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The Existence of Time, Energy, 4 Forces, and Physical Laws Depends on Motion

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Abstract: ***This paper explores the relationship between motion, time, energy, and forces. It proposes a new framework based on the idea that motion drives time, energy, and forces. Without motion, it is impossible to perceive time, energy, or forces. Motion precedes time because time is created through motion. The concept of time without motion is meaningless. Furthermore, not only time but also all forms of energy and forces depend on motion. Energy is generated, changed, or transformed due to motion. The four fundamental forces-gravity, electromagnetism, the strong nuclear force, and the weak nuclear force-are all dependent on motion. Additionally, physical laws are active because of motion. Without motion, these laws would break down. According to this theory, motion provides a new perspective on fundamental scientific principles, potentially offering insights into the Grand Unified Theory (GUT).***

Keywords: Motion Creates Time, Energy, and Forces; Physical Laws Actively Depend on Motion.

Abbreviations:
GUT: Grand Unified Theory

I. INTRODUCTION

The debate between science and philosophy regarding the origin of time remains unresolved. Conventional science does not adequately explain where time originates [1]. Newton's laws describe how objects move and interact with forces but do not address the fundamental nature of time. Both special and general relativity describe time as being linked to space but do not explain its origin [2].

This theory was inspired by a simple observation: when I looked at my wristwatch, I noticed its hands moving, making time perceptible. Time only becomes meaningful through motion. The common assumption that everything happens within time is incorrect because time itself depends on motion. My theory proposes that all processes in the universe align with motion—everything happens through motion. Time does not run automatically. If time were independent, motion would not be necessary. However, in reality, time is contingent upon motion.

Example: The Dependence of Time on Motion: Day and night, as well as seasonal changes like summer and winter, are not caused by time itself. Instead, they result from the Earth's motion relative to the Sun. The concept of time emerges from the Earth's rotation and revolution. Thus, time is a product of motion.

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A. Motion Precedes Time: A Comparison with the Big Bang Theory [3]

- Motion caused the Big Bang, as an explosion cannot occur without motion. Thus, time only becomes apparent after motion has taken place.
- Without motion, energy cannot be transferred. Before motion emerged, time did not exist. Once motion began, time started to flow.
- Motion leads to the creation of time. Time is a consequence of motion.
- Motion, being more fundamental, generates the experience of time. Without motion, time does not progress.
- Everything happens through motion, and time merely serves as a measure of these occurrences.
- The universe's evolution is driven by motion, with time providing context for understanding this process.
- Time cannot exist without motion because it relies on motion for meaning.
- Motion controls time by influencing its flow and direction, whereas time does not control motion.
  Thus, motion is the fundamental factor, while time is secondary.

B. Motion As the Source of Energy and Forces

According to this theory, motion is the primary factor responsible for the creation and transformation of energy. Without motion, energy cannot exist. Additionally, generating and transforming energy from a fixed mass depends on motion. Motion is necessary both for creating energy and for enabling its transformation. Therefore, energy cannot be produced or altered without motion.

Even the four fundamental forces are not truly fundamental, as they depend on motion.

Examples:

- Gravity – Without motion, gravity would not function. Gravity is not solely caused by mass; rather, mass and momentum together generate gravity. A stationary mass does not actively produce gravity. Even two small objects rotating at high speeds in space can generate gravitational effects. Although weaker for smaller objects, gravity still arises due to motion.
- **Electromagnetic Force –** Without motion, there would be no charge separation and no electromagnetic fields, rendering the electromagnetic force ineffective. Example: The electromagnetic force depends on the motion of electrons.
- **Strong Nuclear Force** – The stability of the strong nuclear force relies on

the motion of quarks and gluons inside protons and neutrons.

- **Weak Nuclear Force** – The weak nuclear force is responsible for particle decay, a process that requires motion.

C. Comparison With Maxwell's Equations

Maxwell's equations state that a changing electric field produces a magnetic field and vice versa. This implies that electromagnetic forces result from changes in motion [4].

Example: Charging a magnetic field inside a coil generates an electric voltage (electromagnetic force). According to this theory, a changing magnetic field signifies motion, which in turn creates energy. Furthermore, variations in electric and magnetic fields generate electromagnetic waves such as light. Therefore, the concept of field change directly correlates with motion. Thus, motion is the source of the four fundamental forces and the various forms of energy in the universe.

II. RESULTS AND ANALYSIS

A. Without motion, energy and forces have no relationship.

B. Time ceases to exist if all motion in the universe stops.

C. Not only time but also energy and the four fundamental forces depend on motion. Without motion, these forces cannot exist.

D. As long as motion exists, physical laws remain valid. If motion ceases, physical laws will inevitably break down.

III. EXPERIMENTAL EVIDENCE

A. Electron Spin and Orbital Motion: Electrons exhibit spin, functioning as tiny magnets. Their orbital motion generates magnetic fields, proving that electromagnetic processes require motion.

B. Solar Flares: These occur due to rapid changes in the Sun's magnetic field, releasing energy through particle motion. Such high-energy events support this theory, as they depend entirely on motion.

C. Lightning: Charge separation in clouds occurs due to motion. The movement of charged particles generates an electric field, leading to lightning, which further confirms motion's fundamental role in energy creation.

D. Nuclear Reactions: Nuclear fission and fusion depend on motion. When a neutron collides with an atomic nucleus, it splits, releasing energy. Motion is necessary for this reaction.

E. Potential Energy Storage: A stationary stone has no potential energy. Lifting it introduces motion, thereby creating potential energy. Similarly, stretching or compressing a spring stores energy due to motion.

F. Increased Motion = Increased Energy and Force: Energy and forces are direct results of motion.

IV. CONCLUSION

This theory challenges conventional scientific perspectives and offers an alternative explanation:

A. Relativity applies to large-scale phenomena but has limitations on small scales. This theory addresses that gap.

B. Relativity connects time to space, but this theory argues that time depends on motion, not space.

- Day and night result from Earth's motion, not space-time.
- Time is a byproduct of motion, while space is a fundamental existence.

C. Established theories emphasize time, but this theory asserts that motion precedes time.

D. Conventional science considers the four fundamental forces as the basis of the universe, but this theory claims that these forces depend on motion.

E. Existing theories fail to explain the origin of time. This theory explains it as a consequence of motion.

F. Physical laws actively depend on motion; without motion, they break down.

G. The famous equation $\mathbf{E = mc^2}$ supports this theory, as energy-mass conversion is only possible through motion.

Since gravity, electromagnetism, the strong nuclear force, and the weak nuclear force all rely on motion, this theory may provide crucial insights into the Grand Unified Theory (GUT).

DECLARATION STATEMENT

I must verify the accuracy of the following information as the article's author.

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- **Data Access Statement and Material Availability:** The adequate resources of this article are publicly accessible.
- **Authors Contributions:** The authorship of this article is contributed solely.

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Debjyoti Deoghuria, an independent researcher, permanent resident of village: Chhatna, PO & PS: Chhatna, Dist: Bankura, West Bengal, India, Pin: 722132. After the completion of studies from Burdwan University, started a career as staff of Bankura University, and for the last eight years has been working as library staff in the Central Library of Bankura University, Bankura, West Bengal, India, and is a believer in the philosophy of lifelong learning. Like to study books of different disciplines like philosophical, scientific, logical, historical, and religious books, and also interested in multidisciplinary research and also associated with the different academic and cultural activities.