

The Physical Principles of Natural Philosophy

—The Third Discussion on Contradictions between Quantum Mechanics and Relativity Using the Cosmic Origin Principle

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Abstract

The philosophical Framework of modern physics puts forward a philosophical solution to the contradiction between relativity theory and quantum mechanics theory, aiming to break through the restriction of material philosophy on human thought and solve the artificial contradiction generated by material philosophy. This scheme is the physical principle of natural philosophy. Newton discovered the mathematical principles of natural philosophy, he expressed the principles of the universe's natural philosophy through mathematics, discovering universal gravitation, the mutual perception and motion of material mass. This line of thought continued with the discovery of electromagnetism by Faraday and Maxwell, and quantum mechanics by Einstein, Planck, Born, Bohr, and Dirac many scientists. This represents the completion of the great natural theology of the universe, a credit to these great scientists. However, we have not recognized this as natural theology. Newton and Leibniz jointly discovered absolute space, but due to insufficient scientific information, we lost an opportunity. Today, modern physics has given us another chance; by combining scientific information with the Cosmic origin principles left by our ancestors, we can understand absolute space. Starting with an analysis of the “theoretical contradictions” in quantum mechanics and relativity, reflecting on the concept and essence of physics, and recognizing the Cosmic origin principle is the natural philosophy principle of physics.

Keywords

Taoist Philosophy, Buddhist Philosophy, Cosmic Origin, Natural Philosophy, Physics, Mechanics, Time, Creation, Existence, Motion, Balance, Thermodynamics

1. Literature Review

1.1. The “Theoretical Contradictions” in Quantum Mechanics and Relativity Are Resolved

This kind of article written by the author involves philosophy and physics, but it is not philosophy and physics, because the author’s professional is a professor-level senior engineer of mineral processing, and is a mineral processing bachelor and a mineral processing doctor. Rather, it provides a technical solution to the theoretical contradiction between quantum mechanics and relativity, or philosophical analysis method to solve scientific contradictions.

Thinking about these questions comes from the study of stone, the basic principle of mineral processing is that stone is composed of atoms and molecules, and the process of composition is energy and information. Learning quantum mechanics and relativity discovered that atoms and molecules are also made of energy and information. In physics, we know the basic principle that atoms and molecules come from energy and information. We learned from classical physics and relativity that matter can return energy as a result of information, as a result of force and time.

Thinking about the contradiction between quantum mechanics and relativity comes from the study of physics. To understand this problem frankly is to think about what energy and information are, and to understand and define the concepts of energy and information. This answer, however, is not to be found in textbooks. The discovery was made in the work practice.

In order to find this answer, I have learned some knowledge of ancient Greek philosophy. Because the understanding of the universe in ancient Greek philosophy is fragmented and the expression is materialized, the analysis results are consistent with the conclusions in Aristotle’s works. There is no result, only to study in the direction of material philosophy.

When learning and comprehending Chinese traditional culture, I found that Taoist philosophy and Buddhist philosophy are the original thoughts of the system universe and a perfect system. The original thought of the universe in Taoist philosophy and Buddhist philosophy can link the information and conclusions of modern physics and form a solution to the contradictions of modern physics (Liu, 2024h).

“The Mathematical Principles of Natural Philosophy” is a great work, which is a mathematical breakthrough brought by Pythagoras, Descartes, Newton and Leibniz for the research of material philosophy and material science, leading the rapid development of material science. These developments, still within the Aristotelian categories of material philosophy and material science, are the cause and effect of the contradictions in modern physics. When the idea of the origin of the universe is combined with the knowledge of modern science, it is found that physics is the basic principle to explain natural philosophy. Mathematics alone is not enough, mathematics can only be used as a tool to resolve the contradictions between the categories of material philosophy and material science.

Quantum mechanics and relativity, two of the greatest scientific theories, have been widely applied in practice, bringing immense benefits to human survival. Yet, why do they appear contradictory in theory? The core issue lies in the fact that humanity has regarded the universe as purely material.

Aristotle established the human philosophy of material and the study of material science, which marked a historic advancement in human thought regarding the universe's contradictions. He led humanity on the path of material science and material philosophy, progressing with great courage, all the way up to the emergence of quantum mechanics and relativity.

However, this very progress has trapped us in the shackles of materialistic thinking. We began to view the existence of the universe purely through a material lens, leading us to question quantum mechanics when faced with two great scientific truths. Human thinking is material philosophical thinking.

Physics has been discovered by humanity; quantum mechanics and relativity have been discovered by humanity. The contradictions in modern scientific information and modern physics have opened the door for us to reexamine the cosmic origin philosophies left by our ancestors in Taoism and Buddhism. It does not rely on mathematical formulas but uses Kant's method of contradiction analysis, Hegel's dialectics, and the relationship between concepts and essence in Hegel's philosophy. The analysis is based on the three principles of dialectical materialism, crucially integrating the cosmic origin thoughts left by our ancestors, along with modern scientific, cosmology and systems science. In quiet reflection, in the logical relationships of knowledge and information, and through practical work, these thoughts emerged.

"Reflection and research on the origin of the universe" examines the relationship between space and existence. There are not only three dimensional universes but also multiple universes in space, and its origin is a zero-dimensional universe. The book designs the basic energy and the intelligent energy; The time 0 base point coordinate system is designed. All the concepts of existence are artificial beings created by human beings with language, words and numbers, and human beings are computer-like intelligent substances created by the universe. This book has two volumes, the first book using modern science to research the original idea of the universe, the second book using the original idea of the universe to research modern science (Liu & Liu, 2020).

"Thinking and research on the Human origin" verifies that the origin of human existence is the existence of the mind, the human mind is the software installed by the universe, and human beings are their own programmers, receiving, processing and creating information, learning, creating and acting on information. Human beings have two processes of existence, one is the existence of feeling and subjective consciousness, which is called living; Once is the existence without feeling and subjective consciousness, which is called death. But it still exists (Liu & Liu, 2021a).

"The 0-Dimensional Universe—Survival test of All Things" uses the contradiction of philosophy and science to verify that the universe and existence are living

beings that are the basic energy of Yin and Yang and intelligent energy, and can measure the process of their existence in time, and are all alive. Material philosophy and material science enclose the human mind in the material universe (Liu & Liu, 2021b).

“0-Dimensional Universe—Absolute Space Test” used the conclusions of modern physics and the original thought of the universe, ancient Greek philosophical thought, Aristotle’s analysis of space to research absolute space, Newton and Leibniz proved that absolute space is a zero-dimensional space without matter, relativity and quantum mechanics proved the existence of absolute space. However, material philosophy has made human beings do not know the origin of space and are confused by the concept of three-dimensional space created by human beings (Liu & Liu, 2021c).

“Tao Te Ching—Universal Declaration” is proved and annotated with information from modern science (Liu & Liu, 2021d).

“Textual research of the universe original classic” was understood and annotated with the principles of mineral processing and physics, and the theoretical contradictions of quantum mechanics and relativity were resolved without contradictions (Liu & Liu, 2024).

The English version of “Revelations and Reflections on Humankind inspired by Modern Physics” is the translation of the main part of the “reflection and research on the origin of the universe” (Liu, 2021d).

I invite the scientific and philosophical communities to seriously critique and verify whether this conclusion is correct or incorrect. If the “theoretical contradiction” in modern physics is resolved, we can continue using this “theoretical contradiction” to discuss material philosophy and cosmic origin philosophy, thus pioneering a revolution in human thought.

In resolving this issue of “theoretical contradiction,” we might blame Aristotle’s philosophy of material and material science. However, we should be even more grateful to the great minds of Socrates, Plato, and Aristotle for pioneering the profound thoughts of material philosophy and material science (Russell, 2017). They abandoned humanity’s internal contradictions in thinking and focused on material philosophy, material science, and the issues of human society. We are grateful for the profound ideas of material science and material philosophy that have led humanity to the pinnacle of material science, thus allowing us to generate contradictions, discover contradictions, and resolve contradictions within the development of modern physics.

When we connect the cosmic origin thoughts left by our ancestors with the thinking of material science, material philosophy, and modern science, it inspires us to resolve this so-called “theoretical contradiction” and to reconsider the cosmic origin thoughts from 2,500 years ago.

1.2. Theology and Metaphysics

Aristotle’s philosophical thought initiated a great journey of human material

philosophy and material science. It also inspired theological thinking, giving rise to religious thought, marking a turning point in human intellectual history (Liu & Liu, 2020; Liu & Liu, 2021a).

After the start of the Common Era, humanity saw the widespread emergence of religious philosophical thought. This was a great phenomenon and a significant advancement in human history. In Western philosophy, some attribute this phenomenon or achievement to Aristotle's philosophical ideas (Russell, 2017). However, this correlation lacks a direct causal relationship, at least in the East (Liu & Liu, 2020; Liu & Liu, 2021a).

Human history is the history of information, or rather humanity's contemplation of information, is peculiar. On one hand, we develop a deep-seated faith in religion, truly believing in it from the depths of our hearts. On the other hand, many people, especially scientists, also criticize religion. This is inappropriate.

In "Liu Hongjun & Samo Liu, 2020", the authors present the view that modern physics has no grounds to blame religion. The rationale is that without religion, the cosmic origin thoughts discovered by our ancestors could not have been passed down. It is the philosophical ideas of religion that have preserved these ancestral thoughts on understanding the cosmos, and for this, we should be grateful. Although religion has been heavily influenced by material philosophy and lacks the insights of modern physics, its interpretation of the divine creator of the universe is incomplete, much like Einstein's dissatisfaction with the interpretation of quantum mechanics.

Therefore, it may be worthwhile to revisit the cosmic origin thoughts from 2500 years ago, using physics to interpret the natural principles by which the divine creator of the universe established the material cosmos.

2. The Cosmic Origin Thoughts Left by Our Ancestors

2.1. Reflection on Taoist Cosmic Origin Thought

"Dao De Jing" Chapter 1: "道可道，非常道。名可名，非常名。无名天地之始，有名万物之母。故常无欲，以观其妙；常有欲，以观其徼。此两者同出而异名，同谓之玄，玄之又玄，众妙之门。" (Not translated) (Laozi, 2019). The "Dao De Jing" cannot be translated; it must be read in the original classical Chinese to foster philosophical contemplation, rather than simply being understood through material philosophical thought.

Consider this: Ancient Chinese texts lacked punctuation. If you interpret "Dao De Jing", Chapter 1, character by character, you can derive one meaning. If you freely punctuate and break down the chapter, it can yield many different meanings. If you read it in reverse, yet another meaning emerges. This is the wonder of this great Taoist classic (Liu & Liu, 2021c). Regardless of the interpretation, it can inspire you. Using materialistic philosophy, it can be understood in multiple ways—military strategists, politicians, merchants, and ordinary people could all interpret this work and write books based on it. However, when you use modern physics to interpret this text, it reveals a single concept: the thought of cosmic

origin (Liu & Liu, 2021d).

Later generations organized the “Dao De Jing” into 81 chapters, with the first 37 chapters known as the “Dao Jing” and the latter 44 as the “De Jing.” Dividing the text into chapters aids reading comprehension, which is important for ordinary books. However, as a great philosophical classic meant to inspire thought, this work must be read and understood character by character to truly grasp its essence (Liu & Liu, 2021c; Liu & Liu, 2021d).

Chapter 1 of the “Dao De Jing” serves as the leading chapter of the entire work. No matter how it is divided, the other contents are explanations and applications of this first chapter. It explains the principles of creation, existence, movement, change, and balance in the universe, and the fundamental principles of cosmic origin, whether concerning human society or the existence of all things in the universe. However, understanding these requires the link and assistance of modern physics and scientific information.

This work represents a complete, comprehensive, and balanced interpretation and understanding of the thoughts in the “I Ching”. It is the beginning of Chinese philosophical thought, and no philosophical school can escape its influence. It is a comprehensive reflection on human society, the material universe, and the existence of the entire cosmos—a standard scientific philosophical work on cosmic origin. Taoist philosophy, originating from the Yellow Emperor (in ancient times), is known as Huang-Lao philosophy (Feng, 2013). The author believes that the “Yellow Emperor’s Inner Canon 黄帝内经” and the “Gui Cang 归藏” section of the “I Ching 易经” are connected (Liu & Liu, 2020).

Historical records show that many thinkers throughout history have benefited from the ideas of the “Dao De Jing”, and there have been numerous commentaries on it. Here, the focus is solely on the thoughts of cosmic origin and reflecting on them along the lines of the “Dao De Jing”. From Wenzhi, Liezi, Zhuangzi, and He Guan Zi, to Zhou Dunyi, Zhang Zai, Zhu Xi, Wang Yangming, and others (Zhuangzi, 2017 (Ancient); He, 2022 (Ancient); Zhou, 1990 (Song Dynasty); Zhu, 2008 (Song Dynasty); Wang, 2018 (Ming Dynasty)), all were inspired by this work to explain the cosmic origin. This series of philosophical thoughts can serve as the philosophical framework for modern physics (Liu, 2024h). Physics can be understood as the ontology of the material universe’s creation (Liu, 2024g).

The author is not a professional researcher of Buddhist or Taoist philosophy, but rather an outsider to philosophy, religious studies, and theoretical science. More precisely, the author is merely an enthusiast of the Taoist concepts of “being 有” and “non-being 无” and the Buddhist concepts of “emptiness 空” and “Du 度.” At best, the author can be considered a senior engineer in mineral processing who applies dialectical materialism and science to the study of stones. Perhaps it is precisely because of this that the author can think outside the box, using pragmatic philosophy and science to contemplate and practice issues of “being 有” and “non-being 无” and “emptiness 空” and “Du 度.” By analyzing and judging with modern scientific information, the author concludes that religion is a form

of science. At the very least, one can judge that Taoist and Buddhist philosophies are subjects of scientific philosophy using the principles of dialectical materialism.

By using the principles of modern physics and dialectical materialism to analyze and verify Taoist philosophical thought, one can arrive at the following conclusions about cosmic scientific ontology (Liu, 2024g).

2.1.1. The Universe as a Living Existence and Concept of Yin and Yang

We do not know what this concept and existence are, but it is a form of existence—a real existence. The original text of the “*Dao De Jing*” states, “无名天地之始，有名万物之母” (Not translated). It means that, “Being 有” and “non-being 无” are both forms of existence. They have a mother-child relationship and are mutually transformative. What is “being 有”? What is “non-being 无”?

2.1.2. Reflecting on Material Philosophy through the Lens of Cosmic Origin Thought

Real existence is called “being 有,” which humanity names as matter (Liu, 2024h). Matter is the existence that humans can perceive. The technology to explore material existence is named science, and the method of thinking about material existence is called philosophy. The philosophical thought following Aristotle is called material philosophy, despite attempts to understand the divine that created the material universe, before the information of relativity and quantum mechanics, all methods, such as induction, contradiction, and logical analysis, failed to fully explore the ontology of the material universe, even though the natural god of the universe had already been recognized (Liu & Liu, 2021a). It is correct to study theology, art, and faith in the great god. Praise religion.

Praise philosophy. Although philosophy did not find the natural god of the universe, but it named the god of the universe. The following viewpoints are the author’s reflections as an outsider to philosophy, drawing on the books of Russell and Thilly, among others.

Aquinas (1225-1274), Descartes (1595-1650), Bacon (1561-1626), Spinoza (1632-1677), Leibniz (1646-1716), Fichte (1762-1814), Schopenhauer (1788-1890), Schelling (1775-1854), Nietzsche (1844-1900), and many other philosophers have engaged in this effort. They debated and critiqued each other but did not find the god of the universe. However, they found methods and directions for scientific development. The author refrains from listing references here, as many Western philosophy books describe these ideas, albeit with the author’s subjective opinion (Liu & Liu, 2021a). For example:

Aristotle, created the method of logical analysis, summarizing ancient Greek philosophy. In “*Metaphysics*” and “*physics*”, he discussed the precise logic behind phenomena, classifying and establishing material science beyond the scope of physics. Aquinas, in his “*Summa Theologica*”, clarified that God is a simple, non-material, perfect, infinite, eternal, unchanging, and consistent natural existence (Liu & Liu, 2021a).

Descartes created the great mathematical coordinate system. He also developed

the scientific method of doubting everything deemed true until it could be repeatedly verified. He believed in a perfect god of the universe, who is the creator and ultimate cause of all things. He also posited that the universe contains two distinct substances: mind and matter, both derived from the god of the universe. Spinoza inherited and studied Descartes' philosophy, believing that nature itself is god. The universe includes both material and immaterial spirit. The god of the universe is the inner cause of everything and governs the universe through natural laws (Liu & Liu, 2021a).

In "Mathematical Principles of Natural Philosophy", Newton created the philosophical concepts of absolute space, relative space, and place (Newton, 2017). In his correspondence with Clarke, Leibniz used philosophical language to prove that absolute space is space without matter, where distance cannot be measured, and thus time and motion cannot be confirmed. He demonstrated the existence of absolute space (Leibniz, 1996). However, in his philosophical works, Leibniz posited that our universe is the best possible universe created by God, and without matter, God's existence could not be manifested. At that time, without the theories of quantum mechanics and relativity, Leibniz's opposition to the formulation of absolute space can be understood. However, it should not be said that Leibniz opposed absolute space; on the contrary, he was a proponent of absolute space, absolute space equated with zero-dimensional space (Liu, 2020; Liu, 2021a; Liu, 2021b; Liu, 2021c; Liu & Liu, 2021c).

Fichte used the principles of physics to prove the nature of matter and the self. In his writings, he argued that the absolute self is the command of God or the spiritual world and is the cause of the individual self. In Schelling's work, his focus was on the study of natural philosophy, where he believed that natural science should study and provide the inner dynamic structure and universal principles of nature—this being the reason nature is called nature. He viewed nature as a blind and unconscious intellect. For him, nature is the visible spirit, and spirit is the invisible nature. The representation of nature itself is the most fundamental intellect of the universe. This natural intellect changes and evolves under the influence of the contradiction between identity and difference, ultimately giving rise to spirit. The goal of natural science is to summarize the intellect of all phenomena and ultimately spiritualize this intellect. He believed that the absolute is the natural god of the universe, the supreme good, and the good of nature. When embodied in matter, the natural universe resulted in humans, who are the revelation and representation of God, coming into the world with good and evil. He believed that existence is power (Liu & Liu, 2021a).

Schopenhauer believed that the will to live is the force that governs the world, and that will be the essence of all things—whether stones, animals, plants, humans, or anything else. Nietzsche, believed that the primal force of the world is the will to power. Nietzsche rejected the concept of God, asserting that all values, ideas, and truths in the world are merely human interpretations without ultimate objectivity. He argued that the existence of all things in the universe gains meaning

through human language and expression (Liu & Liu, 2021a).

Kant, the great philosopher and leader of Western classical philosophy, argued that the core of the Enlightenment was humanity. People should adhere to independent thinking and rational judgment. He emphasized that humans are not tools for any purpose and that sovereignty belongs to the people, with freedom and equality being innate human rights. However, he also pointed out that humans must be self-disciplined, and freedom and equality can only exist within the bounds of the law. Regarding the cosmic origin, he did not use an anthropomorphic God to explain it but instead designed a moral compass existing within each person. He said, “Two things fill the mind with ever new and increasing admiration and awe, the more often and steadily we reflect upon them: the starry heavens above me and the moral law within me.” He believed that religion could be seen as humanity’s duty to existence, all viewed as divine commands. The order of nature proves that the universe indeed has a grand designer. Time, he argued, is not a concept of reasoning but a universal concept, an expression of sensibility and intuition. Self-discipline, he posited, is the only moral principle for humanity. He also asserted that Enlightenment means having the courage to think for oneself. He categorized religion as practical reason and wrote three major works: “Critique of Pure Reason”, “Critique of Practical Reason”, and “Critique of Judgment”. These works triggered a revolution in Western philosophy (Liu & Liu, 2021a).

The author most appreciates Kant’s self-debate on contradictions in “Critique of Pure Reason”, known as the antinomies. To understand the cosmic origin, Kant introduced the concept of “thing-in-itself”, which roughly corresponds to the concepts of God and the soul. He believed that the “thing-in-itself” is the foundational existence behind phenomena, and to understand phenomena, one must acknowledge the “thing-in-itself” as the foundation. However, Kant argued that if humans attempt to comprehend the “thing-in-itself,” they will inevitably fall into self-contradiction, which is the essence of antinomies. Kant approached this exploration of cosmic contradictions with seriousness, using the law of universal contradiction to investigate them scientifically and rationally. The author analyzed this in Chapter 3 of Liu Hongjun & Samo Liu (2021b) and suggested that Kant’s approach was somewhat disingenuous, given that he lacked the information of modern physics or had not studied the “Dao De Jing” or “I Ching”. As a result, Kant ended up debating contradictions with himself. This self-debate taught the author how to analyze contradictions with contradictions, using contradictions as a method of thinking—a very effective method of scientific philosophical thought (Liu & Liu, 2021b).

Many Western philosophy books consider Hegel’s ideas to represent the pinnacle of 19th-century German philosophy, with significant influence on existentialism and Marxist philosophy. Reading philosophy books can be tedious and difficult, which is why many people dislike philosophy. Reading Hegel’s works is similarly challenging—his writings are vast and difficult to thoroughly understand. The author grasped only one term: dialectics, because this concept relates

to the “I Ching” and “Dao De Jing”. The author also recognized that Hegel attempted to describe the entire natural and spiritual world of the universe as a continuous cycle of movement, change, and development along the axis of historical time, aiming to reveal the inner laws of this movement, change, and development. However, Hegel did not clearly indicate the ontology and origin of the universe. He taught a method of how to discover and analyze the inner essence of phenomena and concepts, which is highly useful for scientific thinking (Liu & Liu, 2021a).

Feuerbach voiced a profound idea: nature, including humanity, is the primary existence, with matter being the fundamental reality and spirit as a secondary existence. Human beings and human thought are the products of the long-term development of nature. The dialectical materialism of Marx and Engels, which is not mentioned in some Western philosophical texts, should not be overlooked as it has profoundly impacted global thought. The author is a firm believer in dialectical materialism and uses its three fundamental principles to analyze the cosmic origin thoughts left by our ancestors, thereby illuminating the connection between these thoughts and physics (Liu & Liu, 2021a).

Reflecting on material philosophy through the lens of cosmic origin philosophy reveals that the shift towards material philosophy began with Aristotle’s philosophical ideas. When summarizing ancient Greek philosophy, Aristotle meticulously examined the existence of space and emptiness within it (Liu & Liu, 2021c). When he could not conclusively prove their existence, he set aside these concepts and began a precise logical and scientific analysis of the phenomena of material existence. This effort laid the groundwork for material philosophy and material science. He chose to bypass the contradictions in thought, focusing instead on advancing material science, which led to significant progress in human material science until the advent of modern physics. Without the information provided by physics and modern physics, even Kant, Hegel, Newton, and Leibniz could not definitively explain what absolute space is, what the natural god is, or what the origin and essence of the universe are.

In this context, the “Dao De Jing” suggests, “故常无欲，以观其妙；常有欲，以观其徼” (Not translated). The idea here is that if humanity contemplates in a state of “non-being 无,” the wonders of the natural god can be discovered; if we think about the universe in a state of “being 有,” we can only consider the existence of “boundaries 徼”—the size, duration, and the inherent contradictions of existence (Liu & Liu, 2021d). So, what is “non-being 无”?

“Non-being 无” refers to space, specifically the sacred, empty existence within space.

2.1.3. Reflecting on Physics through the Lens of Cosmic Origin

Question Reflection 1: What is force? What is work? What is energy? What are the motion and change of matter? These are fundamental questions in classical physics.

Question Reflection 2: What are strong force and weak force? What are particles and quarks? Why do atomic materials come into being? These are fundamental

questions in quantum mechanics, which have also led to the “theoretical contradiction” between quantum mechanics and relativity.

In the previous article, some concepts from references were borrowed, but they are not used here because physics was developed within the framework of material philosophy, which cannot clearly explain the concept of the natural god.

Question Reflection 3: What are heat and thermal energy? What are time and equilibrium? What is dark matter, dark energy? How are they related to particles and quarks? How are they related to atomic, molecular, and cellular matter? These are fundamental questions of cosmic origin and ontology, central to inquiring about the natural god and fundamental to philosophy (Liu & Liu, 2020; Liu & Liu, 2021a; Liu & Liu, 2021b; Liu & Liu, 2021c). These questions expand material philosophy into the philosophy of cosmic origin, representing a revolution in human thought.

The “Dao De Jing” suggests that “being 有” and “non-being 无” are the contradictory yet unified existences of yin 阴 and yang 阳 in the universe: “此两者同出而异名,同谓之玄, 玄之又玄, 众妙之门” (Not translated). A serious understanding of this sentence reveals the philosophical thought of Taoist cosmic origin. Combined with mineral processing, modern scientific knowledge, and dialectical materialism, it can be judged that modern physics is the ontology of scientific philosophy (Liu, 2024g), and a philosophical framework for modern physics can be designed (Liu, 2024h). The general idea of this sentence is:

Humans are material beings, and the material universe they face is the existence of “being 有,” but it originates from the non-material existence of “non-being 无” in the universe, and they are mutually transformative. “Being 有” and “non-being 无” have different names but share the same origin. Both can be called “mystery 玄” (“此两者同出而异名,同谓之玄”). This is the source of all human knowledge of the universe and the source of the exploration of the natural god (“玄之又玄, 众妙之门”). This sentence encapsulates the scientific philosophical thought, cosmic origin thought, and ontology that reflect on the three questions mentioned above. It serves as the philosophical principle of natural philosophy and physics (Liu & Liu, 2021d).

What enables the transformation between “being 有” and “non-being 无”? Chapter 21 of the “Dao De Jing” states, “窈兮冥兮, 其中有精; 其精甚真, 其中有信” (Not translated). The general meaning is: In the universe, there is another existence called “spirit 精” and “information 信,” which can be understood as information or intelligent energy. Information, along with “being 有” and “non-being 无,” forms a yin 阴-yang 阳 relationship that enables their mutual transformation (Liu & Liu, 2021d). This yin-yang structure is not merely a simple interaction but a mutual reaction of five causes and factors, known in the “Huangdi Neijing” as the “五行生克” (Liu & Liu, 2020; Liu, 2020).

Information is force—strong force, weak force, gravity, electromagnetic force, and thermal force. Energy (non-material) and matter are both cause 因-and-effect 因素 relationships of mechanics. The concepts of matter and non-matter

require a zero-based time coordinate system for determination (Liu, 2024h) transformations between Existence.

Energy creates matter through negative entropy, and matter returns energy in an environment of positive entropy. $E_1 = E_2 = E_3$ (Liu, 2024h) represents the law of conservation of mass-energy equivalence. The total amount of matter-energy remains unchanged.

Once quantum mechanics forms the mass of matter, it has directionality and becomes irreversible. “Zhuangzi” says, “有长而无乎本剽者，宙也” (Not translated). The general meaning is that the natural god controls the direction of nature, and humans name this directional process “time” (Liu & Liu, 2020). Therefore, it is necessary to design a zero-based time coordinate system for the process of existence (Liu, 2024h).

“He Guan Zi” states, “时立而物生” (Not to be translated), meaning that the establishment of time marks the beginning of material existence.

Taoist philosophy emphasizes that all things in the universe are unified and, like humans, are alive. Apart from having senses and subjective consciousness, humans are no different from other existences. The universe and all existences are alive, all possess spirit and perception, especially regarding the perception of force, which humans call the soul.

The author has long contemplated “being” and “non-being” while studying the principles of mineral processing and the life, movement, and change of stones. In the beautiful Shangri-La, the author comprehended this principle. Understanding this principle does not require profound scientific knowledge; university-level physics and higher mathematics are sufficient to grasp the ideas and principles of cosmic origin. The key lies in logical thinking and knowledge.

Beng Zhu Living Buddha, a great lama of Songzanlin Monastery in Shangri-La, has been a good mentor and friend to the author in work. When the author shared his understanding of cosmic origin with Beng Zhu, Beng Zhu said, “You should study and comprehend the “Diamond Sutra” and the “Heart Sutra”, The cosmic origin thought in Buddhist philosophy is similar.”

2.2. The Cosmic Origin Thought in Buddhist Philosophy

The “Diamond Sutra” and the “Heart Sutra” are great classic works of Buddhist philosophy. These texts were spoken by Buddha Shakyamuni and recorded by his disciples, originating in ancient India. They were translated into Chinese by great scholars like Kumarajiva and Xuanzang, becoming part of Chinese literature and integrating into Eastern philosophy, complementing Taoist philosophy (Liu & Liu, 2020; Liu & Liu, 2024).

The “Diamond Sutra” and the “Heart Sutra” were beautifully translated into Chinese. If interpreted through the lens of material philosophy, they can have many different meanings. However, when understood through the perspective of modern physics, they convey a single meaning: the thought of cosmic origin, known as 阿耨多罗三藐三菩提 (Liu & Liu, 2024).

The “Diamond Sutra” is a profound work on cosmic origin philosophy, and its key passages must be read word by word to grasp the thought of cosmic origin, regardless of how they are read. For example, the passage “一切有为法，如梦幻泡影。如露亦如电，应作如是观” (Not translated) suggests that in the context of cosmic time measured in kalpas (a kalpa being equivalent to 4.32 billion years; *Ancient Indian Texts*, 1989), the existence of humans and all beings is equal. The process of existence is like observing dew and lightning—coming into being and passing away, all on an equal footing.

Equality here means that, for instance, in quantum mechanics, Planck time can be considered very long within a time-zero coordinate system where 10^{-43} seconds is significant. Conversely, in a material time-zero coordinate system measured in kalpas, millions of years can be considered short. When viewed from the perspective of “Du 度,” it becomes easier to understand the concept of time for various existences.

Similarly, the concepts of large and small are also equal. What is large? What is small? Since mathematics and numbers are human creations within conscious thought—used to calculate and measure matter—these concepts do not exist in the cosmic origin. In the vast, infinite universe, the origin of the universe is only zero or “emptiness.” It is through human creation of mathematics and numbers that the theory of relativity between numbers and mathematics arises. In the cosmic origin, all is equal (Liu & Liu, 2024).

Likewise, the concepts of more and less are relative. How much is considered “more”? How little is “less”? Is there much sand in a Ganga? If we multiply these sand numbers, is that much? The Milky Way contains hundreds of billions of stars; is that many stars? According to current astronomical knowledge, is the number of stars in Local group of galaxy many? What about the stars in galaxy clusters and superclusters? In the infinite expanse of the universe, it is impossible to compare more and less; this comparison only exists within human thought and reality, which is the relativity of more and less. If you use this method of comparison, the earth and human beings will be compared without, too small; Or too big. Therefore, the concepts of large and small, more and less, existence and non-existence, must all start from a zero-based coordinate system, from “emptiness,” and eventually return to “emptiness.” The concepts of right and wrong, as judged by human thought, also follow this principle. Thus, all existence is relative, existing within human consciousness, within the mind, and within information. If humanity does not recognize this relativity and coordinate system, it cannot comprehend the natural contradictions in the universe. This relativity and coordinate system is fundamental to discovering, contemplating, and resolving contradictions.

Einstein discovered the theory of relativity concerning gravitational mass. In physics, we should also develop the relativity of electromagnetism, the relativity of strong and weak forces, and the relativity of thermodynamics. The emergence of a single theory of relativity does not grant the right to question the great theory of quantum mechanics that explains the creation of matter; quantum mechanics

is the natural theology (Liu & Liu, 2024).

Chapter 6 of the “Diamond Sutra” introduces the concept of “the last five hundred years 后 500 岁.” It suggests that humanity will undergo five periods of five hundred years of intellectual development and change, with the fifth period, “the last five hundred years 后 500 岁,” likely referring to the present era. In this period, humanity will discover the truth of the natural god of the universe, uncovering the cosmic origin of Anuttara-Samyak-Sambodhi 阿耨多罗三藐三菩提 (Liu & Liu, 2024; Liu, 2024d).

During this stage, humanity will also create the means and ability to destroy itself. If humanity does not shift from material philosophy to cosmic origin philosophy during this stage, it may develop the capability to destroy itself through its own actions, leading to self-destruction (Liu & Liu, 2024).

Another possibility is that if humanity transitions from material Philosophy thinking to cosmic origin Philosophy thinking, it may escape the suffering of material Philosophy thought and enter a new stage of contemplation, potentially leading to a revolution in human thought. Otherwise, humanity may create the causes and factors for its self-destruction. This stage is referred to as the “The last dharma age 末法时代.”

Chapters 15 and 16 of the “Diamond Sutra” remind us that our existence may not be the first in the universe, nor the last. Many causes and factors influence human survival and existence. It can be said that human existence, from beginning to end, must establish its own zero-based coordinate system. We may never fully understand the causes and factors of existence and survival (Liu & Liu, 2024; Liu, 2024h).

The purpose of human survival and existence is to understand the universe, to understand the material universe, and, more importantly, to understand the cosmic origin. It is to identify the causes and factors that influence human survival and existence, overcome and resolve them, and ensure the continuation of humanity. If we cannot resolve the contradictions in modern physics, we may also fail to resolve the contradictions in human survival and existence. The natural god of the universe created humanity, and our existence is not an easy one; our survival is not easy. If The God of Nature created humanity, and if The God of Nature chooses to destroy humanity, we can accept it without regret. But if humanity destroys itself, it will be the greatest sin of humankind. We must recognize that the causes and factors threatening human survival already exist. The presence of a vast arsenal of nuclear weapons is a reality, and if they are unleashed, the self-destruction of humanity will become a reality (Liu, 2024b). This is a serious fact, not a joke; it is the greatest contradiction of human survival and existence (Liu, 2024f). How humanity addresses and resolves this contradiction, preventing self-destruction, is the most urgent task (Liu, 2024c).

When it comes to explaining the cosmic origin, no literature or classic expresses it as fully, as clearly, and as beautifully as the “Heart Sutra”. The “Heart Sutra” states: “观自在菩萨行深般若波罗蜜多时，照见五蕴皆空” (not translated). The

general meaning of this sentence is that the great Bodhisattva Avalokiteshvara, during deep meditation, realized that humans possess sensations and subjective consciousness. The process by which subjective consciousness receives and processes information is called the “五蕴皆空.” In Buddhism, the “five aggregates are expressed 五蕴皆空” as Existence 色, feeling 受, thought 想, action 行, knowledge 识。

- Existence 色: The object of information, whether material or non-material, is called existence.
- Feeling 受: The reception of information.
- Thought 想: The processing of information.
- Action 行: Actions, movements, and changes directed by information.
- Knowledge 识: The formation and storage of new information, which can be called knowledge (Liu & Liu, 2024).

In studying Buddhist scriptures, it is revealed that the “Heart Sutra” contains a crucial message: all material and non-material existence in the universe can be represented by the “five aggregates expressed 五蕴皆空” by humans. This means that all existence is conscious, all are alive, whether material or non-material. The Existence 色, feeling 受, thought 想, action 行, knowledge 识 by humans through “verbal wisdom 文字般若” apply to all material and non-material existence, and all are inherently empty, hence the phrase “all five aggregates are empty 五蕴皆空.” Human consciousness is subjective, and all existence has consciousness and perception, and all are inherently empty. All can perceive mechanics and perform work. They come from energy and return to energy. Energy is a non-material, empty, and sacred existence (Liu & Liu, 2024). In nature, the void, the sacred, governs everything.

In expressing the existence of material and non-material entities in the universe, the following words from the “Heart Sutra” are extremely important and provide a very straightforward interpretation of modern physics’ natural philosophy and natural science. The phrase is: “色即是空, 空即是色; 色不异空, 空不异色” (not translated). The general meaning of this phrase is that matter is energy, and energy is equivalent to matter. They transform into each other under the perception and influence of the “five aggregates 五蕴” of material and non-material existence, changing between the form of zero-dimensional energy and three-dimensional matter. The “Heart Sutra” also says that all existence in the universe possesses the awareness that “all five aggregates are empty 五蕴皆空.” However, they do not have subjective consciousness, so they do not experience suffering. Only humans, as a unique existence with subjective consciousness in the universe, experience suffering and deluded dreams 颠倒梦想.

In its overall expression of the cosmic origin, the “Heart Sutra” states: “舍利子, 是诸法空相, 不生不灭, 不垢不净, 不增不减” (not translated). The general meaning of this phrase is that the universe is an infinite, holistic existence, and matter-energy is conserved. Naturally occurring matter-energy transforms and is conserved as a whole. The “philosophical framework of physics” can be expressed

as: $E1 = E2 = E3$.

- E1: The energy of material existence, $E=MC^2$, Einstein's theory of relativity.
- E2: The energy converted through the work of matter, classical mechanics.
- E3: The energy that creates matter, quantum mechanics (Liu, 2024h).

Though the "Heart Sutra" contains few words, it is a summary and reflection of both cosmic and human origin.

2.2.1. A Simple Summary of the Cosmic Origin Thought in Buddhist Philosophy

From the above analysis, it becomes clear that quantum mechanics is the physical principle of natural philosophy, through which the natural god of the universe creates the material universe. It elucidates the cosmic truth in Buddhist philosophy that "all things originate from emptiness." Classical mechanics and relativity explain the cosmic truth that "all things return to emptiness."

"Emptiness 空" refers to space, which is the womb of all material and non-material existence. Emptiness is also the sacred, natural presence within space. Both material and non-material existences are manifestations of "emptiness," embodying the existence of the natural god.

Human beings are no longer surprised by the existence of matter—whether it's the existence of water, stones, the Earth, planets, galaxies, plants, or animals. But are we surprised by our own existence? 100 Millions of years ago, we didn't exist; how did we come to exist? How were we created? Do we just come from our parents?

We have senses and subjective consciousness, and we should recognize that each atom, molecule, animal cell, or plant cell, and even the cells of our human bodies, is a universe in itself—a vast yin-yang structured universe, a universe of intelligent energy and basic energy (Liu & Liu, 2020).

Humans and matter exist in three dimensions, with size, quantity, and the passage of time. The human body is material, with real gravitational mass, but both the interior and exterior of our bodies are empty. We have an empty mind, empty thoughts, and empty meridians and acupoints (Liu & Liu, 2020). Humanity and all things move forward, change, and transform under the push of the yin-yang contradictions of emptiness. We do not know what that force is; it can be called the natural god of the universe who created us, directing our creation, existence, change, aging, and death. We come from emptiness and return to emptiness. But while we are alive, we can clearly feel that we exist in reality (Liu & Liu, 2020).

Humanity has accomplished much—creating robots, discovering the DNA of cells, and even inventing nuclear weapons—but these are not true accomplishments. The true achievement of the natural god of the universe is the creation of something from nothing. Only when humanity learns the skill of creating matter from energy, as the universe does, will it have achieved true mastery. Humanity's real achievement should be to seriously learn from the natural god of the universe, to dare to challenge the contradictions present in the universe, to recognize and eliminate those causes and factors that threaten human survival, and to ensure the continuation of humanity. In the face of the natural god of the universe, humanity

will always be in a state of ignorance—at least for now. Even after discovering the truth of quantum mechanics, there is still doubt.

In the process of learning from the natural god of the universe, humanity has learned to use the energy and information of the universe to create nuclear weapons and robots. However, we have directed this great knowledge and information toward each other, using it for confrontation, conflict, and war, thus creating the causes and factors that threaten our survival. This is a harsh reality; it is not an accomplishment but a sin against ourselves. The natural god of the universe is the mind of the universe (Liu & Liu, 2021a), embedding the yin-yang contradictions of the universe into the human soul and mind. One force is that of demons, and the other is that of God. We should redefine what is demonic and what is divine. Thoughts and actions that allow humanity to exist and thrive joyfully are divine; otherwise, they are demonic. Without recognizing this, we will not escape the confusion that material philosophy causes in the human mind and spirit, and we may create the causes and factors for our own self-destruction, a warning our ancestors have long given us. Humanity, and only humanity, can be its own savior (Liu, 2024f; Shakyamuni, 2019).

The basic points of Buddhist philosophy’s cosmic origin thought are as follows (Liu & Liu, 2020; Liu & Liu, 2021b; Liu & Liu, 2024):

- The material universe originates from the empty energy of quantum mechanics and returns to this empty energy through work and transformation during movement and change.
- The fundamental existence in the universe is the existence of material “being 有” and non-material “emptiness 空.” All existence has a soul, and there is mutual perception between existences. This mutual perception of force is called Causation of causes and factors, and this causality of perception is called “all five aggregates are empty 五蕴皆空.”

This is the basic thought of Buddhist philosophy’s cosmic origin: “originating from emptiness 来自于空, returning to emptiness 去之于空,” and “all five aggregates are empty 五蕴皆空.” The process of all material and non-material existence is called “Du 度.” The understanding of cosmic origin is called “Buddha 佛” or “enlightenment 觉悟,” also known as Prajna wisdom 般若. The cosmic origin is called Anuttara-Samyak-Sambodhi 阿耨多罗三藐三菩提 (Liu & Liu, 2024).

2.2.2. A Simple Summary of Taoist Cosmic Origin Thought

The key points of Taoist philosophy regarding cosmic origin are as follows (Liu & Liu, 2020; Liu & Liu, 2021b; Liu & Liu, 2021d):

- Material existence and its energy (E1) originate from the empty energy (E3) described in quantum mechanics, and during the process of movement and change, this energy returns to the empty state (E2). This relationship can be expressed as $E1 = E2 = E3$ (Liu, 2024h). Taoism refers to this energy as “Qi 炁,” encapsulated in the saying “Qi gathers to form matter, and when matter disperses, it returns to Qi 炁聚为物, 物散为炁.”
- The universe, along with all material and non-material existence within it, is a

living structure based on the yin-yang duality, referred to as the yin and yang “Qi 炁.” This yin 阴-yang 阳 duality is not merely a simple reaction between two forces but a process governed by the interaction of five causes and factors known as the “Five causes and factors are born and restrain 五行生克” cycle of generation and control. The yin-yang reaction process is therefore a process of the “五行生克” influencing each other, meaning that all existence in the universe is affected by all forms of force, which constitutes the Taoist scientific-philosophical principle of “Yin-Yang and causes and factors 阴阳五行” as the cosmic origin.

- Einstein’s theory of relativity is merely the relativity of gravitational mass in terms of matter. There also needs to be a relativity of electromagnetic energy, as well as a relativity of strong and weak nuclear forces. The author believes that the relativity of thermodynamics has already been discovered by Sir Kelvin, which is the concept of absolute zero. Each theory of relativity can establish a time-zero coordinate system (Liu, 2024h). Absolute zero is the zero-based coordinate system for all existence.
- The theory of “yin and yang two Qi 阴阳二炁” and the “Five causes and factors are born and restrain 五行生克” interactions can be found in the works of Zhu Xi (Song Dynasty), as well as in Taoist texts such as the “Huangdi Neijing 黄帝内经”, Zhou Dunyi’s “Diagram of the Supreme Ultimate 太极图说”, and Zhang Zai’s “Correcting Ignorance 正蒙” (Liu & Liu, 2020; Liu & Liu, 2021a; Liu & Liu, 2021b).
- Chapter 21 of the “Dao De Jing” describes a divine existence in the universe known as “Spirit 精” and “Information 信,” which in modern terms is mechanics in physics and information science in systems theory—essentially, the intelligent energy and information of the universe. This concept is discussed in the works of Wang Yangming’s Mind Philosophy, Leibniz’s “Monadology”, and the Buddha’s “Heart Sutra” (Liu & Liu, 2024; Liu & Liu, 2020; Liu, 2021d). This represents the empty, sacred existence of the natural god of the universe. If we consider energy and matter as material cause and form cause, then this divine existence serves as the motive cause and purpose cause for the creation, movement, and change of energy and matter in the universe. This is the study of both the cosmic and human mind, with the human mind also possessing a force called thought, which can direct human actions and contains subjective consciousness (Liu & Liu, 2021a).
- Both the universe and its contents have consciousness and perception but lack subjective consciousness. This concept is known as “non-action but act 无为而为”, “无为而为” has directionality, as it is probabilistic and reflecting the wave-particle duality, entanglement, and uncertainty of quantum mechanics. Once gravitational mass is formed, the process becomes irreversible, similar to the irreversible process of human sperm and egg fusion (Liu & Liu, 2020; Liu & Liu, 2021b).
- Chapter 38 of the “Dao De Jing” states: “上仁为之而无以为” (not translated). This means that the natural god of the universe governs the balance and

direction of the material universe through “non-action but act 无为而为”. From other Taoist classics, it is understood that “Cosmic Benevolence 宇宙之仁” refers to the balance of the universe, and the thermodynamic equilibrium in physics is the expression of this cosmic benevolence 宇宙之仁. This balance is achieved through the principles of yin and yang “Qi 炁” and the “Five causes and factors are born and restrain 五行生克,” which create matter and humanity and all things in the universe. Understanding this principle may take humanity thousands of years, but it must start with understanding the principles of natural philosophy in physics (Liu & Liu, 2021d).

- Time is not an inherent existence or product of the universe but a concept created by humans to describe the process of existence. Thus, to determine the existence of dark matter, dark energy, particles, quarks, atoms, and matter, one must establish a time-zero coordinate system (Liu, 2024h). As “He Guan Zi” states, “When time is established, things are born 时立而物生.”
- Space is the womb of all existence, boundless in its vastness and infinitesimally small 其大无外,其小无内. Human descriptions of space are based only on the form of existence.

2.3. The Cosmic Origin Thought in Ancient Greek Philosophy

The study of Western philosophy has been limited, though I have explored works by philosophers like Russell and Thilly, and read the thoughts of Plato, Aristotle, and other philosophers who followed. I have also engaged more deeply with dialectical materialism. Since the following knowledge is somewhat rudimentary and contains the author’s subjective views, specific references will not be cited. Overall, it seems that Ancient Greek philosophy had a clear understanding of cosmic origin and ontology, which can be compared and supplemented by Taoist and Buddhist cosmic origin thought. A brief summary is as follows:

- Thales, the first recorded scientist and philosopher in Ancient Greece, is known as the father of science and philosophy. He was the first to propose the question of what the cosmic origin is, questioning the nature of the universe’s divine essence. He believed that “everything is full of gods 万物有灵,” meaning that all matter and existence have a soul (Liu & Liu, 2020).
- Anaximander suggested that the cosmic origin is something indefinite, which he called “Apeiron.” All things are born from it, and after destruction, they return to it. Anaximenes believed that the origin of all things is “air 气,” similar to the Eastern concept of “Qi 炁,” though not merely air but rather a form of energy. The existence of all things is a process of the gathering and dispersing of this Qi.
- Pythagoras posited that material existence is finite and that there is an intangible, eternal entity—this he called the existence of God. He introduced the relationship between numbers and the material universe, suggesting that everything is governed by numbers, and that the existence of matter is a form of numerical relativity (Liu & Liu, 2020).

- Xenophanes was a Greek philosopher who opposed anthropomorphic gods and introduced the concept of a natural god of the universe. He believed that God is abstract, universal, unchanging, fixed in memory, without form, and eternally existent. God is both individual and collective, unified with the universe (Liu & Liu, 2020).
- Parmenides believed that God is immovable, one, and eternal. God is continuous, indivisible, unchangeable, real, and the unity of thought and being that can be conceived. He coined the term “being 存在.”
- Heraclitus argued that the universe is full of contradictions, oppositions, and change. Everything is in flux; nothing is permanent, and everything flows. He believed that the universe is self-created, and that its order arises naturally from its own laws, which he named “logos”. He considered fire to be the origin of the universe.
- Democritus was one of the founders of atomism. He posited that the origin of the universe is the existence of atoms and the void. Atoms represent existence, while the void represents non-material nothingness—essentially, the concept of space and emptiness (Liu & Liu, 2020).
- Empedocles believed that the heart is the center of the human body and the core of life. He proposed that the cosmic origin consists of four eternal, unchanging elements: water, fire, air, and earth. These elements combine and separate under the forces of love and conflict, ultimately achieving balance.

There are many other famous Greek philosophers recorded in history, but for now, we list the ones above. By using Taoist and Buddhist philosophical thought and modern physics to reflect on these philosophers’ cosmic origin ideas, we find that while their insights were not systematic, they did hint at an understanding of the cosmic origin.

Due to the fragmented and materialistic nature of these ideas, there were intense contradictions and debates regarding the cosmic origin. Socrates suggested that humans should abandon the study of contradictions and focus on the research and analysis of human society and the material universe. Plato introduced the concept of the absolute idea of the cosmic god, arguing that without the concept of a cosmic architect, the existence of the material universe could not be explained.

Aristotle, in his “Physics”, carefully summarized the cosmic origin theories of Ancient Greece (Aristotle, 2019). However, due to the fragmented and materialistic nature of these ideas, he could not deduce a logical cosmic origin. Therefore, in “Metaphysics”, he categorized such thoughts and reflections as “First Philosophy,” setting aside the existence of space, emptiness, and divinity (Liu & Liu, 2020; Aristotle, 2016). He categorized the existence of the material universe as science and “Second Philosophy,” thus embarking on the journey of material philosophy. Without the concepts of physics and modern physics, we cannot understand the cosmic origin or the principles of cosmic creation.

After the Middle Ages, a number of great scientists emerged. They seriously

considered physics and discovered the natural god of the universe, the empty and sacred existence within the universe.

2.3.1. Reflecting on Gravity

From Kepler, Copernicus, and Galileo to Newton, humanity discovered gravity. The explanation of gravity from the perspective of material philosophy is quite complete. However, analyzing gravity from the perspective of cosmic origin thought reveals that the essence and origin of gravity, and the nature of material motion, are not fully understood.

In “Mathematical Principles of Natural Philosophy”, Newton defined absolute space, relative space, and place, as well as absolute time and relative time. However, reflecting on these concepts from the perspective of cosmic origin thought, we find that due to the lack of information at the time, the concepts and essence of space and time were not fully understood. The reasons include the influence of material philosophy and religion, and crucially, the lack of scientific information. Thus, the phenomena and essence of material existence and motion could not be logically analyzed using material philosophy.

Reflecting on it, gravity can be seen as the mutual perception and interaction of gravitational mass between materials. This is the origin of material motion in space. To define gravity, we must define the perception of gravitational mass, and clarify what gravitational mass is and its time-zero coordinate system (Liu, 2020).

Leibniz, in his debate over absolute space, addressed the concept and essence of absolute space. However, due to the lack of scientific information, a unified opinion on the concept of space in natural philosophy could not be formed.

Throughout the history of science, there has been ongoing debate about absolute time and relative time. However, material philosophy has led humanity to forget an important issue: time is a human-defined concept for processes, not a concrete existence in space (Liu, 2024a).

2.3.2. Reflecting on Electromagnetism

Great scientists such as Ampère, Ohm, Faraday, and Maxwell discovered the principles of electromagnetism. They provided a relatively comprehensive explanation of electromagnetism using material science theories, extending these explanations to optics. However, these explanations are only relatively complete because they do not fully define what electromagnetic force and energy are.

Reflecting on this through the lens of cosmic origin thought reveals that electromagnetic force is the interaction and perception of the yin-yang structural information of matter and the yin-yang structural information of energy. This is the true origin of electromagnetism.

Material philosophy can explain the ability of various forces to cause matter to do work, reflecting the inherent ability of matter to perform work in nature, or to return energy. Humans also possess this capability. Interestingly, electromagnetism and optics have been integrated into physics as a unified field.

Humans have also discovered and learned how to harness the forces acting on matter to produce energy and found ways to return matter to its energy origin,

ultimately leading to the discovery of atomic energy.

2.3.3. Reflecting on Thermodynamics

Material science provides an excellent explanation of thermodynamics. On page 190 of “Theoretical Concepts in Physics”, Longair quotes Bacon: “Heat itself, its essence and substance, is motion, and nothing else.” (Longair, 2017)

Thermodynamics studies the thermal properties of matter from the perspective of energy transformation, revealing the macroscopic laws governing the conversion of energy from one form to another. These laws represent fundamental physical concepts rooted in cosmic origin thought. Through experimental methods, mathematical approaches, and logical analysis, the following laws of thermodynamics have been derived (Dou, 2017):

- The Zeroth Law of Thermodynamics: Also known as the law of thermal equilibrium, it states that if two thermodynamic systems are each in thermal equilibrium with a third system, they are in thermal equilibrium with each other. This means that thermal equilibrium is transitive. Heat is a reflection of righteousness and is the standard equilibrium of energy in the material universe.
- The First Law of Thermodynamics: The law of conservation and transformation of energy states that energy is conserved during the movement, change, and transformation of matter— $E_1 = E_2 = E_3$ (Liu, 2024h). The energy of an isolated system remains constant, meaning the material universe, once created, is conserved. Therefore, humans cannot create a perpetual motion machine. However, everything in the universe is essentially a perpetual motion machine.
- The Second Law of Thermodynamics: The principle of entropy increase states that the entropy of an isolated thermodynamic system always increases or remains constant, implying an irreversible direction of evolution. From the perspective of material philosophy, an isolated system becomes disordered, but from the perspective of cosmic origin, it is highly ordered and follows a cycle with a direction toward equilibrium.
- The Third Law of Thermodynamics: Known as the law that absolute zero cannot be reached, it posits that as the temperature of a thermodynamic system approaches absolute zero, its entropy approaches a constant value. For a perfect crystal, this value is zero, though perfect crystals do not exist in reality, as suggested by the Nernst hypothesis. Scientists calculate absolute zero to be -273.15°C . When Lord William Thomson Kelvin established the thermodynamic temperature scale, he proposed that absolute zero is the lower limit of temperature. From the perspective of cosmic origin thought, this discovery represents the thermodynamic theory of relativity (Liu, 2024h).

In physics, it is believed that where there is matter, there is energy, and where there is energy, there is temperature. Therefore, the material world has thermodynamics and temperature.

Quantum mechanics also reveals that during the creation of matter by particles, the concept of temperature exists, representing the energy or material energy that creates matter.

Furthermore, it has been discovered that dark matter and dark energy also have temperature. Even in the distant, matter-free expanse of the universe, there is no absolute zero. Therefore, it is not difficult to imagine that thermal energy originates from absolute zero. Thus, thermal energy is the creative force (Liu, 2024g; Liu, 2024h), If thermal energy is also called force.

By linking the four laws of thermodynamics and applying the principles of dialectical materialism, we can logically deduce the principles of cosmic origin (Liu, 2024e).

It can be speculated that in a universe devoid of material energy and matter, absolute zero must exist as the basic energy and intellectual energy of yin-yang two Qi 阴阳二炁—the first framework of the philosophy of physics (Liu, 2024h), this is the foundational framework of cosmic origin.

2.3.4. Reflecting on Statistical Physics

Statistical physics is a microscopic theory concerning the thermal motion of large numbers of particles in material systems. It studies the macroscopic properties and changes of material systems, their relationship with microscopic structures, and the micro-nature of thermal properties and phenomena using statistical methods based on the microscopic structure of matter, the motion characteristics of microscopic particles, and the interactions between particles (Dou, 2017).

Equilibrium statistical physics studies the physical phenomena and properties of macroscopic systems in equilibrium. The physicist Gibbs established the framework of equilibrium statistical physics, which is based on a fundamental assumption—the principle of equal probability, a core concept—statistical averaging, and a fundamental method—statistical ensembles. Statistical methods, combined with classical mechanics and quantum mechanics, form classical statistical physics and quantum statistical physics.

Non-equilibrium statistical physics studies the physical phenomena and properties of macroscopic systems in non-equilibrium states. The spontaneous evolution trend of near-equilibrium states is toward equilibrium, so their properties are similar to those in equilibrium states. Linear irreversible thermodynamics and near-equilibrium statistical physics have matured, with Prigogine developing the theory of dissipative structures.

Statistical physics is the theory of systems science. If we consider the entire universe as a system, then the universe is a vast system comprising material and non-material existence. This system is based on the basic energy 基础能量 and intellectual energy 智慧能量 system, where absolute temperature approaches zero or equal to 0—the time-zero coordinate system. However, humanity exists in a material universe where the absolute temperature is not zero, in a balanced process created by the universe.

If we consider the material universe, including material energy and matter, as an isolated, closed system, we can design the second, third, and fourth frameworks of the philosophy of physics.

If dark energy is labeled as E_x and dark matter as E_y , then $E_x + E_y = 95.1\%$,

represented as E4 (Liu, 2024h).

With material energy E1, the energy of work E2, and quantum mechanics energy E3, $E1 = E2 = E3 = 4.9\%$.

Therefore: $E4 + E1 = 100\%$ (Liu, 2024h; Yu, 2002).

If the universe is considered an open system, then no matter how much material energy and matter exist, its thermal energy will tend toward zero in infinite space. In other words, in the infinite expanse of the universe, where we exist in the material universe, the absolute temperature is not zero. Therefore, absolute zero must exist outside of it. From this, it can be inferred:

The physics behind the Big Bang is reasonable and represents the time-zero coordinate system of the material universe created by the natural god of the universe, the creator of negative entropy in the material universe (Liu & Liu, 2020).

Using the four laws of thermodynamics, we can deduce a long-standing, yet very clearly logical principle that humanity has struggled to understand:

Particles and quarks create atoms, atoms form molecules, and molecules form rocky planets, which can evolve into white dwarfs, neutron stars, and black holes, returning energy.

Atoms create plant cells and plants; they create animal cells and animals; they create human cells and humans.

Although humanity does not fully understand the fundamental principles of natural creation, it can be concluded that:

All these phenomena are governed by the irreversible, directional existence of thermodynamic equilibrium in time and space under the influence of all forces.

The region where the absolute temperature equals zero is the absolute cosmic origin, and since the creation of matter, yin-yang two Qi 阴阳二炁 has always been present. Taoism describes this as “matter exists within Qi, and Qi exists within matter 炁在物中物在炁中” Scientific knowledge is still insufficient to explain what Qi 炁 is; it can only be described as the cause and factor of material and energy transformation, the intellectual energy, and basic energy (Liu & Liu, 2020).

2.3.5. Reflecting on Relativity

Relativity is a groundbreaking theory in physics, offering an excellent explanation of the equivalence and transformation between matter and energy at the speed of light, serving as a scientific expression of cosmic origin. Unfortunately, under the influence of material philosophy, space and time have been treated as material entities. This approach, including the description of the curvature of space-time, has misled the natural interpretation of physics.

2.3.6. Reflecting on Quantum Mechanics

Quantum mechanics is a highly sophisticated natural science in physics, describing the cosmic origin theory of energy creating matter. However, influenced by material philosophy, its interpretations have faced skepticism from Einstein. Nonetheless, the achievements of both relativity and quantum mechanics in

physics represent the scientific ontology of the universe (Liu, 2024g).

3. The Principles of Natural Philosophy in Physics

Based on the seven books published and all the articles written, the following principles of natural philosophy in physics are defined:

3.1. Space

Given the current level of human knowledge, humanity is not yet qualified to study or define space. We can only describe its properties as “infinitely large externally, infinitely small internally 其大无外, 其小无内.” Space is the womb of all existence, and currently, tan (憇) cannot be expressed through language, word, numbers, science, or coordinate systems. Terms like “curvature” and “dimension” should not be used to describe tan.

Using tan (憇), Please don't use the name it (Liu, 2024b).

3.2. Intelligent Energy and Information

There exists divine information in the cosmic space that cannot currently be expressed, such as force and time.

3.2.1. Gravity

Gravity represents both the manifestation and essence of material existence in the universe. It is a perception of the gravitational mass of matter, which can be expressed through Newton's definition. Einstein's relativity is merely an extreme expression of the perception of gravitational mass and cannot be extended to other concepts of existence. There is insufficient evidence to support the application of gravitational mass relativity in questioning quantum mechanics. This mutual perception of gravitational mass is both the manifestation and the origin of the existence of gravitational mass in matter.

3.2.2. Electromagnetic Force

This is the interaction of yin-yang structural information between material and non-material existence in the universe. It is both the manifestation and the origin of the existence of this structure. There is insufficient evidence to prove that this structural transmission requires a medium. It represents the perception of mutual information between the yin-yang structures of material and non-material existence.

3.2.3. Strong Forces and Weak Forces

These forces are phenomena and origins in quantum mechanics related to particles and quarks and are fundamental to the existence of gravitational mass in matter. There is insufficient evidence to prove that these forces have a medium. If there is one, it would be a non-material, divine form of information, lacking physical parameters such as mass or charge. This could be referred to as mutual factor perception or causality.

3.2.4. Thermal Force

Thermal force is the creative, fundamental force in the natural universe and represents the directional force of all mechanics. It is a comprehensive mechanical force that governs the balance between all forms of existence, related to all forces—both discovered and undiscovered. All forces can be transformed and expressed through thermodynamics. There is insufficient evidence to prove that thermodynamics represents the interaction and relationship of factors in existence. It can be expressed as the yin-yang relationship within the structure of existence itself.

3.2.5. Time

Time is a non-existent form of information in the universe; it is a human-created concept used to describe the process of existence. All forms of existence can be expressed using this man-made information. The existence of both material and non-material entities, as well as various forms of existence, should establish a time-zero coordinate system, which is the foundational method for mathematical expression in physics and existence.

3.3. Basic Energy and Existence

Existence can be referred to as basic energy or factors, categorized as follows:

- Material existence, which specifically refers to the existence of gravitational mass in matter.
- Energy existence, which is a non-material form of existence.

Energy existence can be further divided into material energy and non-material energy. For example, in quantum mechanics, wave-particle duality represents “particle” as materiality and “wave” as non-materiality. This concept can also be understood through dark matter and dark energy in physics, which are found to occupy approximately 95.1% of the universe’s Limited space.

The energy possessed by matter is expressed as E_1 , the energy described by quantum mechanics as E_3 , and the energy converted through work as E_2 . $E_1 = E_2 = E_3$ represents the laws of mass-energy conversion and conservation. According to physical cosmology, this existence occupies approximately 4.9% of the universe’s space.

4. Conclusion

The principles of natural philosophy in physics defined through cosmic origin thought resolve the theoretical contradictions between relativity and quantum mechanics. This conclusion is the culmination of over 2000 years of reflection on the material philosophy and material science established by Aristotle.

This conclusion is offered for the consideration, critique, and verification of the scientific and philosophical communities. If validated, it could spark a revolution in human thought, inspired by thought of the cosmic origin.

Humanity exists within the contradictions of the universe—creating, discovering, and resolving these contradictions can inspire humanity to address the

contradictions related to its own survival and existence.

Gratitude is extended to the ancestors for their contributions to Taoist and Buddhist cosmic origin philosophical systems, as well as to the Ancient Greek philosophical thought on cosmic origin. Thanks are also due to the scientists who realized these ideas, and to the editors for their diligent revisions and hard work on this article.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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