

The Physical Time is an Absolutely Pure Imaginary Concept. It Has Nothing to do with the Space or the Real World or the Universe

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Abstract: *The earth contains roughly equal number of protons and electrons which makes it charge-neutral because positive charge is equal to negative charge. For earth, Charge (+) = Charge (-) That is the reason, electromagnetic force (although stronger force than Gravity which is the weakest of the four fundamental forces), dominates between nucleus and electrons within the atom, that is, microscopic structure of the Universe. The electromagnetic force is the attraction between proton and electron which makes electrons revolve around the nucleus. Gravity dominates the macroscopic structure of the Universe because it depends on mass and thus, it is collective and of long range unlike electromagnetic force. Although Einstein spent his later life for the ultimate theory i.e. the unification of physics unsuccessfully, but we are carrying forward his idea to find a complete theory, the theory of everything that can describe all possible observations around us. Einstein was unsuccessful in the unification of physics because the time was not ripe, very little known on that time about the strong nuclear force that binds neutrons and protons to form nucleus in a very stable condition and the weak nuclear force that is responsible for radio activity of some unstable atoms of some elements like uranium. Even we know much about all four fundamental forces in details, but we are not quite sure yet that the time is ripe now for the theory of everything or not. Any new invention can completely change the entire scenario in one go. If time can be compared with art, you never know what the limit of the best is, because there is always scope to be better and better. Then, how we know, time is moving forward or not. The ever unidirectional changes (at least within the limit of our psychology and the range of vision) around us including us, make us feel that time is moving in forward direction in a continuous way in a same speed (at least locally). It can be true that the time is an illusion concept. If non-uniform distribution of space, either too relaxed or stressed with respect to reference frame of space (an ideal space that does not display any energy or matter, in that sense, it is pure space, i.e. the space is relaxed or at absolute rest), is responsible for energy and matter formation, then it is not unwise to think that there is discrete constant generation of space waves somewhere in the space due to unevenness of space propagate through the space make galaxies to be further apart, in other words, the Universe is expanding. As always waves are unidirectional, the changes that the waves make in space are also unidirectional. Although we strive for equality, but there is in-built inequality which is the necessary condition of all system including the Universe to run the way we observe the Universe as it is. In somewhere in the universe, if the discrete space waves are being generated in the boundary (locally) and anti-propagate towards the center, the changes these waves will make will be just opposite of what we see in real time, which will make us feel that time is moving backward direction. Actually, there is nothing what is called the physical time; the discrete propagation of space waves make us feels that we are moving-forward in unidirectional time. Basically, the psychology walks with discrete steps on propagation of discrete space waves which make us feel that we are moving in time. In that sense, time is a pure imaginary concept, nothing to do with the real World or the Universe.*

Keyword: The propagation of space waves, The anti-propagation, the strong and weak nuclear forces, The unidirectional imaginary time, The unification of Physics.

1. Introduction

The Universe is a self-contained purely deterministic system. It is a completely independent system in contrary of what we think about the Universe; as we are modest enough to accept that our position is too insignificant in the Universe but not completely aloof [1, 2]. If the Universe would not be completely deterministic, we would not have one and unique deterministic past. Because time is an absolutely pure imaginary concept, we can travel through space only with spaceship or any other related to space but not in time with a spaceship or with a time machine, if any. Thus we need to abandon the concept of time travel. We can neither go to future, nor can the future traveler visit us. We can neither go to past, nor Newton or Einstein can come to visit us [3, 4]. As time is a pure imaginary concept, the whole concept of time travel is also purely imaginary stories, and imaginary is something that is not realizable. That is the reason that we want to use a spaceship as a time machine using the universal speed limit i.e. the speed of light- 1, 86,000 miles per second or 3, 00,000 kilometers per second [5, 6].

2. On the Space and Time

According to the second law of thermodynamics [7], the entropy increases with time [8] which implies that the Universe is moving from a higher order state to a comparatively lower order state [9, 10]. We can have numerous examples to support the law [11]. Human body is in higher order at the younger age and gradually deteriorates with the age [12]. The amount of sugar taken in the childhood would have serious adverse effects in the grown-up stage which implies the lower order state. Is time a reality or an imaginary concept? Is time actually moving? Or does the psychology walk on the time although time is a pure imaginary concept? Is space three dimensional or single dimensional? [13] A point is a unit representation of space which is dimensionless in psychological point of view. The three dimensions- length, width and height are required to locate a point with respect to some reference frame [14, 15]. So, all three dimensions- length, width and height are measurement of distances with respect to the reference frame [16]. A point (the dimensionless unit representation of space) can be self-contained and does not need any

dimension to represent it. It can be totally independent of other points around. Dimensions of space are only measured quantity (distances) to locate a point in space with respect to some references, in other words, dimensions are required for psychological measurement of distances with respect to other points which is nothing but comparative study only. A point in space can be represented as unit of space without any dimension. A point can be regarded as one and unique, independent of other points which mean that dimensions are psychological, no matter how many dimensions we assume or observe of space in macroscopic Universe. Because each point (the dimensionless unit of space) is self contained, the discrete collections of points must be self-contained too, which in turn implies that the whole Universe is self-contained. Because space is vast collection of discrete points, psychologically we do not understand the discreteness of it. The psychological limitations elude us to think that space is continuous. If space can be dimensionless, so must be true for the physical time too. It is true that we can move in space at different speeds with respect to frame of reference, like we ride cars at different speeds on Earth [17]. We can control the speed in space, but we cannot control the speed of time. It is not unwise to think that the movement of time is purely psychological concept. For example, we ride a car, it is psychologically looks like that the car is stationary and the road is moving backward. So, in space movement, the psychology interprets the opposite. If we carry it to time, it is not unwise to think, time is a fixed path like spatial car roads or rail-roads and psychology moving forward in time or psychology walks in discrete steps on discrete points of time. If time is a fixed path, what is supposed to happen, even we do not know it due to psychological limitations, but these all events are already stored in the time path. And as we walk on the time road, we experience these events as if these are revealed by time for us. The psychological limitation is that unless the event is revealed by time, we cannot interpret what it is actually. It is like travelling in a new place, when we are going through the road; we come to know about the road what it is. Unless we have previous information about the road, all will play in our mind, what might be the road or what could be, what should be, what must be etc that are basically probabilistic uncertainty principle [18]. Unless we have technique to sense the road, what it is, only our dependency is on uncertainty principle [19]. Because we developed satellite system to reveal the road information remotely before visiting the road [20], there must be some techniques, while walking on the time road with discrete steps, which can make sense for us what the futurity is. There must be fairly simple algorithms to build a system that can sense the future. As a traveler in space road, we cannot change the road structure; we are only allowed to observe it as it is. In the similar way, we can be merely an observer in the time road. We are only allowed to get information of the time road as we go through the road; we cannot modify the time road because of the causality, although causality is also preordained. As travelers we are only allowed to travel through the road, so is true with time traveler, in the sense that psychology travels in time in a fixed speed at least locally. Thus, past is fixed, so is future and present, psychology walks on the time path with discrete steps from one time instant to another time instant with a jump. But why psychology travels so smooth and uniform in time at

the same speed? Every psychology has the same history on a large scale as it moves through the same time road, but each psychology can have some different fine-details of the large scale structure. A slight variation in fine-detailed history is possible of the same history on a large scale of the time path. These are not alternative histories but different fine-details of the same history as history can be only one and unique. An analogy is the Universe, the Universe looks the same from all sides on a large scale, but some differences or density variations, although very tiny little, but still the differences exist in the small scale [21].

3. On The Anti-Propagation

If there is anti-propagation for some reasons, i.e. space-waves will be generated at the boundary (if any) and anti-propagate through to some center, we will observe the contracting phase of the Universe. And as we are made of particles, we will observe the reverse or backward direction of time. It will be as if we are moving from future to past. It is like potential difference between two points makes current flow in one direction from higher potential point to the point of having lower potential. If the points are interchanged, the current must flow in the reverse direction. The two points having potential difference are analogy to the space boundary and some space center. The current is analogy to the physical time. As current is nothing but flow of charges to strive for diminishing the inequality to make it into equality, the current must flow as long as there is inequality of charges between the points, so is true with non-uniform space. As it is built to be non-uniform so that there will be exchange of space waves between space center and space boundary which resemblance to us as the physical time is moving from past to future in unidirectional way. The physical time is the psychological recognition of space waves. Wave propagation is nothing but exchange of energy between two space points. Thus, the Universe can be explained with space dimensions only (how many may be). As psychology is accumulative, the reason we are progressive but there cannot be anything like time is ripe, psychological progress can be only better than previous. There cannot be anything like the best as psychological progress is a function of time. As long as we survive, we can be only better in time, unless we blow ourselves up.

4. On Our Age

Because space waves are unidirectional, at least in the present state of the Universe [22], the human psychology understands everything unidirectional in time and thus, our age too follows the unidirectional time arrow. If the waves would be reflected back, we and everything would be aged for sometime (as long as space waves propagate) and would be reverse-aged for the following the same time (as long as the space waves anti-propagate), we would experience alternative time (AT), an alternatively bidirectional time to be precise. But it never happens in reality which means space waves are generated somewhere and absorbed somewhere. The effect of unidirectional space waves are that these make everything change in one way only where reverse is not allowed at least in the present state of the Universe. Thus the unidirectional space waves make Earth, human, living beings, the Universe to be more and more

aged. These unidirectional changes occur because space waves interact with particles and energy. The relation of particles and energy conversion is valid with Einstein's famous equation [23].

$$E = mc^2$$

On psychological point of view, when time leaves no choice for us, we do even harder things to accommodate with time's favor (we always seek time's favor) like walking in 40 degree centigrade leaving air conditioner at home. It is as if we have complete freedom to anything which actually abides by the rules of the physical time.

5. On The Primordial Black Holes

If one has a particle with energy above what is called the Plack Energy [24], 10^{19} GeV, its mass would be so much concentrated that it would cut out itself off from the rest of the Universe and would form a little black-hole. But the Planck Energy is very very long way from the energies of around a GeV, which is the best we can produce in the Laboratory at the present time. To bridge the gap, we need to build a particle accelerator which must be bigger than the solar system of us, and the feasibility of that is really really in a bad shape to be funded at the present economic scenario of the World. But the particles with such high energy would be commonplace during Hot Big Bang, which would have made many particles into black holes [25]. We call them the primordial black holes that can have volumes the same as a proton and of infinite density and thus infinite weight. The black holes must be absorbing the space waves completely so that the time movement does not have any meaning inside the black holes but it does have meaning of time movement from outside the black holes. So, as an observer, we can feel that the black holes are getting aged in time.

6. Conclusion

If a point in space is self-contained, completely independent of other points, the point can look like the same point only, so is the Earth can look like the Earth only and thus the Universe as it is. Although comparative study can make us insignificant in the Universe, but why comparative study is? What we have, the Sun does not have that, and what Sun has, we do not have that. Everything is just right and perfect at its own place; thus, comparative study is not always a good choice to follow. If history is one, unique due to causality and so are we the same. We are just predefined and preordained by the physical time. Einstein once asked the question "How much choice did the God have in constructing the Universe"? If time is not a function of God, he would be left with no choice to choose the initial conditions of the dull, cold, boring Universe with background microwave radiations left as remnant since the Big Bang occurred that can warm us approximately 4.7 degree above the absolute zero (-273 degree centigrade, the temperature at which a particle possess no heat energy)

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