

A Stubbornly Persistent Absolute Relative is the Theory of Relativity

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Abstract – The defining great scientific breakthroughs such as the theory of relativity is not a completely independent theory to the other contemporary research works such as James Clark Maxwell’s theory on the electricity and magnetism and Hendrick A. Lorentz’s works. In order to put the theory of relativity in context, in 1964, James Clerk Maxwell developed a complete theory on the electricity and magnetism and he demonstrated that an electric field is generated by the stationary charge and a magnetic field is generated by a moving charge. What actually happens if a charge is sitting still and we are moving past it? Hendrick A. Lorentz showed that for a moving observer, a stationary charge looks like a moving charge, and hence, an electric field looks like a magnetic field. Lorentz also showed that electromagnetic wave propagation is the same for both moving observer and stationary observer, and the velocity or speed of the propagation is a constant, the speed of light (C). The assumptions in the theory of relativity are well supported by both Maxwell’s theory of the electricity and magnetism and in the experimental work of Michelson and Morley, who showed that regardless of the motion of the Earth, light travels at a constant velocity or speed, the speed of light (C). The theory of relativity added further that all physical laws are equally valid in any ‘inertia reference frame’ which travelling at fixed speed and direction and for any such observer, the speed of light is a constant (C). The theory of relativity showed that two observers with identical clocks and meter sticks who are moving relative to one another will have different length of the meter stick and the different physical time in each of the clocks i.e. the meter stick of the other as foreshortened and the clock of the other as running slow. As the theory of relativity only accounted for systems with constant speed, whereas in gravitational fields bodies are constantly accelerated, it was being modified to include the effect of gravitational force where bodies constantly being accelerated. The theory of relativity itself has a paradox on simultaneity which lies in the heart of the theory itself.

Keywords – The Relativity, The Electricity and Magnetism, The Speed of Light, Inertia Reference Frame, Simultaneity, Physical Time Instant, Discreet Physical Time, Space, Space-Time.

INTRODUCTION AND THE THEORY

The conceptual model presented in the theory of relativity is very current and has not failed any observational tests on a large scale till date [1, 2]. When we go through the theory of relativity, what remains so remarkable is how much the physicists were able to infer from such simple starting assumptions [3]. Who will be an observer? The observer must be a human being or a man-made machine which resembles the abilities of human being. What is to observe? It must be an occurrence (a change occurs at a certain place at a certain physical time) that took place at a certain place at a particular physical

time measured by human being, an observer. Anything that is not an observable occurrence by human perception is not an event? In other words, anything that remains as it was, is not an event? For example, what does X-rays, α -rays; γ -rays, Ultra violet rays are not events? What does ultra sound is not an event? Anything that exist in three dimensional space has a series of events, in other words its existence is a purely function of discrete physical time instants and it does not matter that it is an occurrence (in the sense some changes occurred at a place at a particular physical time) took place at a certain place at a certain physical time or remain the same as it was or whether it is observable or unobservable by human being or a man-made machine. A shell remains the same unchanged or unaltered for hundred years as relative to human perception, has a unique history for hundred years, in other words, it has a series of recognizable events for last hundred years. Each atom that exists in space has properties like mass, charge which are pure function of discrete physical time instants (a sample of discreet physical time) can be termed as has one and unique history or a series of events, which proves that there must exist simultaneity of occurrence or events which is a paradox that lies in the heart of the theory of relativity [4, 5]. Each atom radiating energies, each atom decaying gradually, each atom is expanding very gradually are also examples of the pure functionality of the physical time [6] which are very unique histories that occurs at the same physical time which proves the existence of temporal simultaneity, in other words, each atom is consists of a series of unique series of events that are simultaneous with the other atoms. If anything that exists in space is a pure function of the physical time instants, each should have a unique history with each physical time instant. For example, an atom is made of three quarks and it is stable for 13.7 billion years [7], as it is the assumed age of the Universe since the Big Bang occurred, is a pure function of physical time at each discrete physical time instant. Any event is not a perception dependent fact or for an event, it does not matter whether it is being perceived or not by an observer. In other words, an event is a pure function of the physical time which is unique and absolute in nature. Only an observer, does not matter whether a human being or a machine, makes an event relative with respect to the other observer. Similarly, it is not correct that nature obeys the laws of physics rather the laws of physics resembles nature’s behavior in the form of mathematical formulation according to the observational fact of the nature. For nature and space and physical time, it does not matter whether the laws of physics are there or not, rather it does matter for the physics whether nature exist or not. For a stationary observer with respect to Earth, two events may be simultaneous or may not be simultaneous and the same

is true for moving observers too. From the events or occurrences point of view, for events or occurrences to be simultaneous has nothing to do with any observer. It is the observers that are absolute relative to the events or occurrences. Now the observers must be a human being or a man-made machine that resembles the ability of human being is absolute relative to the events or occurrences which prove the theory of relativity as an incomplete theory. The events or occurrences are absolute, the observers are absolute relative.

II. A STUBBORNLY PERSISTENT ABSOLUTE RELATIVE

In order to force the Universe into an eternally static state, the ‘Cosmological constant’ was introduced in the theory of relativity [4, 8]. It was realized later as an error when Edwin Hubble discovered the expanding Universe in 1929. In recent years, the Cosmological Constant has been reintroduced into Cosmology in a new form - a ‘dark energy’ which is assumed to be fueling acceleration to the Universe [9, 10]. A realization of the error and its reintroduction itself states the illusion inference and that can be termed as a stubbornly persistent illusion only [11, 12]. If a aero-plane follows a straight line in a three dimensional space, its two dimensional shadow simply follows the shape of the land whatever the shape of the land is, but definitely not a straight line rather an un-uniform curved, it is not absolutely irrational that the Earth is moving in a linear four dimensional space-time [13, 14], and we are just watching a shadow of it in the three dimensional space which looked like an elliptical path around the Sun. May be the shape of the Earth is a linear flat in four dimensional space-time and we are watching a shadow of it in the three dimensional space as elliptical shaped Earth. But it can definitely be concluded that we are observing shadows of everything in the Universe as the physical time dimension is not observable to us. May be it can be a good topic of research that how the physical time dimension can be observable to us to evaluate more properties of the mystical physical time dimension[15, 16]. It is mandatory for us to first observe the mystical time dimension because the physical time is an integrated part of the grand design of the Universe structure. And its observational findings can significantly change about the assumptions of the Universe. It is analogy to an ocean which is built by each droplet of water with an assumption that the principle of additivity applies to each droplet of water to build the ocean and when we analyze the properties of the ocean, it loses its significance of its building block, a droplet of water. Similarly, the physical time lost its significance in the grand design structure of the Universe as a building block of it. The more evaluation of properties of the physical time can tell us, for example, what happens to the furniture and utensils of an apartment that just vanishes or not when we leave the apartment and those reappear or not when we re-enter into the apartment. A observable physical time must have definite answers like the grand design of the structure of the Universe, We will have definite answers why Earth is strangely habitable

in the inhabitable Universe, We will have answer why the town seems vanished to us when we leave it and why it reappear to us as the same it was when we re-enter it. But it is sure that we are dealing with shadows only which are absolute relative to the original grand architecture of the Universe. A shadow shows absolutely different properties than the original grand design or architecture, and by evaluating the properties of shadows, the grand architecture of the Universe will be totally erroneous and misleading to us.

III. ANALOGY OF SPEED AND PHYSICAL TIME AS RELATIVE

Speed or velocity of a particle or matter is only movement from one space point to another space point with respect to movement from one discrete physical time instant to another physical time instant.

$$S = (P_2 - P_1) / (T_2 - T_1)$$

Where S is the speed or velocity of a particle or matter, P_2 and P_1 are two successive discrete space points where the particle or matter will move, T_2 and T_1 are two successive discrete physical time instants. The physical time gets slow down under the influence of any force like gravity, thus $T_2 - T_1$ becomes larger which makes speed or velocity decreased. So, it can be concluded that speed or velocity is relative because the temporal movement is relative. If we can somehow stop temporal movement, $T_2 - T_1 = 0$, definitely we can attain infinite velocity (S tends or approaches to infinity) of a particle or matter. If a particle or matter is stationary in space, $P_2 - P_1 = 0$; it is still travelling in physical time, say from T_1 to T_2 .

$$S = - (P_2 - P_1) / - (T_2 - T_1)$$

If somehow the physical time reverses, i.e. $T_2 - T_1$ is negative, and then the particle must reverse its movement from P_2 to P_1 , i.e. movement reverses, i.e. $P_2 - P_1$ is negative too. And that makes velocity or speed positive again as it was in the earlier case. It means speed S is independent of physical time arrow, either forward or reverse. For a constant rate of physical time, the basic properties of speed or velocity are absolute like the change of positions from a discrete point to the other discrete point. Similarly, the physical time has basic properties which are also absolute. The rate at which the physical time is moving may vary or dependent on observer perception, but the basic properties of it are absolute that all particles have a fixed tenure in discrete physical time domain; it is discrete, unidirectional and moving forward (positive direction) only.

IV. ON THE PHOTON: ENERGY-PARTICLE DUALITY

The energy-particle duality of light makes us eluded to work on the photosynthesis effect of light. Light bends in the effect of gravity [15, 16]. If a star is just behind the Sun, then the light radiating from the star will be bend to a curve to reach us and because relative observers follow a straight line, we will recognize the star where the tangent of the curvature meet with the extension of the line belong

to the star [17, 18], and it will be seem to us that the star is situated near the Sun, and not exactly behind it. It is not irrational to treat the light as force carrying particle, a particle that carries energy. The photons are luminous because of the energy that the photon particles carry. Once the energy is absorbed, the photons lose their luminosity and behave like an ordinary particle that contributes to the mass only and not the energy. In other words, as long as they carry energy, they are luminous. Our retina can detect the luminous photons only. It can be described as only force carrying particle propagate with a constant velocity, the velocity of light (C). And that is the reason, the electric field and magnetic field propagates at a constant speed, the speed of light (C) [19] because the particle responsible to generate field are force carrying particle. For an ordinary particle, external force is required for acceleration, the maximum force can be provided to an ordinary particle is such that it can attain a maximum velocity, the velocity of light (C). Because the maximum force a particle can attain is the same as the force that a force carrying particle carries. Thus an ordinary particle can never exceed the maximum velocity, the velocity of light (C).

V. CONCLUSION

Although the conceptual model of the theory of relativity does not fail any test till date, the question can be raised about the absolute relativity of the observer. The question can be raised about the simultaneity if anything in the space has a unique series of events or occurrences, in other words anything that occupy space is a pure function of discrete time instants (a discrete time instant is one sample of discrete physical time) which in turn unique histories proves the pure functionality of the physical time of anything that occupy space in the space. So, surely the simultaneity exists and it is not an observer dependent fact rather simultaneity is absolute in nature. We have conceptually erroneous grand design of the Universe because a three dimensional space structure is nothing but a shadow of a four dimensional space-time. So, the grand design of the universe is also a stubbornly persistent relative to the relative observer. An observable physical time dimension can resolve many problems about the properties of the physical time itself and also about the grand design or architecture of the Universe. Space and the physical time, both have their own absolute properties. Our complete and clear intuition to every process can solve many problems concerning with the physical time itself and the grand architecture of our Universe. The energy-particle duality of light can be treated as force carrying particle that loses its luminosity once the energy being extracted from the photon particle. Because the photon of light is a force carrying particle, it bends with the gravitational force. And our observational fact as we see the tangent of the bent curvature of the photon of light makes us a relative observer too. No particle can exceed the speed of light (C) as the maximum energy it can hold is such that it can travel at the speed of light only. Several paradoxes within the theory of relativity make it an

incomplete theory. Much rigorous research is required to make it a complete theory.

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