

## Membrane Topology Perturbation Theory of Wave Equations Developed from Schrodinger Equation in Gravitoetheron Superfluid Itself in Bohmian Pilot Waves

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### ABSTRACT

Modern physics is suffering due to wrong interpretations of relativity theory and wrong Copenhagen interpretations.

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What we have to do now is very clear if we adopt relativity theory selectively and Copenhagen interpretations for a developmental purpose in electronic gadgets only. The reality is far more complex and dynamic due to hidden variables but luckily the chaotic determinism in probabilistic interpretations of Born works fine in the domain of mathematical frame work. Another big mistake is our cosmic observation of accelerating universe when our place in the universe is quite disturbing due to dark pull and flow from a parallel universe. Assumption of dark energy is so huge that it may not be true as the acceleration if any is not entirely due to dark energy. Read my balloon inside balloon theory of matter and antimatter universes on opposite entropy path and reverse arrow of time in mirror configuration.

The concept of our universe as a very very big block of AETHER was a favourite idea of Newton with static nature of constant volume obeying universal laws of nature with absolute space and absolute time. The entities we observe are just like fish in water. Here the concept of a BLOCK VOLUME filled with omnipresent aether where the block is static but the entities are following his laws of motion.

But soon MM experiment by Michelson.. Morley.. provoked Einstein to ignore aether for explaining the null result and develop his relativity theory with the self-established doubtful postulates of maximum speed limit constantcy of light as well as natural laws unvarying on all inertial frames. But time is dilated on all reference inertial frames and also with changing gravity when measured by atomic clocks as observed in GPS clocks. Thus the reality of time in relativistic physics is a big debating point. Also the meaning of speed of light is also a point of concern if we have to abandon Galelian Transform and establish Lorentz Transform when chasing a light beam by two inertia frame observers. If we take photon by photon exit time from source then it is a magical error but all persisting smeared wave can give some consolation. Here also wave particle duality hiding the exact meaning to save relativity theory. The consequences are not only dilated time but also length contraction etc etc. But as we live in a world of

reflections of the reality as projected on the wall in the cave of cave dwellers explained by PLATO in his ALLEGORY OF THE CAVE story.

Therefore when illusion becomes reality and confirmed by experiments then we go as far as possible without the actual meaning of space and time.

TIME AND SPACE AS DESCRIBED BY EINSTEIN IN SPACE-TIME AND WARPING SPACE IS CAUSE OF GRAVITY IS BEAUTIFULLY SOLVING OUR QUEST OF TRUTH BY NON EUCLADIAN GEOMETRY FIELD EQUATIONS FROM TENSOR FLOW WITH VARYING SPEED OF TIME IN VARYING MEASURES OF SPACE. BUT CAN WE SAY THAT QUANTUM PROCESSES ALSO FOLLOW EINSTEIN OR THE CONCEPT OF NEWTON IN ABSOLUTE SPACE AND ABSOLUTE TIME. ARE WE SOMEWHERE MISSING THE LINK OF REALITY AND TRYING TO DEVELOP A RELATIVISTIC QUANTUM THEORY BY SOME ILLUSIVE ASSUMPTIONS IN STRING THEORY?

Therefore my purpose of publishing 40 papers available in VIXRA.ORG is to search for a NEW PHYSICS with a new outlook beyond the concepts of EINSTEIN and COPENHAGEN INTERPRETATIONS.

With all those observations mentioned above in the title page, we have no other option but to re think the way many things have been taken granted as appeared from two pillars of modern physics.

Our world is dancing as bed rocking on gravitoetheron superfluid due to Heisenberg uncertainty principles following Schrodinger Equation on chaotic determinism shown by Born in probabilistic interpretations of mathematical frame where the elementary particles look as wavicles and we wrongly call this wave particle duality as superposition and also call collapse when observed at a location on the wave path.

The electron is not a particle but a cloud of negative charge dancing on the gravitoetheron superfluid with varying charge quanta making it appearing and disappearing making a pattern given by Schrodinger equation with the concept of varying probability density from an amplitude equation. That is why Born is saying that it is a probability wave with the concept of wavelike. So it is more waves and less particle due to its appearing and disappearing with the fluctuation of energy front on the membrane topology of the membrane field. Born by assumption rightly said that the wave function of Schrodinger when multiplied by its complex conjugate, we can derive the probability density. As the whole Schrodinger equation is not real but probability imagination as described by Born, we have to further investigate what the environment as gravitoetheron superfluid which is responsible for rocking is behaving. It is obvious that the exchange of energy from the environment is also having the same pattern as given by Schrodinger equation. Here the pattern is also creating the wave but as we know the Schrodinger equation has two fragments in real and imaginary components. The real component is taking care with the electron cloud but imaginary component is taking care of the rocking fluid as a pilot wave pattern on the same membrane topology front remaining imaginary and when born cleverly thinking of squaring the Schrodinger function with its complex we by default arrive at the probability density. The dance of energy exchange by creating an illusion of appearing and disappearing of electron cloud in probability density has been wrongly interpreted as superposition and when observation locates the maximum probability we call it wrongly again as collapse of wave function.

WE SAY THAT VISUALIZATION IN QUANTUM REALITY IS OUR AIM AND PILOT WAVE CONCEPT DEFINITELY SAVE US FROM COPENHAGEN INTERPRETATIONS.

Membrane topology is rather a more improved imagination of field concepts and here we have to rename fields as membrane fields having two degrees of freedom namely real and imaginary components of Schrodinger equation with many variables but two patterns mutually reactive from energy analysis giving us the option of pilot wave from the imaginary component.

THEREFORE THE PRESENT THINKING OF A SEPARATE NOTION OF PILOT WAVE IS NOT CORRECT BUT A MUTUALLY REACTIVE WAVE PATTERN ON SAME TOPOLOGY BASE IS THE RIGHT DESCRIPTION OF SCHRODINGER EQUATION. TWO REALITIES IN REAL AND IMAGINARY DOMAINS GIVING EFFECTS OF A PATTERN OF VARIABLES IN SCHRODINGER AND BOHMIAN INTERPRETATIONS BUT REMAINING ILLUSION OF A PROBABILITY WAVE AS DESCRIBED BY BORN IN A COMPLEX CONFIGURATION OF ELECTRON DUE TO ORBITAL MODES OF POTENTIAL AND KINETIC ENERGIES.

This delicate balance of pilot wave with an energy balance analysis of appearing and disappearing is the core of energy propagation in variable bits. Therefore our universe is an ocean of waves in the gravitoetheron superfluid in three dimensional membranes like an onion from plus infinity to minus infinity for all free subatomic but bound by orbital energy factor inside atomic models. Pilot waves helping us to realise the exact meaning of quantum field theory on membrane topology.

ENTANGLEMENT IS JUST TWIN DANCING OF A SUBATOMIC ENTITY BORN FROM SAME SOURCE BUT

BOUND BY NON LOCALITY ON ABSOLUTE TIME BY LATTICE PAIR INTERACTION ON THE SAME MEMBRANE EVEN THOUGH PHYSICALLY SEPARATED BY VAST DISTANCE BUT ON TANDEM DANCE OF OPPOSITE SPIN AND CATCHING ONE ON MODE WILL GIVE THE OTHER IN OPPOSITE MODE, THOUGH BOTH ARE CONSTANTLY UP OR DOWN. AS SUCH EINSTEIN VIEW OF LEFT GLOVE AND RIGHT GLOVE THEORY IS NOT CORRECT. ALSO THE INSTANTANEOUS BOUNDNESS NEVER SPECIFY THAT RELATIVITY THEORY IS VIOLATED AS THE BOND OF REALITY HERE IS ON ABSOLUTE TIME AND NOT ON DILATED TIME OF RELATIVITY THEORY.

A New Theory of Gravity with Modified Interpretation of Dark Matter and Dark Energy and Some Associated Outcomes on Standard Model in Prescribing Fundamental Forces has been discussed now.

The greatest puzzle today is dark matter--dark energy and mechanism of gravity. 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. 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 low entropy when misbalance will give rise to a big bounce creating again mirror universes in recyclic and rebound theory.

Now we should think of space as a swirling, whirling exotic medium containing dark matter and dark energy which is non isotropic in field density in the deepest sense and we with all baryonic entities are immersed in it as fish in water.

Time is just measurement of an entropical variable which is influenced by a resultant tensor value created by gravity potential as well as speed of the reference frame. So time is just a variable point to point controlling the macro processes reflected in relativity theory but micro quantum jumps in quantum physics follow an absolute time which exists only in theory but as there is no absolute frame in this universe, we can not measure it by any experiment.

This confusion in time is the main reason for the conflicts in quantum physics and relativity theory.

The difficulties in Quantum Physics due to Copenhagen interpretation is broadly ignoring the pilot waves generated by the gravitoetheron superfluid, we call space. Einstein also ignored the underlying concept of Aether and tried to visualize the time as a dilating variable as a dimension along with space known as convoluting spacetime where curvature is the guiding path of matter looking as gravity. But actually the exotic superfluid is swirling, whirling and flowing with massive fermion gravitons having 750 proton mass giving a look of a curvature.

These fermion graviton has a directional push on molecules and we see planets rotate or apples fall. Therefore gravity is emergent and not fundamental force. Again the superposition concept of dead or alive cat or even wave-particle duality and role of observation in

collapsing the wave function is not properly understood. The basic underlying structure of space is nothing but a dancing superfluid named gravitoetherons which is never static due to uncertainty principles and Schrodinger developed his wave equation simply by applying simple harmonic vibrating string.

This is the backbone of quantum mechanics but when de Broglie tried to visualize the same with any matter particle we see certain non consistencies as explained below. We can easily deduce that propagation speed is two times the matter wave speed of de Broglie. This is not the matter waves but another waves created by pilot waves can give us new direction for revisiting copenhagen interpretation.

Pilot waves are realistic waves associated with the entities as explained by Bohmian mechanics due to dancing of the bed rocking on dynamical gravitoetherons. So all entities propagate with a Bohmian pilot wave and small elementary particles are affected so much to give a look of wave - particle duality or even superposition. Observation just spot the position at a given instant to qualify in a result on a particular point on the wave and we wrongly say collapse of wave function.

Everything is a cause and effect but we must also note that every point in space so dynamically changing every instant that there is no exact outcome which we refer as chaotic determinism in a very narrow range and Max Born understood this in formulation of probability waves.

Entanglement in quantum reality is another area of confusion... We measure the two observations of quantum spin of any twin particles separated by a long distance in absolute theoretical time but not in dilated relativistic time of Einstein.

A Revised Vision for Gravity: - This big bounce is 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 mismatch in our vacuum energy calculations. On the other hand, we see that as the galaxy disc is rotating, the centrifugal force throw 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  $F=P.G.Mm/R.R$  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  $1/R.R$ , so the force of gravity will also depend on the proximity of gravitons changing by a factor  $1/R.R$  as the concentration increases towards center. It is obvious that for falling equally, we have to say that  $M/D.D$  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 suggests 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 say 72. As such here one minute is diluted due to less oxygen in air giving 70 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 not 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 recyclic, re bounce and every epoch gives a set of laws and if the laws are benign then intelligent creatures may live on a earth like planet to ponder about the universe. One most interesting phenomena is that the laws of nature has a propensity for construction which give a chance for formation of structures and creatures and life and may be that is our GOD.

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. Everything like fish in water. 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 an observer 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 take 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 an 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 godly 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.

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. 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 big Hilbert space creating all such effects of entanglement keeping cause and effects, where we may someday derive a better theory for quantum reality and pilot waves are nothing but the bed rocking jittering of the space superfluid causing the entities to dance following Schrodinger equation. There is nothing astonishing about it as uncertainty principles demand that and particles are behaving like wavicles.

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