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Dimensions (Forms) and Processes of "Existence" — A Metaphysical Study of "Space–Time"

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ABSTRACT

Human beings are a form of intelligent matter. We created language, writing, and numbers, forming knowledge. Beginning with matter, we have recognized and contemplated the world, forming systems of material philosophy and material science. We discovered atomic energy, understood DNA, and created robots, arriving at a world of energy and information. Humans have become their own "gods," yet this "god" is confused by its own "knowledge." As the pinnacle of scientific inquiry, quantum mechanics and relativity remain philosophically incompatible. Concepts such as "light speed" and "superluminal speed""High-dimensional space" and "Curvature of spacetime" have made "science" itself resemble "theology." The problem lies in gaps within the philosophical foundation led by Aristotle's *Metaphysics*, which historically guided all disciplines. The "soul" of science faces a bipolar contradiction...

Full abstract continues on the metadata continuation sheet.

Index Terms: Philosophy of cosmic origins • knowledge and wisdom • Metaphysics • Physics • and "First Academic" • matter and ontology • zero

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METADATA CONTINUATION

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RESEARCH ARTICLE

Dimensions (Forms) and Processes of "Existence" — A Metaphysical Study of "Space–Time"

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QUALIFICATIONS / ROLES

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Keywords: Philosophy of cosmic origins, knowledge and wisdom, Metaphysics, Physics, and "First Academic", matter and ontology, zero

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1 Preface

Today, the myths created by humankind can no longer be described as merely "miraculous," for human beings are now capable of " traveling through space-time" and returning to the "past." This extraordinary myth renders all ancient myths speechless.

Question: Who created the foundation for such a myth?

Answer: Science.

Philosophy, theology, and science are inherently interconnected. The universe contains no contradictions but only actual existence. Humanity developed a knowledge system encompassing language, writing, and numerals, coined the term " contradiction," and discovered and generated contradictions themselves. To resolve these contradictions, Aristotle authored Physics and Metaphysics, separating philosophy, theology, and science into distinct disciplines and fields of scholarly inquiry, thereby establishing First Philosophy, Second Philosophy, and Metaphysics. Today, as science has reached its zenith, it has brought human thought back to the realm of metaphysics, once again intertwining theology and philosophy and reminding humanity that " metaphysics " must remain the foremost academic pursuit.

Einstein—the scientist I admire—discovered " light" and "the speed of light," yet he opposed the theory of "superluminal speed." However, scientists in quantum mechanics have " discovered" superluminal phenomena, giving rise to contradictions.

Humans have discovered and believe that all things in the universe are inherently contradictory. We do not fear contradictions; we resolve them. But how should this contradiction be resolved? Who is right, and who is wrong?

Both theories are ” valid” and executable in practice and conform to natural laws. Yet contradictions arise in the theoretical framework. What causes such contradictions?Resolving the common contradictions faced by humanity is our shared mission.

Time can be “traversed,” but what about space? High-dimensional space appears—so suggests M-theory. Tracing the origin of such ideas, this began with Minkowski, who incorporated ” time” as a dimension into a three-dimensional coordinate system—treating the three-dimensional structure of material existence as “space.” Since time can be inserted as a dimension into the coordinate system, other ” causes” or ” factors” may also be inserted; thus, high-dimensional space emerges.

Following the emergence of the mathematical concepts of ” four-dimensional spacetime” and ” high-dimensional space,” their ” naturalness” —whether correct or not—has not been scientifically proven; yet they have been adopted as ” scientific concepts.” In this paper, I employ metaphysical logic to demonstrate that four-dimensional spacetime is ” philosophically inappropriate,” erroneous, and unnatural.

Strangely enough, science has proven the correctness of the ” space-time curvature” theory—drawing such a conclusion before the essence of time and space was fully understood is utterly inconceivable. After Metaphysics, ” time-space” remained a philosophical category defined by the concepts of ” the unknown,” ” emptiness,” and ” nothingness” ; this can only be regarded as a paradoxical scientific conclusion inherent to metaphysics itself.

The research presented in this article does not constitute conclusions of scientific experimentation; it falls under the category of philosophical inquiry and cannot directly determine what is ” correct” or ” correct.” Therefore, the terms ” philosophically sound” or ” philosophically soundness-deficient” are employed for expression.

What is high-dimensional ” existence” ? We do not know. Yet myth and mathematics can create it. Why does science—which opposes myth—become the basis for new myths?

What exactly has gone wrong? Wisdom? Academic frameworks? Knowledge systems? Science? Philosophy?This is the metaphysical question.

“Nature” itself cannot be wrong, for nature is the ” truth” pursued by humanity.

Perhaps the problem lies in our cognition of the ” origin” and ” ontology” of matter, space, and time in nature.

A profound paradox: The universe created humanity, and humanity created language, writing, and numbers, as well as knowledge and history. Throughout the history of knowledge, humans have named spaces by their ” forms of existence,” while modern humans create space through science and mathematics.

To resolve this paradox, we must trace the origins of human knowledge and examine the foundations of science, theology, and philosophy. Aristotelian philosophy serves as the watershed between human philosophy, science, and theology—it divided the once integrated approach to knowledge-seeking while establishing a guiding principle for human thought. This principle involves using existing knowledge to explore the unknown, positioning ” philosophy” as the primary academic discipline alongside ” theological philosophy,” thereby establishing a logical framework for humanity's enduring intellectual inquiry. (Samo Liu, 2026a; 2026b)

Since then, theology has undergone extensive development, preserving and perpetuating humanity's ” associative” mode of thinking—where the known is used to contemplate the unknown—and retaining the most primitive ways of thought and foundational ideas, thereby becoming the bedrock of human faith.

The classification of disciplines has fostered the vigorous development of scientific logical thinking, enabling humans to apply known knowledge to explore the unknown. Physics and mathematics have become vehicles for philosophical and rational contemplation of the ” natural deity,” culminating in the pinnacle of human science over the past two millennia.

However, due to the limitations of human knowledge at that time, philosophical thinking remained confined to the material world and human society—a restriction that persists to this day. This has led to theoretical contradictions and numerous inconsistencies within modern science, particularly in quantum mechanics and relativity.

Metaphysics has not only left behind the ” paradox trap” in human knowledge but also provided logical methods for resolving these contradictions. Reinterpreting Aristotle's Physics and Metaphysics through modern scientific knowledge can address the theoretical contradictions between quantum mechanics and relativity. The philosophical logical methods he established serve as a guiding intellectual force for humanity's advancement.

The following discussion addresses these issues in an academic context, asserting that there are no theoretical contradictions between quantum mechanics and relativity. In other words, the so-called ” theoretical contradictions” that have persisted in modern physics for over a century have been resolved, since metaphysical logic inherently contains no contradictions—only the concepts of ” existence” and ” the transformation of existence” —which represent artificial cognitive inconsistencies inherent to human knowledge.

2 Literature review and research

2.1 What is Science

The *Cihai（《辞海》）* dictionary (Xia Zhengnong, 1999) does not provide a direct definition of “science，” but it includes explanations for related terms such as “scientific classification，” “scientific culture，” “scientific spirit，” and “philosophy of science.”

Scientific Classification (p.4694):

A method of understanding the relationships among disciplines. According to specific principles, it divides subjects, clarifies their objects and domains, and determines their positions and interrelationships within the system of knowledge.

Aristotle divided science into logic, theoretical science, practical science, and productive science.

Francis Bacon proposed three classifications of scientific capabilities.

Saint-Simon and Hegel classified science based on objective principles and dialectical development, respectively.

Engels unified objective principles and developmental principles in scientific classification, establishing the foundation of classification theory.

Conclusion: Scientific classification originates from Aristotle.

Scientific Culture (p.4694):

Refers to the cultural form of science—an important component of human culture. It refers to Oswald Spengler, a German historian and philosopher who pioneered viewing science as a cultural form.(Germany) first regarded science as a form of culture. C.P. Snow (UK) later developed the concept of “scientific culture,” which generally includes scientific spirit, scientific thought, and scientific methodology.

Philosophy of Science (p.4695):

A philosophical theory that takes scientific knowledge as its research object, focusing on the nature and structure of science, its development, and its methodological principles.

Scientific Spirit (p.4695):

A core element of scientific culture, including ways of understanding, behavioral norms, and value orientations. It emphasizes that scientific knowledge originates from practice, and practice is both the criterion for truth and the driving force of cognition. It values both qualitative and quantitative analysis; advocates that science is universal and open; denies the existence of " ultimate truth"; and upholds free exploration, equality in the face of truth, critical thinking, skepticism of authority, and continuous innovation.

Summary:

Science is a form of knowledge created by humankind for survival and existence, and it eventually became a cultural system. It belongs to the category of "human-made existence," a phenomenon of human existence, while its object of study is the natural universe.

As long as humanity exists, exploration has no end.

The conceptual origins and foundations of scientific thought are closely connected to Aristotelian philosophy.

2.2 Brief Comments and Interpretation of Aristotle's Philosophy

The great thinker Aristotle created a distinctive mode of philosophical inquiry: a material-philosophical logic that uses the " **known"** to investigate the **"unknown."** His Physics and Metaphysics established a theological-philosophical framework for studying the unknown—laying the foundations for philosophy, metaphysics, "first philosophy," and "second philosophy." (Samo Liu, 2026a; 2026b)

From then on, philosophers、theologist and scientists alike have been deeply influenced by Aristotelian thought.

With the utmost respect, the following briefly evaluates Aristotle's philosophical influence on academic thinking and scientific development:

Material Philosophy:

First philosophy uses the " known" knowledge of human society and the material world to construct a logical framework for analyzing the unknown world and the universe, thereby generating new systems of knowledge.

Dialectical Materialism:

This represents a high-level logical method derived from material philosophy. It is a living and open philosophical logic based on the principle that existence determines consciousness, and it employs three major laws，Viewing the universe and all things with a dynamic and evolving perspective (the negation of negation; the unity of opposites; quantitative–qualitative transformation) to analyze " matter" and "origin."

Material Science:

Guided by the logical framework of material philosophy, human understanding of nature and society becomes systematically categorized, forming various " ontological" "substance" of the universe—the academic classifications and "subject families（KeShu科属）" that eventually constitute **science（KeXue科学）**。Aristotle's works serve precisely as evidence of this process: disciplinary knowledge is a result of such philosophical inquiry.It is also known as the second philosophy.

Evidently, Aristotle is a founding figure of science.

Material philosophy, together with material science, has flourished hand-in-hand. Treating all entities of the universe and the world as " matter" —even taking " space" and " time" as forms of matter—has driven physics to its peak: relativity unveiled the limits of material motion; thermodynamics revealed the limits of material transformation; quantum mechanics uncovered the " substance" and " being" of matter, compensating for the limitations inherent in Aristotle's ancient Greek knowledge system.

However, **material philosophy is no longer sufficient** for constructing the knowledge systems required to study **energy science** and **information science** (Samo Liu, 2024i; 2025c; 2025b), hindering scientific progress and giving rise to the " theoretical contradiction" between quantum mechanics and relativity.

2.2.1 Physics. Physics is Aristotle's work in which he applies material philosophy to investigate the primordial principles of the universe, exploring the relationships among beings in their processes of change and motion. Although the physical knowledge contained in the book may appear simplistic—even to modern middle-school students—its philosophical logic has influenced humankind for thousands of years (Aristotle, 2019; Samo Liu, 2026a; 2025h).

Influence 1: Material Thinking

Using material philosophy to study the " primordial principles of the universe" or " being" solidified a **materialized paradigm of thought** for humanity, reinforcing the academic dependence on "matter." Even though relativity revealed the limits of motion and transformation of matter; quantum mechanics discovered that the " substance" of matter originates from particles; physical cosmology discovered that **95.1% of the universe is " non-material existence";** humans created robots using "energy," "matter," and " information"; created nuclear weapons using "energy," "information," and " matter"; and discovered that human cells are combinations of " information" and " structure" —humanity nonetheless cannot escape the material-philosophical paradigm. Attempting to explain " information" and " energy" purely through " material philosophy" inevitably leads to contradictions.

However, the logic of material philosophy can reflect upon these contradictions and generate new ways of thinking and new knowledge.

Influence 2: Space

In Book IV of Physics, Aristotle examines whether " space" exists, how it exists, and what it is.

Ancient Greek ideas about " space" were scattered, unsystematic, and inconsistent. The views Aristotle considered compatible with material-philosophical logic include:

1. Hesiod's theory of "Chaos."
2. The idea that the " potentiality" of space is remarkable—it is more important than anything else; without it nothing could exist, yet it can exist without anything else.
3. Space continues to exist even when its contents perish.
4. Space is not a physical body; the material universe can be studied through three-dimensional description.
5. Space is neither a " cause" nor a " factor" —it is not any of the "four causes."
6. Space may represent the form of things or " beings" —the " limit" that surrounds matter or "existence."

Is space " void"? Aristotle argued that the real universe is a "material universe," so rejecting the void would have been easy; yet he **did not** reject it. His study of " space" in Greek philosophy reaches no definitive conclusion. Instead, through careful classification, he opened the great path toward **science**. Over two thousand years later, he passed this unresolved contradiction to relativity and quantum mechanics (Samo Liu, 2024i).

Simultaneously, he handed the study of the unknown to theology, metaphysics, and philosophy—more precisely, he handed the task of confronting **contradictions** and **resolving contradictions** to future generations, telling them that metaphysics is the " first scholarship" (Samo Liu, 2026b).

This discussion demonstrates that both " material existence" and " non-material existence" exist, change, and move **within space**, and that " the manifestation of being" is the " form" of space.

Influence 3: Time

Book IV, sections 10–14, explore the attributes of time and related puzzles: Is time a ” thing” that exists, or does it not exist? What is its nature?

1. Time is not motion or change, but a measure of the speed of motion and change.
2. It is the number or mathematics that represents motion and change.
3. The existence, movement, and transformation of ” being” can be expressed ” in time” ; thus existence must have processes of ” birth” and “perishing,” the scales of “0” and “non-0” (Samo Liu, 2026b; 2025h).
4. Without human subjective consciousness and knowledge , time cannot exist. Time is a human-created numerical/mathematical expression of process.

Like “space,” the question has no answer, because ancient Greece lacked the study of the primordial unity of spacetime. Aristotle left the answer to future generations—embedded within Physics and Metaphysics—and ultimately to quantum mechanics and relativity.

Because there was no answer, conclusions such as ” superluminal speed” could emerge, and the peculiar ” coordinate system” of ” three spatial dimensions plus time” —which is inconsistent with philosophical logic—appeared as the ” four-dimensional spacetime” and ” high-dimensional space” of physics.

This ” peculiar coordinate system” is inconsistent with the ” Physics” and ” Philosophy” of Aristotle; a later discussion will address this.

The above proves that the existence, movement, and transformation of both ” material existence” and ” non-material existence” can be expressed through time. “Units of time” are human definitions derived from local natural phenomena to describe processes.

Influence 4: Perception of Existence

Perception（感知）: It is the mutual ” informational response” between the ” self” and the ” other” of the ” being” constituted by material (three-dimensional) and non-material (non-three-dimensional) entities. This constitutes the innate endowment of ” being” bestowed by cosmic space.

All ” being” possesses a structure. In metaphysics, it is termed a “Concrete（综合实体）” ; in Buddhist philosophy, it is referred to as the unified body（一合体） of the five aggregates that are all empty（五蕴皆空）; in Taoist philosophy, it is called the Yin-Yang Taiji entity（阴阳太极体）. Once a structure is formed, it facilitates the transformation of matter (Samo Liu, 2025f).

Even without the concept of “ existence-being,” the fundamental nature of the universe still possesses these attributes—known as “Yin-Yang Wuji（阴阳无极）” “Sunyata（空）,” and “The One（元一）.” When this essence of existence-being transforms into cellular matter, it gives rise to “sensation（感觉）.”

These concepts have been elaborated in my previous research articles.

In Aristotle’ s era, science and philosophy were not yet separated; Physics was itself philosophy, theology, and metaphysics. Even today, this remains true in essence: physics continues to solve many contradictions and problems raised in Metaphysics, and still has not finished doing so.

Aristotle was not a mystic; he was a rigorously logical thinker.

In Book III, he analyzes motion and change, proposing the “potential entity,” the “mover,” and the “moved,” arguing that the mover is the primordial cause of motion.

Who is the mover? Both he and Newton believed it to be “God.”

However, Aristotle logically deduced that both ” matter” and ” being” possess a kind of **perception**—a conclusion aligned with Daoist and Buddhist views on the primordial nature of the universe.

A demonstration follows, using universal gravitation as an example.

The equation for gravitational force is well known. Two celestial bodies, m1 and m2 , attract each other equally and oppositely, with the magnitude depending only on their masses (material mass) and distance.

Basis 1: Newton, The Mathematical Principles of Natural Philosophy

Basis 2: Aristotle, Physics, Book III, Section 3: motion and change occur within the things that move and change; the activity of the mover is inherent in the activity of what is moved; the realization of the two is unified; both mover and moved are within the moved entity.

Proof:

Two distant celestial bodies, m1 and m2, without contact, nonetheless perceive each other's gravitational force.

Cause-relation: All ” yang-type” existences must have structure; structure necessarily contains “yin-type information.” Information is the cause of perception. In Daoism this is Yin–Yang and the Five Elements; in physics it is mechanics (Samo Liu, 2024i).

Modes of information-perception: **“doing nothing yet everything is done无为而为，” “all aggregates are empty五蕴皆空，” “dependent origination缘起。”**

Similarly, electromagnetic force, the strong and weak forces among particles, follow the same reasoning; each mechanics has its relativity (Samo Liu, 2026a).

Mechanics is the theology of ” perception” —**God's first step.**

If Daoist and Buddhist philosophy derive logic from “perception,” Aristotle derives ” perception” from logic; Newton computes ” material perception” through universal gravitation; Maxwell mathematically derives ” perception” between electric charges and energies; quantum physicists derive strong and weak perception among particles (quanta of energy); Kelvin and Planck establish the limiting perceptions of matter and energy; Einstein calculates the limiting perception of material kinetic energy.

Similarly, geologists and mineralogists know which elements form specific minerals and can extract useful elements from these ores; botanists understand when plants bloom, bear fruit, and wither; physicians are aware of human health conditions, disease treatment protocols, and the processes of conception, birth, maturation, aging, and death.

Please note that this does not imply humans or their scientists are exceptionally capable or intelligent. Rather, it reflects a fundamental reality: Through accumulated knowledge and their own insights, humanity has developed understanding of nature and applied these findings to sustain their existence. Even without human knowledge, all cosmic entities would continue to move, change, and function. While humans may influence terrestrial life and their own existence, their impact on the universe remains negligible or nonexistent. Our role is solely to study and explore the cosmos and nature.

Because the universe, nature, and the existence in nature and ” ontology” have the nature of perception，All of them have life and will spontaneously conceive, be born, exist, and change.The creation and existence of humanity are merely one aspect of these 'existences.'

Influence 5: The Four Causes—Material Cause, Efficient Cause, Formal Cause, Final Cause

To study physics and the primordial principles of the universe—to study ” being” and the mutual relations among beings—one must study the “four causes.” This logical framework remains valid today.

The discipline of physics can rightfully proclaim that the **material cause** (substance, origin, and destination of matter), **efficient cause** (mechanics), and **final cause** (thermodynamics) have been discovered (Samo Liu, 2024g; 2024h; 2024i), thus honoring Aristotle.

The **formal cause**, however, has not yet been found.

Nor have the ” four causes” of energy and information been discovered.

2.2.2 "Ontology" and "Spacetime" in Metaphysics. Metaphysics is devoted to studying the causes of the existence, dynamism, and change of matter and "being," and thus involves the existence and transformation of the "substance" (benti本体) and the "various substances" of matter and "being."

Aristotle inductively organizes and critiques ancient Greek philosophy. For some issues he offers judgments; for others he leaves no final conclusion. However, he provides a logical method of thinking, inspiring later generations to continue inquiry, to use newly acquired knowledge to confirm or revise earlier views, and thereby to form new knowledge.

Reflection 1: What is Life—What Does It Mean to Be "Alive"?

Cihai explains: life is the particular "phenomenon" possessed by living organisms composed of macromolecular nucleic acids, proteins, and other substances (Xia Zhengnong, ed., 1999, p. 4642).

Human beings call this "phenomenon" being "alive"; otherwise, the other phenomenon is called "death." The word "death" is philosophically problematic, for it easily leads to the misunderstanding that all things and all "existence" are not "alive."

The human phenomenon of "not being alive" simply means the loss of sensation and the "perception of being alive," and the loss of the staged capacity for bodily structure and cellular motion and change. This phenomenon is the staged termination of changes in the "factor-structure" of an "existence," which leads to a transformation and detachment of its structural information.

Daoism calls this the separation of the body's Five-Element spirits from the body's yin and yang; Buddhism calls it the karmic return of the "soul" to "emptiness."

Marcus Aurelius considered it the separation of body and soul (Marcus Aurelius, 2017; Samo Liu, 2025d).

The subsequent "phenomenon" is that flesh and skeletal cells still retain perception, and, following the motion and transformation of the sun and the earth, continue until these cells disintegrate and collapse, completing the second stage of "existence," then ending and returning to the primordial state of energy or matter (Liu Hongjun & Samo Liu, 2020; 2021a). This is the conclusion of modern science (physics, chemistry, etc.).

Then where does the "soul" (information) go?

Here we are still within metaphysics and may approach it through theology or Left for posterity . Theology is the science of human faith; it may be personified or naturalized. It is in itself a kind of "pure philosophy" for humanity, and may be considered with first philosophy and explored and investigated through second philosophy. In the more than two thousand years after Aristotle, the development of human science has proceeded from what is easily knowable—starting from matter—using established logic, reaching the summit of human science and discovering the "primordial origin (benyuan本原)" and the "substance (benti本体)" of matter (Samo Liu, 2024g; 2024h; 2024i).

This is the distilled essence of Aristotle's Metaphysics.Knowing is knowing, not knowing is not knowing. Humans do not fear admitting their ignorance; humans are the intelligent substance that grows out of ignorance and establishes their own knowledge systems. Regarding 'ignorance,' we can continuously explore and study it—whether now or for future generations. When contradictions are discovered, solutions to these contradictions must be found, and this is what metaphysics is.

The prerequisite is the existence of humanity; the language, writing systems, numbers, mathematics, coordinate systems, and scientific knowledge frameworks created by humans must also exist. These knowledge systems should not be arbitrarily employed to undermine the natural order; instead, we must respect nature in a fact-based manner.

Therefore, human beings may "live" twice; the universe, all things, and all "existence" are "alive," all are created, move, and change within space (form) and time (process), and must be differentiated both by stages and by "genus–species" of "substances" (Aristotle, 2016; Samo Liu, 2026b; 2026a).

Metaphysics divides "existence" into "perishable" and "imperishable," into "the changing" and "the eternal."

The changing must be yang-type factors (elements, components), Also called the "Being" of "Existence": for example, matter; all existences on earth, including human beings; and existences such as planets and galaxies beyond the earth. Quantum mechanics has discovered the substance and primordial origin of matter (atoms). This is a tremendous advance in humanity's path of knowledge, and a joint advancement of science and philosophy.

Judged by the logic of material philosophy, particles and quarks are a kind of non-material existence: a discrete energy with non-three-dimensional existence, possessing structure and information, and constituting the substance and primordial origin of atoms. Quantum mechanics has established Planck length and Planck time to express their form and process.

By similar reasoning, the substance and primordial origin of particles and quarks will be dark matter and dark energy—still unknown.

The substance and primordial origin of dark matter and dark energy will be absolute zero and light. In Eastern philosophy this is called wuji (无极), and in metaphysics it is called "One (yuan yi元一)。" Although metaphysics did not deduce "wuji (无极)" or "taiji (太极)" from ancient Greek philosophy and has been judged by later thinkers as "dialectical opposites," Aristotle nevertheless, in Book IV, Chapter 8, introduced a highly forward-looking philosophical idea: the primordial origin of the universe, although itself unmoved and unchanged, can give rise to all motion and change—this is precisely the "taiji" arising from "wuji" (Samo Liu, 2025g).

Especially important is his derivation that "existence" possesses "perception"; this is the primordial origin of "cosmic power" in the universe and space.

The eternal has two "genus–species."

One is the eternal of "yang (阳)-type existence": wuji (无极) and yuan yi (元一), the ultimate equilibrium of the universe, which cannot be expressed in terms of form and process, yet is the "yuan yi" of yin and yang. Thales believed "all things are ensouled." Daoist and Buddhist philosophy hold that the universe itself has spirit (Samo Liu, 2024i). Once this spirituality sets in motion the karmic causes of "imbalance" and "asymmetry," the universe creates thermodynamic "negative entropy" and brings forth the motion and transformation of "existence."

The other is "yin (阴)-type existence," the "cause (yin因)" of change in "yang (阳)-type existence," the existence of divinity—namely, the mechanics and thermodynamics of physics.

Book IX, Chapter 7 of Metaphysics calls this the "thought" of "potential entities"; the Heart Sutra calls it the "Five Aggregates"—form (se色), sensation (shou受), perception (xiang想), volition (xing行), and consciousness (shi识)—as "all empty"; the Dao De Jing calls it the "nothingness (wu无)" of "jing精" (spirit, jingshen精神) and "xin信" (information, xinxi信息) (Samo Liu, 2024i).

The Zhuangzi calls it zhou (宙): "有长而无乎本剽者" (not translated here), including the perception by "existence" of "process" (time).

Book XI, Chapter 12 of Metaphysics points out that within the category of substance and relation, there is no such thing as "motion within motion" or "change within change." This kind of "cause" has no substance or primordial origin; it itself is the root that brings about change (or motion) in "yang-type existence" or in substances.

Yin and yang are one; yet their "Integrated entity" endowment has karmic relationships of "same as the genus," "different from the genus," "same as the species," and "different from the species."

On this basis we may judge that the ” four-dimensional spacetime” coordinate system is an ” improper” design from the perspective of natural philosophy. Mathematics allows such a construction, but physics does not—the ” genus” and ” species” differ.Natural philosophy does not permit artificial ” mathematical grafting” of different forms of ” existence” —such as ” origin,” ” ontology,” or ” genus-species” —especially when the essence of time and space remains unclear.

Metaphysics denies that ” number” or ” mathematics” has the status of substance. It values the divinity—or philosophical nature—of mathematics, yet does not permit subjective consciousness to use mathematics to construct models that do not conform to nature.（samo liu，2026j）

As an admirer of mathematics, I have no intention of diminishing its power as a great tool in science. It can be said that the mathematical study of 'four-dimensional spacetime' and 'higher-dimensional spacetime' is a remarkable mathematical achievement and will exert tremendous power in the research on the 'existence' of the material world. However, it is inappropriate to apply it to the study of the 'origin' and 'nature' of 'space' and 'time'.

From the perspectives of natural philosophy and metaphysics, applying these theories to research on spatial and temporal grafting is even less appropriate.

This logical reasoning also applies equally well to evaluating the so-called scientific conclusion of 'spacetime curvature.'

Reflection 2: Reflections on the ” Four Causes”

Physics proposes the ” four causes” and analyzes ” space” and “time.”

Metaphysics focuses on “cause（yin因），” “primary cause，” “first cause，” and “first principle.”

Human beings easily understand their own ” substance”: men (yang) and women (yin), under certain conditions and environments, can give birth to humans. Then body (yang) and soul become one, which is called ” being alive”; when the ” soul” is lost, it is called “not being alive.”

As discussed earlier, the cells of the ” not-alive” body still constitute a material “existence.”

During the ” life-bearing” stage of human development, from conception to birth, through childhood, adolescence, old age, and ultimately death, there is continuous motion, change, and directionality.

What about matter?

The existence of matter is a real “existence（kexue科学）” recognized by humanity: humans themselves are one kind of matter; planets and galaxies are also matter; atoms, molecules, and cells are basic matter.

How was matter created? Why was it created? What are its “substance（benti本体）” and “primordial origin（benyuan本原）”?

How does matter ” exist”? Does it ” change” or ” not change”? How does it change? Does it have directionality（fangxiangxing方向性）?

Who causes matter to be created, to exist, to change, and to possess directionality?

As a thinker in “theological philosophy,” Aristotle in Book XII, Chapter 5 of Metaphysics develops a philosophy of ” personalized God”; in Chapter 6 he establishes a philosophy of ” natural God” (Aristotle, 2016; Samo Liu, 2026b)—the eternal philosophical exploration of the “unknown,” taken as first scholarship.

More importantly, with material philosophy he classified and established “science,” which marked great progress for humanity. Today, humankind regards itself as ” powerful”; each discipline has many scientists, all ” experts” in their fields (Samo Liu, 2025a). Yet under the constraints of material-philosophical thinking, it is very easy to overlook the ” Aristotelian way of thinking” that preceded disciplinary divisions.

With the rapid development of science, some individual scientists despise ” theology” and “philosophy,” even though they themselves also have “faith.”

The influence of “theology,” “philosophy,” and ” metaphysics” on human survival and existence is beyond doubt.

When scientific theory encounters contradictions, it may be helpful to review the ” first cause” and the “primary cause（benyin本因）” of metaphysics.

The consistency and differences between Aristotle's ” Four Causes Theory” and the concepts of Taoism and Buddhism have been elaborated in my previous research articles: *Material and Non-Material Existence* (Samo Liu, 2026b), *Speed and the Speed of Light, Density, Change, and Absolute Zero* (Samo Liu, 2026a), *From Infinity to Taiji, Yin-Yang to Heaven* (Samo Liu, 2025g), and *A Study on the Nature and Form of Zero* (Samo Liu, 202hj). The integration of Eastern and Western philosophy constitutes an integrated cosmological origin philosophy, which serves as the foundation for the subsequent discussions.

Material Cause: the study of the “primordial origin–substance” of “existence.”

The periodic table of chemical elements is a monumental achievement in humanity’s study of the ” material cause”: no matter how complex the compositional structure of molecules and cells may be, they are combinations of these elements and atoms, which exist, move, and change.

Book XIV of Metaphysics rejects ” various opposites” as “principles.”

The ” material world” in which humans live is the ” real existence” judged by humans through the sensation, perception, and logical thinking of life. To deny the ” real existence of matter” would plunge humanity into contradictions concerning its own ” value” or ” meaning” of existence.

Human exploration of the ” primordial origin of the universe” is research into ” natural truth” undertaken for survival and existence, not for denying “natural reality.”

For this reason, physics defined the concept of “antimatter.” Whatever the ontological nature of this ” existence” may be, its naming is “philosophically improper.” The ” yin-yang contradiction” defined by humans through knowledge refers to the movement and transformation of matter and existence, not to opposing natural being.

Quantum mechanics discovered the substance and primordial origin of ” matter” (atoms)—namely, particles. This is a great historical achievement for metaphysics. Although this is not “yuan yi（元一），” it displays the beginning of the creative activity of non-material yin–yang taiji.

Humankind has unlocked atomic energy and created the hydrogen bomb; with 0 and 1 as information we have created robots. If humans are not “divine,” what else are they? The god of the universe does little more than this: create things and create humans.

Physics is, in this sense, Aristotle’s theology.

Then what are ” yuan yi” and ” wuji”?

In Strong interaction and Weak interaction (Hirosi Ooguri,2016), Chapter 5, Section 6, he argues that if light becomes heavy, then besides transverse waves it must also possess longitudinal waves (pp. 148–153), revealing the relation between light and photons. Dirac’s quantum-mechanical study of photons–electrons, positrons–light is rich in philosophical significance.

This research matches the thirteenth research topic of Book III, Chapter 1 of Metaphysics, and accords with the arguments of Book XIII, Chapters 2 and 3.

The relativistic limit of material motion—light speed—combined with Kelvin’s concept of absolute zero and Newton’s absolute space, allows us to deduce that “yuan yi / wuji” is the ” existence” of light at absolute zero—a zero-dimensional existence of “energy,” the “primordial origin–substance” of the universe.

Continuing this deduction within the logic of metaphysics:

If dark matter and dark energy are a real existence—and physical cosmology has basically affirmed this ” scientific knowledge”—then they should be the ” in-between entity” between ” yuan yi” and “particles and quarks，” that is, the ” substance” of quantum mechanics. I place

this within the domain of second yin-yang（阴阳） philosophy (Samo Liu, 2025h).

Clearly, matter is the basis for humanity's understanding of the universe—existence, motion, and change—while its origin "substance" is the "yuan yi-One" of "emptiness," "nothingness," and "0."

Daoist philosophy's "nothingness" （wu无） and Buddhist philosophy's "emptiness" （kong空） are meant to remind humanity that while we must value "matter（wuzhi物质），" we must not forget "substance（benti本体）" and "primordial origin（benyuan本原）。"

Buddhism emphasizes the coexistence of "emptiness" and "form" and the "middle way(zhongdao中道)"; Taoism emphasizes the unity of "non-being" and "being," highlighting the importance of balance.

This raises a question: what endows "existence" with the capacity for existence, motion, and change? Does it have directionality?

Efficient Cause: the existence of mechanics in physics, chemistry, physical chemistry, systems science, and related fields needs no proof.

The main forms are: thermodynamics, electromagnetics, universal gravitation, strong force and weak force, as well as the indispensable "chemical bond forces."

Each kind of mechanics is an ontological question of metaphysics—a theological question of the primordial origin of the universe.

Final Cause: does the universe have a purpose?

Daoist philosophy believes the universe "acts without acting（wuweier-wei无为而为）"； yin and yang and the Five Elements move and change; there is perception and direction; the highest benevolence（ren仁） of the universe is equilibrium（pingheng平衡）(Liu Hongjun & Samo Liu, 2021d; Samo Liu, 2024i).

Buddhist philosophy holds that the universe is "Five Aggregates all empty（wuyunjiekong五蕴皆空）"； "cause（yin因）" and "factors（guo果）" change via causality; the "du（度）" of process is irreversible; it reminds human beings to recognize the "middle way（zhongdao中道）" between "emptiness（kong空）" and "form（you有）" (Liu Hongjun & Samo Liu, 2024).

Ancient Greece "lacked" systematic research in this aspect; Metaphysics reaches no conclusion, but created the term "final cause." Since humans, endowed with subjective consciousness, have "purposes," the universe should also have one; otherwise, the "realization" of a material universe would not have occurred.

Thermodynamics, also called statistical physics, is interlinked with systems science and modern disciplines.

Bacon held that the nature and substance of heat is motion and nothing else (Malcolm Longair, 2017, p. 190).

Absolute zero: the substance and primordial origin of matter at rest, without motion or change.

Chemistry: heat is a kind of equilibrium, flowing from higher level to lower level; physics has discovered that energy universally possesses this endowment.

Entropy: irreversibility. Humans have created the concept of "entropy" with science, and yet fear "entropy." In a universe that uses "kalpas" as units of time, the environment in which humanity dwells is "temporarily balanced." Our fear shows that human knowledge is "insufficient," which leads to "imbalance" within the human heart.

Using the logic of metaphysics, we can infer:

The "final cause" of the universe is the motion, change, and equilibrium of thermodynamics—the direction of the process of "existence," and it is irreversible.

Formal Cause: a yet-unknown cause, related to space and even more to the external expression of existence. However complex the external form of matter may be, it can be expressed in three-dimensional coordinates and calculated with calculus.

All celestial bodies and material existences in outer space are matter; studying existence in cosmic space can and must use the concept of three-dimensional space.

However, matter = three-dimensional space ≠ space.

Proof 1: Physics, Book IV (Aristotle, 2019)

Proof 2: The Leibniz–Clarke Correspondence, Letter III (Leibniz, 1996)

Proof 3: Dao De Jing, Chapter 1 (Laozi, 2019)

Proof 4: Zhuangzi, "Gengsang Chu" (Zhuangzi, 2017)

Proof 5: Diamond Sutra, Section 4 (Śākyamuni, 2020)

All of these works provide philosophical support for the above inequality.

From Aristotle's time to Leibniz's time, knowledge did not yet grasp forms of existence beyond "matter," and thus left them to theology and metaphysics, and to future generations.

Quantum mechanics has enriched knowledge with science: the substance of atoms originates in discrete-energy particles and quarks—non-material, non-three-dimensional existences—and has opened the door to the study of space. **If we still equate space with three-dimensional space, we will be irresponsible to later generations and irresponsible toward scholarly knowledge，It is even more irresponsible toward theology, which is the foundation of human faith.**

Book III, Chapter 1, Topic 13 of Metaphysics examines whether numbers, points, lines, and planes have ontic status. It argues that points, lines, and planes do not have the properties of real material entities, yet possess mathematical properties and non-material properties (Samo Liu, 2026b).

Book XIV denies number as the primordial origin of the universe; at that time there was neither the numeral zero nor positional notation (Samo Liu, 2025h).

M-theory's philosophical model of "point–string–brane" as the primordial origin of the universe has sparked academic excitement and doubt.

Within material philosophy, "point–string–brane" can be infinitely large or infinitely small. However, physics' study of "transverse" and "longitudinal" waves of light produced the theory of the "photon," which accords with Book XIII, Chapter 3 of Metaphysics (Hitoshi Murayama, 2016).

This reminds Professor Witten and his academic team that a non-material "point–string–brane" theory of the primordial origin of the universe and of material creation conforms to the logic of metaphysics and is a "proper" philosophical direction. However, directly grafting time onto the 'space' within a three-dimensional coordinate system is 'philosophically inappropriate.'; "higher-dimensional space" is a mistake in philosophical logic, as will be demonstrated later.

The study of space as "formal cause" remains a "lacuna" in human knowledge and has produced contradictions in modern physics. To resolve this contradiction, we must not overstep the philosophical logic of Physics and Metaphysics.

Reflection 3: The Primordial Origin of the Universe, "substance," and "Genus–Species"

Using the "known" to explore the "unknown" is Aristotle's foundational philosophical idea; the themes and methods of material philosophy opened the way for material science. By these means, new knowledge is created and human progress is promoted.

Material-philosophical logic is also a method for studying the primordial origin of the universe.

Physics and Metaphysics classify the universe's "primordial origin–substances（benyuan-benti本原－本体）" into five major systems of "genus–species（zhong-shu种-属）。"

First "primordial origin–substance" system of genus–species: factors, elements, and components of the material type—i.e., the existence,

motion, and change of “existences.” Research into their “primordial origin–substance” is the study of ” what this is” and “how this is.”

This system of ” existence” has both ” primordial origin” and “substance.” Each ” stage of existence” has its own ” substance” ; each type of existence has its own “various substances.” All ” existences” will have the existence and transformation of “quality（zhi质），” “quantity（liang量），” “location（chu处），” and “substance（benti本体）。”

From the “yuan yi / wuji” of absolute zero and absolute space, to the various stages of particles, quarks, atoms, molecules, cells, and the existence of all things; to the existence of planets and galaxies in outer space.

Physical cosmology studies planets, white dwarfs, neutron stars, black holes, and the final destination , existence, change, and ultimate fate of celestial bodies, and has also discovered dark matter and dark energy.

Each discipline has produced academic contributions corresponding to Book III of Metaphysics on the primordial origin and substance of the universe. These contributions accord with the logic of ” existence” and change in Metaphysics: the transformation of “quality，” “quantity，” “location，” and “substance（benti本体）。”

However, the status of philosophy as first scholarship has been shaken, and some even proclaim that ” philosophy is dead” and “theology is dead.” Has human scientific exploration therefore reached its end? No. Much ” unknown” still awaits study and exploration. I classify these systems of ” existence” into five yin–yang philosophical categories. As human knowledge expands, more may need to be added; science can remedy the ” inadequacies” of knowledge (Samo Liu, 2025h; 2026b).

The process of existence for this system of “genus–species” has been given time units by humans: kalpas, ordinary time, Planck time. Its forms of existence are:

- **Matter:** existence in three-dimensional coordinate systems, the domain of calculus.
- **Absolute zero:** the existence of absolute space, light, “yuan yi,” “wuji”—a zero-dimensional form.
- **Quantum mechanics:** “point, string, brane” as non-material forms. When three-dimensional form is realized, we have particles; otherwise, we have waves. They can be expressed by electrical energy or thermal energy, not necessarily by universal gravitation; their mass, properties, and positions are indeterminate; “entanglement” and ” superluminal” forms of ” existence” must be judged by their “genus–species” nature.
- **Universal gravitation:** mutual perception of the mass structures of matter. Without the mass and positions of matter, there is no universal gravitation. Quantum mechanics must determine the dimensional structure of mass: 1-D, 2-D, or 3-D? Three dimensions are certain; whether 1-D and 2-D possess mass properties remains to be judged.
- **Electromagnetic force:** mutual perception of electromagnetic mass structures. Without the ” energy-value mass” and position of electrons and charges, there is no electromagnetic force; quantum mechanics must determine the dimensional and formal nature of electromagnetic structures.
- **Strong and weak forces:** mutual perception among the structures of particles and quarks. Though the spatial scale is tiny, this third yin-yang philosophical category still has ” energy values” and positions, and must be judged in terms of structural form and nature.
- **“Higher-dimensional” existence above three dimensions:** its nature of existence must be determined by science; otherwise, it is “philosophically improper,” “unknown,” and “unknowable,” and may be provisionally placed within the domain of “theology–mysticism.”

Second “primordial origin–substance” system of genus–species: the “causes（yin因）” that lead to the existence, motion, and change of “factors（yinsu因素）。” This is a divine and metaphysical existence. This kind of existence has no substance—or rather, it is itself both ” primordial origin” and “substance.”

Form: formless and imageless, the Five Aggregates all empty, zero-dimensional.

Will（yizhi意志）: acting without acting（wuweierwei无为而为）。

Process: no expressible process, including the process itself—eternally existent.

Modern physics—mechanics and thermodynamics—has given knowledge and answers (Samo Liu, 2024i). Yet these answers still possess theological and metaphysical unknowns. Modern science may be classified under the domains of information science and energy science.

To which category should we assign the ” soul” and ” spirit” by which human existence moves and changes?

Humans have created robots; information enables robots to move and think. This can be judged as an informational system of “cause,” manifesting the special power—thought—for which the universe has endowed human subjective consciousness.The Power of Thought。

Third “primordial origin–substance” system of genus–species: the mutual relations among existences. These relations determine and clarify the “genus–species” nature.

A ” cause” is a cause; a ” factor” is a factor.

In the relations among causes, genus and species are clear. Thermodynamics discerns the motion and change of structural existences; electromagnetic force discerns the electromagnetic relations of electromagnetic-energy structures; universal gravitation discerns the mutual relations among material mass structures; strong and weak forces discern the relations among particle and quark structures.

Physics classifies these as media of mechanics, possessing both known and unknown aspects of metaphysics. In such media studies, any result with zero charge and zero mass is ” philosophically proper” ; otherwise it is ” philosophically improper” —the weak-force boson is thus “philosophically improper.”

These relations include attraction–aggregation and repulsion–dispersion.

Buddhism calls this the karmic relationship of causes and factors, the Five Aggregates—form（色），sensation（受），perception（想），volition（行），and consciousness（识）。

Ancient Greece called it “relation,” “contradiction,” and “unity.”

Daoism sees it as the generative and restrictive relations of yin–yang（阴阳） and the Five Elements（wuxing五行），possessing metaphysical unknowns.

This is the relational logic of “primordial origin–substance” ; it is itself an substance and does not change.

Form: formless and imageless, the Five Aggregates all empty, zero-dimensional.

Will: acting without acting（无为而为）。

Process: emptiness and nothingness—eternally existent.

The Fourth “Primordial Origin–substance” System of Genus–Species:

The Directionality of the Existence, Motion, and Change of ” Existence” **

This system is related to time. Time can only express the processual quantity of direction; it cannot fully represent directionality itself.

In thermodynamics, the changes and motion of energy–matter–non-matter search ” 无为而为（wuweierwei）” for direction within

equilibrium–nonequilibrium–final equilibrium, From absolute zero to Planck temperature.They have neither form nor process as such; rather, thermodynamics itself is the " primordial origin" and " substance" of changes in form and process.

Directionality leads to the " realization" of "existence." Only through " realization" can its directionality be investigated.

Metaphysics calls this the " ultimate cause" (ji yin极因) and "final cause."

The Fifth "Primordial Origin–substance" System of Genus–Species: Space—the Matrix of All Existence**

Space is the **matrix of all existences**. It creates and destroys; it contains all " substances" and all existence and non-existence. Any coordinate system for the existence and transformation of a given " existence" can only display its external form; it cannot define " space" itself.

Space is neither a cause nor a factor.

Human beings understand that their own "primordial origin–substance" is the mother—more precisely, the changes and creation of yin–yang cells within the mother's body.

The "primordial origin–substance" of matter arises from the existence, within space, of yin–yang " information" and "energy," along with the directional aggregation and dispersion of karmic causes and conditions.

Ontological properties: absolute 0°, light in absolute space, a zero-dimensional "yuan yi / wuji" as "substance." Once dimensionality appears, we already have the "primordial origin–substance" of matter. When three dimensions form, we have the " substance" of matter: its "quality," "quantity," "location," "existence," and "change."

In reality, matter exists in three dimensions. Humanity's knowledge system almost treats the existence of the universe as 100% material existence—even though physical cosmology holds that material existence occupies only 4.9% of knowable space. This does not prevent humans from understanding the material world; they even dare to use three dimensions to define "space."

Daoist philosophy, Buddhist philosophy, ancient Greek philosophy, and the integrated knowledge of modern physics all tell us: we must not forget the primordial origin of the universe. This is the dialectic of materialism as " equilibrium" and the " middle way" : existence determines consciousness.

On the basis of this logic, we now unfold several topics for discussion.

3 Discussion

3.1 Is the Speed of Light (c = 299,792,458 m/s) Correct?

The cosmogony of " creation by light" has been placed under the heading of theology; for the moment, we are unable to prove it—just as we cannot prove the Daoist " nothingness" (wu无), the Buddhist " emptiness" (kong空), or the Greek "One（yuan yi元一）."

Einstein wrote: "I have spent my life trying to understand what a photon is, but I still do not understand it." (Eugene Hecht, 2019, p. 9)

Below, using the philosophy of the primordial origin of the universe and the " logical techniques" of metaphysics, we analyze the possibility of a " creation by light" in physics. We begin with classical definitions of " light" and " photon" and provide some explanations.

Cihai explains (Xia Zhengnong, ed., 1999):

Light: Generally refers to electromagnetic waves that can produce visual sensation. Electromagnetic waves with wavelengths from about 0.77 μm (red light) to 0.39 μm (violet light) are called "visible light." Those with wavelengths above 0.77 μm up to around 1000 μm are called "infrared," and those below 0.39 μm down to around 0.04 μm are called "ultraviolet." (p. 4978)

Photon: Also called "light quantum," a type of elementary particle. Stable and uncharged. It is the energy quantum of light. In 1905, when explaining the photoelectric effect, Einstein first proposed its existence and revealed the "wave–particle duality" of light. It was formally named in 1926. If the frequency of light is ν, then the photon's energy is hν (where h is Planck's constant), its momentum is p = hν/c (where c is the speed of light), and its rest mass equals 0. (p. 4978)

Speed of light: The propagation speed of light (electromagnetic waves) in vacuum, denoted by c. Electromagnetic waves of all wavelengths propagate in vacuum with the same speed, about 300,000 km/s. The most accurate modern measurement is c = 299,792,458 m/s, one of the fundamental physical constants. One premise of special relativity is that in vacuum the speed of light is the same in all inertial frames; from this it follows that the speed of light is the maximum limit for the motion of all matter and the propagation of all interactions. (p. 4979)

Great Dictionary of Physics explains (Du Youwei, 2017):

Principle of invariance of the speed of light: One of the two fundamental principles of Einstein's special relativity. It can be stated as: the speed of light in vacuum is a universal constant c, independent of the direction of propagation, the nature of the light source, and its motion. (p. 15)

Photon: The instantaneous nature of the photoelectric effect shows that a packet of energy is concentrated, equivalent to a particle—a photon. In 1927 Dirac, by inventing the method of second quantization, quantized the electromagnetic field and thereby established the elementary-particle theory of the " photon"—excited states of the quantized electromagnetic field; see " quantization of the electromagnetic field" and "spin of the photon." (p. 12)

Photon: Also called the electromagnetic gauge boson, the quantum of light waves or other electromagnetic radiation, denoted by γ. (p. 856)

Electron–positron pair production: Also called electron pair production. A γ-photon with energy exceeding 1.02 MeV, when absorbed in the Coulomb field of an atomic nucleus, may produce an electron–positron pair. (p. 856)

Electron–positron annihilation: A pair of electron and positron can annihilate into γ-photons when they meet. Before annihilation, the pair can form a short-lived atom-like bound state, positronium. (p. 856)

The above explanations are **logically mixed**: light, light waves, photons, and everyday " light" are all entangled. Let us set aside the notion of everyday light and, using philosophical logic, separate light, light waves, and photons, and then re-hypothesize:

- **Hypothesis 1: Light.**
- Rest mass = 0; electric charge = 0; frequency = 0; no temporal process; no structural form. This belongs to the philosophical category of " yuan yi" and "wuji."
- **Hypothesis 2: Light waves.**
- Electric charge ≠ 0; rest mass = 0; frequency ≠ 0; temporal process exists; structural form unknown. This belongs to the philosophical category of "primordial origin–substance" and "taiji."
- **Hypothesis 3: Photon.**
- Electric charge ≠ 0; rest mass ≠ 0; frequency ≠ 0; temporal process exists; structural form is three-dimensional (or has the dimensional structure of material mass). This belongs to the philosophical category of "primordial origin–substance" and "matter."

These three hypotheses complete the proof of the possibility of a " creation by light" in physics. Let the academic community discuss and critique.

One premise of special relativity is that the speed of light in vacuum is the same in all inertial frames, and that the speed of light is the maximal limit for the motion of all matter and for the propagation of interactions. This is a philosophical, theological, and scientific logical judgment about "light."

The statement that the speed of light in vacuum is a universal constant c, independent of direction of propagation and of the nature and motion of the source, is an accurate scientific judgment of the properties of "light."

Light is both the primordial origin and the substance of the universe. It belongs, in the first "primordial origin–substance" system, to "yuan yi" and "wuji," the first yin–yang philosophical category (Samo Liu, 2025h).

3.1.1 Discussion of the "Correctness" of the Speed of Light.

The speed of light is scientific knowledge of humanity—our understanding and judgment of the ultimate speed of motion of matter, and a "phenomenon" of the creation and end of matter. Here, from the perspective of the primordial origin of the universe and of metaphysics, we discuss the numerical expression of this phenomenon.

The speed of light is a speed; to discuss speed, we must discuss time.

Time belongs to yin, and to the second "primordial origin–substance" system of genus–species, the informational class. It is a **human measure** of the direction and process of changes in the "factor" class.

Nature: emptiness, non-materiality, naturalness.

Primordial origin: time is itself both substance and primordial origin. Therefore, the "primordial origin–substance" of time cannot be discussed; its nature is akin to that of "force"—natural, divine, and metaphysical. It is The Process of "Existence" in the perception of humans and matter (Samo Liu, 2025c; 2024i).

Human beings have created the concept of time and have also created clocks. Thus, the primordial origin of the "concept of time" can be discussed.

Our ancestors, through philosophical reflection, took the motion of the earth relative to the sun, the motion of the moon relative to the earth, and the rotation of the earth itself, and defined year–month–day. They then used the numbers 12, 24, 60, etc., to subdivide processes into hours, minutes, and seconds. This creation is humanity's great contribution to the universe, and belongs to the intangible cultural heritage of all humankind.

China has an important festival, "Spring Festival"—also called "celebrating the New Year." There are many myths about "celebrating the New Year," but in fact it is the worship and commemoration of the ancestors' creation of the time unit "year," celebrating a new year for all things and humans alike, welcoming another spring and sending off the end of a winter.

When our ancestors created the time unit "year," they did not know the modern concepts of the earth's "revolution" and "rotation," but they understood the regular natural phenomena of cold and heat, sowing and harvest, and thus created the time unit "year."

There are also important festivals such as the Lantern Festival on the fifteenth day of the first lunar month and the Mid-Autumn Festival on the fifteenth day of the eighth lunar month, commemorating the beautiful phenomenon of the full moon. Perhaps our ancestors did not know the orbital mechanics of the moon, yet they knew that the moon would reach fullness twelve times each "year," and thus created the time unit "month" and the relation among year–month–12.

Our ancestors also discovered that there are twelve meridians in the human body (Yuanyang Zhenren, 1995). When the human body reaches a very deep state of tranquility, one can perceive the circulation of qi through the twelve meridians in the twelve time periods of each day (Liu Hongjun & Samo Liu, 2021a). Based on such perception, sensation, and observed phenomena, the day was divided into twelve shichen (two-hour periods).

These events are recorded in the Huangdi Neijing and many Daoist classics, which may be consulted.

According to the yin–yang and Five-Element logic, the day–night cycle of each day is a division into "yin" and "yang," that is 2; $12 \times 2 = 24$ hours.

Qi（炁） is composed jointly of the Five Elements (metal, water, wood, fire, earth). The circulation of qi along the twelve meridians is divided into time by the number 5 associated with the Five Elements; thus hours, minutes, and seconds are subdivided using $12 \times 5 = 60$, and the "second" was created as a basic time unit.

These descriptions have no textual citations; they are logical inferences based on records in traditional culture.

The "time-unit knowledge" created by our ancestors on the basis of understanding the human body and nature should predate the Axial Age. By the Axial Age, time units could already be expressed fluently. The creation of time units is an unparalleled, extraordinary achievement of our distant ancestors for human knowledge.

What is marvelous is that the expressions of "time units" in East and West are consistent, even though no one consulted one another. This is certainly not the work of one person in one day or one era; it is the cumulative achievement of the ancestors of humankind. It is a miracle of knowledge created by earth's humans through arduous struggle, and belongs to all humankind.

The concepts of "position" and "distance" regarding the "existence" of matter are not examined in this paper, but they share similar "historical categories of knowledge."

Once there is time, there is an expression for "speed," and there is also the "speed of light." Let us reason further.

3.1.2 Questioning the Numerical Expression of the "Speed of Light"

Suppose I were an alien. The environment of life and survival "there" has no sun and no moon, and the planet of life there has no such patterns of motion. Yet it would still be necessary to create a "process unit" of "existence." The definition of "time" would have to be expressed with another set of "time units." We must therefore understand that "there" may exist another entire knowledge system of "time units."

If I were an alien, I would revere and admire the human knowledge system; at the same time, I would question the numbers assigned to "time units," "speed," and the "speed of light." This numerical expression is suited only to the earth in the solar system. However, I would not doubt the phenomenon of the speed of light, for that belongs to "nature."

After humans adopted an international standard and defined the second as based on the ground state of the cesium-133 atom (13th CGPM, 1969), the time unit acquired a natural universality in the cosmos. Even so, the basic time units—year, month, day, hour, minute, second—created by humans from numbers can only correspond to the natural processes of the solar system; they do not possess a universally "cosmic" expression of natural processes.

The academic community is invited to reflect carefully on this logical inference. If the inference is illogical, it may be ignored.

If the inference is logical, then we should recognize that the "time unit" is merely **knowledge** for expressing processes, knowledge derived from the "solidification" of human observation of the motions within the solar system.

3.2. Is the "Four-Dimensional Spacetime" Coordinate System Correct?

"Four-dimensional spacetime," "four-dimensional space," and "higher-dimensional space" are extremely fashionable terms. On the internet, in literature and the arts, and in some areas of mathematics, these expressions are quite captivating.

The academic community, however, is cautious. Cihai and the Great Dictionary of Physics do not provide dedicated entries for these terms,

for fear that they might be mistaken as established scientific conclusions. Theological and metaphysical modes of thought may and must exist. But if scientific philosophy cannot give a confident explanation of such issues, ideological contradictions will ensue.

Einstein, in relativity theory, mentions "four-dimensional spacetime" (the so-called "Minkowski space").

Relativity: A theory about the interrelations among time, space, and matter, principally established by Einstein. It consists of two parts: special relativity and general relativity. (Du Youwei, 2017, p. 12)

Special relativity: Includes the principle of special relativity and the principle of invariance of the speed of light. Special relativity profoundly changed the Newton–Galilean view of absolute space and time, asserting that simultaneity is relative, that is, frame-dependent. It predicts time dilation—the slowing down of moving clocks—and the Lorentz contraction of moving bodies along the direction of motion. It has been widely applied in atomic, nuclear, and high-energy physics. (Du Youwei, 2017, pp. 12–13)

General relativity: A relativistic theory of gravitation, established by Einstein in 1915. It rests on three premises:

(1) The development of non-Euclidean geometries, such as Gauss and Riemann geometry, provided Einstein with mathematical tools to formulate his theoretical framework.

(2) In classical mechanics and gravitational theory, the equality of inertial mass and gravitational mass served as the signpost for Einstein's formulation of the equivalence principle, which is the physical cornerstone of general relativity.

(3) The principle of relativity, from Galilean relativity to special relativity, inspired the formulation of the general principle of relativity.

General relativity holds that the distribution of matter causes space to curve, so that space is no longer the flat "Minkowski world." The metric of this curved space corresponds to the "potential" of the gravitational field, and the distribution of matter and the metric of curved space must satisfy Einstein's gravitational field equations. The equivalence principle and these equations together constitute the fundamental principles of general relativity. General relativity not only successfully explains the precession of planetary perihelia that classical gravitational theory cannot explain, but also predicts phenomena such as the deflection of light grazing the solar limb and the gravitational redshift of spectral lines, all of which have been experimentally confirmed. Its predictions of exotic objects, such as black holes, and the detection of gravitational radiation have become hot topics in astrophysics. General relativity is also the foundation of modern cosmology. (Du Youwei, 2017, p. 83)

Physics is a profoundly specialized discipline, and it is not my intention here to probe its technicalities in depth.

As a worker in science and technology, I do not doubt the physical principles of this discipline and remain loyal to them. At the same time, **I am well aware that the objects of these physical principles belong to the three-dimensional world of matter and have nothing whatsoever to do with the essential attributes and nature of "space" itself.**

Below, using metaphysical philosophy, the philosophy of the primordial origin of the universe, and dialectical materialism, we will analyze the logical relations involved.

3.1.2 What is the relationship between Space and Matter?.

Space brings matter into being, just as a mother brings a child into being; there must be a relationship. But are they one and the same? Certainly not. Quantum mechanics discovered that particles give birth to matter; at most, then, matter is the grandchild of "space."

Einstein (and Minkowski), through science and mathematics, posed to the academic world an enormous and serious question: we must clarify the philosophical concept of "space"—what is space, and what are its primordial origin and essence—questions that have remained unresolved since Aristotle.

As discussed earlier, the existence of matter is three-dimensional. Descartes created the three-dimensional spatial coordinate system, which can be used to study matter and the "domain" in which matter exists—customarily called "three-dimensional space." However, matter and "existence" are nothing more than a "formal" manifestation of space; three dimensions ≠ space.

The three-dimensional coordinate system is a remarkable mathematical invention that enables the mathematical and numerical representation of the abstract concepts of 'material existence' and 'the domain of material existence' —though these remain merely conceptual constructs.

Time is also expressed by humans through mathematics and numerical concepts. However, the "origin" and "essence" of "space" and "time" are fundamentally distinct; natural philosophy and metaphysics do not permit such a "grafting."

Therefore, the concept of a "four-dimensional spacetime coordinate system" does not conform to the metaphysical logic of philosophy and is **philosophically improper**—a peculiar coordinate system.

If we were to call it a "four-dimensional existence coordinate system," this would be **philosophically proper**. It might even become a great "physical coordinate system" that transforms physics from a "rigid" science into a "living" one.

Physics, if it does not fix the basic parameters of its research, will be unable to proceed. Thus all our current computational results are fixed instantaneous values. For instance: the parameter of speed is a fixed instantaneous value of time and distance; density is a numerical value obtained by fixing structure and ignoring time; time itself is a fixed process unit (Samo Liu, 2026a).

Yet scientific knowledge tells us that humans and all things on earth, along with the earth itself, are moving at extremely high cosmic speeds in the Milky Way as the earth rotates and revolves around the sun—and the Milky Way itself is also in motion.

On the microscopic level, quantum mechanics tells us that cells, molecules, and atoms are constantly changing. We truly exist within a process of motion and change—in what humans call the "concept of time."

Relativity, like Pangu's axe in the Chinese myth of the creation of heaven and earth, tells humanity—under the banner of science—that all matter and "existence" are in motion and change within the temporal process; light, light waves, and photons are no exception. Yet all of these forms of "existence" belong to the first "primordial origin–substance" system of genus–species.

Treating time as a dimension and inserting it into the three-dimensional coordinate system to study matter—time = 0 as primordial origin; time ≠ 0 as relativity describing the motion and change of matter and existence—this is without doubt a great scientific-philosophical innovation.

The "four-dimensional spacetime coordinate system" is Minkowski's mathematical invention. This philosophical idea appeared even before the Axial Age (Samo Liu, 2025c); I have previously published research to expound on this point. But this philosophical idea is merely a descriptive expression of the philosophical principles of the Book of Changes (Yijing), and nothing more.

So far, our knowledge of space as the "formal cause" of "existence" remains deficient and unknown. Let the academic community discuss this view. If this is so, then we do not have the right to define space in any way—especially mathematically. Otherwise we will artificially "de-realize" and "remodel" nature.

3.2.2. What Kind of "Existence" Is the "Superluminal" Phenomenon Discovered by Quantum Mechanics?

Here I do not question quantum mechanics itself; rather, I ask permission to discuss its philosophy. In earlier published work, I questioned the

attribution of mass to the weak boson as “philosophically improper,” and I also questioned the quantum-mechanical philosophy of space.

Quantum mechanics, like Fuxi’s brush in Chinese myth, cleaves open the yin–yang ” primordial origin” and ” substance” from which matter is created, revealing the ” theological” principles by which ” non-material energy” as ” substance” creates matter. …

With great and beautiful things, there often also come difficulties: contradictions between quantum mechanics and relativity emerged.

When the human spirit, heart, and thought are beset by contradictions that are difficult to resolve, depression easily appears. When scientists curse that “philosophy and theology are dead,” this may be seen as a kind of ” depression” in science.

Aristotelian philosophy does not take this route. When the human spirit, heart, and thought confront contradictions that are hard to solve, they must not “fall into depression,” but hand the contradictions over to ” philosophy and theology” for later generations to address step by step—using the ” known” to study the “unknown,” using material philosophy and material science to explore the ” ontic god” that creates matter, while telling posterity that ” philosophy is first scholarship” —that humankind must always keep thinking.

This is the great “metaphysical dialectic.”

Metaphysics and dialectics have been labeled as opposites within philosophy. In my interpretation of Metaphysics (Samo Liu, 2026b), I analyze this from the standpoint of engineering and suggest that this opposition may be a misjudgment. I hold that dialectics and dialectical materialism are themselves developments and transformations of the ” metaphysical dialectic” —a process of negation of negation and spiraling ascent.

We may forgive scientists for their rebukes of “philosophy and theology.” The contradictions between quantum mechanics and relativity have existed for more than a hundred years; these rebukes can in fact be understood as an expectation for new philosophical reflection.

As an executor within engineering and technology—second philosophy, scientific philosophy—I grew up immersed in Daoist and Buddhist philosophy and educated in dialectical materialism. By sorting through and studying the thread of philosophy with a pragmatic spirit, I discovered that the philosophical paradigm has been confined by ” material philosophy” : matter determines consciousness; philosophies dismissed as ” idealism” lack a ” scientific” explanation of their concepts and have not explored the primordial origins of space and time. Yet dialectics also affirms that ” existence determines consciousness” ; the root of the contradiction lies in metaphysics.

Quantum mechanics has discovered the ” theology” whereby ” information and energy” (non-material) create ” matter” and has identified the “primordial origin–substance” of matter. Relativity has discovered the limits of the motion and transformation of matter, and that the “primordial origin–substance” of matter is energy (mass–energy conservation). Thermodynamics has discovered the absolute zero of matter and existence at rest—absolute substance—and Planck temperature.

In other words, the material-philosophical paradigm of thinking has already been broken through; what is needed now is a philosophical logic of energy and information, and the study of energy and information science requires opening up new reflections on space and time.

Metaphysics has left us both pits of philosophical difficulty and pathways to resolve contradictions. A careful study of Metaphysics suggests that many modern scientific phenomena were already within Aristotle’s horizon of anticipation. Owing to the ” gaps” in knowledge in his era, he could not express them clearly. By combining the conclusions of modern physics with Eastern knowledge of the primordial origin of the universe, we can refine the ancient philosophy of cosmic origins and build a logical philosophy for the study of energy and information.

Known: material philosophy; material science; and other bodies of knowledge. Metaphysics has summarized five major systems of “primordial origin–substance” genus–species.

To be established: an energy philosophy—a non-material philosophy; an information philosophy—a philosophy of ” cause” ; and a ” space” philosophy—research into the “formal cause.”

To be demonstrated: that quantum mechanics and relativity are not in contradiction.

From the standpoint of engineering practice, both quantum mechanics and relativity are correct human understandings of nature; there is no practical contradiction. There is only a ” theoretical contradiction” —a “contradiction of knowledge.” Phenomenologically, the issue is ” superluminal” versus “non-superluminal.” At root, it stems from gaps in metaphysical knowledge—gaps in the concepts and primordial origins of ” space” and “time,” and gaps in our understanding of the ” god of space” —knowledge of the “formal cause.”

In my younger years, as an admirer of Einstein, I once felt that he had been treated unfairly, believing that ” relativity” ought to have received a Nobel Prize. Now I recognize that the members of the Nobel committee are themselves great philosophers.

From the perspective of existing knowledge, humans have created the term “universe（yuzhou宇宙）,” also called “nature（ziran自然）,” have named themselves “humanity（renlei人类）,” have called the objects that coexist with them and that they study “matter（wuzhi物质）,” have named the domain of existence “space,” and the process of existence “time.” Humans have created the word ” contradiction” as a term of subjective consciousness. The universe— “nature” —has no ” contradictions” , Aristotle created a great ” law of non-contradiction” ; it only has changes of “generation and restraint（shengke生克）” in yin, yang, and the Five Elements; karmic ” causes” and ” factors” with degrees; and existences of ” opposition” and ” unity” in transformation. Whether or not humans are present, and whether or not humans describe it, it remains: “acting without acting,” “the Five Aggregates all empty,” an ” existence” and “dynamic change.” Therefore, the contradictions of modern physics are necessarily artificial ” philosophical” contradictions of ideology.

The speed of light is a natural phenomenon of the universe. We may question the numerical value assigned to the speed of light, but should not question “nature.” Once an existence in the first “primordial origin–substance” system of genus–species attains the speed of light, there is no longer time or position，It is a zero existence. Hence ” superluminal speed” is **philosophically improper**.

“Information” —belonging to the second “primordial origin–substance” system of genus–species—can be “superluminal,” but any measured value must be a “false signal,” because information in this sense has no “substance（benti本体）。Information without an ” ontology” —in a vacuum—instantaneous response—unconstrained by time and distance.

3.3. Resolving the ” Theoretical Contradiction” Between Quantum Mechanics and Relativity, Seeking a Philosophical Path for Modern Physics

A reinterpretation of Metaphysics in light of current knowledge (Samo Liu, 2026b) shows that scientific philosophy (first and second philosophy) has bracketed off spacetime and focused on the ” various disciplines” that specialize in the “material substance,” while dividing the existence and change of the ” material substance” into five major “primordial origin–substance” systems of genus–species—treating all ” existence” as three-dimensional and “material.”

“Non-material existence” has been relegated to ” theological” and ” metaphysical” existence.

Quantum mechanics and relativity have solved the "theology" of the "material substance," yet still possess "unknowns" of a metaphysical sort; "philosophy" remains first scholarship. Many experts claim that modern science and technology rely on experiments rather than "philosophy." As an engineer, I know that scientific experiment and practice must be guided by a protocol, and that every detail of such a protocol must be developed with strict philosophical logic.

Evidently, people have misunderstood "philosophy": philosophy is simply "thinking." Thinking can be "correct" or "incorrect"; within the probabilities of correctness and error, we search for what is "proper" and thereby form logic-Engineering technology logic.

After more than two thousand years of metaphysics, humanity has found the "ontic god" of matter and has entered the age of "energy" and "information." Metaphysics has become a new subject: the primordial origin of the universe.

Therefore, let us propose a few definitions—hypotheses that will naturally be revised as knowledge grows.

Hypothesis on Space

Space is "heaven" and sky; it is the Dao, the "divine," the "law" of the universe; grammatically, a third-person pronoun "tan" (他).

"tan" is the fifth "primordial origin–substance" system of genus–species—neither cause nor factor.

Space is the matrix of all "primordial origin–substance" existences—the mother of the other four "primordial origin–substance" systems of genus–species—creating, destroying, and containing. Any "coordinate system" or "coordinates" for the existence and change of an "existence" can only display its "external form of existence"; it cannot define "space" itself—such a definition is **philosophically improper**.

Or, to put it bluntly: this represents an 'inevitable' mistake in the history of human 'knowledge'.

The "formal cause" of "existence" is an eternal object of human exploration. The external form of existence can be expressed in dimensions 0, 1, 2, 3; the highest dimension we have so far discovered is the three-dimensional material world. No higher-dimensional "existence" has yet been found.

"Four-dimensional spacetime" is a **mathematical myth**—it can represent the yin–yang changes of dimensions, scales, and structures in the process of "existence," but not space itself.

Hypothesis on Time

Time is the human expression of the process of "existence," based on the processual phenomena of motion in the solar system—rendered as fixed values.

"Process" belongs to the second "primordial origin–substance" system of genus–species, yin-type, in the category of "cause": it is the perception by the "factors" of existence of the process and direction of change (Samo Liu, 2025d). Process—time—is irreversible and possesses metaphysical "unknowns."

Hypothesis on Mechanics (Forces)

Mechanics is the perception, by "material" and "non-material" existence, of information about their own and others' structures—both attractive and repulsive. With human mathematical knowledge, we can calculate the strengths of these mutual perceptions. Mechanics belongs to the second "primordial origin–substance" system of genus–species, yin-type, of the category of "cause."

Its "primordial origin–substance" is unknown; the relationships among different mechanics are unknown; their relation to the "wuji / yuan yi" of light at absolute zero is also unknown. It is the total "cause" of cosmic dynamics and possesses metaphysical unknowns.

Hypothesis on Relations

This is the doctrine of exploring how the "substance" of matter "is thus." It is the third "primordial origin–substance" system of genus–species and possesses metaphysical unknowns.

Quantum mechanics has discovered that particles and quarks (discrete energy) are the yin–yang "substances" of matter, and has also discovered that light is the "substance" of photons and electrons; classical physics and relativity have discovered that matter is the yin–yang "substance" of energy.

We have not yet discovered a direct and explicit relationship between "wuji / yuan yi" and particles or matter. However, physical cosmology has discovered dark matter and dark energy, which may be an "intermediate body."

The horizontal relational equation of the existence and change of matter is: an atom is not singular but belongs to a group—the periodic table. These elements, under different "formal causes" and "structural causes," form molecules, plant cells, animal cells, and human cells.

The horizontal relational equation of the existence and change of particles is: a particle is not singular but belongs to a group—standard model diagram of elementary particles. Quantum mechanics' study of particle structure in terms of "color" and "flavor" is rich in philosophical meaning and also full of unknowns.

The overall relations of the universe and of existences within it are karmic relations of "yin–yang and the Five Elements"; relations of dynamic change in "opposition and unity"; and the existence and change of substances.

Hypothesis on Direction

This is the study of possible processes of the existence and change of matter and energy—taking "natural realization" as fundamental. It belongs to the fourth "primordial origin–substance" system of genus–species and possesses metaphysical unknowns.

From existing knowledge, thermodynamics, the doctrine of equilibrium, and systems science have the ability to explain the directions of existence and change in the universe.

The Engineering Logic of Energy–Information–Matter

Classical physics, through universal gravitation and electromagnetism, showed that the motion and change of matter produce energy and discovered the relation between electromagnetic waves and light waves, with matter as the "substance" of energy; it also discovered thermodynamics, describing the conversion of matter and energy. Modern physics discovered discrete energy—particles—that create matter; it discovered quantum mechanics and atomic energy, and discovered information; particles are the "substance" of matter. Humans created the 0–1 mathematical logic of information, and created computers and robots. All man-made "existences" are products of human thought and action; humans are not their "substance"; humans use "substances" to create new "substances" and thus possess a "divine" function.

The engineering applications of quantum mechanics and relativity demonstrate that human understanding of nature is correct.

The theoretical contradictions are "artificial contradictions" in human knowledge of nature.

Hypothesis on Energy–Matter

In studying matter, humans discovered that the universe is an ocean of energy, and that matter is a three-dimensional form of energy's existence; its structural form moves and changes in the process. From light, photons, particles, atoms, molecules, cells, rocks, to black holes, all are such forms of existence, including humans' material creations. This is the first "primordial origin–substance" system of genus–species.

Hypothesis on Information

In the study of matter and energy, humans discovered and defined information, which is neither matter nor energy. We may judge that the Second through fourth "primordial origin–substance" systems of genus–

species all belong to the category of information, without ” primordial origin” or ” substance” —it either ” occurs” or ” does not occur” : 0 and 1. It possesses metaphysical unknowns.

Information is not the ” raw material” of matter and energy, not the “material cause,” but the ” potential entity” —soul, spirit, or thought—and, like the human soul, spirit, and thought, it is interconnected and essentially “of one kind.”

It is the “potential entity（qianzaizhe潜在者）” of “acting without acting（wuweierwei无为而为）” and the “Five Aggregates all empty（wuyunjiekong五蕴皆空）。”

Information in the material world often appears as manifest “signals,” such as light waves and sound waves; information produced by ” substances” can have speed.The numerical value of its velocity varies depending on the environment and medium.

Humans, endowed with subjective consciousness, can create manifest information—knowledge; knowledge is information, including language, writing, numbers, mathematics, coordinate systems, philosophy, theology, and science.

Philosophy, Theology, and Science

Philosophy: first scholarship, guiding thinking in all disciplines, including philosophy itself, theology, arts and culture, and science. It is noteworthy that philosophy today seems to have become merely one major within the “humanities.”

After metaphysics, philosophy was relegated to the realm of social sciences. Due to the dominance of material philosophy, philosophy could no longer fulfill its primary academic role and faced criticism from certain scientists, thus deviating from the principles established in Metaphysics，deviated from Metaphysics。

Theology: essential knowledge for human life and existence—a beacon of survival. Whether faith or artistic culture, it must be respected.The philosophy of science—particularly in physics, chemistry, and mathematics—has elevated the study of natural theology to a prominent position, inevitably challenging personified theology. Nevertheless, mutual understanding and respect are essential, as both belong to the realm of metaphysics.

Science: the way of human survival. Humanity relies increasingly on science. Science must not be arrogant—the ” edifice of physics” and the ” edifice of mathematics” are far from complete. Science must not behave as though there were ” no law and no heaven” ; it must respect and not violate nature—“the Dao follows nature（daofaziran道法自然）。”

3.2 Conclusion

When linked together, the above hypotheses can resolve the ” theoretical contradiction” between quantum mechanics and relativity and can provide a philosophical framework or pathway for modern physics.

Contradiction and good–evil:

Human beings create knowledge and constantly refine it, discovering ” contradictions” and resolving them. The universe itself “acts without acting.” It has no contradictions; “contradiction” is a term in human language. It has no ” good” or ” evil” ; these are categories in human exploration of knowledge. Humans must find a path of life and existence through the exploration of ” good” and “evil.”

The great religions call on humanity to love one another（huai互爱），to be kind, benevolent（zhishan至善），and righteous（renyi仁义），to understand the “Dao（道）” and “virtue（de德），” and to keep to the “middle way（zhongdao中道）。” Human societies have established law, moral culture, and scientific culture to resolve contradictions.

Engineering and technical logic:

This is a term used by engineers to refer to the comprehensive application of materialist dialectics and metaphysical logic—in using what is already known to explore the unknown, to address problems and resolve contradictions. In this context, existing knowledge is employed to examine the philosophical aspects of modern physics, with the aim of resolving the ” theoretical contradictions” between quantum mechanics and relativity.

This is an original article that applies philosophical methods to the study of physics. By integrating modern scientific knowledge with Eastern philosophical concepts, metaphysical dialectics were used to fill the gaps in metaphysical understanding, thereby breaking through certain ” paradigms” in both philosophy and physics.It is likely that neither the philosophical community nor the physics community will find this article particularly appealing. Therefore, I would like to invite discussions and critiques regarding it.

I suspect Aristotle would appreciate this article—he would criticize us: In that era, I helplessly guided you down the logical path of material philosophy and material science, while leaving behind the logical pitfalls of theology and metaphysics. You have unraveled this labyrinth through quantum mechanics, relativity, and thermodynamics, yet remain trapped in the framework of material philosophy. Are you truly foolish?

In fact, the ” theoretical contradiction” between quantum mechanics and relativity can be resolved simply by understanding the ” origin” and ” substence” of ” space, time, and matter.” After 2,500 years of struggle, humanity has already solved this contradiction through modern science and dialectical materialism, yet remains unaware of it.

The paradox of space-time, a contradiction that has existed for thousands of years in human existence, leads to the contradictions in modern physics. The root of this contradiction lies in metaphysics, which also provides a solution. The achievements of modern physics have enlightened us on the ideas of metaphysics, specifically the embodiment of dialectical materialism.

4 Epilogue

The author is a mineral processing engineer, neither a professional philosopher nor a physicist.

From the logical perspective of engineering and technology, I have studied the primordial origin and ” substance” of the universe and published several books and a series of articles.

If the logic of these articles is incorrect, then my thinking is “philosophically improper.” If the logic is correct, the credit belongs to Daoist philosophy, Buddhist philosophy, Metaphysics, and dialectical materialism, and to the scientists.

These articles are the ” idle research” of a retired elder, pondering the existential meaning of ” emptiness” and “nothingness.”

They are also a way of embracing knowledge, loving nature, and venerating space.

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