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Why and how did modern physics go in the wrong way?

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Abstract:

Today, physics has problems that old theories can not solve. These problems have historical roots. Until the roots of these problems are reviewed, physics will not be in the right way, and its problems will become more and more complex. In this article, these problems are reviewed and corrected.

Keywords: massless, singularity, virtual photon, quantum chromodynamics, big bang, Higgs

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What are the problems?

1 – **Massless photon:** by limiting the speed limit to the speed of light c and accepting relativistic mass at the beginning of the twentieth century, only one way seemed to be, assuming that the photon is massless. In the other word, energy is massless. There is no experimental observation and theoretical proof for massless photon (energy is massless) in physics. Massless photon is an assumption only. In addition, this assumption concluded that only massless particles could move at a speed of light. Read more [1]

2 – **Massless photon and cosmological equations problem:** The assumption of a massless photon also was used in the cosmological and the Big Bang.

"The 'Big Bang' is the model for the formation of our Universe in which spacetime, and the matter within it, were created from a cosmic singularity. The model suggests that in the 13.7 billion years since the Universe began, it has expanded from an extremely small but incredibly dense and hot primordial fireball, to the enormous but cold and diffuse Universe we see around us today". [2] "Singularities are regions of space where the density of matter, or the curvature of spacetime, becomes infinite. In such locales, the standard concepts of space and time cease to have any meaning". [3]

When we assume that the energy is massless, the existence and explosion of singularity with that specification (infinite density and zero volume) are also accepted. While not true.

3 - **Higgs boson:** "The story of particle mass starts right after the big bang. During the very first moments of the universe, almost all particles were massless, traveling at the speed of light in a very hot "primordial soup." At some point during this period, the Higgs field turned on, permeating the universe and giving mass to the elementary particles. The Higgs field changed the environment when it was turned on, altering the way that particles behave. Some of the most common metaphors compare the Higgs field to a vat of molasses or thick syrup, which slows some particles as they travel through". [4]

It should be noted that the theory of the Higgs entered physics decades after the Big Bang theory.

"In the 1970s, physicists realised that there are very close ties between two of the four fundamental forces – the weak force and the electromagnetic force. The two forces can be described within the same theory, which forms the basis of the Standard Model. This "unification" implies that electricity, magnetism, light and some types of radioactivity are all manifestations of a single underlying force known as the electroweak force. The basic equations of the unified theory correctly describe the electroweak force and its associated force-carrying particles, namely the photon, and the W and Z bosons, except for a major glitch. All of these particles emerge without a mass. While this is true for the photon, we know that the W and Z have mass, nearly 100 times that of a proton. Fortunately, theorists Robert Brout, François Englert and Peter Higgs made a proposal that was to solve this problem. What we now call the Brout-Englert-Higgs mechanism gives a mass to the W and Z when they interact with an invisible field, now called the "Higgs field", which pervades the universe". [5]

For physicists of the early twentieth century, including Einstein and Planck and other physicists, the assumption of a massless photon help they put the physics in a way that could explain physical

phenomena well. But physics has deviated from the path of reality, and nowadays there are problems that physicists are pursuing physically beyond the standard model.

But in the CPH theory, not only photon has mass, even graviton (in fact, all particles which are carrying the fundamental forces) have mass. It is not acceptable that a massless force can change the momentum and energy of the particles/bodies. By admitting the massive force and energy, many physics problems are solved, and physics knowledge become out of mathematical mastery, and mathematics will be the only physics tool. Then understanding and explaining the physical phenomena can be simple and more realistic than the past.

In the theory of CPH, the gravity force carrier and gravitational energy carrier are different. Also, electromagnetic force (virtual photon) carrier is not the same as electromagnetic energy (real photon).

In the CPH theory, not only the four fundamental forces of nature have closely related, even the mechanism of production of these forces is the same. At a distance far relative to the diameter of the subatomic particles, gravity force is produced. At a distance close relative to the diameter of the subatomic particles, electromagnetic forces are produced. At a distance very close relative to the diameter of the subatomic particles, the weak force is produced.

At a distance less than that (the required distance to produce weak force), repulsive electromagnetic force turns to an attractive force, pay attention to birthplace of fundamental interactions (figur 1).

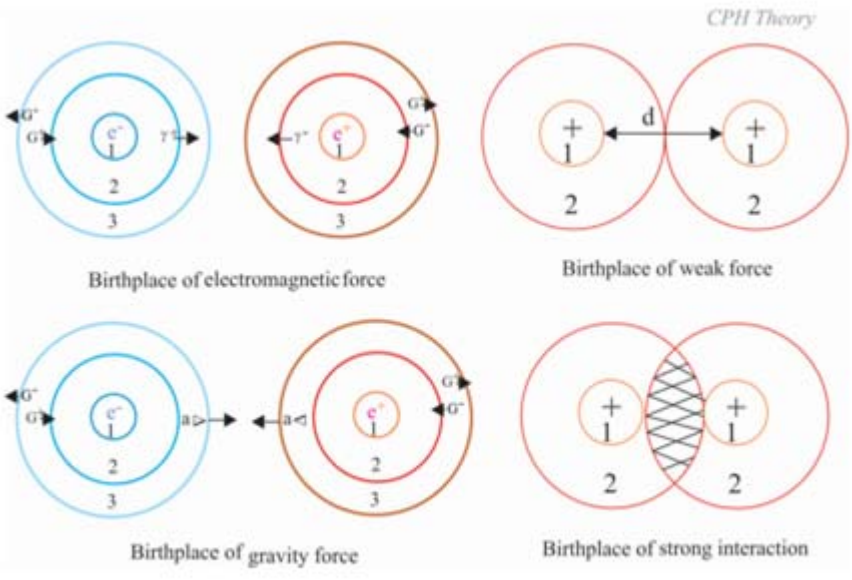

Fig1; All fields are generated by particles. The mechanism of producing the particles of the carrier of the forces is the same, the difference is only in the distance between the particles.

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It is important that we understand the mechanism of this action and explain in a way that is consistent with the basic laws of physics. Read more [6]

In CPH theory, regarding on review of Newton's second law, we have been attempted to enter to the sub-quantum space by crossing the border of quantum mechanics then to survey of counteracting Newton's second law and the universal gravitation law and finally we can be analyzed and investigated the results. In sub-quantum space, we passed across the black hole and reach the formation of the absolute black hole by specifying the limits of Newton's second law and gravitation law, then the singularity will be explained in the explosion of an absolute black hole. In this review we will be forced to change their attitude towards the singularity and the general conclusion in the singularity state is: ***volume will not be zero, density will be limited.***

With this approach, Friedman's cosmological equation can be solved at zero moment (at the moment of the explosion). This is what has been done in the CPH Theory. [7]

To date, there is no way to explain the process that describes how particles produce exchange particles in modern physics. According to the results of reconsidering relativistic Newton's second law, we can definitely say that the best way for unifying the interactions is generalizing interaction between charged particles to photon structure and vice versa. This new view on photon means that we can redefine graviton and electromagnetic energy. Electromagnetic energy converts to matter and anti-matter such as charged particles. Charged particles use gravitons and generate an electromagnetic field. This way of looking at the problem shows how two same charged particles repel each other in far distance and absorb each other at a very small distance.

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