Energy Ontology and Temporalized Correlation: A New Paradigm for Understanding Structural Information Transfer and Dynamic Function

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Abstract

Current mainstream science faces significant challenges in explaining the integrity of life, the dynamics of complex systems, and the deep connections between matter, energy, information, and spacetime. Its methodology, based on matter ontology and micro-to-macro reductionism, exhibits inherent limitations. This paper proposes a multi-layered theoretical framework centered on **energy ontology** and a **macro-to-micro determination**. Within this framework, **time is considered a fundamental attribute of energy**, while **space corresponds to matter**, and **matter is a special condensed form of energy – discrete time blocks**. A universal cosmic time system exists, exhibiting macro and micro consistency across different scales. Based on this ontology, the paper uses the deconstruction of food through cooking as a paradigm example to elucidate a **temporalized structural information transfer mechanism**. In this mechanism, food's intrinsic structure-space correlation (information) is released during cooking's deconstruction, entering the water body (which reflects the macro energy ontology as a dynamic continuous space) as subtle energy pulses. This information is then modulated by the dynamics of the water's hydrogen bond network (the temporal dimension), transforming into non-spatial correlation (temporal sequences) carrying the original structural information. These temporal sequences, as structured energy flow, act as bridges connecting self-organizing systems (such as biological organisms), capable of being directly perceived and eliciting corresponding Dynamic Functions and super-spatial correlations. This mechanism suggests that understanding the mysteries of life and matter hinges on discerning the **structured flow of energy in the temporal dimension**, rather than relying solely on the static spatial structure of matter. This paradigm offers a novel perspective for re-envisioning energy, information, spacetime, and wholeness.

1. Introduction

1.1 Challenges in the Current Scientific Paradigm for Explaining Complex System Wholeness and Dynamics

Humanity's exploration of nature has yielded remarkable achievements, establishing profound theoretical frameworks in revealing the fundamental constituents of matter, particle interactions, and describing the basic structure of spacetime. However, when confronting questions such as the integrity of living organisms, the phenomenon of consciousness, the self-organizing capacity of complex systems, and the deep connections between macro and micro levels, the current methodology based on matter ontology and micro-to-macro accumulation (seen as a "static sum") appears to encounter inherent limitations. While this

paradigm is exceptionally successful in analyzing and predicting localized, linear phenomena, it seems inadequate in capturing emergent properties, dynamic correlations, and non-local influences exhibited by systems as a whole. Traditional explanations in physics and biology, focusing on the static description of material structures and the physicochemical interactions between particles, may not be sufficient to fully elucidate the subtle, highly efficient, and seemingly non-local phenomena in nature.

1.2 Re-examining the Relationship Between Matter, Energy, Information, and Spacetime

These challenges suggest that we may need to re-examine the relationships between the most fundamental elements constituting reality – matter, energy, information, and spacetime. Current science faces difficulties in unifying these concepts, particularly regarding the nature of energy and information, the fundamental connection between time and space, and how these basic elements collectively shape complex systems and vital activity. Traditional epistemology often starts from matter and its "points" occupying spacetime, attempting to construct the entire universe from the bottom up, which may overlook crucial influences and information originating from more fundamental levels that operate based on a different logic (e.g., temporal logic rather than purely spatial logic).

1.3 Introduction of a New Theoretical Framework

This paper proposes a new theoretical framework aimed at transcending the limitations of the current paradigm, offering an alternative perspective for understanding the deep mechanisms of nature's operation. This theory regards **energy as the single and most fundamental entity in the universe**, rather than matter. Matter itself is viewed as a special form of energy that is highly condensed and patterned, not a distinct entity separate from energy. Everything in the universe, from the behavior of the smallest particles to the evolution of the cosmos, is essentially the flow, transformation, and interaction of energy in different forms and at different levels. Based on the view that time is an attribute of energy, **this theory proposes that time is a fundamental, inseparable attribute of energy**, while **space corresponds to matter**. The core of this theory lies in positing a hierarchical structure with a **macro-to-micro determination**, meaning the principles and dynamics of the more fundamental, pervasive energy-time level (macro) determine and shape the attributes and behaviors of the derived matter-space level (micro). Furthermore, this framework emphasizes **macro and micro consistency** across different scales, implying that the principles governing the fundamental level operate in some consistent manner at all levels.

1.4 Using Food Cooking as a Paradigm Example

To specifically illustrate how this theoretical framework explains natural phenomena, this paper will focus on a common and universal phenomenon – the cooking of food in water. This process is not merely a physical and chemical change of matter, but a prime example for understanding how energy, information, and spacetime interact within a typical self-organizing system (the water body) to achieve information transfer. We will use this as a

starting point to detail how the intrinsic structural information of food is released and transformed within the dynamic medium of water into a temporalized energy mode capable of effective transfer between self-organizing systems, ultimately leading to the Dynamic Function in the receiving system.

1.5 Outline of the Paper Structure

This paper will proceed as follows: Chapter 2 will detail the ontological foundations of this theory, defining key concepts and constructing a multi-layered model of reality. Chapter 3 will elaborate on the specific mechanism of structural information temporalization using the paradigm of food cooking. Chapter 4 will discuss how temporalized information relates to Dynamic Function and broader holistic correlation. Chapter 5 will present a discussion of the theory's potential implications, comparison with existing science, and outlook. Chapter 6 will conclude the paper.

2.Ontological Foundations: A Multi-layered Unity of Energy, Time, Matter, and Space

This chapter will delve into the foundational concepts upon which this theoretical framework is built, proposing an ontology distinct from current mainstream science, redefining the relationships between energy, time, matter, and space, and elucidating how they constitute a unified, multi-layered picture of reality.

2.1 Energy Ontology

2.1.1 Energy as the Most Fundamental Entity of the Universe

In contrast to the traditional view that regards matter as the basic constituent, this theory considers **energy as the sole and most fundamental entity in the universe**. Energy is not merely an attribute describing the motion or interaction of matter, but the primordial existence from which everything is composed. Matter itself is a special form of energy that is highly condensed and patterned, not a basic entity existing independently of energy. All phenomena in the universe, from the behavior of the smallest particles to the evolution of the cosmos, are essentially the flow, transformation, and interaction of energy at different forms and levels.

2.1.2 Time as a Fundamental Attribute of Energy

Time, in this theory, is not an independently existing dimension or a simple physical parameter. Instead, it is an **intrinsic, inseparable basic attribute of energy**. The very existence of energy inherently contains the potential for dynamic change, and this dynamism manifests in the form of time. Time is the intrinsic scale and expression of energy's flow and transformation. There is no time existing separate from energy; the dynamism of energy is the essence of time. Therefore, understanding time requires starting from the dynamism of energy.

2.1.3 The Universal Cosmic Time System

Based on the view that time is an attribute of energy, this theory posits the existence of a

unified, universal cosmic time system. This universal time system is the overall rhythm or framework of the fundamental energy dynamics of the entire universe, pervading every corner and every level of the cosmos. The local passage of time that we typically perceive is a manifestation or projection of this universal time system under specific material and energetic conditions (e.g., in local gravitational fields or at certain velocities), rather than independent local times. This universal cosmic time system provides a unified, more fundamental temporal reference and synergistic basis for all energy dynamics and information transfer in the universe.

2.2 Derivation of Matter and Space

2.2.1 Matter as a Special Condensation of Energy

If energy is the fundamental entity, then matter is a special form of energy that is highly concentrated and solidified under specific conditions and in specific patterns. Matter is not a basic entity opposing or alongside energy, but a **condensed state** of energy within spacetime. This not only refers to the equivalence of mass and energy (as described by E=mc2), but its deeper meaning is that the formation and stable existence of matter is the result of fundamental energy dynamics being "programmed" and "solidified" according to some higher-level pattern involving the attribute of time.

2.2.2 Matter as Discrete Time Blocks

This is a key and unique concept: matter, appearing as **discrete entities** in space, can be understood in essence as **"discrete time blocks."** This implies that the discreteness and stability of matter are rooted in some form of discrete or quantum attribute of time itself, manifested during the energy condensation process, or that the formation of matter involves the local, packaged "solidification" of fundamental energy and time within space. The stable form of matter's existence is closely linked to specific temporal structures or processes; they are the "condensation points" of temporal dynamics in space.

2.2.3 Space Corresponds to Matter

Space is not an empty void existing prior to matter, but **corresponds closely to matter** and is in some ways defined or shaped by the existence and state of matter. Space is the "place" or "carrier" where matter holds energy, undergoes dynamics, and interacts. In this theory, space may be seen as the unfolding result of time (an attribute of energy), while matter is the "condensation" or "discrete blocks" within this unfolding. Thus, space is the stage upon which matter appears and mutually relates. Without matter and energy's dynamics, space would lose its meaning and structure.

2.3 Hierarchical Structure and Fundamental Direction

2.3.1 Multi-layered Ontology

Based on the definitions above, this theory constructs a multi-layered ontology of reality:

- **Fundamental Layer:** Energy (and its attribute time) is the most fundamental, pervasive existence in the universe, forming a continuous basic field or universal

system (e.g., the universal cosmic time system, the cosmic base wave).

- **Derived Layer:** Matter (as condensed energy, discrete time blocks) and space (corresponding to matter) are levels that are derived or emerge based on the dynamics and structure of the fundamental layer. The macroscopic and microscopic worlds that we typically perceive and which science primarily studies are located within this derived layer.

2.3.2 Macro Determines Micro

The core directional principle of this theory is **macro determines micro**. This differs from the reductionist path commonly used in current science, which attempts to explain macroscopic phenomena from the behavior of microscopic particles. In this theory, the overall state, dynamic patterns, and organizational principles of the more fundamental, pervasive energy-time level (macro) determine and shape the local attributes, behaviors, and interaction laws of the derived matter-space level (micro). The direction of influence, organization, and information flow is from the fundamental layer to the derived layer.

2.4 Macro and Micro Consistency

Despite the multi-layered structure of reality, this theory emphasizes **macro and micro consistency** across all levels. This means that the fundamental principles and relationships governing the most basic energy-time level are manifested in a consistent manner at the derived matter-space level and in phenomena across different scales. From the universal cosmic time system to the discrete time blocks of matter, from the dynamics of the diffuse space to the flickering of the hydrogen bond network, all follow an internally consistent logic of energy-time and information organization. This consistency provides the theory with universality, enabling it to explain phenomena across different scales within a unified framework.

2.5 Definition of Information within this Framework

Within this theoretical framework, information is not merely the static arrangement of matter (such as the base sequence of a gene), nor is it a measure of probability and uncertainty in Shannon's information theory. Information is **the pattern formed by the structured flow and dynamic organization of energy in time and space**. It is closely linked to the attribute of time, being an intrinsic expression of energy's dynamism. Information is the key element driving the formation, maintenance, and evolution of self-organizing systems. It exists in the fluctuations of energy fields, the patterns of temporal sequences, serving as a bridge connecting different levels and enabling macro-to-micro regulation.

3.Temporalized Structural Information Transfer Mechanism (Paradigm: Food Cooking)

Building upon the ontology established in the previous chapter, this chapter will detail the structural information transfer mechanism proposed by this theory. By examining the changes food undergoes during cooking, we will reveal how information is released from material

structures and transformed within the dynamic medium of water into a temporalized energy mode capable of effective transfer between self-organizing systems.

3.1 The Energy-Time Imprint of Food Structures

3.1.1 Food as Condensed Energy and Its Structural Information

According to the ontology of this theory, food is primarily a material structure, a **condensed form of energy** composed of discrete "time blocks" (matter), formed under specific patterns of fundamental energy condensation. The overall structure of food, the arrangement of molecules, and the network of connecting bonds between molecules are not merely static spatial arrangements, but represent the solidified manifestation of specific **energy modes** determined by their formation process and intrinsic properties. These modes constitute the **structure-space correlation information** of food, serving as the raw encoding of its particular attributes and potential effects.

3.1.2 Energy Modes of Food Connecting Bond Networks

The material structure of food is maintained by a complex network of chemical bonds and intermolecular forces. These connecting bonds do not only represent the physical form of matter but are also the manifestation of energy condensed and distributed locally. This theory posits that the overall network formed by these connecting bonds, existing above the level of individual material molecules, carries a more macroscopic **energy connection mode** reflecting the overall characteristics of the food. This mode is the concrete form through which its structural information is expressed and stored, and although it is at a derived level, its organization reflects the influence from the fundamental energy level.

3.2 Energy-Time Transformation during Cooking

3.2.1 Cooking Leads to Structural Disintegration and Energy Release

The process of cooking, particularly simmering or boiling (熬煮), is a complex interaction involving energy input (heat) and food. This energetic intervention causes the disintegration of the food's original connecting bond network, breaking down the macroscopic material structure. This process is not just physicochemical decomposition, but also the release of the **structure-space correlation information** solidified within the food. The energy modes originally "locked" in the static structure become active and free as the structure breaks down. This theory suggests that the **"subtle unique energy"** released during this process carries the original structural information and possesses characteristics closer to the fundamental energy level.

3.2.2 Released Energy Modes Enter the Water Body

During cooking, these energy modes, carrying the original structural information released from the food structure, enter the **water body**, which serves as the cooking medium. Water plays a crucial role in this theory; its unique attributes make it an ideal carrier and transformer for these subtle energy modes.

3.3 Energy-Time Dynamics in the Diffuse Space of Water

The water body is not a uniformly static medium but a vibrant self-organizing system. This theory particularly focuses on the **diffuse space** within water.

3.3.1 Characteristics of the Diffuse Space

The diffuse space is considered a **dynamic continuous space reflecting the macro energy ontology** within the water body. It is distinct from the water molecules themselves, referring instead to the low-energy-density, highly dynamic, and interconnected overall state formed by the space between water molecules and the more fundamental energy field within the water body. It is this **low energy density** characteristic that gives the diffuse space **low resistance** to externally input subtle energy modes, allowing it to efficiently receive and accommodate the information/energy released from food.

3.3.2 Hydrogen Bond Network Dynamics and Temporal Modulation

The most representative dynamic structure within the water body is the continuously forming and breaking **hydrogen bond network**. This is a highly dynamic system with self-organizing properties; its flickering and reorganization occur on extremely fast time scales, constituting water's intrinsic, high-frequency **time carrier**. The subtle energy modes entering the diffuse space do not directly act upon the water molecules themselves but **influence and modulate** the intrinsic dynamics of the hydrogen bond network. This influence is subtle; it does not merely provide energy to break or form hydrogen bonds but, through its connection to the fundamental energy level, **intervenes and shapes** the **temporal sequencing** of the hydrogen bond dynamics in a specific manner.

3.3.3 Formation of Temporalized Information: Structured Energy Flow

Through the modulation of the hydrogen bond network's temporal sequencing, the energy modes within the diffuse space transform the information originally encoded in the food's static spatial structure into information encoded within the **temporal sequences of the hydrogen bond network's dynamics**. This form of information no longer relies on the original spatial correlation (which has been broken down) but manifests as a specific, pattern-based **non-spatial correlation** (i.e., the temporal sequence itself). This process forms **temporalized information**. In this theory, this temporal sequence with a specific pattern is essentially equivalent to **energy performing a structured flow within the diffuse space and hydrogen bond network, guided by the original structural information**. The path and manner of energy flow are defined by this temporal sequence.

3.3.4 Cooking's Augmentation: Information Condensation and Swiftness

The process of simmering or boiling (熬煮), as a specific energy input and macroscopic dynamic, has a significant **augmenting effect** on the temporalization process described above. The continuous heat input provided by boiling and the resulting low-frequency dynamics such as convection interact with the water body's intrinsic high-frequency hydrogen bond dynamics, creating a complex **temporal intertwining or convolution** effect. This effect increases the effective energy density of the diffuse space (referring to a more active

information-carrying state) and makes the food's structural information more **condensed** or compact in its temporal representation. This condensed state of information, when the water (broth) is ingested, allows it to elicit a response with greater efficiency and intensity, thus **greatly enhancing and accelerating the swiftness of the subsequent Dynamic Function**. Cooking, through this mechanism, becomes an efficient process of information refinement and amplification.

4.Temporal Information, Dynamic Function, and Holistic Correlation

The previous chapter detailed how structural information is transformed into temporalized information within the water body. This chapter will discuss how this temporalized information further influences the receiving self-organizing system (represented by the human body), elucidate the essence of Dynamic Function, and reveal the role of information transfer in establishing super-spatial correlation.

4.1 Transfer and Reception of Temporalized Information

4.1.1 Temporalized Information as a Bridge Connecting Self-Organizing Systems

The temporalized information, intensified through the cooking process in water, exists as structured energy flow in the water (broth). When this water is ingested, the energy flow carrying specific temporal patterns is transferred from one self-organizing system (the food-water system) to another self-organizing system (the human body). This theory proposes that this temporalized energy mode acts as an **energy bridge** connecting these two complex systems. It is a subtle, information-rich input signal capable of bypassing the limitations of conventional molecular recognition and chemical reactions, acting directly on the receiving system's more fundamental organizational levels.

4.1.2 The Human Body as a System for Receiving and Interpreting Temporal Information

The human body, as a highly complex self-organizing system, is not merely a passive collection of matter. It possesses intrinsic dynamism and self-organizing capabilities, enabling it to perceive, receive, and process energy and information from its environment. This theory suggests that within the human body, there exist systems or mechanisms capable of connecting with, **receiving, and interpreting** these temporalized energy modes from the external environment. These "sensing units" may not be conventional sensory organs but dynamic structures distributed at different levels (e.g., cell membranes, cytoskeleton, cellular water environment, or even more fundamental energy field levels) capable of responding to specific temporal sequences. The **self-organizing nature** of the human body and the **synchrony** of its internal dynamics provide the basis for receiving and processing this complex temporal information.

4.2 Temporal Information and Dynamic Function

4.2.1 Human Body's Recognition and Utilization of Structured Energy Flow

When the human body receives external temporalized energy modes carrying specific structural information, it is capable of recognizing the "instructions" or "blueprint" embedded within these patterns. The human body, being a dynamic system, does not merely absorb this energy; instead, it uses these temporal patterns as templates to **guide the structured flow of its own internal energy**. The pattern of this internal energy flow highly corresponds to the received external temporal information.

4.2.2 The Essence of Dynamic Function

This theory posits that the essence of **Dynamic Function (活态作用)** is precisely **the process of energy within the human body, a self-organizing system, following received (or self-generated) temporalized patterns to undergo structured flow**. For example, the specific physiological effects elicited by food or medicinal broth (such as promoting digestion, enhancing vitality, alleviating symptoms) are not merely the actions of specific chemical substances but are the result of the temporalized energy modes transferred from the broth exciting and guiding specific energy flow patterns within the human body. This flow pattern is the manifestation of what we observe as " Dynamic Function." Dynamic Function is the outcome of energy "dancing" within the living structure according to information-carrying instructions.

4.2.3 Temporal Patterns and Holistic Effects

Different temporalized energy modes carry different structural information, and thus they excite different patterns of structured energy flow within the human body, leading to **specific holistic effects**. These effects often manifest as changes in the overall state of the system, rather than merely localized responses of individual cells or molecules. Temporal information is capable of coordinating dynamic processes spanning different scales and spatial locations within the human body, thereby enabling the regulation of overall function.

4.3 Temporal Information and Holistic Correlation

4.3.1 Time as a Spatial Node

As mentioned earlier, time in this theory is an attribute of energy, and space is the unfolding of time. In self-organizing systems, temporalized information (energy patterns in time) plays a crucial role. This theory proposes that **time acts as a spatial node in self-organizing systems**. This means that time is not merely a background carrying change but is actively capable of **connecting and organizing spatially separated elements and dynamics**. By synchronizing or coordinating dynamic processes at different spatial locations (manifesting as specific temporal patterns), time establishes a dynamic, pattern-based network of correlation within space.

4.3.2 Construction of Super-Spatial Correlation

Based on the characteristic of time acting as a spatial node, the transfer and replication of temporalized information enable the construction of **super-spatial correlation**. Super-spatial correlation refers to highly coordinated or synchronized correlations between different

parts of a self-organizing system that extend beyond physical distance and direct physical connection. This correlation is not achieved through the propagation of particles in space but through these parts responding to or replicating the same temporal pattern. Temporalized information is the "binder" and "instruction" that achieves this non-local, holistic correlation. Dynamic Function itself is accompanied by the establishment of super-spatial correlation states at the macroscopic level within the human body.

4.4 Extending the Paradigm to Broader Domains

This theory suggests that the mechanism of temporalized structural information transfer, as illustrated by food cooking, is not limited to the interaction between food and the human body. This principle may have broader universality:

- **Drug-Solvent Action:** Many drugs exert their effects by dissolving in water or specific solvents. The solvent may similarly play the role of an information carrier and transformation medium, transferring specific information about the drug's structure to the biological system in a temporalized manner.
- **Environment-Life Interaction:** The environment (such as air, water bodies, terrestrial fields) may contain temporalized energy modes reflecting the overall state of the Earth or cosmos. These modes are perceived by life systems and influence their survival and evolution, explaining the deep, non-superficial correlation between life and the environment.
- **Theoretical Possibility of Information Transfer Across Galaxies:** On a grander cosmic scale, if a universal cosmic time system and energy base wave exist, the mechanism of temporalized information transfer might allow information or organizational patterns to traverse vast interstellar or even intergalactic distances, offering a new theoretical possibility for understanding the cosmos as a whole.

5.Discussion and Outlook

The preceding chapters have detailed the ontological foundations and core information transfer mechanism of this theory. This chapter will discuss the contributions, explanatory power, challenges faced, and outlook of this theory.

5.1 Core Contribution of this Theoretical Framework: Offering a New Perspective

The most core contribution of this theory is providing a new perspective for understanding the world that is fundamentally different from the current mainstream scientific paradigm. Mainstream science is largely built upon a matter ontology and a reductionist methodology that seeks to explain macroscopic phenomena by accumulating microscopic components. This theory, however, proposes a **multi-layered unified framework based on energy ontology, with time as an attribute of energy, and emphasizing the determination from the macro (fundamental) level to the micro (derived) level**. This paradigm shift allows us to think about matter, life, information, spacetime, and their interactions in a new way. This

theory shifts the focus of understanding complexity, wholeness, and vital activity from static material structures and local interactions to the **dynamic, structured flow of energy in the temporal dimension and its transfer and organizational role between different levels**.

5.2 How this Theory Explains Current Scientific Challenges

This theoretical framework offers potential new avenues for explaining some challenges that remain significant within the current scientific paradigm:

- **Integrity of Life:** Mainstream science often views integrity as an emergent property of component interactions, but this struggles to explain the coordination and influence of the whole on the parts. This theory, from the perspective of macro determining micro and integrity originating from the fundamental energy-time level, suggests that the integrity of a living organism is the result of its connection with and response to the dynamics of a larger energy-information body (such as the Earth's information body). Dynamic Function itself is seen as a manifestation of this integrity (structured flow of energy).
- **Consciousness:** Although this paper does not directly discuss consciousness, if consciousness is related to fundamental energy fields, the attribute of time, or deeper mechanisms of information processing, then this theory's framework based on energy and time ontology could provide a completely new starting point for understanding the physical basis of consciousness, moving beyond the mere material structure of the brain or localized neuronal activity.
- **Unpredictability of Complex Systems:** Predictions for complex systems in current science are often limited by their high nonlinearity and sensitivity to initial conditions. This theory proposes the existence of continuous, subtle temporalized influences from the macro level, and the system's response to these influences through "dynamic adaptation." This pattern, driven by the dynamics of the fundamental level, with effects depending on the receiving system's internal state, may be the deeper reason for the apparent unpredictability of complex system behavior – we have not yet captured or understood the more fundamental, subtle drivers and how they act upon the system's inherent time carriers.

5.4 Philosophical Implications

This theory's reshaping of the relationships between energy, time, matter, space, and information carries profound philosophical implications. It challenges the traditional priority of matter, proposing an ontology centered on dynamism, process, and relations. Time transforms from a passive background or parameter to an active principle generating space and organizing correlations (time is the unfolding of space; time is a spatial node). Matter shifts from a basic entity to a condensation of energy and a discrete manifestation of time (matter is discrete time blocks). Information changes from a structural description to a pattern of energy dynamics. These reshaped concepts not only alter our view of the universe's

fundamental composition but also influence how we understand causality, part and whole, and the nature of existence.

5.4 Challenges Faced

As a completely new theoretical framework, this theory undoubtedly faces significant challenges:

- **Precise Definition and Formalization of Concepts:** Concepts such as "diffuse space," "temporalized structural information," "cosmic base wave," and "discrete time blocks" require more precise and rigorous definition and formalization in terms of physics and mathematics to enable quantitative prediction and testing.
- **Bridging with Existing Physics Frameworks:** How to reconcile the ontology of this theory (energy ontology, time attribute, space unfolding) with established physics theories (such as quantum mechanics, general relativity) or establish connections is a huge challenge. Exploration is needed to see if mathematical structures or physical principles exist that can connect these seemingly different descriptions.
- **Potential Verification Methods:** The magnitudes of forces involved in this theory are extremely low, and key concepts (such as diffuse space influence, temporal information patterns) are difficult to directly observe or measure with current instruments. It requires conceiving entirely new theoretical modeling methods or designing breakthrough experimental techniques to indirectly or directly explore the reality of these phenomena and concepts. For example, could unconventional physics experiments detect the existence or attributes of diffuse space? Could methods be found to measure and decode specific temporalized energy patterns?

5.5 Inspirations for Future Scientific Research

Despite the challenges, this theory offers important directions for future scientific research:

- **Rethinking the Role of Information in Nature:** It prompts scientists to focus on the encoding and transfer of information within energy dynamics and temporal patterns, rather than solely on the static information of material structures.
- **Exploring Mechanisms of Macro-to-Micro Influence:** It encourages researchers to investigate the interactions between dynamics at different scales and how organizational principles at more fundamental levels influence lower-level behaviors.
- **Developing New Measurement Technologies:** It stimulates the development of novel instruments capable of perceiving and measuring subtle, diffuse, temporalized energy/information signals.
- **Promoting Interdisciplinary Integration:** This theory connects fields such as physics, biology, information theory, and philosophy, potentially fostering deeper dialogue and method integration across disciplines.

This theory, as an exploratory framework, aims to serve as a catalyst, offering a completely new possibility for understanding current scientific challenges. It encourages us to step

outside existing thought frameworks and explore the mysteries of the universe with a more open mind and broader perspective.

6.Conclusion

The current scientific paradigm faces challenges in explaining the integrity of nature, the dynamics of complex systems, and the deep unified relationships between matter, energy, information, and spacetime, stemming from its matter ontology and reductionist approach. This paper, based on reflections on these limitations, proposes an entirely new theoretical framework.

The core of this theory lies in establishing a **multi-layered ontology** distinct from current science. We propose that **energy is the most fundamental entity in the universe**, and **time is an intrinsic and inseparable basic attribute of energy**. **Matter is a special condensed form of energy**, whose essence can be understood as **discrete time blocks**, and **space corresponds to the existence of matter**. Based on this ontology, this theory emphasizes a principle of **determination from the fundamental (macro) level to the derived (micro) level**, and posits that this connection maintains **macro and micro consistency** across all scales. Information is defined as the pattern formed by the structured flow and dynamic organization of energy in time and space, closely linked to the attribute of time.

Using the process of food cooking in water as a paradigm example, this paper detailed the **temporalized structural information transfer mechanism** proposed by this theory. This mechanism describes how structural information is released from material structures (structure-space correlation) and transformed within the water body (which reflects the fundamental energy ontology as a dynamic continuous space) into a temporalized pattern (non-spatial correlation) carrying the original structural information. This process is achieved through the modulation of the hydrogen bond network's dynamics by the diffuse space, forming a **structured flow of energy**. The cooking process, through the intertwining of temporal patterns and the condensation of energy, significantly enhances the efficiency of information transfer and the swiftness of the action.

This theory further posits that the temporalized energy mode transferred from the water can act as a bridge connecting self-organizing systems (such as the human body). The receiving system is capable of recognizing and utilizing this pattern, **replicating the corresponding super-spatial structural information** within itself. This theory suggests that the essence of **Dynamic Function** is precisely **the process of energy within the self-organizing system flowing in a structured manner, following the received (or self-generated) temporalized patterns**. This mechanism can establish **super-spatial correlation** transcending physical distance, offering a new perspective for understanding the integrity of living organisms, the deep interaction between environment and life, and broader cosmic connections.

In conclusion, this theory, by proposing a multi-layered framework based on energy and time

ontology, emphasizing macro-to-micro determination and cross-scale consistency, offers a new paradigm for understanding reality. It attributes integrity, Dynamic Function, and complex correlations to the structured flow of energy in the temporal dimension, challenging the limitations of current science, and opening new theoretical directions for exploring the deep mechanisms and unity of nature. Despite facing challenges in conceptual formalization and empirical verification, this theory aims to inspire new ways of thinking, encouraging the scientific community to explore the mysteries of energy, information, spacetime, and life with a broader perspective.

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