature 2016; 529, 43-47. doi:10.1038/nature16166.

