

Quantum World and the Reality by Understanding Pilot Waves and Schrodinger Equation

Datta D*

*Department of Physics, National Institute of Technology, Durgapur, India

Opinion Article

Received date: 29/04/2021

Accepted date: 20/04/2021

Published date: 30/04/2021

*For Correspondence

Department of Physics, National Institute of Technology, Durgapur, India,

E-mail: durgadas.ddatta@gmail.com

ABSTRACT

If we try to understand the reality of the existence and meaning of our universe, we generally take the help of physical laws and theories based upon derivation and prescription of standard model. General relativity and quantum physics give us a set of equations for our research and application. But when we discuss with philosophers, we find that they never accept the core ideas based on assumptions by Einstein and proponents of quantum physics. Neither many famous physicists are happy to accept the concepts devoid of reality as we know from experience. The two pillars of modern physics. GR and QP are not marriageable partners and the long dispute of meaning of time also never settled. Basically, the initial ingredients for cooking the standard model like meaning and existence of space-time with the postulates of Einstein and wave-particle duality in superposition of QP just from not understanding Double Slit experiment may have resulted into all confusions in eating the preparations. Modern Physics never questioned the origin and existence of space-time which is the stage of all dramas of existence of all entities. Time is the director of all dramas in absolute time as noted by Newton but Einstein introduced the concept of dilated measured time by our clocks and we find it useful in GPS and we confuse the meaning of time in reality. Quantum physics never talks of dilated time in reference frames but atomic clocks differ in time in different gravity and reference frames. Schrodinger has deduced an equation from basic wave equation, time independent and time dependent versions. We now ascribe it to all entities existing including matter as waves also in wave particle duality prescribing super position to explain double slit experiment as given by Copenhagen team. Here the mistake of misunderstanding developed. Schrodinger never said that the wave is inherent with electron or as a matter of fact though Debroglie first proposed matter waves. Let us understand that this is not matter wave but a dancing phenomenon on a preexisting pilot wave which spreads all along our universe due to gravitoetheron superfluid vibrating like a bed rocking wave as given by Schrodinger in his equation. So here the interpretation should be wavicle and not wave-particle duality further complicating by Born in probability waves with Bohr prescribing super position. There is no superposition but a definite but varying position on the pilot wave and any observer just locates it on the probability equation surely explained by Born but not interpreted correctly by Bohr. As such, there is no collapse of wave function and observation may tamper the position and velocity by photon bounce. Apart from that the dynamic gravitoetheron superfluid cannot ensure the initial conditions so perfectly that hidden variables creep in and we always try to explain by saying that cause and effect is missing and quantum world is probabilistic. Therefore, all entities are connected by a mother pilot wave due to jittering of gravitoether superfluid on Heisenbergs uncertainty principles which we call space-time on absolute time defined by Newton and as a result we see entanglement phenomena on absolute time and Einstein described it spooky action at a distance because he thought information cannot flow faster than light and trying to visualize on dilated measuring clocks.

INTRODUCTION

The greatest puzzle today is dark matter; dark energy and mechanism of gravity. Recently the Hubble constant have been seen to be different when calculated by other methods. What is going on in our universe is a deep question. Can we still depend on our regular laws or a new physics required? Why the birth of our universe indicating a huge amount of exotic energy associated giving an exponential inflation and then a retardation but again an acceleration which is probably going stronger and stronger. We are living on a planet which is located in a part of our universe of super cluster, which is under dark pull/flow from another universe giving drift velocity from existing universe. This has affected our observations by telescopes in the form of incorrect red shift and calculations. Our universe is expanding and accelerating but at reduced rate from our calculations or is it the opposite. Another factor is due to our matter universe inside an antimatter universe on opposite entropy path and reverse arrow of time creating "gravitoetheron superfluid" at common boundary by annihilation and injected into both the universe as explained in my balloon inside balloon theory. The outer universe will be approaching a low entropy when disbalance will give rise to a big bounce creating again mirror universes in recycled and rebounded theory.

What we call dark matter and dark energy may be a single superfluid containing many exotic particles and fields with the possibility of negative mass particles with mono magnetic coupling. This superfluid is known as gravitoetheron superfluid from my balloon inside balloon theory. As this superfluid is constantly vibrating due to uncertainty principles and swirling, whirling and flowing like a viscous flow following Navier stokes, we may also use revised fluid dynamics along with tensor flow and quantum field theory for the fields. Therefore, our space is more dynamic than just a curvature of space time as explained by Einstein for gravity effects. Where is the origin of stress-energy-momentum tensor? Can we say space-time warping concept of Einstein around mass is a mirror reality of gravitoetheron superfluid flow with massive gravitons or fermion gravitons and high energy gluons along with other exotic particles. Massive gravitons push matter in the direction of its flow to appear as gravity whereas gluons or boson gravitons act on quarks to form protons and neutrons. That is why we see that vacuum energy calculations differs so widely with observations. Does that mean that gravity as well as strong nuclear force also is emergent and not fundamental? Let us not forget that macro world emerges from micro world and micro world follow a quantum physics in each point in space which need not obey three cartesian coordinates along with time as prescribed by Einstein. So, space-time is doomed here.

The processes need not obey the speed of the reference frame along with its dilated time frame of Einstein. All quantum processes at micro level follows absolute time and the measured time of Einstein by any observer is hoax in measurement and we are now seeing the spooky action at a distance. As a result, Dirac equations are partially faulty and forecasting antimatter is not a big deal. As a matter of fact, all variables along with hidden present at any point of absolute time in any point in space is subjected by the entropically tide of not only stress-energy-momentum tensors but also entropical factors to decide the tensor flow path on a pilot wave of bed rocking fluid. String theory more elaborately talking about these micro processes and indicating the necessity of many more variables apart from three space and one time frame as taught by Einstein and when we see extra dimensions, we just fail to grasp the meaning. Therefore, I am saying that three space one-time concepts are doomed along with relativity theory in micro level quantum processes.

Quantum processes follow absolute time and many variables without much importance of spatial dimensions and quantum physics and relativity theory cannot be married. string theory is the only option along with my suggestions to go deep into our observations presently bothering modern physics. let us have as many dimensions as possible in a string theory, because basically, they are variables disguised into spatial dimensions.

Let us not forget that this superfluid contains 125 proton mass Higgs Boson making it viscous for creating mass in elementary particles as well as 750 proton mass fermion gravitons which is flowing with a direction to bang the molecules so that apples fall or planets rotate around sun. Other exotic particles are yet to be theorized and seen in lhc experiments. The most important behavior of this dynamic fluid is what Schrodinger formulated in his wave equation, simply by deriving a sinusoidal wave from a vibrating string. When de Broglie applied it on matter waves, it became complicated. I have shown an associated matter wave will only carry half of the particle velocity and as such lagging behind. Therefore, I said that there is a pilot wave generated from the jittering superfluid from uncertainty principles, which is reflected from Schrodinger wave equation. All entities are dancing in this space waves known as pilot waves and appearing as wavicles. Though the entities have clear image but due to this bed rocking, we prescribe wave particle duality.

Therefore, gravity mechanism is an emergent phenomenon due to directional pressure by fermion gravitons on matter molecules. Another emergent phenomenon is strong nuclear force due to boson gravitons gluing quarks when available. Here again fine tuning of the fields of boson gravitons decides the three quarks configuration. But we can devise methods for pentaquarks formation which will not stable. These boson gravitons due to huge hidden energy can participate in accelerating expansion of our universe and create a 120-order mismatch in our vacuum energy calculations. The question of fine tuning is obvious when so delicate balance of not only Higgs field but also strong nuclear force provides the background for matter formation giving mass. We always wonder why the laws and constants of nature as well as strength of gravity and strong nuclear fore along with Higgs fields are so delicately fine-tuned and balanced. Our standard model may invoke a feeling of amazement, but who knows that there may be many more configurations providing the background for many more universes. We are in this universe where things

are as happened in the big bounce and these bounces are infinite times in infinite backdrop of infinite multiverse. Basically, there is no design, but only chances and infinite possibilities of laws and constants.

This big bounce was described by Dr. Guth in his exponential inflation. After around 380000 years, we will see CMB glow and galaxies will be forming around escaped evaporation black holes from previous era as seeds of galaxy formation. That is why we see black holes in every center of galaxy and much older than the life of our universe. CMB glow also shows circles of the bounce and BICEP-2 also carries some foot prints. Therefore, this injection of gravitoetheron superfluid is our expanding space swirling, whirling, flowing as curls and divergent vectors more specifically tensor flow in 4 dimensions of space-time which Einstein described as special and general theory of relativity with the assumption of gravity due to curved space-time. This is what we refer as quantum foam in quantum mechanics. There is nothing like empty space in our universe but the distribution is non isotropic field density point to point in space-time. Many exotic particles/fields constitute the space fluid where fermion graviton with mass and boson gravitons giving strong nuclear force for quarks will be detected soon. Gravity as well as strong nuclear force both are emergent in nature and not fundamental. Boson gravitons are having by nature strong force to glue quarks if the quarks are available. Otherwise, it just participates in expanding our universe. That is why we see 120 order mismatches in our vacuum energy calculations. On the other hand, we see that as the galaxy disc is rotating, the centrifugal force throws the massive fermion gravitons away from center of galaxy giving greater concentration at outer periphery, so that outer stars rotate defying Newton. So, we have to write the equation as $F=PG Mm/RR$ where P is space graviton factor index. Now we know that fermion gravitons are flowing like raindrops on earth or we may say flowing like arrows towards center of earth. Earth center is becoming very hot with molten iron for creating a magnetic dynamism All molecules on earth are subjected by the push of massive gravitons so that apples fall and as Galileo first noted that all molecules heavy or light fall equally. That means we can say that as area of a sphere varies by $1/RR$, so the force of gravity will also depend on the proximity of gravitons changing by a factor $1/RR$ as the concentration increases towards center. It is obvious that for falling equally, we have to say that M/DD of any molecule is constant at any particular height where D is diameter of any molecule and M is mass. We have seen air bubbles change diameter as it comes out from bottom of a pond to the surface due to gravity potential. Some calculation suggest that fermion gravitons must be having 750 proton mass. I do not think that fermion gravitons have negative mass as it will create mess in quantum calculations of virtual particles at quantum foam in QED and QCD. But more discussions may clarify the matter further from renewed experiments. The concept of time in relativity and quantum mechanics is definitely creating all our conceptions in reality diluted. Our universe is ever dynamic without any absolute rest frame and as such all frames are relatively dynamic and Einstein talks of a time which is measured time varying from frame to frame. Example we can say that if our heart beat count one minute then at sea level it may be 70 but, on a hill, it will be said 72. As such here one minute is diluted due to less oxygen in air giving 70 beats or 72 beats. Therefore, the concept of time is measurement time and not absolute time. As such absolute time is theoretical concept which Newton prescribed. But all quantum processes follow absolute time but the measurement dilutes it in atomic clocks. Therefore, there is no possibility of marrying quantum physics with relativistic calculations. We have already seen how relativistic calculation in quantum physics by Dirac, Heisenberg and others created all conceptual difficulties of uncertainties but Einstein said that God does not play dice. Actually, we do not know each and every hidden variable in each point of the universe and as such initial conditions dictating the outcome, quantum outcome of quantum processes. But propensity of processes follows a pattern if we look at many outcomes in probabilistic theory as we also see in flipping of coins. Though each quantum outcome is different due to changing dynamic hidden variables but we must say it follow a cause and effect in each outcome. The initial conditions are so dynamically changing in a narrow range but probabilistic many outcomes can give a pattern for our understanding. Therefore, Einstein is correct in saying God does not play dice. We cannot say that God is playing dice. Time is great confusion in modern physics. The understanding of reality is our perception in this infinite universe of infinite balloon inside balloon of matter and antimatter on opposite entropy recycle, rebound and every epoch give a set of laws and if the laws are benign then intelligent creatures may live on an earth like planet to ponder about the universe. One most interesting phenomenon is that the laws of nature have a propensity for construction which give a chance for formation of structures and creatures and life and may be that is our GOD.

The time and space should be regarded as absolute as prescribed by Newton for developing corrections in quantum physics. The space we see is a part of our universe in a multiverse which has no limit. As such space should be considered as container and absolute filled with non-isotropic gravitoetheron superfluid swirling, whirling, flowing etc. and all objects and entities are immersed in it. Time is a local variable in this space as prescribed by Einstein when we measure it. Our concept of time is a dilated measured time which is an illusion of absolute time. Plato described this illusion of observation in his allegory of caves story. Einstein only mentioned about this variable time in respect of reference frames and effect of gravity in his time dilation theory. GPS system proves Einstein so we are certifying Einstein. The problem is that our universe is ever dynamic without any absolute rest frame. We cannot measure absolute time except in theoretical calculations and understanding. But we cannot ignore absolute time in quantum calculations. Einstein postulated about speed of light which he considered about the smeared electromagnetic waves and not photon by photon with a specific time of exit tag from the source. This thinking gives the speed of light same by all inertia frames observers which contradicts Galilean transform from simple logic. But can we say that in reality the Galilean transform is violated, if we consider light as a flow of photons with different exit time tags for each photon. Here the trick of applying Lorentz transform and surely the observations of smeared EM waves light by instruments also certify the relativity

theory of Einstein. As such wave particle duality has given our modern physics. An illusion of duality and uncertainty which even Feynman failed to understand. Therefore, we have to discuss modern physics in the right perspectives beyond relativity theory. There is even no reason that information cannot flow faster than speed of light. Speed of light is due to Maxwell electromagnetic theories but information is carried/propagated by another kind of waves which is consciousness waves of observers and that is much faster than speed of light. There is nothing magic in quantum entanglement or observers' effect in quantum physics. Our ideas must develop further to go beyond Einstein and standard model. The effect of observing in quantum physics should be fully explored by further research on consciousness. How our consciousness takes a physical shape in the form of propagation at a speed much higher than speed of light is being investigated. We must admit that relativity theory can enforce limit on the speed of light but information can propagate much faster than speed of light and Einstein must be wrong in saying that nothing propagates faster than speed of light.

Quantum mechanics describe the interactions at the subatomic scale of atoms and molecules set against the background of gravitoetheron superfluid which is supplying the virtual particles which is applied in QCD/QED calculations of Feynman. Obscure wave function of Schrodinger and further extensions to matter waves by De Broglie cannot be a real quantum world interpretation but a way of coding our observations in subjective beliefs for an abstract quantum description on the wave function. Then do we have to abandon cause effect in all such fantasies in quantum entanglement or probabilistic interpretation of Copenhagen lobby or should we try to explore hidden variables as prescribed by Einstein? The main difficulty here is time taken for Quantum calculations from relativistic approach is creating errors from time dilation and the dynamical system of space-time is changing point to point in space creating the birth of quantum effects in chaotic determinism of highly sensitive in hidden conditions of variables giving output of an illusion of disobeying cause and effects. We deal with the probabilities as described by Max Born for an interpretation always undergoing a feedback loop patterns for a statistical outcome of all such disorganized cause and effects for a pattern which is verified by quantum experiments. The probabilistic wave which is nothing but a deterministic chaos due to a very inherent law of nature which we may call propensity for reconstruction even under second law of thermodynamics. That is why we see chaotic determinism even in extreme conditions of emerging life from uncertainty. The outcome of natural laws also is due to this propensity of reconstruction in a pocket of the multiverse where Higgs field is just appropriate with a benevolent tuning for evolving natural laws which we normally think that never changing. We are blessed with the benevolent natural laws with fine tuning at this juncture of infinite time and our goldy lock position of planet earth and many accidents on earth wiping out very big animals so that a suitable life can form for intelligent beings to ponder about our existence.

SUGGESTIONS TO RELOOK ON OUR EXPERIMENTS

Double slit experiment with electrons one by one can even result into an interference pattern, just by deflecting at the edges from a Casimir effect/electronic repulsion from electrons on the metal wall. The electrons passing by touching the edge bound electrons of molecules may deflect the path of the electron. But change of pattern from observation effect may be explained by mere a means of avoiding the edges due to photonic intervention not allowing the deflection of path. Whenever any particle moves, it is also engulfed with a pilot wave generated from the jittering of the space as described by Schrodinger and Heisenberg. So as a matter of fact, the whole space as small and big intensity waves are marching along with the particle. But how the observation collapses the pilot wave also is to be understood. The photonic intervention by mere act of observation stops the particle to dance giving a definite path. Entanglement may be explained by instantaneous interaction of lattice neighboring pairs in tensor flow of information from point to point on absolute theoretical time creating an illusion of entanglement in dilated observed time then if relativistic time cannot be applied for in such delicate quantum tensor network flow of propagation in absolute time of lattice interacting in all degrees of freedom in this damn big Hilbert space creating all such effects of entanglement keeping cause and effects, where we may someday derive a better theory for quantum reality We have to understand gravitoetheron superfluid and the associated pilot waves as guide waves for all entities as every entity is like fish in jittering water. Actually, we are bound by our standard model and relativity theories along with Copenhagen interpretation of quantum physics. We are too much worried about fine tuning and observer effects by morphism and bio centrism. We are even ready for abandoning cause and effects. The multiverse and many possibilities may look like anthropic solution but there are many fine tunings possible from my theories to give structure and laws with many types of lives apart from carbon based. The multiverse is a kaleidoscope of many patterns and many possibilities and mind boggling when it can be infinite.