

Modern Physical Philosophy Framework

—The Second Use of Cosmic Ontology to Resolve the Contradictions of Quantum Mechanics and Relativity

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Abstract

The previous article “Scientific Cosmological Ontology” discussed that the “theoretical contradictions” between quantum mechanics and relativity may become a joke in the history of human existence. It is believed that human philosophical thinking, from Socrates, Plato, to Aristotle, was a turning point. For more than 2000 years, we have been developing in the direction of material philosophy and material science according to Aristotle, and we have reached the peak of human thinking. Modern physics is a great achievement at this peak. According to the principles of dialectical materialism, this “theoretical contradiction” has opened the door to the original thinking of the universe. We have to go back 2500 years to pick up the great banner of cosmic origin that humanity has abandoned, and human thinking. This article continues to analyze the “theoretical contradictions” between quantum mechanics and relativity, and to design the philosophical framework of modern physics according to the thought of cosmic origin.

Keywords

Ontology, Cosmic Origin, Contradiction, Dialectics, The Contradiction between Quantum Mechanics and Relativity, Metaphysics, Physical Philosophy Framework

1. The Truth and Fallacy of Science

The previous article “Scientific Cosmological Ontology—Using Cosmic Origin Philosophy to Resolve the Contradiction between Quantum Mechanics and Relativity” summarizes the origin of the universe, discusses the problems of existence and dimensions in cosmic space, problems of coordinate systems and calculus, problems of thermodynamics and the existence of life, and problems of

the process relationship between space and existence. Discusses the Taoist and Buddhist ideas about the origin of the universe and the practice process of thinking about the origin of the universe, and puts forward a new interpretation of quantum mechanics, which holds that quantum mechanics and relativity theory are the physical philosophical framework of the universe ontology, and lays a foundation for solving the contradiction between quantum mechanics and relativity theory. (Liu, 2024g)

This article formally resolves the contradiction between quantum mechanics and relativity, using the idea of the origin of the universe, information from modern science, and materialist dialectics.

Research has found that human language, words, numbers, science, and coordinate systems are artificial existences. Artificial existences do not have absolute truth, only relative truth. (Liu & Liu, 2021a) Lee Smalling's book, "Time Reborn. From the Crisis in Physics to the Future of the Universe," (p. 105), makes a remarkable statement that there is no single ultimate theory in the world. (Smolin, 2017)

Scientific truth is still the case, only relative truth. These relative truths are scientific discoveries in the universe, which are real existences and laws that have been repeatedly verified. However, scientific truth is also only a stage truth of humanity. Our understanding of the truth that exists in the universe, the real existence in the universe is still very far away. Human existence is an eternal exploration of existence. (Liu & Liu, 2020, 2021a)

Classical physics is the truth, and Einstein's relativity discovered the limitations of the law of universal gravitation. (Einstein, 2020) Relativity is the truth, the law of conservation and transformation of mass energy is the basic existence and law of the universe, and it also has limitations, only suitable for the material universe, in the thought of cosmic origin, there is no material. (Liu, 2024g)

Quantum mechanics is also a truth of scientific discovery. Einstein, as the founder of quantum mechanics, questioned this theory. Theoretical scientists of quantum mechanics have interpreted this theory, but there is no convincing answer to Einstein's question, influenced by material philosophy, which becomes the contradiction of modern physics. (Liu, 2024a)

In theory, $E = MC^2$ is the equivalent of energy of matter under certain conditions of time and mechanical information, and matter can be transformed into energy. In turn, quantum mechanics is another equivalent equation for energy to be transformed into matter under certain conditions of mechanics and time information. It is a philosophical principle of the mutual transformation of matter and non-matter. (Liu, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f)

Quantum mechanics and relativity are the peak of more than 2000 years of material science development by humanity, and also the key to opening the door to the philosophy of cosmic origin. Both are achievements of material science development under the guidance of material philosophy. However, we have forgotten the issue of space that Aristotle has shelved for more than 2000 years. (Aristotle, 2016, 2019)

If engineers and technical scientists believed in the contradictions of quantum mechanics and relativity by theoretical scientists, there would be no third industrial revolution, and no development of computers, televisions, and the internet. There would be no development of informatics, and there would be no creation of nuclear weapons such as atomic bombs and hydrogen bombs. Of course, there would be no factors that humans can eliminate themselves. (Liu, 2024f)

Engineering and technical scientists seek truth from facts. With the spirit of dialectics left by our ancestors, respect for scientific conclusions, and diligent practice, they have turned the great scientific achievements of humanity into material reality, and have also brought about the reality of human survival and existence. The author is proud to be a member of engineering scientists, not to participate in the debate, to practice earnestly, to realize the creation of science in practice, to find the focus of contradictions in practice, and to find the answers to contradictions in order to resolve contradictions.

As an ordinary person, there is no intention to blame anyone here, especially in the scientific community. It is just to convey a message and express some phenomena through language, words, and numbers. In the process of expression, some extreme words, such as demons and Buddhas, two kinds of minds, smart and stupid, two kinds of thinking, (Liu, 2024g), etc., are all neutral expressions. I sincerely respect the scientific community, especially Einstein's theory of relativity and Witten's M-theory. The four-dimensional space-time coordinate system, the law of conservation and transformation of mass energy inspired the thinking of 0, (Liu & Liu, 2020) M-theory inspired the thinking of cosmic dimensions and integrated the thought of cosmic origin (Liu, 2019). I admire the achievements of material philosophy for human survival and existence, and also found the troubles and troubles brought by material philosophy. These cannot be blamed on humanity, this is the cause of the human mind given by the universe, it is the universe that makes humans have to do so. (Liu & Liu, 2020, 2021a)

The key is, have we humans realized this point, human thought is just a natural phenomenon of the universe, whether it is material philosophical thought or cosmic origin thought. (Liu & Liu, 2020)

In addition to having feelings, subjective consciousness, language, words, numbers, and other cellular material functions, humans are no different from stones, planets, particles, etc., except for the length of life. Humans have feelings, can think, and can express themselves, and with language, words, and numbers, they keep asking and exploring, where do humans come from? Where to go? How should we live and exist? Where does matter come from? Why does it exist (Liu, 2020a; Liu, 2020b). Before the advent of modern physics, there was no scientific answer, although our ancestors left us a lot of knowledge, because we live in the contradictions of the material world. The existence and survival of humans and matter itself is a contradiction, (Liu & Liu, 2021b, 2021c) the cosmic origin thought left by our ancestors tells us: the existence of humans is to solve contradictions. (Liu & Liu, 2021d, 2024)

2. Cosmic Ontology Reflection

2.1. Basis for Reflection

The “Tao Te Ching” states: 道可道，非常道；名可名，非常名；无名天地之始，有名万物之母。(Not translated)

Please understand that the “Tao Te Ching 道德经” cannot be translated because any translation would become the translator’s own thoughts. It is recommended to read the ancient Chinese text directly to understand the wisdom within. The author has studied many versions of the “Tao Te Ching,” taking the version by Wang Bi (Wei Dynasty) as the main reference, and has annotated it with modern physics and dialectical principles (Laozi, 2019), referring to the annotations by Professor Lou Yulie. It is believed that “道可道，非常道；名可名，非常名” means that human existence is an eternal exploration of the “Tao” of the universe, the eternal truth of the universe, which cannot be clearly expressed in language, word, and numbers for the time being. “无名天地之始，有名万物之母” means that “nothingness 无” gives birth to existence, existence is “being 有,” and “being 有” gives birth to matter.

Laozi, in the “Tao Te Ching,” clearly uses the original scientific philosophical thought of the universe to interpret the ontology of the universe. However, before the emergence of quantum mechanics and relativity, we were all interpreting Laozi’s words with material philosophy. The information from quantum mechanics, relativity, and modern science can allow us to re-understand and interpret the great original thought of the universe and the ontology of the “Tao Te Ching” (Liu & Liu, 2021d). The “Tao Te Ching” tells us that the universe is a balanced, living, and Yin-Yang “nothingness 无”, Once it is unbalanced and contradictory, it will produce the existing “being 有”. Inaction is action 无为而为, without subjective consciousness, and the direction is to return to balance in fluctuations, very similar to the dissipative structure theory of systems science (Xu, 1994).

The same principle applies to the “Diamond Sutra” and the “Heart Sutra.” The author has also studied many versions, taking the version by Kumarajiva (Eastern Jin Dynasty) for the “Diamond Sutra,” and the version by Master Xuanzang for the “Heart Sutra,” referring to the annotated edition supervised by Master Xing Yun (Siddhārtha, 2019) and the book edited by Professor Lai Yonghai (Siddhārtha, 2020), and has interpreted the “Diamond Sutra” and “Heart Sutra” with modern physics and dialectical principles. It is believed that the mother of the universe is called space, and there is an existence of “emptiness 空” in space, also called “emptiness 空.” “Emptiness 空” creates “being 有” with the consciousness of “all five aggregates are empty 五蕴皆空,” and the existence of “being 有” is called “spend 度.” All existence is in the “spend” of space. “spend” is named time by humans and can be very long, infinitely long; it can also be very short, infinitely short. The time to understand the universe is called “kalpa 劫,” and each “kalpa” is roughly 4.32 billion years (Ancient Indian Books, 1989). Therefore, the “Diamond Sutra” says: 一切有为法，如梦幻泡影，

如露亦如电，应作如是观。(Not translated) The general idea is that human understanding of existence should be like understanding the dew and lightning in nature, which pass quickly and are the same. It is believed that the “Diamond Sutra” discusses the issue of all existence in space “spend” with human wisdom, simply called “emptiness 空, Prajna/Wisdom 般若, spend 度” (Liu & Liu, 2024).

2.2. Reflection Process

In the history of human survival and existence, due to the lack of scientific information, humans have handed over the thinking about space and the emptiness and divine existence in space to metaphysics and mythology (Liu, 2020a; Liu & Liu, 2020).

Aristotle pioneered a new journey of material philosophical and material scientific thinking for humanity, pulling philosophical thinking back from the heavens to the world, focusing on a comprehensive consideration of human society and the material universe. Since then, although humanity has repeatedly claimed that philosophical thinking is metaphysical and cosmic origin thinking, human thinking has never been able to break through the restrictions of material universe, material existence, and material rationality on human thinking. The language, words, and numerical information created by humans have become the information for expressing the material universe (Liu, 2024b; Liu & Liu, 2021a). Humans call “truth” what they think is correct and what they think is incorrect “fallacy,” and the information created by humans has become the coordinate system for humans to judge right and wrong (Liu, 2024c; Liu & Liu, 2021a, 2021b). In this way, a system for understanding the world has been formed, which is beyond reproach.

For the cosmic origin, for the thinking of cosmic ontology, it has also been limited to thinking from matter to matter, matter originating from matter. We cannot break through the restrictions of human material rational thinking created by language, word, and numbers (Liu, 2024b). On the contrary, scientific thinking, especially the thinking of physics, has broken through matter and entered the existence of emptiness in mechanics and time, and the thinking of mechanics and energy, opening up a new journey for human thinking about the cosmic origin and the cosmic ontology. As a result, the development of science and physics has made rapid progress until the emergence of quantum mechanics and relativity (Liu, 2017, 2019, 2021d; Liu & Liu, 2020). However, the development of science has been guided by material philosophy and has fully developed within the framework of material philosophy, discovering the existence of emptiness, divinity, and non-material existence, also as material existence. When the development of science and physics reaches its peak, when the research on mechanics, time, energy, and information reaches a certain stage, material philosophy shows its limitations, and the philosophical thinking contradictions of quantum mechanics and relativity appear. This is not a contradiction of science, but a contradiction that is bound to appear in the history of human survival and

existence, in human existence, and in the process of human thinking (Liu, 2024b). Quantum mechanics is questioned, to be precise, it is questioned by human material philosophical thinking.

Science has discovered the origin of the universe and can explain the ontology of the universe. However, due to the constraints and limitations of material philosophy, we are unable to recognize this scientific cosmological ontology. There has also been a discussion in “Scientific Cosmological Ontology” about whether humans are wise or foolish. (Liu, 2024g)

2.3. Method of Thinking

By understanding the systematic cosmological philosophical thoughts of Taoism and Buddhism left by our ancestors, some of the cosmological philosophical thoughts of ancient Greece, by learning dialectical materialism (Hegel, 2019; Engels, 1962), combined with modern physics, systems science, physical cosmology, and other modern scientific information, the above conclusions can be found. (Liu, 2024a)

The theory of universal gravitation discovered the mutual Yin and Yang perception information between the mass structures of matter; electromagnetic mechanics theory discovered the mutual perception information between the energy structures of matter; thermodynamics discovered the perception information of the balance of matter and energy. The existence, movement, and change of matter, the material cause, dynamic cause, and formal cause of matter have been found (Aristotle, 2016, 2019; Liu & Liu, 2021a), and the soul of matter has been found. Quantum mechanics discovered another kind of perception force between particles—strong force and weak force, and found the cohesive force of matter creation and creation. The strong force and weak force discovered the mutual perception information between particles and quarks, the perception between particles. The weak force discovered radioactivity, the time and direction information of matter creation, and the information of thermodynamic equilibrium. The soul of the energy particles created by matter was found (Planck, 2019; Liu, 2024b).

From this, it can be judged that science has not yet found the soul information of the material energy particles and quarks that are created. The author believes that it can be found in thermodynamics (Liu, 2024f). However, physical cosmology has found dark energy and dark matter (Yu, 2002). The logical relationship between dark matter, dark energy, and particles, quarks has not been found. Now, based on the author’s six books and published papers, an attempt is made to find this logical relationship and to find the modern physical philosophical framework of cosmic ontology (Liu, 2024g).

3. The Basic Framework of the Philosophy of Physics in Cosmic Ontology

Based on the logical analysis method of dialectical materialism, and based on the

information and knowledge of modern science, and based on the thoughts of the cosmic origin left by our ancestors, the philosophical framework of physics in cosmic ontology has been thought out.

Humans are material and live in the material universe. The information and discoveries created by humans are all thoughts of material philosophy and information of material science. Therefore, the information produced is within the category of the material universe, and the expression is also within the category of the material universe. Although our ancestors have discovered the cosmic origin, they cannot explain the ontology of science and the universe. Because humans don't have enough information. It is the theoretical information of modern physics, quantum mechanics, and relativity that has proved the thoughts of the cosmic origin left by our ancestors.

The concepts of space and time are created by humans. In order to survive and exist, we have to create information. However, the specific origin and information of space and time can only be expressed in concepts before the emergence of modern physics information. We cannot express the origin of space and time with fundamental information. However, modern science has this condition and information. (Liu, 2024a)

Research and thinking have found that although humans are material and live in the material universe, the origin of matter is energy, and the origin of the change, movement, and survival of energy and matter is information. So far, the information that humans can express is that the universe in which humans live is a universe where matter, energy, and information exist. Energy and matter are two kinds of existence with Yin and Yang attributes under the condition of information, and the existence of information determines the creation, movement, change, balance, and cycle of energy and matter. All the creation, movement, change, balance, and cycle of existence, in terms of the essence of physics, is a balance and cycle of mechanics and thermodynamics. (Liu, 2024b, 2024e)

This conclusion is based on the thoughts of the cosmic origin left by our ancestors, combined with an understanding of Planck's "Eight Lectures," (Planck, 2019) Longair's "Theoretical Concepts in Physics," (Longair, 2017) as well as related works of quantum mechanics, relativity, and other related works of physics, and is a basic conclusion drawn by combining them. Therefore, the following basic framework of cosmic ontology can be established:

3.1. The First Framework

The absolute ontology of the universe is the existence of absolute zero temperature, which is a concept of Yin and Yang, a concept of information and energy of Yin and Yang, and also a balanced existence of the change and movement of Yin and Yang.

This is an empty, divine, unknown concept of Yin and Yang.

Physics calls it absolute zero; electric charge is 0; mathematical dimension is 0; mass is 0. It can be called the concept of "light." (Liu & Liu, 2020, 2021a, 2024)

3.2. The Second Framework

Under the interaction of cosmic Yin and Yang, the framework of quantum mechanics is produced, which should include the universal existence of dark matter and dark energy, as well as the creative existence and movement and change of particles and quarks under the information of force and time. Force and time are information discovered and created by humans, and their origin is unknown and worth further thinking and exploration by humans. Absolute temperature can be equal to 0, or not equal to 0. (Liu, 2024a, 2024b, 2024e) Mathematical dimension is 0; mass is 0.

3.3. The Third Framework

The absolute temperature is not equal to zero; but the mathematical dimension, electric charge, mass, and gravitational mass of matter can be equal to zero, or not equal to 0; time can be designed as the material energy time is not equal to zero, there is an existing process; the material energy existence time process is reversible, can be equal to zero, can be not equal to 0, reflecting wave-particle duality; at this time, the electric charge is not zero, can be 0, reflecting wave-particle duality, unmeasurability, and the entanglement of energy and information; gravitational mass is 0, does not belong to the category of relativity; gravitational mass is not 0, belongs to the category of relativity, and there is a tendency to form atoms. (Liu, 2024e; Planck, 2019; Landau, 2008) This process can be a process of cosmic divinity, emptiness 空, and inaction and action 无为而为, and may not be a process that allows human subjective consciousness to participate.

Once the gravitational mass is produced and the concept of material time is produced, the direction of thermodynamic equilibrium is irreversible. (Liu, 2024b)

3.4. The Fourth Framework

It is the production, creation, existence, movement, change, and thermodynamic cycle of atoms, molecules, matter, cells, and all things, from the big bang to black holes, which may be the whole process of the existence of the material world, the material universe, and life. All existence, especially the existence of matter, is a living existence, and the most basic principle is the thermodynamic cycle and balance. (Liu, 2024e) Humans are a kind of existence in the entire process of material existence, a stage existence, or can appear rhythmically, determined by human subjective consciousness and according to the natural conditions. Human subjective consciousness is the software installed by the cosmic god. (Liu, 2024e) The software program of human consciousness is a spiritual software program that humans upgrade and transform themselves according to the information they receive. (Liu, 2024e; Liu & Liu, 2021a)

4. Basic Concept Analysis of Cosmic Origin Thought

The author is not a professional in philosophy and does not like philosophy.

This is the disadvantage of philosophical thinking. The advantage is that it is not bound by any philosophical ideas. especially not liking to always scold others for incorrect philosophical thoughts. Very fond of the Taoist and Buddhist cosmic origin philosophical thoughts of the middle way and balance, like the thinking method of dialectical materialism, which can inspire human comprehensive thinking. Although I don't like philosophy, I am interested in several concepts of philosophy. For example, the logical relationship between contradictions, dialectics, the concept of existence, and essence, etc. So the writing of the article, with the way of thinking and understanding, integrates. Humans have created the concept of existence using language, text, and numbers. Starting from this concept, they analyze the logical relationship between existence and essence, proving the origin of the concept. Thinking about the logical relationship between concepts and essence.

4.1. Matter

4.1.1. Concept Analysis of Matter

The “Cihai” defines matter as: It is the objective reality that does not depend on consciousness and can be reflected by human consciousness. The essence of the world is material, and consciousness is a product of the highly developed material. Motion is the fundamental attribute of matter, and time and space are the forms of existence of matter in motion. All phenomena in nature and society are various manifestations of moving matter. (Xia, 1999)

Analysis: This definition is the current common thinking, material philosophical thinking, and does not reflect the thinking of quantum mechanics.

The “Dictionary of Physics” defines matter: Before the 20th century, the concept of matter only included ordinary matter composed of atoms, not including other forms of matter such as sound and light. This concept of matter can be extended from atoms to any object that has mass even when at rest, but this is still not a well-defined concept of matter. Because the mass of an object can be changed by the motion and interaction of its components. Therefore, matter does not have a universal definition, and matter is no longer a basic concept of physics. However, matter can still be classified from the perspective of particle physics. Baryonic matter and non-baryonic matter. Baryonic matter refers to matter composed of baryons as components. Almost all matter encountered in daily life is baryonic matter, such as any matter composed of atoms. Non-baryonic matter refers to matter composed of components other than baryons, including neutrinos, free electrons, photons, etc. It is still undetermined whether dark matter belongs to which category. When we usually refer to matter, we generally refer to ordinary matter that does not include dark matter. (Du, 2017)

Analysis: This definition is a scientific physical definition. Although it is material thinking, it has laid the foundation for the definition of matter in the concept of cosmic origin.

Physics assumes the concept of “antimatter.” From the philosophical concept

of cosmic origin, the term “antimatter” is inappropriate. From the principle of cosmic origin, mechanics is the information that creates matter, as well as the information that destroys and annihilates matter. Thermal energy and time control balance and direction. From the perspective of existence, there is no “antimatter.” (Liu & Liu, 2020)

According to the Yin and Yang principle of the “I Ching” and the principles of information science with 0 and 1, we should use the concepts of “matter” and “non-matter” in physics.

4.1.2. Analysis of the Concept of Time

Liu & Liu (2020, 2021a, 2024) believe that time is not a concept of existence in the universe; it is a subjective, artificially created concept of human consciousness. It is a process relationship created by humans between space and existence (Liu, 2024g). The CIPM (CGPM) (1969) defines the concept of “second” with modern physics, which is a precise expression of the concept of time created by humans and also an expression of the directionality of thermodynamic existence (Liu, 2024a). Time is an artificially created process information, an expression of the process of existence.

4.1.3. Analysis of the Concept of Material Existence Dimension

Descartes (2019) created the three-dimensional coordinate system, creating the standard concept of the three-dimensional existence of matter, and created the standard of the scale of material existence. Newton discovered the gravitational mass of matter, discovered the mutual perception and motion between the gravitational masses of matter, and this perception showed the mutual attraction between the masses of matter. Newton also discovered the concept of absolute space, which was confirmed in his debate with Leibniz (Leibniz, 1996), absolute space is a 0-dimensional universe without matter, without the concept of material scale and distance (Liu, 2020b, 2021a, 2021b, 2021c). There are no dimensions in the original space of the universe. In the original universe, there is no gravitational mass of matter, no matter and matter dimensions, but it can be created. (Liu, 2024a, 2024b, 2024c, 2024d, 2024e, 2024f) which is quantum mechanics. When matter has no dimension, of course, there is no measurable material existence time. With the material dimension, there is a measurable material time with gravitational mass. Analysis based on this logic.

4.1.4. Definition of the Concept of Matter and Non-Matter in the Universe’s Origin

Based on the above concept analysis, based on the principle of the universe’s origin, enter the third framework of the philosophical framework of physics in the ontology of the universe for definition.

When a particle has gravitational mass, it has the dimension of matter and enters the three-dimensional material category of Newtonian mechanics and Einstein’s relativity. Having the meaning of matter, it also has the concept of Einstein’s time not being zero in the four-dimensional space-time coordinate

system, and matter begins to be measured from zero in terms of survival, existence, and life, and begins the journey of matter being created, gathering, existing, moving, balancing, and changing, and has the concept of material time, until it disappears and returns to energy. (Liu, 2024g) Before this, it is the time process of wave of energy particles, which belongs to the concept of non-matter existence. It does not belong to the category of relativity. (Liu, 2024g)

4.2. Energy

4.2.1. Analysis of the Concept of Energy

Energy: According to Maxwell's theory, the energy that an object possesses is a measure of its ability to do work externally. In the realm of mechanics, it mainly refers to mechanical energy, including kinetic energy and potential energy. In the realm of thermodynamics, it manifests as the internal energy of a system. Generally speaking, the forms of energy of various types of motion are different, and they can change between each other, but the total amount remains constant. (Du, 2017: p. 9)

Analysis: According to the principle of the universe's origin, the current material universe is a balanced universe formed in the process of all mechanics, thermodynamics, and time interrelationships and interdependencies. The characteristic of this universe is that all matter is energy in motion and change.

Matter moves and changes in various mechanical relationships. Mechanics and time form the current balanced universe, in which all material existence works under the interdependent and interactive effects of mechanics. The result of doing work generates energy. Matter, under natural mechanical conditions, naturally goes through the process of the universe's time. It forms material energy and returns to energy.

The form of matter's energy, $E = MC^2$. M is the gravitational mass of matter, C is the speed of light. This energy can be expressed as $E1$.

$E1$ is the existence of material energy in a state of universal balance, the accumulation of material performance energy. Like people living, they will also die (Liu & Liu, 2024), called returning to energy. The existence time of matter is very long, measured in hundreds of millions of years or "kalpas 劫". Human intervention can accelerate this process, such as man-made atomic bombs, which can cause stones to die prematurely; on the other hand, nuclear weapons can also cause humans to disappear prematurely. (Liu, 2024b, 2024c, 2024e, 2024f)

Matter moves and changes under the conditions of mechanics named by humans, in the concepts of time and space created by humans. It does work and generates energy. Eventually, it will completely revert to energy. The energy of matter doing work is expressed as $E2$. $E1 = E2$. In physics, it can be expressed as the law of conservation of mass energy and the law of mass energy equivalence.

Quantization of energy: The basic principle of quantum mechanics is that energy is discontinuous, and energy can only take a series of separated values. (Du, 2017: p. 562)

Analysis: Particles, also known as energy quanta, are the energy quanta discovered by Planck in blackbody radiation, discovering that energy is a discontinuous energy quantum in segments. Einstein discovered the quantization of light, and since then, the great journey of quantum mechanics has begun. It turns out that the material universe originates from something similar to light and photons, a great creation, and all matter originates from there. Light energy is the particle energy of quantum mechanics, expressed as E_3 , $E_3 = E_2 = E_1$. Enter the third framework and the second framework for thinking.

Quantum mechanics created the basic concept of existence, called particles and quarks. How did particles and quarks come about? Where do they come from? It is not yet clear. This is very similar to 100 years ago when we did not know where matter came from and how it was formed.

After 100 years of development of quantum mechanics, we have learned that matter comes from particles, and particles, under the interaction of strong and weak forces, produce atoms and matter.

Current physics has discovered and named a kind of existence called dark matter and dark energy. According to the idea of the universe's origin, the existence of dark matter and dark energy is designed as a pre-particle energy existence and is the only existence.

4.2.2. Dark Matter, Dark Energy

Dark matter, a hypothetical form of matter that does not interact with light, accounts for the majority of the material in the universe (Du, 2017: p. 191). In cosmology, it is a kind of unknown matter that fills the entire space of the universe and has a gravitational effect. It does not emit electromagnetic radiation itself, nor does it interact with baryonic matter, electromagnetic waves, or itself. The existence of a large amount of dark matter in the universe can only be known through gravitational effects. (Du, 2017: p. 884)

Analysis: This is a hypothetical existence that fills the entire space of the universe and can be defined as a non-material, pre-particle energy existence, expressed as E_x .

Dark energy is an unknown form of energy in cosmology and astrophysics (Du, 2017: p. 191). In cosmology, it is a kind of unknown energy that fills the entire space of the universe and has an anti-gravitational effect. It has a repulsive effect. (Du, 2017: p. 884)

Analysis: This is also a hypothetical existence that fills the entire space of the universe and can also be defined as a non-material, pre-particle energy existence, expressed as E_y .

Based on the standard model of cosmology and the observation results of the Planck satellite, it is estimated that the total matter and energy in the universe is about 4.9% ordinary matter, 26.8% dark matter, and 68.3% dark energy. It is estimated that dark matter accounts for about 84.5% of all matter in the universe, and the total of dark matter and dark energy accounts for about 95.1% of the total matter in the universe. (Du, 2017: p. 191) $E_x + E_y = 95.1\%$, which can be ex-

pressed as $E_4 = E_x + E_y$, dark matter and dark energy are the same type of energy, can create particles, and the force of creation is called the primal force or thermal force (Liu, 2024e). This type of energy may also determine the motion, change, and direction of all existence.

Analysis: It is clear that our material universe only accounts for about 4.9%, and the rest are non-material energy concepts. The three-dimensional existence that can be expressed in size is only 4.9%, what should we do? There is no way, to understand it, the universe is a collection of matter and non-matter. (Laozi, 2019; Siddhārtha, 2019; Liu & Liu, 2021d, 2024)

This thought can enter the third framework and the second framework. Particles can be created by the primal force and E_4 , and the primal force should have a zero-based coordinate system of time and space relativity principle; atomic matter can be created by E_3 particles and strong and weak forces, and strong and weak forces should also have a zero-based coordinate system of time and space relativity principle; matter can be gathered into gravitational mass and material energy E_1 by all forces, and the mass of gravitational attraction combined with the speed of light produces the dynamics of material relativity $E_1 = E_2 = E_3$. A single relativity is not enough to explain the universe, (Liu, 2024e), It will be a joke to the philosophical thinking of mankind (Liu, 2024g).

Then enter the first framework for thinking. The basis of thinking is space, time, and information.

4.3. Information

The greatest contribution of classical physics to humanity is the discovery of mechanics, which led to the discovery of energy. In fact, we do not know what energy is. Modern physics has allowed us to further discover energy. Judging by the thought of the universe's origin, energy is the non-material emptiness, matter comes from energy and goes back to energy. Force can change energy and matter with each other, and can also make matter exist, move, change, and return to energy. What plays a decisive role is force and time. Humans have created a name called information.

4.3.1. Analysis of the Concept of Information and the Research Significance of This Article

The founder of cybernetics, N. Wiener, believed: Information is information, neither matter nor energy. (Xu, 1994: p. 594) The author appreciates Wiener's definition of the concept of information very much. Physics tells us that matter and energy are the two forms of Yin and Yang in the universe. It also tells us that there is a natural information in the universe that allows matter and energy to change each other. Under the interaction of natural information in the universe, energy changes and creates the existence of matter, and the movement and change of matter can also produce the existence of energy. The natural information that creates and changes the existence of motion is called mechanics, which is obviously the natural information that humans have discovered and de-

ined. (Liu, 2024a, 2024b)

Wiener also said that information is the name of the content we exchange with the external world in the process of adapting to and controlling the external world. (Du, 2017: p. 250) Obviously, information is a great creation by humans for survival and existence. Language, words, and numbers are a kind of information created by humans, (Liu & Liu, 2021a), science and coordinate systems are also human creations of information, (Liu & Liu, 2021a), and human exploration of matter and energy is a great creation by humans in the exploration of the truth of the universe. (Liu & Liu, 2020, 2021a, 2021b, 2021c)

If we use information to define human history, then before the scientific and technological revolution, humans created a revolution of information in language, word, and numbers. In this revolution, humans found the first energy for human survival, the first energy is the energy of humans transforming food into the growth and change of the body. (Liu & Liu, 2020) The first energy is the agricultural and food revolution discovered and created by humans.

Coordinate systems and scientific thinking initiated the scientific and industrial revolution of humanity.

The first industrial revolution was when humans mastered the transformation of material energy information through thermodynamics. The second industrial revolution was when humans mastered the transformation of material energy information through electromechanics. These two energy information revolutions were all information of mechanics doing work on matter. These two industrial revolutions can be called the second energy of classical mechanics for material information. (Liu & Liu, 2020)

The third industrial revolution is the peak of the development of human material philosophy and material science, bringing humanity to the realm of the gods of the universe.

At this stage, humans have used the Yin and Yang principle of the material universe, and the information of zero and one, to create computers and robots. It has brought human material information energy science to the peak, and humans have learned to create intelligent robots like the universe creates humans.

At the same time, we have found that matter is equivalent to energy under the information conditions of the speed of light (Einstein, 2020), matter is energy. We have not only discovered that mechanics can turn matter into energy but also found that quantum mechanics can create the information of matter from energy (Landau, 2008). This is the great principle of quantum mechanics.

humanity has discovered the great principle by which the universe creates the material universe. As intelligent matter created by the universe, humans have discovered the natural divine principle of the universe. Humans have also discovered nuclear energy, which can benefit humanity or eliminate all of humanity, and nuclear energy is called the third energy. (Liu & Liu, 2020)

At this time, we found that there is a theoretical contradiction between quantum mechanics and relativity. However, as a great engineering and technical

science, quantum mechanics and relativity have been widely applied. Humans have gained the greatest benefits of material interests. At the same time, they are also in the confusion of physics. (Smolin, 2017)

At this time, we found that the information of language, words, and numbers created by humans, material philosophy, and material science coordinate system information have imprisoned our human thinking. Because the information of space and time that we understand with material philosophy has produced contradictions, and we have already walked out of the closed circle of thinking brought to human beings by material philosophy.

We once called the third industrial revolution the information revolution (Schwab, 2016), but in theory, we have been locked in the thinking category of material philosophy by the information of material philosophy and material science. The most representative is the theoretical contradiction between relativity and quantum mechanics.

The fourth industrial revolution has caused humans to reflect. From the analysis of concepts and essence, we are only reflecting on what benefits and disadvantages have science and scientific progress brought to humanity. On the one hand, we use informatics to develop networks and robots, and on the other hand, we worry about the threat of networks and robots to humanity; on the one hand, we call for peace, and on the other hand, we prepare for the threat of nuclear weapons to human survival. (Liu, 2024f) In fact, we have already lost the direction of scientific development and human survival, and we are confused by material philosophy.

We must break this thinking lock. The real revolution for humanity is a thinking revolution.

Use the cosmic origin thoughts left by our ancestors to expand the thoughts of material philosophy and expand our thinking. With the information brought to us by modern physics, we should re-think the direction of human and scientific development. Otherwise, we will not find the direction.

Perhaps this is the significance of the author writing this article and all previous articles and six books.

Humanity needs to re-think philosophy, re-think the concepts and definitions of space, time, theology, etc., in philosophy. For the survival and existence of human science, re-think the cosmic origin thoughts left by our ancestors.

4.3.2. Space

Space is the matrix of all existence that humans perceive and create. It is the mother of all our information, the supreme concept. It is the unknown. Call space “Tan” (Tan) instead of other third-person pronouns. (Liu, 2024b)

Space cannot be expressed in mathematics, it is boundless in size, without inside or outside, it is infinite. From the perspective of material existence, the original existence of the universe is zero-dimensional. (Liu, 2024a) From the information we currently have, space cannot be expressed and should not be studied for the time being. We should respect and revere space. (Liu, 2024c, 2024e)

In terms of scientific expression of space, three-dimensional space is merely the spatial expression of the material universe. From the perspective of energy and information, the original zero dimension of the universe. Space can be expressed by the shape of existence to convey the information of existence. (Liu, 2024a, 2024b).

4.3.3. Theology

Humanity has used the information to create theology and mythology. This is a beacon in the human spirit and mind. We must respect this culture and persist with it. (Liu & Liu, 2020, 2021a)

Theology is physics, it is informatics, it is mechanics. When physics discovered the principles of mechanics, relativity, and quantum mechanics, and after humanity discovered the principles of quantum mechanics, cosmic theology was established. (Liu & Liu, 2021b, 2021c)

Humanity has used wisdom to find the god of the universe, to find the material universe to be created, to exist, to move, to be balanced, and the cycle of change of the material cause, formal cause, dynamic cause, and the purpose of cause. Humanity has succeeded. (Liu & Liu, 2021d, 2024)

Mechanics is the information of cause and factor, the effect 因缘 of the cause and factor, the knowledge of the god of the universe, creating the material universe, and also creating humanity. Through the mastery of mechanics, humanity has already possessed the power of the god of the universe. Great scientists are the bodhisattvas of humanity. (Liu, 2024d)

Time is informatics, and it is also theology. Time is a great artificial existence concept designed by humans according to the process of matter, energy, and all existence.

CGPM uses the concept of modern physics to define “seconds,” which is an accurate expression of the concept of the time process created by humanity. Time may be related to all forces, especially thermodynamics, accompanying the entire process from the beginning, end, and motion changes of matter.

4.3.4. Time

There is no such thing as time in the universe; this is a process defined by humans for all existence. It is a great informational concept created by humans.

This informational concept is called existence in Western philosophy, “Du 度” in Buddhist philosophy, an empty, divine concept. For the concept of time, the accurate expression is Taoist philosophy.

Taoist philosophy says, “有长而无乎本剽者，宙也。” (Not translated) (Zhuangzi (Ancient), 2017). The 宙 is time. The meaning is that time has directionality and is irreversible. Research suggests that the directionality and irreversibility of time are also reported in “Huangdi Neijing” for the growth process of humans, and there is such an expression. (Liu & Liu, 2020) As a result, this logic of time on humans extends to the existence of stones, realizing that all matter and existence in the universe, like human existence, have a life and death

process from birth to death.

Taoist philosophy also says, “时立而物生。” (Not translated) (He, 2022), which means that the establishment of time is the beginning of the life of matter.

According to the principles of modern physics, we can also express that the establishment of time is also the beginning of the life of energy; the establishment of time is also the beginning of the life of dark matter and dark energy. Therefore, the establishment of the zero-based coordinate system of time is the establishment of life for all existence, the establishment of existence. (Liu, 2024g).

If we establish the existence in the universe as the existence of matter, particles and quarks, and dark energy and dark matter, then the zero-based coordinate system of time can be established as:

1) The zero-based coordinate system of matter is Einstein’s four-dimensional space-time coordinate system, where material time starts from zero to a non-zero process, and then ends at zero, which is Einstein’s relativity coordinate system, where mass and energy are equivalent and conserved under the conditions of optical information.

2) The second zero-based coordinate system of time is the time coordinate system of particles and quarks. Particles and quarks start from zero, to the process of the creation of matter, where a relativity of strong and weak forces is needed. There is also a need for a cause and condition for the creation of particles and quarks by a force, the author imagines this is a kind of thermal force, or called the primal force.

3) The third zero-based coordinate system of time is the time coordinate system of dark matter and dark energy. If thermodynamics or primal force is the force information that creates particles and quarks, dark matter and dark energy are a kind of factor. A thermodynamic relativity is needed here, and Lord Kelvin’s absolute zero may be this relativity.

After the design of the three zero-based coordinate systems of time, we can think about the problem of absolute zero temperature in the universe. In Liu & Liu (2020, 2021a), a basic coordinate system of the 0-dimensional universe was designed. Called basic energy and wisdom energy. (Liu & Liu, 2020, 2021a)

5. Basic Energy and Wisdom Energy

Ancient Chinese ancestors left us a great book called “I Ching” (易经), which is composed of “Lianshan 连山”, “Guicang 归藏”, and “Zhouyi 周易”. “Lianshan” and “Guicang” have been lost, and only the “Zhouyi” book remains.

Here is a reminder to philosophical thinkers that when studying the “I Ching”, do not be confused by the divination content in it. As a philosophical thinker, only by comparing the Yin 阴 and Yang 阳 and the five elements of Yin and Yang 阴阳五行 in the “I Ching” for meditation and thinking can there be philosophical thinking gains. (Liu & Liu, 2020)

The I Ching is the foundation of Taoist cosmic origin philosophical thought. It is a solemn consideration of the Yin and Yang structure and the five elements

of information in the universe, a great inspiration for human thinking, and a classic work that inspires human thinking about the origin of the universe for all ages.

The author, according to the Taoist basic thoughts in the “I Ching”, designed two basic concepts of the universe’s origin: basic energy and intellectual energy. They represent the structure and conceptual information of Yin and Yang in the universe, which are the five elements of Yin and Yang 阴阳五行 in Taoism, the cause 因 and factors 因素 of cause in Buddhism, and energy and information in physics. They are the fundamental dynamics, purposes, and existence that create the universe and make the universe exist, move, and change.

It is the existence of emptiness, the existence of wuji (无极), the 0-dimensional universe, and also the existence of zero time. It is the five aggregates of emptiness 五蕴皆空 in the universe, and the natural non-action and action 无为而为 of the Tao in the universe. This is the original thought of the universe.

Basic energy and intellectual energy are the 0-based time coordinate system of the universe’s origin.

6. Conclusion

The contradiction between quantum mechanics and relativity has been resolved.

This contradiction was reminded by the great philosophical thoughts of Taoism, Buddhism, and ancient Greek philosophy 2500 years ago, and answers were reserved.

This contradiction was not caused by Einstein, but appeared after more than 2000 years of the great thoughts of material philosophy and material science created by Socrates, Plato, and especially Aristotle.

From the logical analysis of concepts and essence, the emergence of this contradiction is inevitable. And the emergence of this contradiction was caused by the great scientists such as Newton, Faraday, Maxwell, Kelvin, Planck, and Einstein, and it was also resolved by them.

The method to resolve this contradiction comes from Kant’s method of contradiction analysis, Hegel’s dialectical epistemology, Hegel’s principle of logical relationship between concepts and essence, and dialectical materialism. When using the original thoughts of the universe left by our ancestors as the fundamental method to resolve this contradiction, you will feel that the universe is so simple and not complicated.

The great human beings were created by the universe. The meaning of human existence is to create contradictions and discover contradictions, and the key is to resolve contradictions. This is the great significance of human existence. With this, a modern physical philosophical framework is designed for reference by the scientific and philosophical communities.

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