

Investigation the Philosophy of Bohemian Mechanics

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Abstract: Although quantum mechanics, as one of the most advanced physical theory was successful in explaining many of the physical and natural phenomena and this theory has numerous achievements in diverse areas of human gifted, but parallel to this subject, much confusion has been made in understanding the philosophical principles. The most obvious approach to the challenges of understanding the nature and will cause disagreement and confusion in describing the physical world and reality. The question "how quantum mechanics describes physical reality and describe what results there?" Many researchers have attempted to address the meeting. Among the researchers, David Bohm has a special place. By providing an alternative to quantum mechanics, "Bohemian Mechanics" offers. In this brief article will attempt to introduce "quantum mechanics" and its description of physical reality, the "Bohemian Mechanics" and its own definition of physical reality too.

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1. Introduction

Human creation always count on numerous questions and he's analysis, what realists and idealists around the world, why would this article have been made, though it caused huge changes in the philosophy of science is theory.

This article will explore the various sources and authorities in the fields of philosophy and science due to the wonders of the bohemian look and insight into the text; we're in a new world and a new philosophy and what it leads to.

Among different scientists with different theories, Boehm tried through the math, the results of "quantum mechanics" to challenge and prove that there is a flaw in the formula and this defect it.

Boehm at trial proved the "plasmon" was known to conclude that sea of electrons in act strangely. In another experiment (effect of Bohm) found that under appropriate conditions, electrons can be in the presence of a magnetic field where the probability of finding an electron is zero sense. The idea of "hidden variables" proposed by this theory is the equations of the quantum factor.

He expressed his intention to do his uncanny physical reconstruction. His theory of "hidden order" raised and the "positive discipline" does not say where space and time and in another place he idea of "holographic universe" to be raised.

Bohm's idea said that we cannot break things down into smaller objects and recognize them. This will only cause them to get smaller wholes and not knowing their constituents.

By examining the Bohm theory, it can be said that neither she nor in physics and in philosophy has not brought anything new. "Bohemian Mechanics" As others have noted physicists, the different results of "quantum mechanics" do not offer. Entirely in keeping with his philosophy that "the negligence and "pantheism" and the "hidden order" and "hidden variables" before winning his philosophy and all seem to have to prove it.

His strength seems not to offer a new theory, but the new method is developed theories. Postmodern man invited her to see again.

Bohemia and deconstruct of Bohemian mechanics

What is the universe? But people always tell from the outside world, has undergone many changes and has numerous definitions.

Philosophy from the beginning, based on the principles of natural science foundation and by understanding the human perception of the environment that was done by the senses, his understanding of the world around them expanded.

The simplest division is split began with the animate and inanimate beings to recognize the world around them. The next step is to classify the particles into four elements water, wind, earth and fire, another step towards understanding as well as knowledge of the world outside of their own perceptions and their relationship with each other.

With the advancement of science, philosophy, and constantly updated in line with human perception of the nature of the particles, philosophers

have tried to discover how and why their existence and meaning of life. In this way, the definition of "physical reality" and that "the human mind works" philosophy has always been challenging to achieve the new vision and more.

Starting with the Renaissance and the scientific revolution, the great transformation of the philosophy and philosophers like he "thinks" and "Spinoza" The concept of putting a serious challenge, were reviewed. Over the same period, the physics will eventually spent a great change from the "Newtonian physics" as physics was officially accepted by physicists.

The physical interpretation of the "classical physics" is known, Principles was recognized for a long time to accept and use all the philosophical assumptions were included such as;

- Physical realities exist independently of us.
- These facts can be decomposed into recognizable elements.
- These facts are based on quantities such as mass, velocity, volume, location and description.... or investigated.
- Based on the time course of the previous states of the system are causal results.
- Any information obtained through observation and observation system disorder not logged in.
- A clear separation exists between the mind and the same man as the outside observer that describes physical reality; physical process is not affected by your observation.

Since the arrival of man to the modern age and access to technology to investigate ultrafine particles such as atoms, "classical physics" in some cases it was unable to respond. With the advancement of physics, new theories were offered as the "theory of relativity" and "quantum theory".

In this theory attempts to describe mathematically and obtain the equations of the theory to account for the behavior of particles can be measured, significant results were obtained. Including those electrons were observed at the test site. To do this, man, as an observer, with a light beam, electron behavior change.

This is contrary to the principles of "classical physics" that he believed could not be physically harmed in the process. In the experiments, "Wave-particle duality problem" and "problem-reduction wave function" opened new challenges facing physicists. Equations that physicists were finally accepted and electrons behave as a wave or a particle to be calculated separately. By placing in formula; the possibility to predict the behavior of a physical process was calculated. Outcome of these studies and the basic equations of modern physics, which resulted in a "Complementarity" and

"uncertainty principle", are known. These two principles, the philosophical foundations of classical physics suddenly collapsed.

Scientists such as "Einstein" trying to rule out a return to the principles and philosophy of Objectivism their functionality was important. The "quantum" many of the challenges they face widespread successfully removed and the new interpretation of physics, new physics was accepted as fact in greater levels of "classical physics" was accepted as the "classical limit" of the famous.

Collectively, these debates are philosophical physicists to several categories; physicians 'realists' who believed in the reality of the outside world. Physicist's approach of "critical realism" argued that objective reality, independent of any theory is a theory that attempts to calculate it differently. A group known as "quantum idealism" and believed that the primary role rests observer commented, wisdom and spirit, and the priority of thought on the matter said. Materialist also said that the world of electrons, protons and although we do not see them and treat them the same way that quantum mechanics says.

Another category that most fans had is the "Copenhagen School", who believed that our understanding of quantum physics, we find the reality, not reality itself being vital. The knowledge of the wave function caused by natural and disturbed during the measurement. Think they should ask why quantum physics to answer the questions, just acknowledge that the right answer.

However, other scientists who were trying through the mathematics, the results of "quantum mechanics" to challenge and prove that there is a flaw in the formula and to overcome this defect, this formula is the "functionality" will be. One of the scientists, "David Bohm" was an American physicist.

Bohm continued his investigation and trial "plasmon" was known to conclude that sea of electrons in act strangely. This means that whenever the electrons were in plasma, there was no effect of individual behavior, and it seemed that the whole of a large and related substance derived. Despite the random arrangement of individual movements, the effects produced by electrons in amazement as biological organisms and were regular.

In another experiment (Bohm effect) He found that under appropriate conditions, electrons can be in the presence of a magnetic field where the probability of finding an electron is zero sense. The discovery of substantial correlation was named placeless.

Bohm quantum theory ultimately formed. In this theory, the ideas of the integral foundation of thought are important. In formulating this theory, not a

spectator particles are in the truest sense, ie based on ontology, is there any real lines in this case must be attributed to the actual particle. From the standpoint of the theory of particle system configuration through a move makeup done by the wave function is vital.

Bohm theory of "hidden variables" proposed by this theory, the quantum equations of the functionality. However, other physicists say because these variables are observable and measurable, inevitably prove to be the correct theory of quantum formulas out there, and if you're not out of the quantum formulas, formula Bohm, and quantum mechanics give the same results. Bohm was ultimately successful formulation of quantum physics the results obtained, but was met with a strong backlash from other physicists.

He expressed his intention to do his uncanny physical reconstruction. His theory of "hidden order" raised and the "positive discipline" does not say where space and time.

In another place, the idea of "holographic universe" was considered. Thus he offers an image as a hologram image. "For example, if we have the typical picture of a tree and split it into 4 equal parts and keep it one-fourth more than one-fourth of the tree will not see it.

Suppose we have created a hologram of a tree and the hologram is recorded on a plaque. When I plug it up and look at it under a microscope, but some tangled lines and do not see anything irregular. But if we put it under a good light, like a laser, we can see the tree again. The same component and if one of the following four parts: laser light, we still have a complete picture of the tree (albeit somewhat more ambiguous).

Thus, each of the plates, tree spans all the information. For Bohm, a small portion of his time and place, with all the information about the order in the entire world. Holographic sight, she revealed to Bohm another way of discovery, of particles within atoms, regardless of the distance that separates them is they are related.

Bohm believes the reason is not that kind of strange signals are exchanged but their separation from both an image and a deeper level of reality such particles are not separate entities. It tells us things that cannot be decomposed into smaller objects to recognize it. This will only cause them to get smaller wholes and not knowing their constituents.

An electron has a "primary particle" is not a name that certain aspects of the movement are applied. Fact split up and each episode is named after the result of local customs and traditions, because everything else in the world of subatomic particles and are not separated. This order may be hidden behind another hidden orders is in our opinion not fit.

Conclusion:

By examining the Bohm theory, it can be said that neither she nor in physics and in philosophy has not brought anything new. "Bohemian Mechanics" As others have noted physicists, the different results of "quantum mechanics" do not offer. Entirely in keeping with his philosophy that "the negligence (Houlistm)" and "pantheism" and the "hidden order" and "hidden variables" before winning his philosophy and all seem to have to prove it.

Also look at this kind of philosophy is not new and many philosophers have tried to explain it. From Plato to the present "cave like" refers to the limitations of the human senses to perceive the truth to Descartes' brain in a vat "as applied to the external reality directly challenged the idea that Spinoza's" pantheism "and separating components of each are proposed, all have attempted to provide this kind of outlook.

Apart from these major religions and belief in the mystical Eastern philosophy, the dominant view. Hindu and Buddhist rituals, and even some Islamic mysticism, is the stoic type casting is visible and evaluation and according to a person close to the kind of mysticism David Bohm, the influence of this opinion to explain his philosophical ideas - not physical, he is not far-fetched.

Reason Bohm theory is so important? His strength seems not to offer a new theory, but the new method is developed theories. Postmodern man invited her to see again. To accomplish this goal, like any other great philosopher, the tool uses the updated examples. To attract people to update, the update tool is required. His explanation of "physical reality" through technological advances that were not possible before, and the world from the perspective of technological tools are described. He stated however that the old story seem new tools that he used to work modern man's attention, and expressed surprise and forced him to re-visit and re-think it.

It cannot be said that he thought the new package provides the old, such philosophical questions as essential and eternal human questions, never be worn and always challenge people's understanding of the universe, the human brain remains a major question.

The important role of "David Bohm" takes charge of the post-modern man wants to expose her to these questions does not forget to re-visit, re-thinking and re-discover the place.

References:

1. Albert, D. Z., *Quantum Mechanics and Experience*, Cambridge, MA: Harvard University, 1992 .

2. Bohm, D., *Causality and Chance in Modern Physics*, Routledge, 1984 .
3. Bohm, D., *Wholeness and the Implicate Order*, New York: Routledge, 1980.
4. Bohm, D., and B. J. Hiley, *The Undivided Universe: An Ontological Interpretation of Quantum Theory*, London: Routledge & Kegan Paul 1993.
5. Clayton, P., *Mind & Emergence: From Quantum to Consciousness*, New York: Oxford University Press, 2004.
6. Goldstein, S., "Bohmian Mechanics", *The Stanford Encyclopedia of Philosophy* (Spring 2009 Edition), Edward N. Zalta (ed.), URL = <http://plato.stanford.edu/archives/spr2009/entries/qm-bohm/>.
7. Golshani, Mehdi, analytical and philosophical insights of contemporary physicists, Farzan's publishing, 1991.
8. Golshani, M., "The philosophical foundations of modern physics", a Academy of Sciences, No. 1, 1994.

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