

Seeing the Anatomy of Quantum Gravity through Formula of Everything

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Abstract – The prior publication of “The Time Theory of the Universe” reveals the true nature of time as “electromagnetic speed of relativistic scaling” through formula of everything. The formula of everything, $dt/dm = Um + 4m$ depicts relationship between “time and mass”, “time and energy” and “energy and mass” as inverse. This inverse relationship necessitates the emergence of spontaneous symmetry breaking that connects classical realm to quantum by converting “time-to-energy” phase of classical realm to “energy-to-energy” phase of quantum realm. The time-quantized value of classical mass is entangled to a counterpart in quantum realm. However, the two entangled masses are suspended far apart by measurable and feasible range. Therefore, this publication, “Seeing the Anatomy of Quantum Gravity through Formula of Everything” elucidates the formation of mass of particles at the low-energy state as energy travels inversely via entanglement of time-relativistic scaling. This mass of particles causes the curvature of spacetime at quantum level to emerge quantum gravity. The impact of classical gravity is instantaneously expressed at quantum level and vice versa. Formula of everything illustrates the unification of quantum realm to classical realm as quantum entanglement of time-relativistic scaling to and from classical realm via strong-weak conveying interactions.

Index Terms – Formula of everything, quantum gravity, relativity, time, time-speed is faster than the speed of light, time dilation, time travelling, unifying force of the universe, universe.

1.0 INTRODUCTION

It is conceived by an inspired instinct that quantum entanglement is similar to repulsive scaling exhibited by big bang explosion at classical level. Meanwhile, repulsive and attractive relativity-scaling reactions which deck the bonce of classical realm as diadem are similar to repulsive and attractive natures of electric charges in quantum realm. It is therefore necessary to envisage that there must be a connecting point where quantum realm is entangled to classical realm.

This afore-stated connectivity eludes our comprehension for many years because we fail to understand that time is inversely related to energy in order to generate a force which will enforce equilibrium point. More so, gravity is the curvature of spacetime. Therefore, spacetime cannot be treated as background in quantizing gravity. The inverse interaction of time to energy forms mass of particles at low energy state to implement curvature of spacetime towards equilibrium point in position phase or exhaustion of entropy at high energy state to change the movement course toward equilibrium point in momentum phase.

Formula of everything ($dt/dm = Um + 4m$) exposes the needed symmetry breaking for quantum gravity to emerge. Spontaneous symmetry breaking is introduced by time-relativistic scaling far beyond the high temperature of big bang explosion to form mass and life at classical level. Therefore, particles' disorder at high temperature of big bang explosion transformed into masses by time-relativistic scaling which is far into a condensed atmosphere where convergence is feasible.

Meanwhile, the spontaneous symmetry breaking goes from classical realm into quantum realm as indicated through the application of “Formula of Everything”: “Um” of the formula is denoted as strong conveying force while “4m” is tagged weak conveying force. The value of weak conveying energy is suspended to the value of strong conveying energy by inverse quantum entanglement. The course of movement changes at maxima, the point where classical “mass-worth” is entangled to the point where “mass of particles” is fully formed at low energy state to cause curvature. At the stage of spontaneous symmetry breaking, mass of particles can then travel conveniently in the same direction of energy since the energy has been weakened and exhausted by the elongation caused by time-relativistic scaling. This development will enforce new flavour which will energize time-relativistic scaling and thus make energy and mass of particles to travel toward the time direction. Mass of particles is the reality of “quantum gravity” while relativistic scaling of time is the controlling force of “classical gravity”. Mass of particles is a constructive and fully emphasized energy wave, thus invokes a need for conversion of “time-to-energy” phase to “energy-to-energy” phase as central-scaling mechanism of time at “the present” of classical realm is swapped with energy-driven mechanism of time-relativistic scaling toward the exhausted energy of the past in quantum realm.

Meanwhile, Maxima emerges at the point where entropy is at the highest disorder as energy travels against time-narrow scaling to breed high temperature. This development changes the course of movement

toward the equilibrium point. The formation of “mass of particles” enforces path for particles to travel through, thereby cancels out noise to eject “energy-worth” through equilibrium outlet. But high temperature at maxima which generates highest entropy-disorder will eject weakened noise at equilibrium outlet.

Meanwhile, position of converged particles at low temperature where relativistic time-entanglement to energy in inverse relationship has developed a mass of particles which is feasible in the past phase rear to the time peregrination or feasible at highest point of time-dilation against energy for more spacious atmosphere to lower temperature for convergence of mass at quantum level. But momentum on the other hand is the alternating reinforcement of energy through relativistic scaling of time to generate noise in entropy-disorder at fore-front of time.

Therefore, **alternating entanglement of time-energy wave function for precise capturing of “position” and “momentum” of electron or quantum gravity is synonymous to alternating aperture and shutter speed in order to precisely capture some sport events or motion-inclined activities.** Alternating entanglement may then be defined as the oscillating interference of time and energy back and forth through relativistic scaling powered by time and necessitated by quantum gravity (position phase), and entropy (momentum phase) of time-energy wave function. Time-energy wave function is derived and illustrated in one of the chapters below.

When an aperture of $f/2.8$ is configured to widen aperture lens for more light to enter, a shutter speed of $1/2000$ must be configured to reduce the amount of entering light for clear and stable capturing. So, when time scaling is widened or made high by time-dilation, energy must be narrow or lowered by formation of mass of particles in order to define path and capture accurate “position” as time travels inversely to energy at quantum level. But inverted is the case as energy is wide or high while time scaling is narrow or low to capture “momentum”. The “position” phase of time-energy wave function must experience the wide-scaling of time against energy for more spacious and cool-atmospheric condition that will permit the convergence of particles through the acquired energy-potential of such inverse action to generate **quantum gravity** as necessitated by spontaneous symmetry breaking. But “momentum” phase of time-energy wave function reinforces energy after the minima point to widen its temperature as a result of the emergence of

entropy necessitated by the narrow-scaling of time toward and behind energy to generate compactness that inflates entropy through the use of energy.

The above situation is illustrated by “formula of everything” as follows:

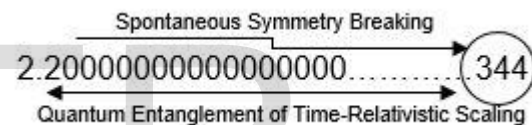
For mass of 86kg, we have:

$$\frac{dt}{dm} = Um + 4m$$

$$\frac{dt}{dm} = 2.5 \times 10^{39} (86kg) + 4 (86kg)$$

$$\frac{dt}{dm} = 2.2 \times 10^{41} + 344$$

$$\frac{dt}{dm} = 2.20 \times 10^{41}$$



It must be noted that the final answer is appended with zero, thus made “2.2” to be “2.20”. An array of zeros of “10³⁸” has suspended 344 (mass-worth), and that is the point of transition from classical realm into quantum realm. The suspension is the needed spontaneous symmetry breaking which will allow for quantum gravity that connects mass-worth of 86kg of classical realm, through quantum entanglement, to a corresponding energy-worth of 86kg in quantum realm. The stretched energy is at maxima of energy exhaustion and that will trigger a change of movement as neutrons that are not at the nucleus are unstable to attract the radioactivity of a weak force for conversion of unstable neutrons to protons by w^- bosons to generate electron and anti-neutrino. The suspension-stretch is the quantum entanglement of time relativistic scaling with the speed value and force that outstrips the speed of light. The question that may come to mind is: Why is “344” mass-worth suspended by zeros of “10³⁸” when the total stretch of zeros should be “10⁴¹”, the total power of time-stretch in the “formula of everything”? The no-locality of quantized wave nature must be localized by measurement as “position” is defined within the wave of “momentum”. Suspension limit or spontaneous symmetry breaking is a vital tool for gauging the quantized gravity within a measurable

and feasible range. Mass formation is not feasible at the extreme end of time peregrination where time-scaling is zero and mass of particles cannot survive at the energy-core of intensive heat necessitated by time-scaled compactness. However, the suspension range is either narrowed down as classical mass is smaller or widened as classical mass is bigger.

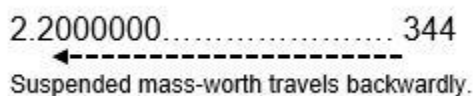
However, the relativistic scaling of time in form of quantum entanglement has stretched “energy” to the maximum point where energy is completely exhausted at the final formation of classical mass-worth. Therefore, the course of movement is ready to change toward the direction of “energy”. This change of movement is not possible without accumulating additional mass instead of energy-worth if energy is not exhausted to generate spontaneous symmetry breaking. For by nature, energy to mass movement is inversely related.

I denote “mass” of classical realm “mass-worth”, for it has added value by the virtue of time-relativistic scaling which catapults it into the realm of time. Mass-worth then travels reversely as follow:

$$\frac{3.4}{10^{38}}$$

$$3.4 \times \frac{1}{10^{38}}$$

$$3.4 \times 10^{-38}$$



At the time-dilated scaling of 2.20×10^{41} , 86kg classical mass in “344” worth of time-scaling is converted and we have a counterpart of 3.4×10^{-38} as either position of mass of particles or quantized energy-worth of mass of particles for 86kg which is narrowly adjusted by time-relativistic scaling to effect balance in both classical realm and quantum realm. Gravity is the curvature of spacetime and inverse trip of mass of particles toward the low energy-state is the **quantum gravity** that causes the curvature of spacetime as illustrated through time-energy wave diagram in later chapter.

In this research, we will explore the anatomy of quantum gravity through the application of “Formula of Everything” and through the illustration of “Time-energy Wave Function”. Therefore, join me to unravel

the mystery of “Quantum Gravity” as inspired by Almighty God.

2.0 QUANTUM GRAVITY AS DISSECTED BY FORMULA OF EVERYTHING

A case study of 86kg example illustrated in “The Application of Formula of Everything” section of “The Time Theory of the Universe” research papers indicates that weak force has no effect on strong force. No mass accumulation at the speed of time but accumulation of energy-worth, for energy is already exhausted at the point where mass-worth is suspended in order to enable mass-worth to travel in the same direction of energy to accumulate mass of particles instead of additional mass. “Energy-worth” will be referred to as, or interchangeably used with “mass of particles”. Alternating entanglement of energy-worth at quantum level propels time farther than the speed of light in expanding the universe at classical level. Therefore, 344 value of weak force is suspended by 2.20×10^{41} value of strong force as spontaneous symmetry breaking caused by relativistic scaling of time allows for reinforcement which will annihilate the suspended interval of 0s in “ 10^{38} ” to 344:

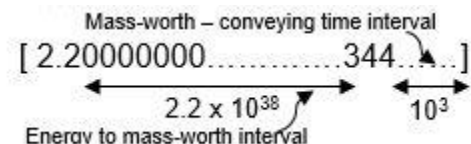
The suspension is thus implemented in time-relativistic scaling as follows:

$$\frac{dt}{dm} = Um + 4m$$

$$\frac{dt}{dm} = 2.5 \times 10^{39} (86kg) + 4 (86kg)$$

$$\frac{dt}{dm} = 2.2 \times 10^{41} + 344$$

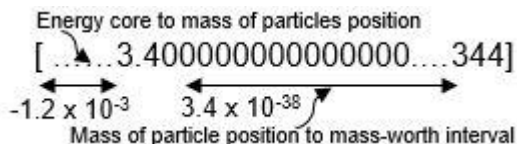
$$\frac{dt}{dm} = 2.20 \times 10^{41}$$



$$\frac{3.4}{10^{38}}$$

$$3.4 \times \frac{1}{10^{38}}$$

$$3.4 \times 10^{-38}$$

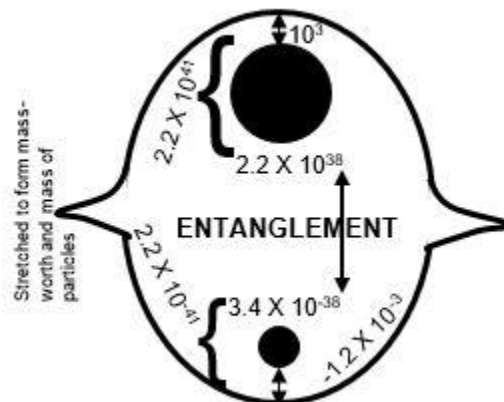


Gravity is the curvature of space-time and that is why it is difficult to be quantized, for it cannot be treated as background in quantum gravity actualization or feasibility. Quantum gravity requires substantial energy or force of "mass of particles" to cause the curvature of space-time. Since spacetime is the fabric of instance architecture which houses both quantized entities and classical entities in the universe, then curvature of spacetime is essential and inevitable at both levels for gravity. Microwave from the past is the information of the present, and it transcends into the future. Therefore, the "time-energy wave function" is an expression of quantum particle interactions through virtual particles into classical realm and transiting from classical realm into the quantum realm as triggered by spontaneous symmetry breaking that links the classical "mass-worth" to quantum "mass of particles" via time-relativistic scaling (quantum entanglement) by the constant speed of the universe to achieve the needed energy and force for curvature of spacetime at quantum level.

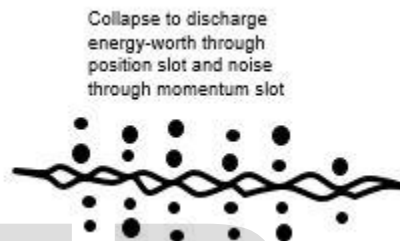
THE TIME-ENERGY EXPANDING AND COLLAPSING MECHANISM

Collapsing of time-energy wave function could be likened to "a doubly folded belt that is inwardly squeezed in order to form upwardly shaped oval with empty space inside. This entangled empty space which formed oval shape is collapsed when the belt is drawn outwardly. The upper entangled region collides with the lower entangled region to make an audible sound as energy is emitted into the air."

Time-energy Wave Expanded



Time-energy Wave Collapsed



The "momentum" is 2.2×10^{-41} , while "position" is 3.4×10^{-38} as non-locality of quantized wave nature is localized by measurement within the wave of momentum. The value of mass of particles is sure to generate virtual particle by satisfying the condition that allows for virtual particle interaction as a change in energy multiplied by a change in time is less than $h/4\pi$, for higher mass results in shorter time of existence, thus shorter effective distance. The stretched energy is at maxima of energy exhaustion which will trigger change of movement as neutrons that are not at the nucleus are unstable to attract the radioactivity of a weak force for conversion of unstable neutrons to protons by w^- bosons to generate electron and anti-neutrino. Time-energy wave function collapses to eject "energy-worth" through position-phase outlet, while "noise" is ejected through momentum-phase outlet.

Meanwhile, time-energy interval is expanded as "mass-worth" of time-quantized value of 86kg (344) of classical realm is entangled to "mass of particles" of quantum realm. The energy gap eliminates noise and defines definite path and precise entanglement to the supposed "mass of particles". Quantum entanglement by nature can get entangled to anything in its proximity, and noise usually interfere to make the actual position of entanglement in superposition highly unpredictable. For at that point, it becomes probability

distribution for the entangled wave functions. "Formula of Everything" solves these issues by implementing spontaneous symmetry breaking that breeds stable time-quantized "mass-worth" and enforces the "mass-worth" to travel reversely after the maximum point of energy exhaustion is reached in order to convert "mass-worth" to "energy-worth" for quantum gravity. However, the suspension range of "mass-worth" in spontaneous symmetry breaking differs as mass of classical realm increases or reduces.

$$\Delta E \Delta t < \frac{h}{4\pi}$$

Then it is sure to generate virtual particles for quantum interaction as:

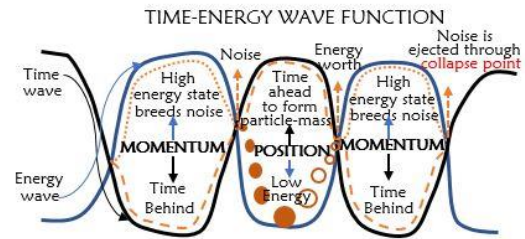
$$3.4 \times 10^{-38} < 5.3 \times 10^{-35}$$

Suspension of weak force to strong force by time-relativistic scaling is the energy potential for strong-weak conveying force interaction or high-low energy interaction which results in curvature of space-time to stir gravity at quantum level. Spontaneous symmetry breaking is the factor which necessitates the essence of quantum gravity by time-relativistic scaling. Expansion in time-relativistic scaling creates entities by adhesive convergence while expansion at the level of light-speed is an entropy of repulsive reaction. This afore-stated comparison confirms the reason time must be faster than the speed of light. A mass is formed in a longer than the speed of light period as time travels inversely to the energy and that causes space-time curvature at the quantum level. Quantum gravity is the curvature of spacetime by this relationship, and conveying lower speed of energy to time in time-relativistic scaling is an indication of mass of particles formation that curves the spacetime.

"Formula of Everything" further proves that time is way faster than the speed of light by the relativistic reinforcement (alternating entanglement) caused by strong-weak conveying force interaction. Only in time-energy interval or conservation of energy can mass be manufactured (position) as energy dispatched by inverse reaction to time-scaling is conserved in mass of particles formation, while only in energy-time interval or momentum conservation will noise be generated (momentum) as energy exerted by inverse relationship to time-scaling is conserved as entropy. Time expands space by its inverse relationship to energy in order to

form mass and "energy-worth" is released as time and energy collapsed. This noise is released when energy and time collapse at momentum phase to form interference patterns of wave when time and energy oscillate back and forth.

3.0 DERIVATION OF TIME-ENERGY WAVE FUNCTION



$$\nabla \times \vec{E} = - \frac{dt}{de}$$

$$\nabla \times (\nabla \times \vec{E}) = - \frac{d(\nabla \times t)}{de}$$

$$\nabla \times (\nabla \times \vec{E}) = - \frac{1}{U^2} \frac{d^2 t}{de^2}$$

The above section is "time-energy wave inverse interaction" at second order derivative where "U²" is the constant speed of universe squared. The stretched entanglement is of "U²" intervals from "strong conveying force-energy" to "mass-worth" and "mass worth" to "mass of particles".

To integrate vector structure in order to have the wave equation in 3-dimensions, we implement the following:

$$\nabla \times (\nabla \times T) = \nabla(\nabla \cdot T) - \nabla^2 T$$

Where capital "T" is some placeholder vector. We now apply as follows:

$$\nabla(\nabla \cdot \vec{E}) - \nabla^2 \vec{E} = - \frac{1}{U^2} \frac{d^2 t}{de^2}$$

$$\nabla^2 \vec{E} - \frac{1}{U^2} \frac{d^2 t}{de^2} = 0$$

To solve for mass formation of particles as suspended in time-relativistic scaling, we have:

Since the total for a relativistic particle with mass “m”, according to special relativity, is:

$$E^2 = p^2 c^2 + m^2 c^4$$

We need to substitute “U” for “c”, for time-energy wave function propels at the constant speed of universe not at the constant speed of light.

Therefore, we have;

$$\frac{d^2}{d^2 E} - \frac{1}{U^2} \frac{d^2 t}{de^2} = -\frac{1}{h^2} \left(p^2 - \frac{E^2}{U^2} + m^2 U^2 \right)$$

$$\frac{d^2}{d^2 E} - \frac{1}{U^2} \frac{d^2 t}{de^2} = -\frac{U^2 m^2}{h^2}$$

Now we can rearrange and easily generalize this to 3-dimensions by turning this equation into vector equation with wave and particle duality behaviour of wave function.

$$\nabla^2 \Psi(\vec{r}, t) - \frac{m^2 U^2}{h^2} \Psi(\vec{r}, t) = \frac{1}{U^2} \frac{d^2 t}{de^2} \Psi(\vec{r}, t)$$

$$\frac{d^2 \Psi}{d^2 E} - \frac{m^2 U^2}{h^2} \Psi = \frac{1}{U^2} \frac{d^2 t}{d^2 \Psi}$$

Electric field is formulated in space of time intervals. There will be no electric field without inverse movement of time to energy. Little wonder! Electrons spin anticlockwise while travel in positive time peregrination and vice versa. The expansion of “time” in inverse relativistic scaling to “energy” is the quantum entanglement that generates electric field. Meanwhile, “-1/U²” indicates the inverse relationship of time to energy by relativistic scaling to set low energy state based on second-order derivatives for the formation of “mass of particles” as position or high energy state based on second-order derivatives for the formation of noise (unstable particles) through entropy as momentum.

The second order derivative of electric field in upward slope towards the second order derivative of time in relativistic scaling to energy will exchange at equilibrium point where mass of particles is collapsed as “energy-worth”.

After the collision, energy crosses time towards high-energy state to form entropy as momentum phase.

Time-energy wave function illustrates the operations of time-dilation at quantum level. Just as time-dilation causes gravity at classical level, so also does it affect gravity at quantum level. Time runs faster at the gravity-invoking rotation or movement of classical mass in order to expand space through curvature of spacetime for low-energy state as mass of particles is formed in space of time interval at quantum level, while time runs slower at momentum-invoking speed of high energy at classical level to narrow down the scaling of time for compactness that breeds high-energy state powered by entropy at quantum level. Mass of particles at low energy state causes curvature of space-time as quantum gravity.

The above situation thus explains the transition from classical gravity to quantum gravity or from quantum gravity to classical gravity as successfully merged by “formula of everything”, dt/dm = Um + 4m. This may be likened to volcanic eruption from the underground that leads to earthquake on ground level. The rotation of earth triggers expansion of spacetime to warrant low-energy state which allows for convergence of particles that generates mass of particles to cause curvature of spacetime at quantum level, and the resultant effect of it is experienced at classical gravity level.

If relationship between “time and mass”, “time and energy” or “energy and mass” wasn’t inverse, we would not have had big bang explosion resulted in repulsive reaction. Little wonder! The wave of magnet is perpendicular to that of the charged ions, it couldn’t have occupied the oppositely inverted position already obtained by time wave.

Expansion generates the needed energy potential for creation. Expansion in time relativistic scaling creates entities by adhesive formation, while expansion at the level of light-speed is an entropy of repulsive formation. Only in time-energy interval or conservation of energy can mass be produced (position phase), while only in energy-time interval or momentum conservation will entropy be manufactured

(momentum phase). Time expands space by its inverse relationship to energy in order to produce mass, but worth of energy is released when time and energy collapsed.

4.0 QUANTUM GRAVITY PARADOX

The emerging occurrence of unusual and inverse interaction in swapping the peregrination of time-relativistic scaling from central scaling point at “the present” in classical realm to singularity scaling point “the future” in quantum realm based on the reality of quantum gravity is called Quantum Gravity Paradox.

Time dilation at classical realm portrays “energy” as the fuelling projection of the future, “time” as the relativistic scaling of events into occurrence as reality of the present, while “mass” as the worth and value of both the present’s and future’s existence from the past. Let the future be tagged “high” or “front”, let the present be “centre” or “middle” and let the past be “low” or “back”. Energy must be high when time is low as rotative mass-impact causes curvature in spacetime for classical gravity to occur. But opposite is the case for quantum. Energy must be low when time is high as spinning mass of particles’ impact causes curvature in spacetime for quantum gravity to occur. Fast-to-slow relativistic scaling of time is the reality of things we could observe, measure and interact with in classical realm. But slow-to-fast relativistic scaling of time is the reality of things we couldn’t measure and interact with in quantum realm. Therefore, “energy” is observed to be the propelling force of the future, while the “time” is the relativistic scaling that brings about the occurrence of an event as reality of the present and “mass” is the worth of existence from the past into present as tangible mass in classical realm.

At quantum level, gravity via time dilation enforces “energy” to flip and become the past, “mass of particles” as the present, while “time” is the future. Therefore, “time” is observed as the propelling future of the present formed by “mass of particles” through the speed of alternating entanglement of “energy” from the past in quantum realm.

To better understand quantum gravity, we need to dissect gravity inside dark hole.

4.1 QUANTUM GRAVITY INSIDE DARK HOLE

According to the formula of everything, “time” becomes the future of “mass of particles” by suspension to the speed of energy (the past). Unlike the classical realm, where “energy force” is the future of “time” as time balances the higher speed of light in relativistic scaling to the speed of mass at the present phase.

Therefore, quantum realm is an inverse version of classical realm. This flip of reality is the reason for unpredictable nature of quantum entities until measured. If time scaling is visualized as timelines by which stages or phases of projects or changes are measured, then unmeasured phase or stage remain unrealized until reaching the stake of its execution on time scale. In classical realm, time-relativistic scaling is at the centre (the present), so any event drawn from the future or the past into the present becomes a reality. But the present state of event or occurrence in quantum realm has its reality in the future as time is flipped to be the future of unmeasured “mass of particles” (the present) and “energy” (the past).

Just as it takes time for scattered particles to converge and form a classical mass, so also it takes energy for suspended “mass of particles” to acquire more mass by the inverse flip that virtual particles (gauge bosons) will orchestrate at quantum realm. Time-scaling is the reality of classical realm as positive relativistic scaling of particles in a long stretched entanglement defines the visible and gigantic formation we observe as universe. On the other hand, “mass of particles” is the reality of quantum realm as the required energy to bridge the gap of symmetry breaking in reversed and negative scaling of time is the minuscule and compacted mass-formation we cannot observe.

Therefore, the relativistic scaling of time towards centre is the classical gravity, while the relativistic scaling of time in retracting force towards the energy is the quantum gravity which will necessitate the required energy force into singularity.

For instance, brother A, B and C set out to measure a long and horizontal distance with a very long rope of measurement-scaling. Brother A stood at a particular spot, while brother B and C unrolled the rope to another spot where brother B would stay. But when they both looked back into the direction of their brother, they could not see anybody standing afar. Brother C ordered brother B to go back to the earlier spot and confirm if their brother was still there. Brother B began to appear bigger to brother A as he was

approaching him. Meanwhile, brother B was appearing smaller to brother C. The transition from classical realm into the quantum realm is real as brother B, who was once big, when in close range, to brother C, turns out to be small at a long distance apart. If brother B should look back to check on brother C, brother C too would as well appear small to him. So where is the spot of quantum or classical realm in the illustrated scenario? Quantum realm is inter-woven with classical realm.

Quantum entanglement is the connecting virtue of quantum realm to classical realm. The interaction of quantum particles result in the formation of classical mass. The two entities are one via entanglement. The singularity from which big bang emerged is the past inlet of time-relativistic scaling into the widely formed present of timed energy for ageing realm, while the singularity of dark hole is the future outlet of time-relativistic scaling toward energized time-scaling of extremely narrow scope of zero time-reading as it flips the energy of classical realm to be the past in quantum realm. This is strange to what is obtainable in the classical realm. The flipping aims to launch the classical universe into ageless realm via singularity slot of dark holes.

The afore-stated illustration is confirmed to be true as astronaut twin in "twin paradox" had her age-progression reduced in spaceship trip into the future. What will happen if the speed of spaceship is faster than the speed of light? The twin age will reduce to zero, for she must have travelled in the speed of time to launch her into ageless realm via singularity of dark hole. Why do we have the spiral formation of galaxies around dark holes? Time is bending light via relativistic scaling in balanced motion to the speed rotation of dark hole mass. The universe is like oval which scaled wide in all directions from singularity of the past, and scaled narrow into the singularity of the future via time-relativistic scaling of entanglement.

6.0 THE ALTERNATING ENTANGLEMENT

The anti-clockwise spiral tail of galaxy to the clockwise spiral head of galaxy is a typical example of alternating entanglement in repulsive spread that expands the universe in all directions.

Alternating entanglement is the virtue which makes the measuring of "position" and momentum of quantized particles possible. The quantized measuring

technique of gravity is difficult because gravity is the warping of spacetime. Therefore, spacetime cannot be treated as a background field for gravitational field.

Meanwhile, spontaneous symmetry breaking is a vital feature that enforces the flipping of time peregrination as central scaling point at "the present" in classical realm to singularity scaling point at "the future" by converting "time-to-energy" to "energy-to-energy" in order to transit into quantum realm. Weak energy is suspended at the point where energy force is exhausted by relativistic scaling that has maximally stretched energy for spontaneous symmetry breaking. The suspension is hooked away from the extreme ends of both energy and time at low and high energy state ideal for formation of mass.

Alternating entanglement of time and energy for precise capturing of "position" and "momentum" of electron at quantum level or for achieving quantum gravity is synonymous to alternating an aperture and shutter speed for precise capturing of sport events or motion actions. When an aperture of $f/2.8$ is used to widen aperture scope, a shutter speed of $1/2000$ must reduce the amount of entering light for clear and stable capturing of the events or actions. When time-scaling is widened or made high by time-dilation, energy must be narrow or low to capture "position" at quantum level. And vice versa is the case when it is the turn of "momentum".

Inverse relationship of time to energy expands spacetime to filter out the fuzziness that compactness of narrow spacetime may cause. Inverse relationship of "time to energy", "energy to mass", and "time to mass" are keys to sustainable environment for quantum gravity. "time to energy" relationship is needed for huge spacing of spacetime, huge space of spacetime is needed for spontaneous symmetry breaking, and spontaneous symmetry breaking is needed for the activation of quantum gravity. Therefore, the application of $dt/dm = Um + 4m$ using 86kg of classical mass will give us as follow:

$$2.5 \times 10^{39}(86\text{kg}) + 4(86\text{kg})$$

$$= 2.2 \times 10^{41} + 344$$

$$= 2.2 \times 10^{41}$$

$$\text{Time-wide scaling: } 2.2 \times 10^{41}.$$

And energy-narrow scaling is as follow:

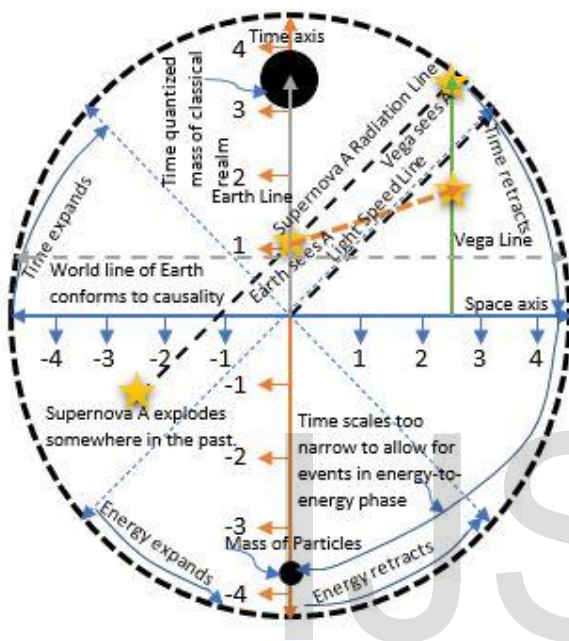
$$3.4/10^{38}$$

$$= 3.4 \times 1/10^{38}$$

$$= 3.4 \times 10^{-38}$$

7.0 THE TIME-ENERGY WAVE ARCHITECTURE THAT BYPASSES CAUSALITY

TIME-ENERGY WAVE ARCHITECTURE THAT BYPASSES CAUSALITY



Causality implies that “cause” must precede “effect” in a scenario where energy is timed. Causality is an event-validating mechanism, and we are going to use it to evaluate the possibility of faster than the speed of light travel (FTL).

The null line is the line of light-speed at angle 45 degree. Below that null line is the region of FTL while above the null line is the region for STL (Slower than the speed of light travel). The perception of earth trajectory is constant or stationary, so we tag it “world line”. Then time represents the y axis while that of x axis is represented by space. Meanwhile, the sloping of line across the null line indicates motion as time passes in relation to space. Let us assume that the neighbouring planet to earth is Vega and its trajectory is parallel to time axis just as that of the earth. This means that the trajectory is instantaneous, the most extreme FTL possibility. If supernova A explodes from somewhere in the past and reaches the earth, and before it could reach Vega, earth decided to send a warning message to Vega via FTL messenger. The FTL message branches from the earth point diagonally to

the Vega below the light speed line and Vega received it before the radiation of the supernova A reaches Vega. The time slice of earth perception is flipped to travel from the past into the future. The time slice, moments of simultaneity, are then parallel to the space-axis as it travels from the past into the future without breaking causality. But if STL line is added and flipped parallel to its diagonal trajectory, it will break the causality except the FTL message is removed. This is the presumed causality breaking that renders FTL impossible in our classical realm. However, the instantaneous travel of quantum entanglement will conform to causality just as time slice trajectory doesn’t violate causality, for time-scaling will be so narrow to allow for events in energy-to-energy phase. This implies that the speed of FTL machine must be extremely fast (instantaneous) to ignite energy-to-energy phase.

How can we get to dissect time without thorough scrutiny of quantum gravity paradox? Why is quantum gravity elusive in its mystery to humans? It is hypothesized that the future is an epitome of energy. How can this be adequately proved? The past is the worth of energy, the birth of exploded particles which travels the universe by entropy as the expanding spacetime is still adjusted to a narrow scope of relativistic scaling to allow for high energy that facilitates the entropy. The present depicts the conservation of energy through formation of mass in order to actualize the reality of existence as the expanding spacetime is wide enough at inverse relativistic scaling of time to low energy state (minima), so as to allow for a condensed atmosphere that will necessitate the needed convergence. Time is dilated at this point to allow for formation of entities, stable condition for visibility, feasibility, interaction and measurability at classical realm. The future is an epitome of energy as it returns to singularity which can be accessed by the speed of time. The time-relativistic scaling that narrows down the future devises it as funnel. The past expands from singularity into the present of wide phase which extends into the future of retracting phase to singularity.

When humans journey into the future at mass speed, they occupy the wide opening region of the funnel by tiny fraction. But the moment they travel by propelling force of a machine in speed close to the speed of light, they get quantized to travel through the narrow hole of the funnel via high energy acquisition as time-scaling is narrowed down for high energy state. Time must run slower when energy is high (ageing is

reduced). But time-scaling runs faster when energy is low (ageing is accumulated).

Why must there be “quantum gravity paradox” before the actualization of quantum gravity? The spacetime curvature is gravity. Therefore, gravity cannot be quantized when the present of classical realm is characterized by time-relativistic scaling while the past of quantum realm is an epitome of energy. The divergence of inverse relationship between time and energy will not allow it to work.

For quantum gravity to work, there must be a conversion of “energy-to-energy” instead of “time-to-energy”. Time-dilated scaling is the encapsulation of mass formation into reality at the present phase of classical realm. Mass must then travel at the speed of time which is faster than the speed of light to cause spontaneous symmetry breaking at the point where light-speed is exhausted (the future in quantum realm) in order to flip time ahead of “energy” by energy. This new development is the anatomy of quantum entanglement action to decide the state of entangled particles by measurement. Mass travelling at the speed of time has its mass time-quantized in classical realm by energy to flip time ahead of energy in quantum realm as it measures the catapulted mass of particles to determine the inverse position as suspended low energy state. This alternating entanglement is quantified by “formula of everything”, and it is much faster than the speed of light. The transition of classical gravity into quantum gravity is necessitated by spontaneous symmetry breaking.

Meanwhile, quantum gravity paradox is the solution to causality breaking in time travel. For energy-to-energy conversion is instantaneous trip with no time passing at all. FTL line is the line below 45 degree null line of light-speed travel while STL is above the angle 45 on time and space axis. The quantum entanglement alternates instantaneously. Since instantaneous or constant travel of earth perception does not violate causality in FTL travel, then instantaneous travel of quantum entanglement will not violate causality in FTL travel of mass of particles. **For when energy is timed, it causes events to occur and events are the evidences of physical occurrence. But when energy is energized, time is too narrow to allow for events but force. Meanwhile, when “time” is energized, the resultant effect is infinity (singularity).**

8.0 TIME AS THE FIFTH FORCE OF THE UNIVERSE

When energy is timed, it causes events to occur and events are the evidences of physical occurrence. But when energy is energized, time-scaling is too narrow to allow for event but force. The effect of force is unpredictable and unseen until it is applied. Meanwhile, singularity or infinity is the result we get when time is energized.

Therefore, the state of energy being energized is enforced by the relativistic scaling of time in narrow scope. The time-dilated scaling is the measure that captured or trapped the fuzziness or unstable nature of energy in stable condition for visible and measurable appearance. Energy-to-energy is the condition which must be satisfied before time could propel the mass of particles into the singularity where time-scaling is zero for ageless realm.

Time is the facilitator of force, it is the automation of moving energy. Time is the force of force. The relativistic scaling of time against energy is the force of a moving energy. The balanced motion of the universe is the relativistic scaling of higher force (time) to lower force (energy).

The whole existence of the universe is from singularity to singularity. Almighty God is the beginning and the end of everything. The whole essence of our being is within the domain of God’s grace. I’m forever grateful to Almighty God for giving me a rare chance to be an expression of His power. What about you?

CONCLUSION

Quantum gravity is the curvature of quantized spacetime at low energy state by mass of particles entangled to classical mass through the relativistic scaling of time necessitated by spontaneous symmetry breaking.

This publication reveals the operations and transitions of alternating entanglement as from when “energy is timed” (classical realm) through “energy is energized” (quantum realm) to “time is energized” (ageless realm). No entity in the universe is independent, every entity of the universe is one way or the other depends on another or more entities in the universe.

Fifth force of the universe is discovered as “time force”, the propelling force and the balanced motion of the universe. It is as well discovered that quantum realm is an inverse version of the classical realm via “quantum gravity paradox” which depicts the flipping of “time-to-energy” to “energy-to-energy” as facilitated by spontaneous symmetry breaking.

Meanwhile, time-travel bypasses causality as “energy-to-energy” phase is narrowly scaled, in time scope during FTL travel, in order not to give room to events that determine motion-like nature. Events are only feasible in time-to-energy phase not in energy-to-energy phase.

Quantum Computing:The energy-to-energy phase discovery will proffer solution to the challenges of quantum computing or to the manufacturing of quantum computers as energy gap between the entangled particles will define path and position that cannot be drifted by noise interference. More so, the act of using classical mass to retrieve the quantum counterpart eliminates the ambiguous nature of quantum entanglement to entangle to unsolicited particles in its surroundings.

Warp Drive Sustainability: Just as gravities of dark holes in the repulsive reactions of spiral galaxies implement the sustainability of the universe, so will the spinning of electrons, as they move in motion, generate magnetic field which then creates internal gravity in the tunnel of quantum entanglement as propelled and

pushed by energy gap in order to drill through the intense radiation caused by narrowing scope of time-relativistic scaling. Quantum gravity at low energy state which forms mass of particles in repulsive reaction of quantum entanglement will sustain FTL travel amid intense radiation.

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