

## Preface

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### Introduction

#### Unveiling the Cosmos

The vast expanse of the cosmos, a celestial ocean teeming with constellations and swirling galaxies, has ignited an unquenchable spark of curiosity within humanity since the dawn of time. This eagerness to understand the universe in which we live has continually driven humankind to uncover the secrets of the cosmos. This endeavor is evident in ancient civilizations that charted constellations, as well as in modern astronomers who peer into the farthest reaches of space. Throughout history, pioneering astronomers like Galileo and Copernicus paved the way for a more tangible understanding of the universe. Eventually, modern cosmology, equipped with powerful telescopes and advanced detectors, has revolutionized our understanding of the universe as a whole, offering a framework for the origin, evolution, and ultimate fate of the universe.



#### From Philosophy to Physics Theories and Observations

The mysterious enigma of the cosmos has been and continues to be a pretense for the clash of ideas, inspiration, and countless arguments throughout human history. For tens of thousands of years, the configuration of stars in the sky has captivated our attention and inspired the creation of constellations from which myths and fictional stories were born, followed by philosophical inquiries essentially defining the philosophy of nature. Subsequently, the introduction of mathematics to simplify these philosophical concepts has opened up the world of physics to humanity. Persistent efforts and the accumulation of unanswered questions have not only compelled humans to observe and monitor the cosmos on larger scales with the advancement of technology but also aimed to interpret and analyze its components. This has been achieved through the processing of numerous mathematical models and the formulation of various theories, which sometimes align and sometimes contradict.

However, despite technical and technological advancements, the definition of the cosmos has been obscured in countless equations, calculations, models, and physics theories, with no clear and powerful unified interpretation provided thus far. Humanity remains at a loss in answering the questions: What is the cosmos? Why does it exist, and where is it headed? This is where the power of intuition and perception from a holistic viewpoint becomes essential for understanding and grasping the philosophy of the why and how of the cosmos. From this perspective, T-Consciousness Cosmology has attempted to unravel the complexities of conventional cosmology and provide a complete, clear, and unified interpretation of the cosmos through new theories. Additionally, this viewpoint addresses all concepts and the nature of what transpires in the cosmos, including Cosmic Information, Cosmic Mind, Cosmic T-Consciousness, and also various forms of Cosmic Life. These topics, however, do not entirely conform to the limited framework of currently accepted theories in physics and cosmology.

## **The Conventional Cosmological Perspective and Common Theories**

### **Big Bang: The universe originated from an ultra-dense and hot point.**

With the advancement of scientific research, the Big Bang theory was eventually established as the dominant cosmological model for the origin of the universe. This theory posits that the cosmos began nearly 13.8 billion years ago from an infinitesimal point with incredibly high density and temperature, known as the singularity. This singularity rapidly expanded and cooled in a fraction of a second, initiating the process of element formation and subsequently the formation of celestial bodies, ultimately leading to the cosmos we observe today.

From the perspective of cosmologists, the Big Bang theory is strongly supported by several key observations. One such observation is the discovery of the Cosmic Microwave Background (CMB). This radiation is considered a faint echo of the early universe, permeating the entire cosmos. In other words, its uniformity across the sky aligns with the predictions of a hot, dense origin of the universe. Additionally, the observed abundance of light elements such as hydrogen and helium in the universe also corresponds with the nuclear synthesis predicted to have occurred following the Big Bang.

### **Standard Model of Cosmology: A Framework for Cosmic Evolution**

Building on the Big Bang theory, the standard model of cosmology (Lambda-CDM) provides another perspective on the universe's initial moments and its evolution, from the formation of fundamental particles to the creation of large structures like galaxies and galaxy clusters. This model incorporates the theory of inflation, a period of rapid exponential expansion believed to have occurred shortly after the Big Bang. The theory addresses the observed uniformity in the large-scale universe and theoretically resolves some of the problems with the Big Bang model. Additionally, the model relies on the existence of dark matter and dark energy, which are considered enigmatic components of the universe. Although invisible, dark matter influences the motion of galaxies and clusters through its gravitational pull. On the other hand, dark energy is believed to be responsible for the currently accelerated expansion of the universe.

### **Unanswered Questions and Ongoing Explorations**

Despite the successes achieved in cosmology, the Big Bang theory and the standard model still face challenges. Questions about how the universe was born, the process of its evolution to its current form, the nature and geometric shape of the cosmos, its ultimate fate, the characteristics of dark matter and dark energy, and the possibility of other universes – along with countless unanswered questions – continue to drive ongoing research. Furthermore, alternative cosmological models such as the steady-state model, etc., are being examined to ensure a comprehensive understanding of the origin and evolution of the universe.

## T-Consciousness Cosmology: A New Perspective on the Universe

Through its novel approach, T-Consciousness Cosmology comprises a collection of theories that examine and analyze topics such as the origin of the universe, its nature, the manner of its evolution, its fate, and hundreds of other theories.

As the name suggests, this viewpoint introduces a unique consciousness known as T-Consciousness. It posits that the universe, in addition to matter and energy, contains another element called T-Consciousness, which differs from definitions previously offered in the history of science or philosophy. From this perspective, it is argued that both matter and energy themselves arise from T-Consciousness.

Furthermore, T-Consciousness Cosmology articulates that the cosmos generally consists of two parts: frequency-based ( $\sim$ ) and non-frequency-based (-):

The frequency-based part of the cosmos describes behavior that is periodic and non-linear, characterized by amplitude and wavelength, such that it has a non-continuous effect on the cosmos (i.e. all known types of waves and ordinary matter).

In contrast, the non-frequency-based part of the cosmos describes non-periodic and linear behavior, where the amplitude and wavelength are zero, and its effects in the cosmos are linear and continuous.

In this regard, for example, it can be said that space, gravity, and time themselves do not have a frequency effect and have a sustained effect on everything. Even if, for a moment, one of these, like gravity, were to exhibit a periodic effect, the entire cosmos would disintegrate. However, it is worth noting that the result of this influence is the emergence of particles (ordinary matter), which exhibit periodic and frequency-based behaviors. Similarly, if time itself were to have a periodic effect, the cosmos would likewise collapse in the same way, despite the fact that we have a periodic method of measurement for time (tick tock of a clock). Therefore, from this perspective, for the most part, the known physical aspect of the cosmos is periodic and frequency-based.

An important point to note is that the linearity of the impact of space, gravity, time, dark matter, and dark energy refers to the inherent influence of these factors in the universe, not the outcome of their effects.

Consequently, the frequency-based part ( $\sim$ ) of the cosmos includes matter and energy, and the non-frequency, non-pulsing part (-) of the cosmos consists of two sections:

A- A section that in conventional cosmology is referred to with different definitions, such as spacetime, dark energy, and dark matter.

B- T-Consciousness, information, mind, life, dark life energy, etc., are parts that do not have specific definitions and are not mentioned in conventional cosmology. While from the viewpoint of T-Consciousness Cosmology, they constitute the main part of the cosmos.

**Important Note:** In T-Consciousness Cosmology, instead of the concept of "space-time," the term "space, gravity-time" is used, in which gravity and time are always proportionally intertwined and inseparable. In fact, the effect of gravity-time is considered as two sides of the same coin. Moreover, considering that if space did not exist, the cosmos would certainly not exist either. Therefore, from this perspective, space is considered a fundamental element of the cosmos, while it is neither matter nor energy. This means the nature of space, as one of the main components of the cosmos, is non-pulsing. This concept also applies to dark energy and dark matter, which this perspective identifies as functions of space itself.

Therefore, T-Consciousness Cosmology states that the structure of the components of the cosmos, such as dark energy and dark matter, is not composed of particles. Additionally, because of its non-pulsing nature, gravity is inherently a non-frequency element. Thus, generally, gravity is also not composed of particles (such as the hypothetical graviton particles in conventional science).

Regarding the non-pulsing nature of gravity or space, it can be noted that physics calculations show that celestial bodies with significant mass or acceleration can disturb spacetime in such a way that it appears as if gravitational waves propagate in all directions. In other words, conventional cosmology predicts that although they differ from each other, gravitational waves resulting from the spinning of neutron stars, the collision of black holes, and supernova explosions can be analyzed. However, T-Consciousness Cosmology defines what is commonly referred to as gravitational waves in physics simply as the squeezing and stretching of space due to the changing behavior of massive bodies in proximity to one another. Therefore, the changes in gravitational behavior caused by massive bodies only lead to the contraction and expansion of space. In simpler terms, gravity has a linear impact on the structure of space, not a wave-like one.

Like gravity, time exerts its influence in a linear fashion on the cosmos and its components, in tandem with gravity. If gravity were zero, time would also be zero. Conversely, if gravity approached infinity, time would similarly become infinite. It is also essential to mention that the type of timekeeping invented by humans (i.e. the ticking of a clock) is completely arbitrary, as time does not have a frequency or pulsing nature.

Consequently, T-Consciousness Cosmology uses "space, gravity-time" instead of the well-known term "spacetime."

### **The Origin and Fate of the Universe**

Existing models in conventional cosmology have not yet provided a widely accepted theory about what existed before the Big Bang or how the various forms of matter and energy known today came into being at the initial moment of the explosion. This issue remains shrouded in ambiguity for cosmologists. In this context, T-Consciousness Cosmology, by introducing a new model named the 'Spherical Cosmos Model,' not only addresses the origin or how the initial seed of the cosmos came into existence, but also acknowledges the expansion of the cosmos and introduces a shell made of TAM (Taheri Absolute Matter), that isolates the cosmos. This model proposes a different foundational mechanism compared to conventional inflationary models and introduces a new concept called 'Space Rebound' to explain the increase in the volume of the cosmos. In fact, the theories of this viewpoint support each other in the understanding of the structure of the universe as a whole system, making simple predictions about the behavior of the cosmos. Moreover, T-Consciousness Cosmology, by addressing the nature of dark matter and dark energy and their functions, determines the cause of the cosmic expansion and its ultimate fate. Additionally, in line with the Spherical Cosmos Model (SCM), a new theory about another stage of the lifecycle of the cosmos, referred to as its 'Reversion,' is also proposed.

## **The Nature of the Building Blocks of the Cosmos**

T-Consciousness Cosmology, in addition to addressing the general behavior of the cosmos, also explores the formation and function of its components, introducing new types of matter. According to the Spherical Cosmos Model, there is no contradiction between the formation mechanism of fundamental particles and the initial point of the cosmos (Big Bang). However, in the standard model of cosmology, which includes the theory of inflation and is based on general relativity and the standard model of fundamental particles, there is a clear contradiction known as the singularity at the birth of the universe and the formation of matter. Specifically, the singularity, a consequence of general relativity, is an obstacle that is inconsistent with the formation of fundamental particles in the initial moments of the cosmos's birth.

Overall, it can be stated that T-Consciousness Cosmology offers a unique view of the cosmos by altering the perspective of the observer. From this shifted viewpoint, the cosmos is perceived as a grand system endowed with distinct identity, personality, and behavior. This system not only follows a specific trajectory to fulfill a special purpose but also demonstrates a high level of intelligence.

## **The Multiverse from a New Perspective**

T-Consciousness Cosmology asserts that the cosmos in which we currently live follows a sequential principle (Consecutive Cosmos) and has its own lifecycle. It is one of countless homogeneous or heterogeneous universes, each with its own unique characteristics and behaviors (laws of physics).

Additionally, from this viewpoint, the fundamental constants of physics change according to different cosmic epochs and locations. For example, gravity-time will range from infinity at the beginning of the cosmic lifecycle to zero at the terminal edge of the cosmos (the ultimate stage of space rebound).

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