

Review the Physicists show EVERYTHING happens at the same time

H. Javadi ¹, F. Forouzbakhsh ²

1 Faculty of Science, Islamic Azad University, South Tehran Branch, Tehran, Iran

Javadi_hossein@hotmail.com

2 Department of Energy Technology, Aalborg University, Esbjerg, Denmark

faf@et.aau.dk

Dec. 5, 2016

Physicist Max Tegmark claims flow of time is illusion. EVERYTHING happens at the same time, Max Tegmark said. [1] To understand how this theory is consistent with the truth, it should be compared with physical previous theories and experiences. The theory is backed up Einstein's theory of relativity, Max Tegmark said. [1]

Relativity and time

Albert Einstein founded relativity by presenting two theories, special relativity in 1905 and general relativity in 1915. In the theory of relativity, time dilation is a difference of elapsed time between two events as measured by observers either moving relative to each other or differently situated from a gravitational mass or masses. Time dilation (in both the special and general relativity) have confirmed by experiments. [2]

By comparing both theories classic mechanics and special relativity, time is dependent of the method of nature performance and limit of speed. In classic mechanics, increasing the speed is unlimited and time is an absolute quantity, while in special relativity, the speed is limited and the time is a relative quantity and is a function of speed. Moreover, it is considerable that changing

Review the Physicists show EVERYTHING happens at the same time

the speed of a mass (clock) depends on an external force that imposes on it. Due to this reason, the ticking of a clock is a function of gravitational field intensity. [3]

Quantum mechanics and time

Quantum mechanics investigates about time from both experimental and conceptual dimensions. In quantum mechanics, quantity of time is proposed in a more fundamental style. For example, in standard model, the photon is the basic unit of electromagnetism, the quantum of the electromagnetic field and the basic "unit" of all forms of electromagnetic radiation. Having zero rest mass, and traveling always at the speed of light, a photon does not experience "time passing". Thus, however long its journey, even billions of light years, from the photon's perspective, it is instantaneous. [4]

Thermodynamics and time

Thermodynamics is the science that describes much of the time-asymmetric behavior found in the world. [5] Differences between response of quantum mechanics and thermodynamics to the nature of time is referred to the difference of their expertise area. Expertise area of quantum mechanics is to recognize the nature of interactions and properties of radiations, while expertise area of thermodynamics is radiation systems and relation between them. In quantum mechanics, some particles (such as photon) do not experience passing time, but in thermodynamics, any thermodynamic system (from a capsule of gas until observable universe), either have oriented time axis for themselves from the past to the future and the time never stops. [3]

Reviewing the Max Tegmark's theory by using the old theories

According to old theories, does everything happen at the same time? In classical mechanics, the time is an absolute quantity and a universal scale that there existed independent of anything in the nature. So, in thermodynamics and classical mechanics, the time has an arrow from the past to the future and everything does not happen at the same time.

In special relativity, time dilation in special relativity must be investigated along with contraction of length. Because they are inseparable from each other. Contraction of a physical object means compactness of atoms and sub atomic particles. Whatever atoms are compacted more to each other, the radiation of system decreases for any reason that is considered.

In addition, time dilation in general relativity happens by reduction of volume, due to gravitational pressure. The clock that is on the earth is under gravitational pressure more than a clock that lies at the top of a mountain. It means that all physical existents experience "time passing" in general and special relativity. [3]

Review the Physicists show EVERYTHING happens at the same time

In CPH theory, a fundamental particle is a particle that is not decayed under any condition or is not convertible into other particles. Such a particle must be constant mass (energy), therefore, the amount of speed must not change.

By this definition of fundamental particles, that standard model presents, particles are not fundamental, because their masses are not constant and they are convertible to energy. For instance, electron and positron absorb each other and convert to energy. This phenomenon holds for other fundamental particles in standard model even for photon, because energy of photon is variable (for example in gravitational field and Compton Effect) and in pair production, a high energy photon converts to electron-positron. As the same way, it can be shown that even photon experiences time passing. In fact, a fundamental particle must not experiences time passing, and all other particles are made of it even quantum fields.

What is the physical nature of time?

Assume that the observable universe would collapse due to gravity. Again, a new universe appears by another big bang. We suppose a smart existent like human lives in the next universe, the question is: How he/she will know that we have lived before him/her? All the materials in the observable universe converted to energy and energy converted to matter again. How do we know there was a universe before the present universe or it has not been existed at all? We do not know the answer of this question. However, we know that any physical existent in this universe does not destroy and just it converts to another thing, converting energy to mass and vice versa, in fact, field converts to energy, energy converts to matter-antimatter and vice versa.

So to understand and describe the physical nature of time, we need to understand what is photon made up of? A different attitude to the behavior of photon in a gravitational field can help us recognize the nature of electromagnetic energy. Electromagnetic fields around a light ray are not static fields and are much stronger in comparison with gravitational field.

In interaction between gravity and photon (blueshift), when gravity acts on photon and gravitons G enter the photon, gravitons do change the intensity of electric and magnetic fields which belong to photon.

In CPH Theory, description the structure of photon is based on the behavior of photons in the gravitational field, leading to a new a definition of the graviton too. In effect, gravitons behave as if they have electric and magnetic fields effects. These are referred to as negative color charge G^- , positive color charge G^+ and magnetic color G_m . From this, it can be shown that a photon is made of color charges G^- , G^+ and magnetic colors G_m^- , G_m^+ . The negative sign in G_m^- , G_m^+ , only determines the direction of magnetic colors around the negative and positive color-charges. [6]

Color charges and magnetic color have linear speed equal c with photon motion and nonlinear speed in the structure of photon, so they move faster than light speed. In fact, the amount of passed path per unit of time is not equal c and it is greater than c , in the other word graviton (also color charges and magnetic color) moves faster than light speed. [6]

Review the Physicists show EVERYTHING happens at the same time

Graviton Principle

Graviton is the most minuscule unit of energy with constant mass m_G that moves with a constant magnitude of speed so that $|V_G| > |c|$, in all inertial reference frames. Any interaction between graviton and other existing particles represents a moment of inertia I where the magnitude of V_G remains constant and never changes. Therefore;

$$\nabla V_G = 0, \text{ in all inertial reference frame and any space} \quad (1)$$

Based on the principle of graviton, a graviton carries two types of energy generated by its movement in inertial reference frame, one is transmission energy E_{GT} and the other one is non-transmission energy E_{GS} , So that;

$$E_G = E_{GT} + E_{GS} = \text{constant} \quad (2)$$

As the graviton mass and speed is constant, its energy remains constant and can only its transmission energy changes to non-transmission energy and vice versa. Gravitons convert to electromagnetic energy and electromagnetic energy converts to matter and anti-matter. In fact, everything is formed of graviton and Graviton is the only fundamental particle in the nature that makes other particles. [6]

According to $|V_G| > |c|$ and relations (1 and 2), every visible (detectable) physical being decay. But graviton does not decay, in the other word; time does not pass of graviton; the reason is that graviton does not decay to other physical being. Graviton's life is independent of time. It exists and moves in an imaginary space that for human being is not conceivable. Graviton carries information and moves so much faster than light speed. According to color charges and magnetic colors $G, G^-, G^+, G_m^-, G_m^+$, in fact graviton is pure information that for a real observer it moves with infinite speed. [6]

The fact is that the Earth, solar system and the universe existed before us and after us will exist too. Human as a clock compares himself with older clocks, and from this comparison concludes that there exist something that is called time, and the time is independent of physical existents. While any attempt to explain or define time, independent of physical existents has been inconclusive. A physical existent with its own space and time forms its special shape and after a number of ticking, decays or converts to other physical existent.

Simple and clear, EVERYTHING happens at the same time. In the other words, everything is made up of elements that never do experience "time passing" and they are seeing EVERYTHING happens at the same time. [7]

Review the Physicists show EVERYTHING happens at the same time

References

[1] SEAN MARTIN, "Time is NOT real: Physicists show EVERYTHING happens at the same time" Express, Dec 3, 2016

<http://www.express.co.uk/news/science/738387/Time-NOT-real-EVERYTHING-happens-same-time-einstein>

[2] Experimental Evidence for Time Dilation, Alternative Physics Org

<http://www.alternativephysics.org/book/TimeDilationExperiments.htm>

[3] H. Javadi, et. at, "Adaptive Review of Three Fundamental Questions in Physics", General Science Journal, 2016

[http://gsjournal.net/Science-Journals/%7B\\$cat_name%7D/View/6493](http://gsjournal.net/Science-Journals/%7B$cat_name%7D/View/6493)

https://www.researchgate.net/publication/302313653_Adaptive_Review_of_Three_Fundamental_Questions_in_Physics?ev=prf_pub

[4] Physics - Standard Model, <http://www.whillyard.com/science-pages/electromagnetic-force.html>

[5] Stanford Encyclopedia of Philosophy, <https://plato.stanford.edu/entries/time-thermo/>

[6] H. Javadi, et. at, "Generalization of the Dirac's Equation and Sea", General Science Journal, 2016

[http://gsjournal.net/Science-Journals/%7B\\$cat_name%7D/View/6552](http://gsjournal.net/Science-Journals/%7B$cat_name%7D/View/6552)

https://www.researchgate.net/publication/303988070_Generalization_of_the_Dirac%27s_Equation_and_Sea?ev=prf_pub

[7] For the first time, I published at:

H. Javadi, "Unified Force, Mass and Energy", Scientific-Technical Journal of Islamic Azad University, South Branch, vol. 1, pp. 15- 17, 1991.

I have expressed: Mother, daughter and granddaughter are born at the same time, at the same time, marry and die.