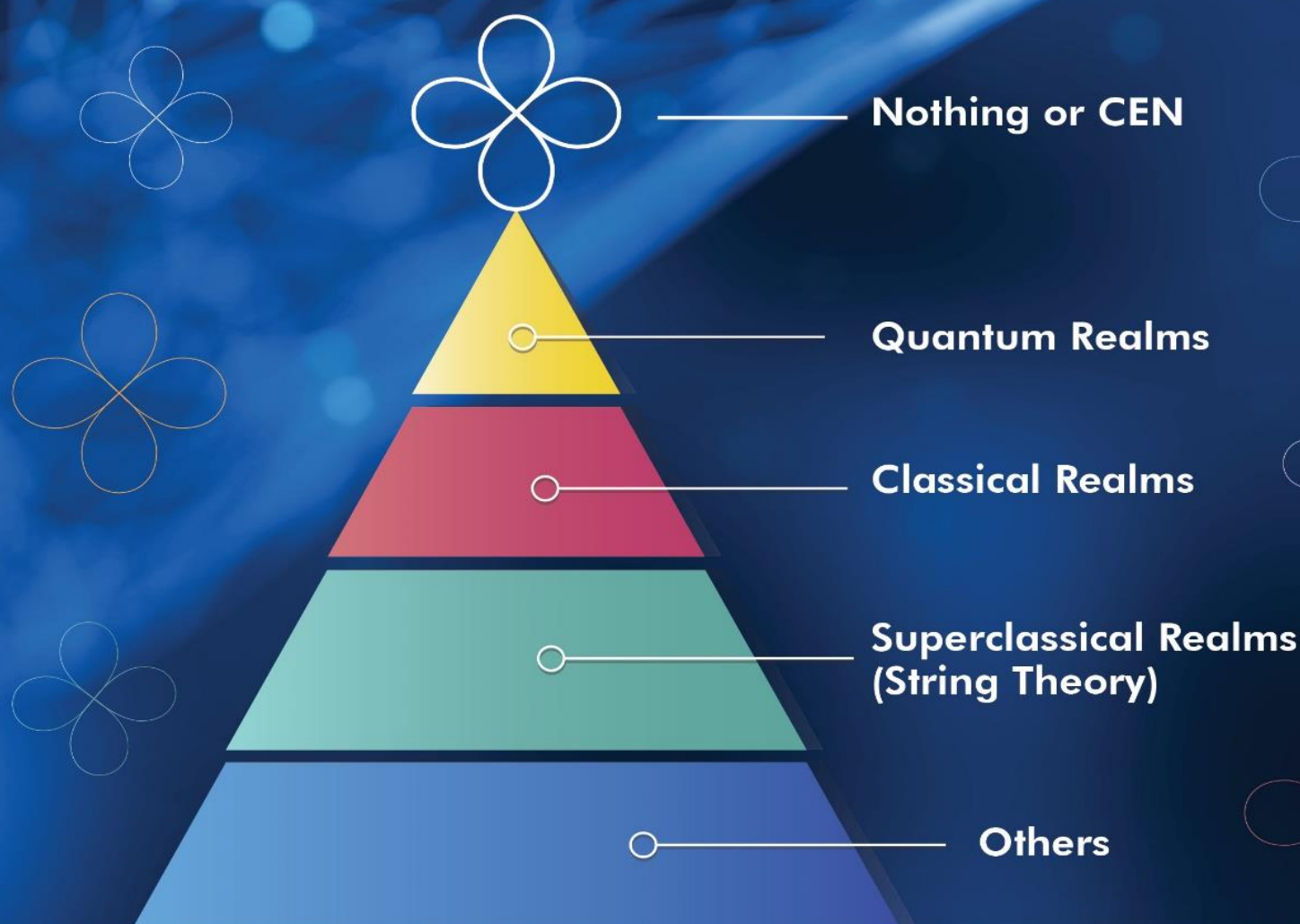


The Emerging Field of Consciousness Physics

Consciousness Mechanics

Tijani Mustapha Adedeji



What You Will Learn in This Book:

- **The Physics of Consciousness**
- **The Mathematics of Consciousness Physics: Consciousness Mechanics**
- **Consciousness Statistics**
- **Developing a Personalized Time Travel System**
- **How to Meditate: Practical Tips with Scientific Basis in Consciousness Physics**
- **The Physics of Religion (Belief Systems)**
- **The Physics of Aliens, Ghosts, Spirits, Voodoo**
- **The Physics of the Whole of Existence**
- **And lots more ...**



Preface

In 2018, I embarked upon the Consciousness Physics Research Project (CPRP), also called CENProject to unravel various mysteries of Mother Nature and enhance our understanding of the Universe as a whole. CEN is an acronym for Consciousness-Energy (CEN). Over the past five years, I have made key breakthroughs in this Project, which is in two phases. In the first phase, which was completed in July 2023, I developed various models to explain the Physics of Consciousness, with a range of interesting applications. I have published my findings in preprints in some papers, and some of the papers are still under review in a SpringerOpen journal.

In the second phase, which I started in August 2023, I have developed the mathematical basis for Consciousness Physics based on my approaches, and these mathematical frameworks are what I call Consciousness Mechanics. In Consciousness Mechanics, I have developed a mathematical language called Temic notation, which is the equivalent of Dirac notation in Quantum Mechanics. However, Consciousness Mechanics, along with one of its primary aspects, Temic notation, deals with reality at the deepest level, and so Temic notation generalizes Dirac notation to every possible dimension.

I have published a preprint of some papers on the Mathematics of Consciousness Physics based on my approaches. I am developing Consciousness Physics as a Unifying Theory that links all fields of Physics together. Also, I have built Consciousness Mechanics as the specific mathematical tool to achieve this grand objective and ultimately develop the Theory of Everything. The fundamental principle of Consciousness Physics based on my approaches is that consciousness-energy (CEN) is the building block of all things in nature (whether living or not). This book is a compilation of all the papers I have written and all the findings I made so far on this emerging field of Theoretical Physics.

Project Website: <https://cenproject.org/>

Dedication

This book is dedicated to all African ancestors, especially key ones such as Atum, Olorún, Olodùmare, Òrúnmìlà, and Ifá, who have been worshipped historically as pagan Gods, and to my parents, Alhaji S. Olusegun Tijani and Mrs. R. Ireti Tijani.

Acknowledgements

I highly appreciate all the support of my family members, especially Quadri Tijani, who is a key partner in CENProject and my other siblings, in addition to my lecturers in the University of Ibadan (UI) and Lagos State University, especially the Departments of Physics in these institutions, and my friends.

Disclaimer

This book is a collection of working papers and findings made by the author in CENProject. Hence, the papers represent research studies in progress. Except for purposes such as comment, criticism, news reporting, scholarship, teaching (including classroom use cases), or research, no part of these papers may be used for commercial purposes without obtaining a written permission from the author and/or without proper reference to the author.

Copyright © 2024 Tijani Mustapha Adedeji

All rights reserved.

Table of Contents

INTRODUCTION	11
PART I: FOUNDATIONAL ASPECTS	14
CHAPTER ONE	14
Consciousness Travels in Waves — The Conwave Model	14
Introduction.....	15
What Is Consciousness?.....	16
Key Concepts.....	19
The Proposed Physics of Consciousness Waves: The Conwave Model.....	21
The TEMIC Framework of Reality (TemFrame)	25
How Consciousness Interacts with Matter: Conwaves Propagation	29
Conclusion	29
CHAPTER TWO	31
The Origin of Consciousness: The TEMIC Framework of Reality	31
Introduction	32
The Hypotheses of the Study and Results	33
Conclusion	44
CHAPTER THREE	45
Astrogenesis and Consciousness: The Role of Consciousness in the Evolution of Life	45
Introduction.....	45
The Hypotheses of the Study and Results	47
Potential Applications	54
Conclusion	55
PART II: THE PHYSICS OF CONSCIOUSNESS	56
Consciousness Physics: A Unified Theory, Working Papers	56
SECTION ONE	58
Introduction	58
SECTION TWO	61
Entanglement: The Temic Principle of Consciousness Entanglement	61
Types or Forms of Entanglement	62
Quantum Entanglement	63
Human Entanglement	63
Planetary Entanglement	64
Universal Entanglement.....	65
Absolute Vacuum	65
Gravity: A Consequence of Big Bang Expansion	68
The Temic Theory of Gravity.....	70

<u>The Concept of Mass in Consciousness Physics</u>	<u>73</u>
<u>Force Entanglement: Unified Force</u>	<u>73</u>
<u>Fundamental Consciousness Wave Background (FCWB)</u>	<u>74</u>
<u>The Temic Uncertainty Principle</u>	<u>74</u>
<u>The Temic Superposition Principle</u>	<u>76</u>
<u>Resolving the Einstein-Podolsky-Rosen Paradox (EPR)</u>	<u>77</u>
<u>The Temic Wave-Particle Duality</u>	<u>78</u>
<u>Quantization of Conwaves</u>	<u>79</u>
<u>The Conwave Model: Measuring Conwaves</u>	<u>80</u>
<u>Objectivity, Observation, Measurement, and Subjectivity</u>	<u>81</u>
<u>Coherence</u>	<u>82</u>
<u>Objectivity and Subjectivity</u>	<u>83</u>
<u>The Temic Principle of Conscious Perception</u>	<u>84</u>
<u>Observation and Measurement.....</u>	<u>85</u>
<u>The Observer Effect</u>	<u>85</u>
<u>Consciousness Is the Collapse of the Conwave Function</u>	<u>87</u>
<u>Objectivity and Subjectivity in Humans</u>	<u>87</u>
<u>The Heart and Breath: A Philosophical-Cultural Perspective.....</u>	<u>88</u>
<u>How Communication between the Brain and the Heart Brings about Perception</u>	<u>88</u>
<u>Objectivity and Subjectivity from the Conwave Perspective</u>	<u>89</u>
<u>Realms, Worlds, Inner Universes, Outer Universes</u>	<u>89</u>
<u>Lucid Dream and Trance</u>	<u>90</u>
<u>Reality Is Both Local and Non-Local</u>	<u>91</u>
<u>SECTION THREE</u>	<u>92</u>
<u>The Periodic Table of Lifeforms on Earth (PTL)</u>	<u>92</u>
<u>Under Development</u>	<u>94</u>
<u>SECTION FOUR</u>	<u>96</u>
<u>Implications of the Findings in Context of Existing Fields and Research</u>	<u>97</u>
<u>Consciousness Physics Offers a New Approach to Reality.....</u>	<u>97</u>
<u>Limitations of the Study.....</u>	<u>97</u>
<u>SECTION FIVE</u>	<u>97</u>
<u>Conclusion</u>	<u>99</u>
<u>PART III: THE MATHEMATICAL BASIS OF CONSCIOUSNESS PHYSICS —</u>	
<u>CONSCIOUSNESS MECHANICS</u>	<u>10</u>
<u>Consciousness Physics: A Unified Theory, Working Papers II</u>	<u>7</u>
<u>Consciousness Mechanics: The Mathematics of Consciousness Physics</u>	<u>7</u>
<u>SECTION ONE</u>	<u>7</u>

Background	7
SECTION TWO	10
The Temic Big Bang Cosmology	10
<u>The Beginning</u>	10
<u>Temic Universal Laws or Fundamental Principles of the Universes</u>	12
<u>Conclusion</u>	23
SECTION THREE	24
Consciousness Mechanics Operators and Functions	24
<u>Introduction</u>	24
<u>The Temic Transformation Theory</u>	25
<u>Temic Notation</u>	26
<u>Transformation: A Generic Concept</u>	31
<u>Conclusion</u>	37
SECTION FOUR	38
The Temic Big Bang Model	38
<u>Introduction</u>	38
<u>The Big Bang Evolution of the Universes</u>	38
<u>Cosmic Inflation, Big Bang Expansions, and Different Universal Epochs</u>	47
<u>The Temic Theory of Gravity</u>	48
<u>Gravity: A Consequence of Big Bang Expansion by Fundamental Consciousness</u> ...	48
<u>Variations in CEN Distributions in Universes</u>	53
<u>Realms, Worlds, Inner Universes, Outer Universes: Inner and Outer Automorphisms</u>	55
<u>Isomorphism</u>	61
<u>Automorphism</u>	62
<u>TEPET Isomorphism and TEPET Automorphism</u>	63
<u>CEN: The Fundamental Building Block of All Things in Existence (the Multiverses)</u>	63
<u>The Big Bangs as Set Permutations, Inner and Outer TEPET Automorphisms</u>	66
<u>Partition Function, Conjugation, Inner and Outer TEPET Automorphisms: Inner and Outer Universes</u>	71
<u>Inner and Outer Automorphisms</u>	71
<u>Inner and Outer TEPET Automorphisms</u>	72
<u>Conclusion</u>	77
SECTION FIVE	78
Key Consciousness Mechanics Principles	78
<u>Introduction</u>	78
<u>The Conwave Model: Measuring Conwaves, Extended Electromagnetic Spectrum, and Consciousness Wave Observatory</u>	78
<u>The Temic Uncertainty Principle: A Generalization of Heisenberg's Uncertainty Principle</u> ..	88

<u>The Temic Superposition Principle: A Generalized Version of the Superposition Principle..</u>	<u>90</u>
<u>The Temic Principle of Consciousness-Energy Conservation: A Generalized Version of the Principle of Conservation of Energy</u>	<u>91</u>
<u>The Temic Wave-Particle Duality: A Generalization of the Wave-Particle Duality of Matter</u>	<u>91</u>
<u>Quantization of Conwaves</u>	<u>92</u>
<u> Resolving the Matter-Antimatter Asymmetry Problem</u>	<u>93</u>
<u>The Temic Principle of Coherence</u>	<u>98</u>
<u>The Temic Principle of Conscious Perception.....</u>	<u>98</u>
<u>Temic Relativistic Consciousness Principle: Reality Is Both Local and Non-Local.....</u>	<u>98</u>
<u>Consciousness Lensing</u>	<u>100</u>
<u>The Temic Consciousness Absorption Principle</u>	<u>101</u>
<u>Conclusion</u>	<u>107</u>
<u>SECTION SIX</u>	<u>108</u>
<u>Consciousness Statistics: Temic Algebra and the Cayley-Dickson Construction</u>	<u>108</u>
<u> Introduction.....</u>	<u>108</u>
<u> Time Travel</u>	<u>109</u>
<u> Temic Algebra: The Aclopen TEPET Sets, Big Bang Expansion, and the Cayley-Dickson Double</u>	<u>112</u>
<u> Developing a Time Machine for Time Travel</u>	<u>117</u>
<u> Fundamental Forces and Elementary Interactions in Consciousness Physics</u>	<u>121</u>
<u> Conclusion</u>	<u>121</u>
<u>SECTION SEVEN</u>	<u>123</u>
<u>The Periodic Table of Lifeforms on Earth (PTL)</u>	<u>123</u>
<u> Under development.....</u>	<u>123</u>
<u>SECTION EIGHT</u>	<u>124</u>
<u>The Theory of Everything (CEN): The Temic Approach</u>	<u>124</u>
<u> Introduction.....</u>	<u>124</u>
<u> What Is the Significance of the TOE Using the Temic Approaches?.....</u>	<u>124</u>
<u> Under development.....</u>	<u>124</u>
<u>SECTION NINE.....</u>	<u>127</u>
<u>Nature of Existence, Space-Time, and Time-Space in Consciousness Mechanics.....</u>	<u>127</u>
<u> Introduction</u>	<u>127</u>
<u> CEN: The Whole of Existence or the Multiverses.....</u>	<u>127</u>
<u> Understanding Soul, Spirit, and Body in Consciousness Physics.....</u>	<u>129</u>
<u> Understanding Existence, Birth, Death, Reincarnation, Heaven, and Hell Using Consciousness Statistics</u>	<u>131</u>
<u> Conclusion</u>	<u>133</u>
<u>SECTION TEN</u>	<u>134</u>

<u>CEN Spectrometry and Spectroscopy</u>	134
<u>Introduction</u>	134
<u>The Physics of Religion (Belief Systems): Understanding Birth, Death, the Big Bang, the Brain, and Consciousness Using Consciousness Statistics</u>	134
<u>CEN Spectrometry and Spectroscopy Involving Interactions between Our Own Universe and Other Universes</u>	134
<u>Under development</u>	134
<u>Conclusion</u>	134
<u>SECTION ELEVEN</u>	135
<u>Ethical Considerations</u>	138
<u>PART IV: APPLICATIONS</u>	140
<u>SECTION ONE</u>	140
<u>Applications and Predictions of the Studies</u>	140
<u>Predictions of Consciousness Physics</u>	140
<u>Breaking of the Current Value of the Speed of Light</u>	45
<u>Expanded EM Spectrum: Discovery of More EM Radiations</u>	45
<u>Existence of Invisible Particles (Dark Matter)</u>	45
<u>Advanced Telescopes and Similar Instruments to See into Other Realms of Earth</u>	45
<u>Applications of Consciousness Physics</u>	45
<u>Transformator for Teleportation</u>	46
<u>SETI: Using Consciousness Telescope to Measure the Level of Consciousness in a Planet</u>	46
<u>Planetary Defense: Using Consciousness Sensor to Detect Alien Life on Earth</u>	47
<u>Communication via Conwaves (Live Meetings/Correspondences)</u>	47
<u>Photocraft: Faster-Than-Light Travel</u>	48
<u>Treating Brain Disorders via Transfer of Consciousness</u>	49
<u>Brain Modelling</u>	49
<u>Using Conwave-Heart Vibrations to Treat Diseases</u>	49
<u>Killing Germs with the Mind</u>	50
<u>Studying Emotion Waves from Trees to Communicate with Them</u>	51
<u>Telepathy: B2B Communication with Reander</u>	51
<u>Mind-Controlled Games</u>	52
<u>Complex Systems Design (Biosynthesis)</u>	52
<u>EOG Space Station</u>	53
<u>Exotic Applications of Consciousness Physics</u>	53
<u>Further Predictions and Limitations of the Study</u>	135
<u>Predictions and Applications of Consciousness Physics</u>	135

<u>CEN Language.....</u>	<u>135</u>
<u>CEN Computer</u>	<u>135</u>
<u>Discovery of Other Universes and Mapping of Times Zones across Them</u>	<u>136</u>
<u>Complex Systems Design Using Tepet from Cosmic Dust/Star Dust</u>	<u>136</u>
<u>COncsciousness Detecting and Ranging System (CODAR).....</u>	<u>137</u>
<u>COncsciousness Lensing: The Eyes of Gaia Consciousness Telescope</u>	<u>137</u>
<u>Dark Matter Telescopes and Microscopes</u>	<u>137</u>
<u>CEN Technologies/Systems</u>	<u>138</u>
<u>Conclusion</u>	<u>138</u>
<u>BIBLIOGRAPHY</u>	<u>141</u>

INTRODUCTION

“Tìbì tìrè lá dá ile ayé”: A Yorùbá proverb meaning, “Life is a union of opposites”, which captures the concept of entanglement, a fundamental feature of reality.

The scientific method is a system invented by man to investigate and determine what is true objectively about Mother Nature as opposed to what is false or only subjectively true. Unlike objective truths, which when examined by people, regardless of their culture, creed, skin color, race, or language, remain unchanged or valid, subjective truths are personal or individual truths, which vary from one person to the other, from one culture to the other, from one race or creed to the other.

The scientific approach of looking at reality has enabled man to invent all kinds of machines and gadgets, ranging from cars, computers, smartphones, microscopes, to airplanes, the Internet, spacecraft, and tons of others. It has allowed humanity to solve various health challenges and enjoy longer life spans with major advances and breakthroughs in medical sciences and related fields, such as Biology, Physics, Chemistry, and others. Within the past 100 years since the Age of Scientific Enlightenment became well established in Europe, Asia, and other parts of the world, many feats that were previously unimaginable in the past eras have been achieved by scientists and engineers, and these inventions have touched — and continue to touch — all spheres of life.

In the scientific paradigm of looking at reality, Physics is a key area, which was previously called Natural Philosophy (Cahan, 2003). From its name, Physics simply provides a scientific approach of studying nature, focusing on the physical aspects — forces, motion, particles, and others. Today, Physics has undergone tremendous development and has evolved into different fields or subfields, each of which deals with one aspect of the physical Universe or the other. Various fields of Physics include Classical Physics, Nuclear Physics, Quantum Physics, Relativity, Particle Physics, Astrophysics, and others, each of which involves studying certain aspects or elements of nature, using specific approaches, all of which are generally called scientific methods.

While these fields have dramatically enhanced our understanding of nature and the Universe as a whole in many ways, the subject of consciousness still remains largely unclear, and a robust physical framework that explores topics such as consciousness, inner world, and related areas is lacking in the mainstream science. This book was written to address this gap and provide solid theoretical frameworks to explain consciousness and related topics objectively.

Based on the Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC) developed by the author, Consciousness Physics is defined as an emerging field of Theoretical Physics that involves studying electromagnetic (EM) waves, which have frequencies lying around and beyond the radio wave segment of the EM spectrum with a focus on consciousness waves (conwaves) possessed by complex systems (living organisms). In animals, including human beings, these conwaves are brain waves because the brain is the seat or organ of consciousness in these complex systems (i.e., hosts). The Conwave Model, which is part of the author's larger TEMIC framework, states that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves from the absolute vacuum to any matter that serves as a host to consciousness.

The fundamental principle of Consciousness Physics based on the TEMIC Model, also called TemFrame, is that the basic building block of the Universe — or the multiverses generally — is consciousness-energy (referred to as cen or CEN in short by the author): Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists; anything else is a picture or interpretation built for us by the brain. This field involves studying Physics at the deepest level of reality, CEN, which is even deeper than the quantum level. CEN is also used as an acronym for the Collective Entanglement, and it usually denotes the Whole of Existence or the Multiverses in these papers, while cen is also used to refer to consciousness-energy, just like CEN, but cen is used often specifically to refer to elements (the entanglements or archetypes) of the Collective Entanglement, CEN.

This book has three parts. Part I presents papers that provide a brief literature review of past studies on the subject and the philosophical basis of Consciousness Physics based on the Temic approaches. Part II contains papers that explain the Physics of Consciousness based on Temic approaches. Part III provides the mathematical basis for Consciousness Physics based on these approaches in what is called Consciousness Mechanics. Consciousness Mechanics has various key areas, including Temic Notation, which is the equivalent of Dirac notation in Quantum Mechanics. But Consciousness Mechanics, along with one of its primary aspects, Temic notation, deals with reality at the deepest level, and so Temic notation generalizes Dirac notation to every possible dimension. By applying the Eight Axioms (the Temic Universal Laws, see Tijani, 2023d), Cayley-Dickson construction, Lagrange theorem in Group Theory, and Hurwitz's theorem, a new algebra called Temic Algebra was developed to explain this Physics: The Physics of Everything, which is another name for Consciousness Physics. Apart

from Temic Algebra, which is a kind of universal algebra, Consciousness Mechanics also contains an aspect called Consciousness Statistics to explain various aspects of this emerging field.

In addition, Part III also explores CEN Spectrometry and Spectroscopy. CEN Spectrometry is a method of studying and measuring the interactions between various EM radiations in the CEN Extended Electromagnetic Spectrum (CEES) and any form of matter (including ordinary matter, dark matter, and others) as well as reactions and measurements of radiation intensity and wavelength. On the other hand, CEN Spectroscopy is the study of the absorption and emission of various EM radiations in the CEN Extended Electromagnetic Spectrum by any form of matter, including ordinary matter (baryonic matter), dark matter (non-baryonic matter), and others. CEN Spectrometry and Spectroscopy are developed as generalizations of the fields of spectrometry and spectroscopy to all possible dimensions and radiations. This section, along with other aspects, explores the Physics of Religion (belief systems), providing a scientific basis for topics such as soul, spirit, reincarnation, heaven, hell, God, and others, and the relationship that exists between these areas and the Big Bang, gravity, the brain, dark matter, dark energy, and others. All these topics are explored under a single theoretical framework, Consciousness Physics, which is the Physics of the Whole of Existence.

Part IV contains applications of Consciousness Physics and Consciousness Mechanics. Due to paucity of funds for the project, many of the mathematical formulations developed for Consciousness Mechanics are hand-drawn, but they will be designed using software soon in future editions of this book. The author's papers contained in this book are research studies in progress, and this point needs to be borne in mind along with the key role that observation and experiments play in the scientific method.

PART I

FOUNDATIONAL ASPECTS

“Observation, reasoning, and experiment make up what we call the scientific method” —

Richard P. Feynman

CHAPTER ONE

Consciousness Travels in Waves — The Conwave Model

Abstract

There are three common approaches to resolving Chalmers' hard problem of consciousness in the academic literature, especially within scientific circles: Consciousness as an emergent property of complex or complicated neuronal computation in the brain; consciousness viewed as spiritual trait or quality of the Universe, which is distinct from purely physical actions; and consciousness composed of discrete 'proto-conscious' events occurring in a manner which obey physical laws of nature that are not yet understood fully. However, for one reason or the other, all three positions are problematic and are not able to address the hard and binding problems of consciousness. The Conwave Model, part of the author's larger *The TEMIC Framework of Reality* (TemFrame), resolves the hard and binding problematic issues in these positions by positing that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called conwaves (consciousness waves) from the absolute vacuum to any matter serving as a host to consciousness.

Keywords: The Hard Problem of Consciousness, Consciousness Waves, Conwaves, Consciousness, Complex Systems, Theoretical Physics, Astrophysics, Big Bang, Biophysics

1.0.Introduction

The wave nature of consciousness explores the possibility that consciousness, which means the subjective experience of being aware, has characteristics and features similar to those of waves in Physics. This notion originated from the intersection of philosophy, neuroscience, and quantum physics. Consciousness is a subject that has been keenly debated by philosophers, thinkers, and researchers for centuries (Descartes, 1644; Edelman, 1993). In ancient traditions, it is regarded as light. Often, religious figures were represented using luminous 'halos' and/or auras. In Hinduism, deities are depicted with luminous blue skin. Individuals that have had 'out of body' and near-death experiences stated that they were attracted toward a 'white light'. In several cultures around the world, people who have 'awakened to the truth about reality' are referred to as 'enlightened'.

Furthermore, in relationships, the phrase 'on the same wavelength' is often used to refer to people that have a strong understanding of each other, sharing connections, similar thoughts, opinions, and perspectives on issues. 'Being on the same wavelength' means these people are in sync with one other as if they were tuned to the same frequency.

In this study, consciousness is regarded as a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves or conwaves from the absolute vacuum to any matter that consciousness interacts with. This notion is what the author refers to as the Conwave Model. To explain the model, the author proposes another theoretical framework called The Emergent Model of Inner-Outer Universe Cosmogony (TEMIC) in an attempt to provide a basis for the Conwave Model. Consciousness exists in two crucial forms: fundamental consciousness and individual consciousness. This research attempts to resolve the hard problem of consciousness formulated by Chalmers (1996; 2007). Among other postulates, this research proposes that nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects of consciousness in these organisms, all of which are complex systems. For instance, in humans, the brain is an aspect of (human) consciousness, and it is the organ/seat of consciousness in these highly evolved animals, where conwaves are brain waves; in plants, information processing and/or signal transmission system is an aspect of (plant) consciousness and is the organ of consciousness in plants. The same thing applies to all other organisms on planet Earth as well and on any other planets in the Universe that may

hold life. Generally, conwaves are EM waves emitted by nervous systems, information processing and signal transmission systems of complex systems, which do vary across different families and types of organisms (Tkačik and Bialek, 2016).

1.1. Aim of the Research

To investigate consciousness, its properties, and types from the perspective of a wave.

1.2. Research Questions

1. What is consciousness, and what is conwave?
2. How does consciousness wave interact with matter, and how are conwaves propagated?
3. What are the properties of conwaves?
4. In animals, does consciousness originate from the brain?
5. Can consciousness exist independently of the brain?
6. Is consciousness electromagnetic in nature?

2.0. What Is Consciousness?

Even though consciousness is a popular subject that has been defined, explained, and debated over the millennia by philosophers and scientists alike, its real nature remains a controversial and mysterious issue (Descartes, 1644; Edelman, 1993; Block, 2007; Hameroff and Penrose, 2014). In particular, the hard problem of consciousness, which inquires why and how human beings have phenomenal experiences (also called qualia), is one of the key aspects of these consciousness debates (Chalmers, 2020). The formulation or postulation of the hard problem of consciousness by Chalmers goes thus: ‘...even when we have explained the performance of all the cognitive and behavioral functions in the vicinity of experience—perceptual discrimination, categorization, internal access, verbal report—there may still remain a further unanswered question: Why is the performance of these functions accompanied by experience?’ (Chalmers, 1995).

According to David Chalmers, people use the term ‘consciousness’ ambiguously to mean many different phenomena (Chalmers, 2007). Some regard it as ‘experience’ (Kant, 1787; Nagel, 1974; Farah, 1990); some use it to mean ‘mind’ (Locke, 1688; von Helmholtz, 1897; Heidegger, 1927, Sahoo, 2016), while others see it as ‘existence’ (Husserl, 1929; Honderich, 2000). Yet, some other people think consciousness is the same thing as ‘conscious awareness’ (Descartes, 1644; Merleau-Ponty, 1945; Carruthers, 2000). A simple definition of

consciousness is given by Webster as ‘the quality or state of being aware especially of something within oneself’ or ‘the state or fact of being conscious of an external object, state, or fact’ (Merriam-Webster, 2023). In the *Principles of Philosophy*, Descartes (1644) defined thought (*pensée*) to mean reflexive consciousness or self-awareness. Later on in the late 17th century, John Locke toed a similar path when he said, in *An Essay on Human Understanding* (1688), that: ‘I do not say there is no soul in man because he is not sensible of it in his sleep. But I do say he can not think at any time, waking or sleeping, without being sensible of it’. Leibniz, who was John Locke's contemporary, gave a theory of mind in his book, *Discourse on Metaphysics* (1686), possibly inspired by his mathematical treatise on calculus (differentiation and integration). This theory gave room for infinitely several degrees of consciousness, with some of them even possibly ‘petites perceptions’ (unconscious thoughts). Leibniz was the first individual to differentiate perception from apperception which roughly means between awareness and lack of awareness (Leibniz, 1686). He believes consciousness is not something that could come from mere matter (Leibniz, 1720).

In spite of Leibniz's notion of the possible existence of unconscious thought, the domains of consciousness and thought were regarded as roughly the same for most of the next 200 years (Van Gulick, 2022). Criticizing the purely associationist approach in the late 18th century, Immanuel Kant (1787) remarked that a proper account of phenomenal consciousness and experience needed a much deeper structure of intentional and mental organization. Kant argued that phenomenal consciousness could not just be a succession of related notions. At a minimum, phenomenal consciousness ought to be the experience coming from a conscious self, which is located in an objective world organized in relation to space, time, and causality.

According to Thomas Reid, consciousness can only be associated with the present state of mind (Yaffe, 2009). G. F. Stout considered consciousness as synonymous with introspection, defining the latter phenomenon as, ‘To introspect is to attend the workings of one's own mind’ (Sahoo, 2016). As for Gilbert Ryle, consciousness is a mental product and is a myth (Sahoo, 2016). Perhaps — as John Searle said — the only idea everyone can all agree on is the intuition that consciousness exists (2005).

In the academic literature, especially within scientific circles, there are three possibilities with regard to the origin of and the place occupied by consciousness in the universe (Mocombe, 2023). The first possibility is consciousness as an emergent property of complex or complicated neuronal computation in the brain (Chalmers, 1996). The second approach is consciousness,

viewed as spiritual trait or quality of the Universe, which is distinct from purely physical actions (Joseph, 2011). The third possibility is consciousness composed of discrete 'proto-conscious' events that occur in ways which obey physical laws that are not yet understood fully (Hameroff and Penrose, 2014).

The first approach lays emphasis on the laws of Classical Physics, positing that consciousness emerges as the by-product of the neural correlates of the physical substrates that are present in the material brain (also called the neural correlates of consciousness or NCCs) (Chalmers, 1996). The other two possibilities can be regarded as post-materialist approaches to gaining an understanding of consciousness, laying emphasis on consciousness emerging as an external phenomenon existing outside of the brain's physical substrates (in the form of panpsychism or panspiritism/cosmopsychism) (Mocombe, 2023). These two post-materialist perspectives make use of the theories and concepts of Quantum Mechanics either to complete the materialistic approach of the first possibility or to establish 14 paranormal and parapsychological (telepathy, near-death experiences, psychic mediumship, out-of-body experiences, telekinesis, and others) as empirical data serving as evidence for the external nature of consciousness (that is, the second approach) which the brain receives (Chalmers, 1996; also see other studies like van Lommel, 2010; Mocombe, 2023).

However, all the three approaches are problematic as they are not able to address the hard and binding problems of consciousness (Chalmers, 1996). Proponents of the materialistic position are not able to account for how NCCs in the material brain bind and produce what we, humans, regard as the phenomenal subjective experience of consciousness. In the same vein, the other two post-materialistic approaches are not able to account for either how panpsychism (consciousness in all things in existence) emerges or combines, or decombines from the cosmos or a god, cosmopsychism, and panspiritism, respectively, and avoiding quantum decoherence in the process, in the material brain thus yielding consciousness (van Lommel, 2010). The Conwave Model, which is part of the larger *The TEMIC Framework of Reality* (TemFrame), also developed by this study's author, resolves the hard and binding problematic issues in these positions by stating that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves or conwaves from the absolute vacuum to any matter that serves as a host to consciousness. Nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or

organs of consciousness in these living organisms (complex systems). For instance, in humans, the brain is an aspect of (human) consciousness, and it is the organ/seat of consciousness in these highly evolved animals, where conwaves are brain waves; in plants, information processing and/or signal transmission system is an aspect of (plant) consciousness and is the organ of consciousness in plants. The same thing applies to all other organisms on planet Earth as well and on any other planets in the Universe that may hold life. Conwaves are generally EM waves emitted by nervous systems, information processing and signal transmission systems of complex systems, which vary across different families and types of organisms (Tkačik and Bialek, 2016).

3.0.Key Concepts

Fundamental consciousness: Fundamental consciousness is a fifth force of nature that is cycled and recycled throughout the Universe as a resonating station or channel of and on a range of frequencies or wavelengths through sentons (a photon), an elementary particle that is massless, neutral (no charge), but has spin and phenomenal properties (qualia). It is a fundamental property of the Universe and non-emergent. Senton is a term adopted from the Sentonic Theory of Fundamental Consciousness (STFC) proposed by NASA scientist Karl Sipfle (2018; 2018a), and the conception of consciousness is developed by adopting some aspects of Mocombe's consciousness field theory (Mocombe 2019; 2019a).

Absolute vacuum: The absolute vacuum is the source of all that is in existence. It is an empty space where space and time do not exist, with all known and unknown fundamental/natural forces, elementary particles, quarks, and constituents of matter existing together essentially as fundamental consciousness and other archetypes. Space-time, matter, and all forces (except fundamental consciousness) emerged via expansions during Big Bangs from the absolute vacuum. These expansions of the absolute vacuum, or of fundamental consciousness, are like explosions radiating consciousness and energy equally in all directions. Thus, Big Bangs can also be defined as expansions or explosions of fundamental consciousness giving rise to individual consciousness in stars, planets, organisms, and others, and fundamental consciousness, being one of the key forces of nature, is driving the expansion.

Senton: A term coined from 'sentience' by Sipfle (2018), senton is a hypothesized elementary particle that acts on particles carrying the consciousness (or sentonic) charge. Sentons are bosons that mediate the fundamental force of consciousness generated by consciousness fields or sentonic fields (Sipfle, 2022). Just like gravitational waves are a consequence of the

curvature of spacetime, or gravity, caused by massive objects and their motion, and electromagnetic waves are a manifestation of the behavior of electromagnetic fields, conwaves are a manifestation of the behavior of consciousness fields or sentonic fields. All these waves transmit energy, information, and momentum, just like other waves, as explained by Georgi (1993). In this study, sentons are regarded as photons as proposed by (Sipfle, 2022). Sentons, as a boson, have an integer spin but no mass and no charge.

Consciousness field: A hypothesized new field for consciousness called the consciousness field that corresponds to a new force particle or boson referred to as the senton (Sipfle, 2018a). A consciousness field is a vector field as it trails off with distance (Sipfle, 2018). It is not a scalar field like the Higgs field.

Individual consciousness: This is a property that emerges from fundamental consciousness and is only exhibited by animate systems for intra-somatic communication or information/signal transport and inter-somatic or information/signal exchange with the environment. Individual consciousness is an emergent property, and on planet Earth, it is a resonating station or channel on the Earth's Schumann wave which is connected to or linked with the absolute vacuum that transmits consciousness to the brain (in the case of animals) via the elementary particle of senton that operates by interacting with other fundamental forces such as the electromagnetic force. This conception draws on the theory of phenomenological structuralism (Mocombe 2016, 2019a, 2021a, 2021b). Nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or expressions of individual consciousness in these organisms. For instance, in humans, the brain is an aspect of human consciousness, a type of individual consciousness, and it is the organ of consciousness in these highly evolved animals; in plants, information processing and/or signal transmission system is an aspect of plant consciousness (a form of individual consciousness) and is the organ of consciousness in plants. The same thing applies to all other organisms on planet Earth as well and on any other planets in the Universe that may hold life. Information processing and signal transmission systems do vary across different families and types of organisms on this planet (Tkačik and Bialek, 2016), just like they may do on other planets in the Universe that hold life.

Mind: Mind is an emergent phenomenon that represents ‘an island of animal or human consciousness’ (Sipfle, 2022, pg. 2), which arises as a product of interactions between

consciousness and other fundamental forces, especially the electromagnetic force (in ions) in the brain. Its seat lies within, at most, a single brain on planet Earth, and it is a special case of individual consciousness, with the brain being the organ of individual consciousness that radiates conwaves.

4.0. The Proposed Physics of Consciousness Waves: The Conwave Model

4.1. Conwave Model Postulates

These are the proposed properties of conwaves:

1. The absolute vacuum essentially contains fundamental consciousness
2. Consciousness is a fundamental, primordial property of the Universe, and it is a natural phenomenon
3. Consciousness travels in waves called consciousness waves (conwaves), transferring energy, momentum, and information
4. Consciousness, like energy, cannot be created nor destroyed but can exist in or be changed from one form or state to another (principle of conservation of consciousness)
5. Consciousness is a fundamental and intrinsic property of the Universe, which matter gains when it attains a certain level of complexity where fundamental consciousness becomes expressed as individual consciousness
6. Nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or seats of consciousness (individual consciousness) in these organisms.
7. Like charge, mass, and spin, consciousness is a fundamental property of certain classes of matter (regarded as animate) in the Universe
8. Conwaves are electromagnetic in nature and are photons/sentons – massless, neutral (no charge)
9. Infinite energy lies within the fabric of fundamental consciousness, making it a self-sustaining phenomenon and property
10. The tem (\AA) is a unit of consciousness energy, and $1\text{\AA} = 1\text{kJ}$, where \AA is a symbol representing tem.

Conwaves do not transfer mass but can be absorbed by mass, such as the human body, animals, plants, stars, and other classes of matter that have attained a certain level of complexity. This

study posits that consciousness is fundamental to the Universe and is one of the fundamental interactions in our Universe (Sipfle, 2018; Mocombe, 2021). In other words, consciousness is a fundamental force, like others, such as the strong force, the electromagnetic force, the weak force, and gravity. All around us, we have consciousness fields (Mocombe, 2019, 2021a), which exist in various distributions in the Universe -- in animals (such as humans), plants, microbes, planets, stars, and others. Just like gravitational waves are a consequence of the curvature of spacetime, or gravity, caused by massive objects and their motion, and electromagnetic waves are a manifestation of the behavior of electromagnetic fields, conwaves are a manifestation of the behavior of consciousness fields or sentonic fields. All these waves transmit energy, information, and momentum, just like other waves, as explained by Georgi (1993).

Consciousness exists in two crucial forms: fundamental consciousness and individual consciousness. This study regards individual consciousness as emergent from fundamental consciousness, which is an intrinsic property of the Universe and as feedback between two worlds: the internal world and the external world. Consciousness allows living entities to communicate and interact with their environment. It is simply encoded information that possesses inherent, self-sustaining energy. Fundamental to the Universe, consciousness is a fundamental property of certain classes of matter (called animate), just like mass, charge, and spin, traveling in waves known as consciousness waves — conwaves in short — which are subtle waves hard to measure and detect. Conwaves are electromagnetic waves like light: They are photons – massless, without any charge. Consciousness, like energy, cannot be created nor destroyed but exists in or can be changed from one state or form to another. This is the principle of conservation of consciousness. Conwaves evolve with time, changing state or form, expanding or contracting. They can be absorbed by a suitable host (with a sufficient level of complexity), frozen in a vacuum, and defrosted or released through the process of superposition of waves or coherence.

When matter (or a system) becomes complex up to a sufficient level, it absorbs or traps consciousness. According to Monin (1992, p. 1), ‘a complex system (CS) is a set of elements, with connections between them, singled out of the environment, capable of getting information from the environment, capable of making decisions (i.e., of choosing between alternatives), and having purposefulness (i.e., an urge towards preferable states or other goals)’. Examples of such systems are viruses, bacteria, insects, birds, animals, plants, moons, planets, stars, galaxies, and so on. ‘Complex’, as used in this context, does not mean ‘large’. For instance, an

ant, despite its minute size, is complex and possesses consciousness, while Mountain Everest is not a complex system in this context and, hence, does not possess consciousness. This implies that 'complexity does not yield consciousness' (Sipfle, 2021, p. 2).

Since, according to the law of conservation of energy, energy cannot be destroyed, consciousness does not die given that it possesses inherent, self-sustaining energy. But when a host is confronted with severe emotional disturbances, such as severe pains, intense love, severe dissatisfaction with the present world or realm, or similar disturbances, the host dies, and its consciousness gets translated or transferred to another realm of existence, which can exist in this universe or a different universe. Thus, the death of the host (the body) does not bring an end to consciousness but only a transition or change in the state of consciousness (a phase transition). This means that death of organisms or other hosts such as stars can be regarded as a phase transition of individual consciousness.

4.2. Key Conwave Variables

Energy: The energy possessed by fundamental consciousness, measured in tems, is infinite, but when the absolute vacuum expands during Big Bangs to create universes, in a process that releases fundamental consciousness into the cosmos, this consciousness gets trapped by matter such as stars, planets, animals, plants, and similar classes of matter that have attained a sufficiently high level of complexity, and the fundamental consciousness becomes individual consciousness in the host with the individual consciousness possessing a specific range of energies (with specific upper and lower limits) corresponding to the range of frequencies of its conwaves. In this study, the author proposes that the individual consciousness, possessed by all animate/living systems on Earth or other planets that could hold life, first exists (after being released from the absolute vacuum as fundamental consciousness) as absorbed in a star before diffusing into the body of the host (such an animal or plant) at an early stage of the host's development. Thus, animal consciousness or plant consciousness, or any other type of consciousness exhibited by living organisms on a planet such as Earth comes from a star in space, just like all other elements that constitute the host's body (The National Aeronautics and Space Administration [NASA], 2022; Sexton, 2022).

On planet Earth, to quantify the energy possessed by individual consciousness (especially animal consciousness) in tems, a possible approach may be the Garyian equation as developed by Kozłowska and Kozłowski (2016) (see Figure 1). The Garyian equation is the equation of, and for, individual consciousness: This is the formula for the elementary value of quantum

energy for brain waves as well as Schumann waves (Kozłowska and Kozłowski, 2016). Φ is the symbol for consciousness, and $f_{(0)}$ is the variable for the resonating station or channel of individual consciousness, which is received from the absolute vacuum.

Figure 1: The Garyian wave equation of individual consciousness

$$\Phi = 10^{-15} \text{ eV}_{(4)} \pm f_{(0)}$$

Source: Kozłowska and Kozłowski (2016)

Frequency: When fundamental consciousness travels in waves (conwaves), it possesses an infinite amount of energy; however, when trapped by any host, the energy becomes tuned to a specific range possessed by the host's individual consciousness. This energy range also operates on a specific range or bandwidth of frequencies. For animal consciousness, a form of individual consciousness, the frequency of the conwaves is given in the Garyian wave equation of individual consciousness as $f_{(0)}$ (see Figure 1).

Wavelength: For fundamental consciousness, this is infinite. But for individual consciousness, it lies within a specific bandwidth or range of wavelengths (see Figure 2). For animal consciousness, the wavelength range, $\lambda_{(0)}$, may be calculated from the Garyian wave equation of individual consciousness as follows:

Figure 2: Wavelengths of conwave from the Garyian wave equation of individual consciousness

$$\lambda_{(0)} = \frac{c}{f_{(0)}}$$

Information: Individual consciousness can be seen as a resonating channel or a bridge/link through which information is sent to a specific organ in a host (in the case of animals, this organ is the brain), with the information giving the host a sense of awareness and phenomenal experience called qualia. In humans, the information flow between the absolute vacuum and the brain via conwaves is responsible for our experiences, and this information is waves such as idea waves (including our thoughts), wish waves (including emotions). Conwaves propagate and transmit information, just like they do energy and momentum.

5.0. The TEMIC Framework of Reality (TemFrame)

Simply known as TemFrame, this framework, within which lies The Emergent Model of Inner-Outer Universe Cosmogony (also called TEMIC), is proposed to incorporate consciousness into science. It seeks to offer some alternative approaches to looking at reality, which may be useful in filling the gaps in the existing bodies of knowledge in Physics (and science generally) and advancing our understanding of the Universe. TEMIC was inspired by studying some philosophical notions of ancient Egypt, especially those of Atum, a chief god of the ancient Egyptians worshipped in the past in Africa.

We might never really be able to understand the Ultimate Reality or develop a Theory of Everything because it appears consciousness and energy is all that exists, and anything else is a product of our brain's interpretation. Concerning the origin of existence, ‘...the standard big bang theory says nothing about what banged, why it banged, or what happened before it banged. The inflationary universe is a theory of the ‘bang’ of the big bang’ (Guth, 1997). In TemFrame, the process of coming to life (a phase transition of consciousness) can be seen as if one is waking up from a lucid dream, as if one is flying away from an inner universe where space-time and gravity do not exist, flying out of a lucid dream to a physical world. Following that line of thought, existence originates in the inner universe, which is a separate dimension (Al-Arashi et al., 2021). While Al-Arashi et al. (2021) call the inner universe the fifth dimension, this study prefers to refer to it as the zero or first dimension. Inner universe is one of the hidden dimensions of nature where the absolute vacuum, the source of all things in existence in The TEMIC Framework of Reality, resides. Inner universes are immaterial worlds or realms of feelings, thoughts, ideas, imaginations, emotions, all occurring below the Planck scale, i.e., space and time do not exist in these worlds.

All living organisms are connected to the inner universes via their organ of individual consciousness. For humans, the realms of these inner universes are inner worlds existing within the brain. For other organisms, the inner universes lie within their nervous systems or respective information processing and/or signal transmission system. In these universes, all events occur at the same time, and making sense of them depends on the power of the observer's brain and the power of the accommodation of their eyes in the case of animals, especially humans. The higher the brain's processing power and the power of the accommodation of the eyes, the more the events (in number and level of details) the observer will be conscious of and can grasp. The absolute vacuum is in the innermost universe within the Beginning prior to the expansions via

the Big Bangs. In this portion of the inner universe (the absolute vacuum), individual consciousnesses exist in a frozen state in the absolute vacuum. The outer universes are physical worlds bound by space and time, for instance, our Universe. Time is relative in the TemFrame, varying from one location, planet, universe to the other, but in some universes (the inner universes), time does not exist at all. Thus, essentially, time is not an absolute quantity.

Our universe is one of the multiple (possibly infinite) universes in existence, and all universes and all things in existence originated via expansions of the absolute vacuum through Big Bangs. These expansions began in an inner universe, with the inner universes having laws of nature distinct from the outer universes like ours. If one were to witness this process, one would conclude all things in existence came from the expansions or explosions of Nothing. Since infinity, everything has always existed. However, everything was held together by fundamental consciousness (a great force) in the absolute vacuum, and this force is a very great source of energy. The outer universes are exact replicas of the inner universes, meaning all the Big Bang processes described in the TEMIC Model have already occurred in the inner universes where space and time do not exist. All processes and phenomena in the outer universes are occurring at the same time in the inner universes, but they can take varying times ranging from milliseconds, hours, days, to months, years, billions of years, and even infinity to manifest in the outer universes, the physical worlds.

5.1. The Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC)


TEMIC is proposed as a framework that provides a theoretical basis for the Conwave Model. It was borne out of the need to incorporate consciousness into science, especially Physics, and in particular to explore the role consciousness, as a natural phenomenon, may have played in the evolution of the Universe. It is hoped this approach will fill in the gaps in the Standard Big Bang Model as well as the Inflationary Big Bang Model, especially as regards accounting for these two much-discussed phenomena, dark energy and dark matter, hypothesized as constituting a significant portion of the energy density of our Universe.


Simply put, The Emergent Model of Inner-Outer Universe Cosmogeny posits that our Universe (an outer universe) emerges (the process occurs infinitely) from an inner universe via expansions or explosions of the absolute vacuum in Big Bangs still occurring till now. The absolute vacuum is the source of all that is in existence. The phase transition of the absolute vacuum from the innermost universe to our current Universe, one of the multiple universes in existence, goes thus: inner universe horizon -> particle horizon (quantum particle and

subatomic structures/matter) -> normal structures, macrostructures, megastructures, and superstructures horizon. The transition is cyclical over eons and epochs. The absolute vacuum is an empty space where space and time do not exist, with all known and unknown fundamental/natural forces, elementary particles, quarks, and constituents of matter existing together essentially as fundamental consciousness and other archetypes. Space-time, matter, and all forces (except fundamental consciousness) emerged via expansions during Big Bangs from the absolute vacuum. These expansions of the absolute vacuum, or of fundamental consciousness in the inner universe, are like explosions radiating consciousness and energy equally in all directions giving rise to homogeneity and isotropy in our Universe. Underpinning the cosmological principle, the homogeneity and isotropy of the Universe on large cosmic scales ensure that the Universe looks the same (on average) to all observers, irrespective of their location (Weinberg, 1977; Singh, 2005). Thus, Big Bangs can also be defined as expansions or explosions of fundamental consciousness giving rise to individual consciousnesses in stars, planets, organisms, and others in the universes, and fundamental consciousness, being one of the key forces of nature (perhaps the most important of all), is driving the accelerated expansions of our Universe. Thus, the energy possessed by the fundamental consciousness force manifests as dark energy. This implies dark energy is an aspect of fundamental consciousness.

5.1.1. Properties of the Absolute Vacuum in the TEMIC Model

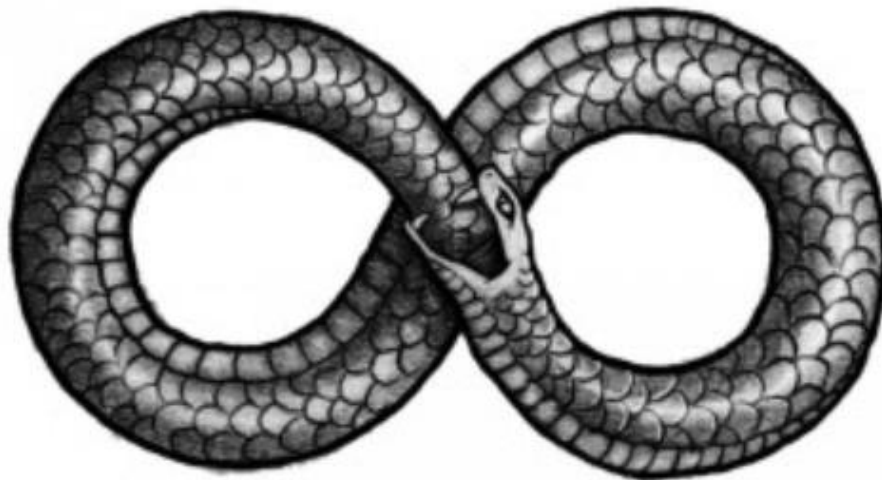
These are the properties of the absolute vacuum in this model:

- The absolute vacuum essentially contains fundamental consciousness of infinite energy, making the vacuum photonic or photon-like in nature
- The absolute vacuum is symbolized by double infinity 
- All things in existence originated via expansions of the absolute vacuum through Big Bangs
- The absolute vacuum lies in the Beginning in the innermost universe
- It contains archetypes of all things in existence
- The Big Bangs started in the absolute vacuum in the inner universe

The absolute vacuum is symbolized with double infinity  because in TemFrame, existence or our Universe has no beginning and no end as existence occurs in cycles infinitely since space and time only exist within the double infinity or the absolute vacuum, not outside of it. Thus,

the double infinity is not bound by space and time since it is photonic in nature. There are two infinities ∞ in the symbol, as its name implies: The two infinities cross each other at the center showing that the outer universes exist infinitely and are exact replicas of the inner universes that also exist infinitely. This symbol is inspired by Ouroboros in ancient Egyptian philosophical notions, meaning a serpent symbolized as representing the cycle of life and death which our Universe maintains (Reemes, 2015). The snake (serpent) eating its own tail depicts the recreation of life via the death of the Universe (Mythologian.net, nd). The double infinity symbol shows space-time in the absolute vacuum is infinite.

Figure 3: Egyptian Ouroboros



Source: Mythologian.net (nd).

5.1.2. Postulates of the TEMIC Model

Outlined below are the postulates of The Emergent Model of Inner-Outer Universe Cosmogeny:

- All things in existence are manifestations of the absolute vacuum, which is in the innermost universe, and the absolute vacuum (consciousness and energy) is really all that exists
- Our universe is one of the multiple (possibly infinite) universes in existence, and all universes and all things in existence originated via expansions of the absolute vacuum through Big Bangs

- The Universe (or any universe) does not occupy space and is not bound by time, i.e., space-time only exists within the Universe, not outside of it
- The Universe is neither open nor closed because it is not bound by space, meaning its size is infinite
- The energy of the universe, when measured, is infinite
- There are inner universes and outer universes: The outer universes are exact replicas of the inner universes

The TEMIC Framework of Reality and the TEMIC model are discussed in detail in subsequent research.

6.0.How Consciousness Interacts with Matter: Conwaves Propagation

When conwaves interact with matter, a process known as consciousness absorption can occur. Consciousness absorption is a kind of photonic absorption. Based on the type of matter that absorbs fundamental consciousness to give rise to individual consciousness in the host, the emergent individual consciousness belongs to different categories or forms. Conwaves are propagated via sentons (photons). Using the STFC model, the consciousness/sentonic field is a vector field propagated by sentons. The key to detecting conwaves and measuring the mind is in understanding how this field interacts with other vector fields generated by the other fundamental forces, particularly in the human brain. Also, a study of how conwaves interact with other waves can provide a clue as regards measuring the mind and detecting conwaves. This is one of the predictions of the Conwave Model. Conwaves are predicted as a manifestation of the behavior of consciousness fields, just like gravitational waves are a consequence of the curvature of spacetime, or gravity, caused by massive objects and their motion, and electromagnetic waves are a manifestation of the behavior of electromagnetic fields.

7.0.Conclusion

In the academic literature, especially within scientific circles, there are three approaches to resolving the hard problem of consciousness. However, for one reason or the other, all the three approaches are problematic and are not able to address the hard and binding problems of consciousness. The Conwave Model, part of the larger *The TEMIC Framework of Reality* (TemFrame), also formulated by this study's author, resolves the hard and binding problematic issues in these positions by stating that consciousness is a fundamental, intrinsic, and

primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called conwaves (consciousness waves) from the absolute vacuum to any matter serving as a host to consciousness. Nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects of consciousness in these living organisms (complex systems). Further research on the subject will develop the TEMIC Framework of Reality and examine other related areas such as types of consciousness, the evolution of stellar consciousness, communication mechanisms via conwaves, and others.

CHAPTER TWO

The Origin of Consciousness: The TEMIC Framework of Reality

Abstract

This study proposes the TEMIC Framework of Reality (TemFrame), which is a set of approaches, including The Emergent Model of Inner-Outer Universe Cosmogony (TEMIC), the Conwave Model, and archexpansion/archexplosion, to incorporating consciousness into science, particularly Physics, and resolving some issues, such as dark energy and dark matter, with the Standard Big Bang Model. In TemFrame, the absolute vacuum is the origin or source of all that is in existence. Symbolized with double infinity ∞ , it is a coagulation known as the Beginning, which exists in a primordial universe (the innermost universe), which was the first universe to exist. According to the TEMIC Model, our Universe emerges from an inner universe via expansions or explosions of the absolute vacuum in Big Bangs still occurring till now, and these processes occur infinitely in cycles. TemFrame is proposed to provide a theoretical basis for the Conwave Model and to incorporate consciousness into Physics, highlighting the role the natural phenomenon of consciousness might have played in the evolution of our Universe, an outer or physical universe. Big Bangs can also be defined as expansions or explosions of fundamental consciousness that produce individual consciousnesses in stars, planets, living organisms, and others in the universes, with fundamental consciousness, one of the key natural forces — perhaps the most important of all — driving the accelerated expansion of this Universe. In TemFrame, what exists beyond the singularity when spacetime collapses or tears down due to intense gravity is the zero dimension or the inner universe, which are non-physical realms or worlds. The Conwave Model states that consciousness is a fundamental, primordial, and intrinsic property of the Universe, which transmits information and energy traveling in waves called consciousness waves (known in short as conwaves) from the absolute vacuum to matter that serves as a host to consciousness.

Keywords: Astrophysics, Cosmology, Cosmogony, Consciousness Waves, Conwaves, Consciousness, Complex Systems, Theoretical Physics, Big Bang, Biophysics

1.0. Introduction

As far as recorded history shows, humans have long debated and pontificated about the origin of the Universe or cosmos. The question of how everything in the Universe came to be has fascinated philosophers, religious people, thinkers, scientists, and others over the ages, beginning in antiquity, the ancient Egyptians and Babylonians, through to the ancient Greeks, all the way to modern times. Cosmogony encompasses various myths, conjectures and speculations, hypotheses, theories, and concepts proposed by different religions, philosophies, cultures, and scientific disciplines regarding the origin of the Universe or cosmos.

In this study, cosmogony is presented and approached as a scientific problem. It is regarded as synonymous with "cosmogony" and refers to the study of the origin and formation of the Universe (Woolfson, 1979; Ridpath, 2012). Thus, "cosmogony" and "cosmogony" are used interchangeably in this research. The Big Bang theory is the prevalent or dominant cosmological model that explains the early development of the Universe (Wollack, 2010). Apart from the Standard Big Bang Model, other related theories, such as the Inflationary Big Bang Model, were also developed to address one flaw or the other in the Big Bang Model. This research proposes the TEMIC Framework of Reality (TemFrame): A set of approaches, including The Emergent Model of Inner-Outer Universe Cosmogony (TEMIC) and the Conwave Model, to incorporating consciousness into science, especially Physics, and resolving key issues, such as dark energy and dark matter, with the Standard Big Bang Model.

Reality is a product of the interplay of natural forces in our inner worlds — of thoughts, feelings, and emotions — and outer worlds of physicality. In the context of this research, reality is regarded from a physical viewpoint. The TEMIC model states that our Universe emerges from an inner universe via expansions or explosions of the absolute vacuum in Big Bangs still occurring till now, and these processes occur infinitely in cycles (Tijani, 2023). The theoretical framework is proposed to provide a theoretical basis for the Conwave Model and to incorporate consciousness into Physics, highlighting the role the natural phenomenon of consciousness could have played in the evolution of our Universe.


The Conwave Model posits that consciousness is a fundamental, primordial, and intrinsic property of the Universe, which transmits information and energy traveling in waves called consciousness waves (known in short as conwaves) from the absolute vacuum to matter that serves as a host to consciousness (Tijani, 2023). The information transmitted by conwaves yields self-awareness, awareness of the surroundings, and experience in the host. One of the

postulates of the Conwave Model is that nervous systems in highly evolved organisms (such as brains in animals), signal transmission and/or information processing systems in micro-organisms, plants, and other living organisms are organs or aspects of consciousness in these creatures (complex systems). For example, in higher animals such as humans, the brain is the organ of (human) consciousness; in plants, their signal transmission and/or information processing system is their organ of consciousness. The same applies to all other living organisms on Earth and any other planets that could hold life in the Universe.

2.0. The Hypotheses of the Study and Results

2.1. The TEMIC Framework of Reality

The TEMIC Framework of Reality, known in short as TemFrame, is a set of approaches, such as The Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC) and the Conwave Model, to incorporating consciousness into science, particularly Physics, and resolving key issues, such as dark matter and dark energy, with the Standard Big Bang Model. TemFrame seeks to provide TEMIC, Conwave Model, and others as alternative approaches to looking at reality, and these could be useful in filling the gaps in the current bodies of knowledge in Physics and enhancing our understanding of the Universe. The inspiration to develop the TEMIC Model came from some philosophical notions of ancient Egypt, especially those of Atum, who was one of the major deities worshiped by the ancient Egyptians in Africa in the past.

The absolute vacuum is the source or origin of all that is in existence. Also, it is a coagulation called the Beginning which exists in a primordial universe called the innermost universe, which was the first universe to exist. Symbolized with double infinity , the absolute vacuum possesses an infinite amount of energy with all things existing within it in a frozen state as a coagulation held together by fundamental consciousness, one of the forces of nature and a very great source of energy. This coagulation was broken by fundamental consciousness, and fundamental consciousness caused the absolute vacuum to explode, with individual consciousnesses, space, time, light, matter, forces, and others being products of this explosion.

In TemFrame, the process of coming to life is a phase transition or translation of consciousness. This process appears as if one is waking up from a lucid dream, flying away from an inner universe in which space-time and gravity do not exist, flying out from dreamland to a physical world. From this perspective, existence originates in the innermost universe (one of the inner

universes), which is a separate dimension, according to Al-Arashi et al. (2021). While these authors call the inner universe the fifth dimension (Al-Arashi et al., 2021), this study refers to it as the zero dimension or first dimension. Inner universe, or the zero dimension, is one of the hidden dimensions of nature in which the source of all things in existence in TemFrame, the absolute vacuum, resides. Inner universes are immaterial realms or worlds of feelings, imaginations, ideas, thoughts, emotions, all of which occur below the Planck scale. Thus, space-time does not exist in these realms.

All living organisms on Earth or other planets that may hold life are connected to the inner universes with their organ of individual consciousness. For human beings, these inner universes are inner worlds or realms that exist within the brain. When we close our eyes, we see the inner universes; thus, humans see the inner universes when they meditate and when they sleep. Our brains are the inner universes. Every human has an inner self in the inner universe and an outer self in the outer or physical Universe. The same thing applies to all other living organisms. For humans, connecting with the inner universe is a function of the mind, not the body. Meditation can allow an individual to access different realms in the inner universe because when a person meditates, their consciousness, which travels as waves, according to the Conwave Model (see section 2.3.), can get lifted into or connected to these realms via superposition of waves.

For humans, when two or more consciousness waves are in phase (i.e. they have the same frequency, and their corresponding points reach the same position simultaneously), these humans can experience the same reality. Two or more humans can experience the same realm or reality in the inner universe when their conwaves are in phase with each other and with the frequency of vibration of the specific realm in question. When the frequency of the heartbeats and breath of a person matches that of another human and any specific realm in the inner universe, these two people can experience a shared reality in this same realm via the principles of superposition of waves and interference. Thus, it is possible for humans to explore realms in the inner universe as a group if they can tune to a specific frequency of heartbeat and breath that matches one of the natural frequencies of vibration of such realms. In Temframe, due to its photonic nature, consciousness exists or experiences life (when absorbed by organisms/hosts) in all realms/worlds at the same time (whether in inner universes or outer universes), and the heart is responsible for tuning conwaves of hosts into seeing and remembering those things that the hosts did in other universes.

Both the inner universe and the outer Universe determine our realities as humans. Our outer universes are exact replicas of our inner universes. Just like in the physical Universe, which is an outer universe, matter also seems to exist in the inner universes, which appear to us as lucid or clear dreams. The things a person (an observer) sees in dreams appear physical and concrete because during the dreams, the observer strongly has the feelings that the things they touch are concrete and physical. For instance, when they stumble upon a stone in a lucid dream, they strongly feel the stone is a physical stone. When water splashes on their body in the dream, they strongly feel the wetness of the water on their skin and might even feel cold in that dream. All this is interpretation of the observer's brain as consciousness and energy is really all that exists.

For other living organisms, their nervous systems or respective information processing and/or signal transmission systems are the inner universes. Thus, the inner universes for these creatures lie within their nervous systems or respective information processing and/or signal transmission systems. All events take place at the same time in these universes, and in the case of animals, such as humans, making sense of events depends on the power of the observer's brain and the power of accommodation of their eyes. The higher the processing power of the brain and the power of accommodation of the eyes, the more the events (in level of details and number) the observer can grasp, be conscious of, and remember. Individual consciousness or the inner self of a host moves at the speed of light in the inner universes like photons, with all events, processes, and phenomena occurring at the same time in these realms. The absolute vacuum lies within the innermost universe within the Beginning prior to the expansions or explosions through the Big Bangs. In this innermost universe (the absolute vacuum), individual consciousnesses exist within the absolute vacuum in a frozen state. As for the outer universes, these are physical worlds that are bound by space-time, such as our Universe — a physical universe. In TemFrame, time is relative as it varies from one location, region, planet, or universe to the other. However, in some universes (the inner universes specifically), time does not exist at all. Therefore, time is essentially not an absolute quantity.

Our Universe is one of the multiple universes in existence, and these universes could be infinite in number. All universes and all things in existence emerged through expansions of the inner universe (or the absolute vacuum), a primordial universe, via Big Bangs. These expansions started in the innermost universe, and the laws of nature in these inner universes are distinct from those of outer universes like ours. The origin of existence lies in things which exist but

cannot be seen: the absolute vacuum. Thus, if one were to witness this process (Big Bang expansions), one would conclude all things in existence emerged or evolved from the expansions or explosions of Nothing. Since infinity, all things have always existed in one form or the other. But everything was held together by a great force, fundamental consciousness, in the absolute vacuum. Fundamental consciousness is a natural force, which is a very great source of energy. In TemFrame, the outer universes are exact replicas of the inner universes, which means all the Big Bang processes and events described in the TEMIC Model have already taken place in the inner universes in which space-time does not exist (Tijani, 2023). All events, processes, and phenomena in the outer universes are taking place simultaneously in the inner universes, which are non-physical in nature. However, they can take varying times which range from milliseconds, hours, days, months, to years, billions of years, and even infinity to manifest in the physical or outer universes.

2.1.1. The Emergent Model of Inner-Outer Universe Cosmogeny

The Emergent Model of Inner-Outer Universe Cosmogeny, known as TEMIC in short, is one of the approaches in the TEMIC Framework of Reality that seeks to incorporate consciousness into Physics and, particularly, to explore the role which consciousness, being a natural phenomenon, could have played in the evolution of our Universe. TEMIC is proposed as a theoretical framework that offers a theoretical basis for the Conwave Model (Tijani, 2023) (see section 2.3.). The author hopes that this approach will fill the gaps in these two key Big Bang models: the Standard Big Bang Model as well as the Inflationary Big Bang Model. TEMIC attempts to resolve gaps in the scientific understanding of dark energy and dark matter, which are hypothesized as constituting a significant portion of the Universe energy density.

Postulates of the TEMIC Model

Here are the postulates of The Emergent Model of Inner-Outer Universe Cosmogeny:

- All things in existence are manifestations of the absolute vacuum, and the absolute vacuum (consciousness and energy) is all that really exists
- Our Universe is one of the multiple universes in existence, and these universes could be infinite in number. All universes and all things in existence emerged through expansions of the inner universe (or the absolute vacuum), a primordial universe, via Big Bangs

- Space-time only exists within the Universe, not outside of it, i.e., our Universe (or any universe) does not occupy space and is not bound by time
- The Universe is infinite in size, meaning it is neither open nor closed because it is not bound by space
- The energy of Universe, when measured, is infinite
- There are inner universes, and there are outer universes, with the outer universes being exact replicas of the inner universes

The Emergent Model of Inner-Outer Universe Cosmogeny states that the Universe (an outer/physical universe) emerges (the process takes place infinitely) from an inner universe through explosions or expansions of the absolute vacuum in Big Bangs that are still occurring at the moment. The origin or source of all that is in existence is the absolute vacuum, and the phase transition of the absolute vacuum from the innermost universe to this current Universe, one of the multiple universes existing, is as follows: inner universe horizon -> singularity -> particle horizon (quantum particle and subatomic structures/matter) -> normal structures, macrostructures, megastructures, and superstructures horizon (Tijani, 2023). This transition occurs in cycles over eons and epochs. As its name implies, the absolute vacuum is an empty space; it is not bound by space-time, and all known and unknown natural or fundamental forces, elementary particles, quarks, and other constituents of matter exist together essentially as fundamental consciousness and other archetypes. Matter, space-time, and all forces (except fundamental consciousness) emerged through expansions or explosions during Big Bangs from the absolute vacuum. These expansions of the innermost universe (the absolute vacuum), or of fundamental consciousness in the inner universe, are like explosions that radiate consciousness and energy equally in all directions, which results in homogeneity and isotropy in this Universe. These underpin the cosmological principle, which states the Universe is homogeneous and isotropic on large cosmic scales, meaning that on large scales, this Universe looks the same to all observers on average, irrespective of where the location may be (see Weinberg, 1977; Singh, 2005). Therefore, we can also define Big Bangs as expansions or explosions of fundamental consciousness that produce individual consciousnesses in stars, planets, living organisms, and others in the universes, with fundamental consciousness, one of the key natural forces — perhaps the most important of all — driving the accelerated expansion of this Universe (Tijani, 2023). Thus, the energy possessed by the fundamental consciousness force, measured in tems,


manifests as what is called dark energy, meaning dark energy is an aspect of fundamental consciousness (Tijani, 2023).


Inner Universe and Singularity: What Exists Beyond the Singularity?

Our universe is one of the products of the Big Bang expansions of the innermost universe, where the coagulation called the Beginning, or the absolute vacuum, is. These Big Bangs are still occurring in this inner universe where space-time has no meaning. As our Universe in its current state originated via expansions, which are still occurring, it is possible to extrapolate back in time to the beginning of the Universe about 13.8 billion years ago, based on the current estimates (National Aeronautics and Space Administration [NASA], 2006; Planck Collaboration, 2020), where this physical Universe started from a singularity. According to Curiel (2023, p. 1), “a spacetime singularity is a breakdown in spacetime, either in its geometry or in some other basic physical structure”. This implies that a singularity — also called a spacetime singularity — is essentially not part of the regular spacetime any longer and so cannot be determined or specified by "where" or "when" (Alan, 2005). At the edge of spacetime, gravity is so intense that it would make spacetime itself catastrophically break down (Curiel, 2023). Thus, what exists beyond the singularity when spacetime collapses or tears down in this manner is the zero dimension or the inner universe, which are non-physical realms or worlds.

Properties of the Absolute Vacuum in the TEMIC Model

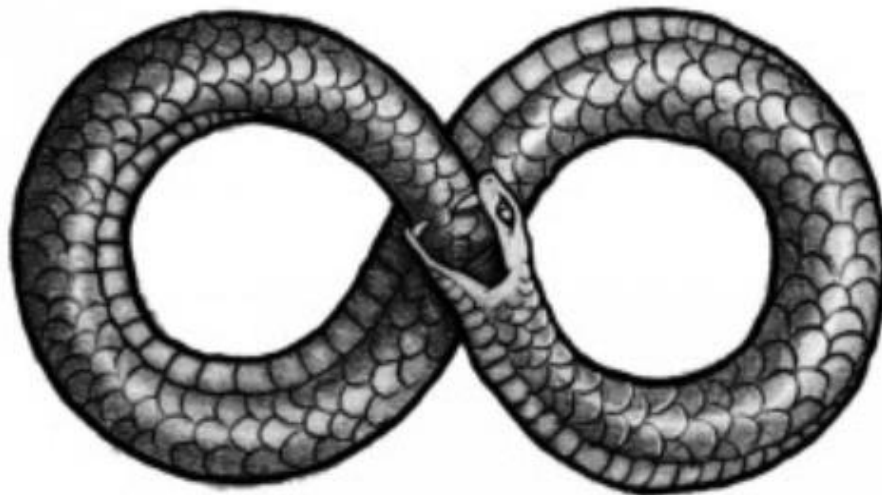
From the TEMIC perspective, outlined below are the properties of the absolute vacuum:

- The absolute vacuum is symbolized or depicted with double infinity 
- Essentially, the absolute vacuum contains fundamental consciousness that possesses infinite energy, which implies the vacuum is photon-like or photonic in nature
- All things in existence have their origin in the innermost universe through expansions of the absolute vacuum via Big Bangs
- The absolute vacuum is in the innermost universe or the Beginning
- In the vacuum are archetypes of all things in existence
- The Big Bangs began in the absolute vacuum which is in the inner universe

In TemFrame, the absolute vacuum is symbolized with double infinity  since existence or this Universe does not have a beginning and end, with existence occurring in cycles infinitely

(Tijani, 2023). Space-time only exists infinitely within the absolute vacuum (the double infinity), not outside of it. This means that the double infinity is not bound or restricted by space-time because of its photonic nature. In the double infinity symbol are two infinities ∞ , with these two infinities crossing each other at the center, which shows the outer universes exist infinitely, and they are exact replicas of the inner universes (also existing infinitely). The inspiration for this symbol came from Ouroboros in ancient Egyptian philosophical notions. In these notions, Ouroboros represents a serpent that is symbolized as representing the cycle of life and death that this Universe maintains, according to Reemes (2015). The snake (i.e., the serpent) eating its own tail stands for the recreation of life through the death of our Universe (Mythologian.net, nd). From the double infinity symbol of the absolute vacuum, it can be deduced that space-time is infinite in the absolute vacuum. The absolute vacuum is what “banged” in the Standard Big Bang model and is the source of the multiverses.

Figure 1: Egyptian Ouroboros



Source: Mythologian.net (nd)

Figure 2: Egyptian Ouroboros



Source: Blackfeather (2023)

2.2. Archexpansion or Archexplosion: Expansion or Explosion of Archetypes

In TemFrame, the absolute vacuum is what banged in Big Bangs occurring infinitely in the inner universe to create an infinite number of universes or the multiverses. In the coagulation called the absolute vacuum or the Beginning, all things existed in a frozen state as archetypes. These archetypes include Fundamental Consciousness, Matter, Space-Time, Mass, Antimatter, Light, and others. When the absolute vacuum expands or explodes to create universes, we can say that it is the constituents or contents of this vacuum, which are the archetypes, that are really expanding. “Archetype”, as used in this context, means the summation or aggregate of each category of contents of the absolute vacuum. It can also mean "prototype". In this context, each aggregate is a summation or superposition of each category of contents of the absolute vacuum, with each aggregate existing as a single matrix. For instance, Matter is one of the archetypes or matrices in the absolute vacuum and expands or explodes to yield more and more matter in the outer universes. Thus, all forms/states of matter in the absolute vacuum exist as a single matrix. The same thing applies to Fundamental Consciousness which expands or explodes to yield more and more consciousnesses (individual consciousnesses) in the outer universes. The expansion or explosion of Fundamental Consciousness in the inner universe via Big Bangs is a process where Fundamental Consciousness, as an archetype, diffuses into the outer universes to yield individual consciousnesses. The archetype, Space-Time, began in the

innermost universe from a little space-time, and this expands infinitely to yield or birth larger and larger space-times in the outer universes.

The phenomenon or process of expansion or explosion of these archetypes is what is called archexpansion or archexplosion. By picturing Big Bang in this manner (as explosion or expansion of archetypes), a physical basis can be developed for the emergence of individual consciousnesses in an outer universe like our Universe from Fundamental Consciousness in the inner, primordial universe, as stated in the Conwave Model (see section 2.3.).

2.3. The Conwave Model

This model states that consciousness is a fundamental, intrinsic, and primordial property of the Universe transmitting information (self-awareness, awareness of the surroundings, experience) and energy that travel in waves known as conwaves or consciousness waves from the absolute vacuum to any matter serving as host to consciousness. “Conwave” is a term coined by the author from “consciousness” and “wave”. Among other postulates, the Conwave Model proposes that nervous systems (for example, brains in animals) in relatively highly evolved living organisms, information processing and/or signal transmission system in plants, micro-organisms, and other living organisms or creatures are aspects of consciousness in the creatures. All these organisms are complex systems (Tijani, 2023). For example, in higher animals such as humans, our brain is an aspect of (human) consciousness, meaning it is our organ of consciousness; in plants, information processing and/or signal transmission system is an aspect of plant consciousness, and it is their organ of consciousness. The same applies to all other living organisms on this planet and on any other planets in this physical Universe that could hold life.

2.3.1. Conwave Model Postulates

Outlined below are the proposed properties of conwaves in this model:

1. Essentially, the absolute vacuum contains fundamental consciousness
2. Consciousness travels in waves known as consciousness waves, and these conwaves transfer or propagate energy, momentum, and information
3. Consciousness is a fundamental and primordial property of our Universe; it is a natural phenomenon

4. Just like energy, consciousness cannot be created or destroyed but can be changed from one state or form to another (conservation of consciousness)
5. Consciousness is a fundamental and intrinsic property of the Universe that matter gains once it attains a certain level of complexity in which fundamental consciousness becomes expressed in the form of individual consciousness
6. Nervous systems (including brains in animals) in relatively highly evolved living organisms, information processing and/or signal transmission system in plants, microbes, and other creatures are aspects of consciousness (specifically, individual consciousness) in the living organisms
7. Conwaves are photons/sentons, meaning they are electromagnetic in nature (massless, neutral/no charge), hard to detect and measure
8. Consciousness — just like mass, charge, and spin — is a fundamental property of specific classes of matter (referred to as animate) in this physical Universe
9. Within the fabric of fundamental consciousness lies infinite energy, meaning consciousness is a self-sustaining phenomenon and property
10. The tem (\AA) is a unit of consciousness energy, with $1\text{\AA} = 1\text{kJ}$ (\AA is a symbol of tem)

2.3.2. The Proposed Physics of Consciousness Waves

Individual consciousness in our Universe, or any other universe, emerges from Fundamental Consciousness that archexpands or archexplodes in the innermost universe. "Archexpands" or "archexplodes", in this context, means an archetype "expands" or "explodes". From the law of conservation of energy, energy cannot be destroyed; in the same vein, consciousness does not die as it possesses inherent and self-sustaining energy. But it can change from one form to the other. This is the conservation of consciousness. When a host is confronted with severe emotional disturbances in the form of severe pains, intense/deep love, severe dissatisfaction with the present realm/world, or other such disturbances, the host experiences death, with their consciousness transferred or translated to another realm of existence. Such a realm can exist in this universe or a different universe. Thus, the death of a host (i.e., the body) does not cause an end to consciousness but only a change or transition in the state of consciousness. This means that death in the Conwave Model can be defined as a phase transition or translation of (individual) consciousness (Tijani, 2023). Therefore, the death of organisms or other hosts, including stars, is a kind of phase transition or translation of consciousness (Tijani, 2023).

When consciousness waves interact with matter, consciousness absorption can take place. Consciousness absorption is a process, a type of photonic absorption, which occurs when matter traps consciousness. Depending on the type of matter (host) that absorbs fundamental consciousness from which individual consciousness emerges in the host, this emergent individual consciousness can belong to various types or categories. The types of individual consciousness include stellar consciousness, animal consciousness, plant consciousness, microbial consciousness, planetary consciousness, and universal consciousness. When conwaves interact with matter, they do not transfer mass. But they can be absorbed by mass (matter), including stars, the human body, animals, plants, and other classes of matter, which have attained a certain level of complexity.

When matter (or a system/host) attains complexity up to a sufficient level, it traps or absorbs fundamental consciousness. “A complex system (CS) is a set of elements, with connections between them, singled out of the environment, capable of getting information from the environment, capable of making decisions (i.e., of choosing between alternatives), and having purposefulness (i.e., an urge towards preferable states or other goals)” (Monin, 1992, p. 1). Examples of such systems include stars, galaxies, planets, animals, plants, planets, bacteria, viruses, insects, birds, and so on. In this context, “complex” does not mean “huge” or “large”. For example, an ant, in spite of its minute size, is a complex system and possesses (individual) consciousness, but in this context, Mountain Kilimanjaro is not a complex system, and, hence, it does not possess consciousness. Therefore, “complexity does not yield consciousness”, according to Sipfle (2021, p. 2).

The Conwave Model posits that consciousness is fundamental to our Universe and is among the fundamental interactions in this physical Universe (Sipfle, 2018; Mocombe, 2021). This implies that consciousness is a fundamental or natural force, just like the strong nuclear force, the weak nuclear force, the electromagnetic force, and gravity. There are consciousness fields all around us (Mocombe, 2019, 2021a), existing in various distributions in the Universe, in stars, planets, animals, plants, microbes, and others. Gravitational waves are a consequence of gravity, or the curvature of spacetime, that is caused by massive objects and their motion; electromagnetic waves are a manifestation of the behavior or effects of electromagnetic fields; in the same vein, conwaves, or consciousness waves, are a manifestation of the behavior or effects of sentonic/consciousness fields (Tijani, 2023). All these waves propagate and transmit energy, information and momentum, like other waves, as stated by Georgi (1993). There are

two key forms that consciousness exists in — fundamental consciousness and individual consciousness. In the Conwave Model, individual consciousness is emergent from fundamental consciousness, with the latter being an intrinsic property of our Universe. Consciousness is feedback between the internal world and the external world.

3.0. Conclusion

Reality is a product of the interplay of natural forces in our inner worlds — of feelings, thoughts, imaginations, and emotions — and our outer worlds of physicality. This study proposes the TEMIC Framework of Reality (TemFrame), which is a set of approaches, including The Emergent Model of Inner-Outer Universe Cosmogony, the Conwave Model, and archexpansion/archexplosion, to incorporating consciousness into science, particularly Physics, and resolving some issues, such as dark energy and dark matter, with the Standard Big Bang Model. In TemFrame, the absolute vacuum is the origin or source of all that is in existence. Symbolized with double infinity ∞ , it is a coagulation known as the Beginning, which exists in a primordial universe (the innermost universe), which was the first universe to exist. According to the TEMIC Model, our Universe emerges from an inner universe via expansions or explosions of the absolute vacuum in Big Bangs still occurring till now, and these processes occur infinitely in cycles. TemFrame is proposed to provide a theoretical basis for the Conwave Model and to incorporate consciousness into Physics, highlighting the role the natural phenomenon of consciousness might have played in the evolution of our Universe, an outer or physical universe. As for the Conwave Model, this states that consciousness is a fundamental, primordial, and intrinsic property of the Universe, which transmits information and energy traveling in waves called consciousness waves (known in short as conwaves) from the absolute vacuum to matter that serves as a host to consciousness. Further research related to the subject will explore the types of consciousness, communication mechanisms via conwaves, the evolution of stellar consciousness, objectivity and subjectivity, and other related areas.

CHAPTER THREE

Astrogenesis and Consciousness: The Role of Consciousness in the Evolution of Life

Abstract

Questions about the origin of life on Earth and whether life exists on other planets are controversial. Evolution is a complex process, and in this research, it is postulated that consciousness plays an essential role in the evolution of life on Earth and on any planet with life. In TemFrame, the seeds of life are consciousness and stardust/cosmic dust, both of which find their way into a planet such as Earth from dying stars in space. In the Temic approach, the evolution of life on Earth (or possibly other planets) can occur from either astrobiogenesis, the process where life evolves on a planet from the contents of a dying star, or biosynthesis, the process of synthesizing a complex system that holds life (i.e., a living organism) from organic and inorganic matter. Apart from variation, inheritance, and natural selection mechanisms, evolution is also driven by the natural force of consciousness. In TemFrame, the origin of life or living organisms on any planet is stars in the region where the planet's solar system travels through.

Keywords: Astrophysics, Consciousness, Consciousness Waves, Conwaves, Complex Systems, Theoretical Physics, Biophysics

1.0. Introduction

In the first part of this research project, the Conwave Model was developed, which states that consciousness is a fundamental, intrinsic, and primordial property of the Universe transmitting information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves or conwaves from the absolute vacuum to any matter that consciousness interacts with (see Tijani, 2023). To provide a physical basis for this theory, The Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC) within the larger TEMIC Framework of Reality (TemFrame) was formulated in the second part of the project (see Tijani 2023a). The TEMIC Model posits that the Universe, which is an outer or physical universe, emerges (the process is taking place infinitely) from an inner universe via Big Bang explosions or expansions of the absolute vacuum, and these Big Bangs are still occurring till now (Tijani, 2023a). Among other objectives, these theoretical frameworks were developed as part of TemFrame to incorporate consciousness, which is a natural phenomenon, into Physics. The TEMIC Framework of Reality is a set of frameworks, such as the TEMIC Model, Conwave

Model, and others, that provide alternative approaches to looking at reality from a physical viewpoint (Tijani, 2023a).

The Conwave Model, among other postulates, proposes that nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or organs of consciousness in these organisms, which are all complex systems (Tijani, 2023). For example, in humans, the brain is an aspect of (human) consciousness, and it is the organ of consciousness in these higher animals; in plants, information processing and/or signal transmission system is an aspect of (plant) consciousness and is the organ of consciousness in plants (Tijani, 2023). The same applies to all other organisms on planet Earth as well and on any other planets in the Universe that may hold life. Information processing and signal transmission systems do vary across different families and types of living organisms or living creatures (Tkačik & Bialek, 2016).

Consciousness exists in two basic forms: These are fundamental consciousness and individual consciousness. Fundamental consciousness is a fifth force of nature, which is cycled and recycled throughout the Universe as a resonating station or channel of and on a range of frequencies or wavelengths via sentons (a photon), an elementary particle that is massless, neutral (no charge), but has spin and qualia (which are phenomenal properties) (Sipfle, 2018, 2018a; Mocombe, 2019, 2019a). On the other hand, individual consciousness is an emergent property, and on this planet, it is a resonating station or channel on the Earth's Schumann wave, which is connected to or linked with the absolute vacuum transmitting consciousness to the brain (in the case of animals) via the elementary particle, senton, which operates by interacting with other fundamental forces such as the electromagnetic force (Sipfle, 2018; Mocombe, 2019). There are various forms or types of individual consciousness, including stellar consciousness, planetary consciousness, animal consciousness, plant consciousness, and others. This study, which is the third and concluding part of the research project, explores the various types of individual consciousness that matter (host) possesses. Also, it examines the evolution, birth, and death of organisms on a planet such as Earth and how these processes are connected or related to the evolution, birth, and death of stars in the cosmos. As regards human consciousness, a form of animal consciousness, the study examines the link between astrogenesis, or the process of star formation, and astrogenesis (the process of astrocyte formation during brain development) and neurogenesis, or the process of formation of new neurons in the brain (Kanski et al., 2014; Mira & Morante, 2020). Also, it explores the

evolution of consciousness hosted in matter and how this is related to the birth and death of organisms on Earth.

2.0. The Hypotheses of the Study and Results

2.1. Types of Consciousness That Matter Possesses

Individual consciousness hosted by various classes of matter radiates consciousness waves that belong to distinct types and classes, with each type or form of consciousness existing on a unique or specific range of frequencies or wavelengths/bandwidth. When conwaves interact with matter, a process known as consciousness absorption can occur (Tijani, 2023). Consciousness absorption is a type of photonic absorption, and based on the type of matter that absorbs fundamental consciousness, the emerging individual consciousness belongs to unique categories. These categories include stellar consciousness, planetary consciousness, animal consciousness, plant consciousness, microbial consciousness, universal consciousness, and others. Complexity is a key factor determining whether an entity is conscious or not. There are various signs of the attainment of such complexity (and consequently, the possession of consciousness).

2.1.1. Properties of Complex Systems Exhibiting Consciousness

The signs showing the attainment of a sufficiently high level of complexity for a system to host consciousness include the following:

- The possession of a brain or a nervous system
- The possession of an information processing and/or signal transmission system
- The ability to communicate with other similar entities or of the same species
- The ability to exchange signals (sending and receiving information to and fro) the environment)
- The ability to reproduce
- The possession of DNA or a similar genetic code of life
- The ability to move
- The ability to feed
- The ability to respire
- The ability to release waste products
- The ability to grow or evolve
- The ability to adapt

- The ability to die

A system, organism, or entity is said to exhibit consciousness if it possesses some (not just one) of these characteristics. Here is a look at the various distinct classes or forms of individual consciousness:

2.1.2. Animal Consciousness

When matter, such as humans or other animals, becomes complex up to a certain level, it absorbs or gains consciousness from the Universe that comes from a star. Some signs showing matter, like an animal is conscious or animate, include the following:

- The possession of an organ of consciousness: a brain or a nervous system
- The ability to communicate
- The ability to exchange signals (sending and receiving information to and fro) the environment)
- The ability to reproduce
- The possession of DNA or a similar genetic code of life
- The ability to move
- The ability to feed
- The ability to respire
- The ability to release waste products
- The ability to grow or evolve
- The ability to adapt
- The ability to die

Animal consciousness is an umbrella term for sub-classes of individual consciousnesses like human consciousness, which is of a different stock than the consciousness of each of the other species of animals. In other words, human consciousness is different from elephant consciousness, horse consciousness, antelope consciousness, and other animals, with each type grouped under animal consciousness.

2.1.3. Plant Consciousness

The properties that show a system such as a plant possesses consciousness based on the outlined criteria (see Section 2.1.1.) are as follows:

- The possession of an organ of consciousness: an information processing and/or signal transmission system
- The ability to communicate with other similar entities or of the same species
- The ability to exchange signals (sending and receiving information to and fro) the environment)
- The ability to reproduce
- The possession of DNA or a similar genetic code of life
- The ability to move
- The ability to feed
- The ability to respire
- The ability to release waste products
- The ability to grow or evolve
- The ability to adapt
- The ability to die

Like animal consciousness, plant consciousness has sub-categories based on the plant species.

2.1.4. Continental Consciousness

Continental consciousness is the summation or aggregate of all the individual consciousnesses of the living organisms (plants, animals, micro-organisms, and others) in a continent. This quantity also varies from one continent to another.

2.1.5. Planetary Consciousness

This is the overall consciousness of a planet. It is the summation of all the individual consciousnesses of the living entities existing on a planet. For example, Earth Consciousness or Gaia (also called Mother Nature) represents the overall consciousness of planet Earth vibrating at a Schumann frequency of 7.83 Hz and progressively weaker harmonics at about 14.3 Hz, 20.8 Hz, 27.3 Hz, and 33.8 Hz (National Aeronautics and Space Administration [NASA], 2013; Khanna, 2021). The properties of Earth as a conscious entity are a summation of the properties of its conscious entities. Planetary consciousness varies in magnitude from one planet to another, depending on the planet's habitation level.

2.1.6. Stellar Consciousness

In TemFrame, stars are conscious entities that live and die as they possess consciousness just like other living creatures. That means life exists on all parts of the Universe that contain stars, and these celestial entities should also be regarded as extraterrestrial and conscious entities. In the TEMIC model, Big Bang is an expansion or explosion of fundamental consciousness in the absolute vacuum giving rise to individual consciousnesses in stars, planets, organisms, and others in the Universe, and fundamental consciousness, one of the key forces of nature, is driving the accelerated expansion of the Universe (Tijani, 2023). After Big Bangs occur starting from an inner universe, fundamental consciousness becomes dispersed or expanded in the other universes to yield individual consciousness, and when this consciousness is absorbed by stars, which are among the products of Big Bangs in any particular universe, stellar consciousness emerges. Stellar consciousness is a form of individual consciousness exhibited by a star. In TemFrame, the origin of life on planet Earth and any other planet that holds life in our Universe is dying stars. This will be covered in detail in the next section. Solar consciousness is a form of stellar consciousness representing the consciousness of a solar system's Sun. It is equal to the sum of the consciousnesses of the planets orbiting it (planets, plants, animals, and other animate entities on the planets).

2.1.7. Galaxy Consciousness

Like planetary consciousness, galaxy consciousness is the sum of all the individual consciousnesses of its solar systems and stars. Galaxy consciousness varies from one galaxy to the other depending on its habitation level.

2.1.8. Universal Consciousness

The Universe is home to a plethora of conscious entities. Universal consciousness is the summation or aggregate of all consciousnesses in the superstructures, megastructures, and structures in the Universe, such as galaxies, solar systems, planets, and others. Thus, the Universe is a conscious entity or system (Meijer, 2012, 2018). Universal consciousness varies from one universe to the other. The energy possessed by universal consciousness is infinite.

2.2. Evolution of Life

Evolution of life is a term for the process by which living creatures or organisms undergo changes genetically over successive generations (Millstein, 2017). Questions about how life

began on Earth and whether life exists on other planets are controversial. Evolution is a complex process (Futuyma, 2005), and in this study, it is posited that consciousness plays a key role in the evolution of life on Earth and on any planet that could hold life. In TemFrame, the seeds of life are consciousness and stardust/cosmic dust, both of which find their way into a planet such as Earth from dying stars in space. In the Temic approach, the evolution of life on Earth (or possibly other planets) can occur from any of the following processes:

Astrobiogenesis: A term coined by the author from “astrogenesis” (the process of star formation) and “biogenesis” (the concept of life arising from pre-existing organic or living matter). Simply put, astrobiogenesis is the process where life evolves on a planet from the contents of a dying star. Such contents are usually the photons of consciousness waves and stardust. During astrobiogenesis, a star dies and spews its contents into a planet that evolve or transform into a living organism on the planet. Astrobiogenesis can occur on a planet as one of the products of or resulting processes from Big Bangs. It occurs during other phenomena as well (see sections 2.2.1. and 2.2.2.).

Biosynthesis: In this context, “biosynthesis” means the process of synthesizing a complex system that holds life (i.e., a living organism) from organic and inorganic matter. In this process, consciousness waves get absorbed by a body (a host) created in a lab using organic matter (such as blood) and inorganic matter (such as stardust/cosmic dust/space dust), where the Universe supplies consciousness to this host when it has attained a sufficient level of complexity. Biosynthesis itself is a critical pathway through which consciousness can occupy or get absorbed by a host. It does not create life as consciousness is a fundamental property of the Universe, so life already exists in the Universe in one way or the other. Unlike the first process (astrobiogenesis) that is difficult to replicate in a lab, biosynthesis can be carried out in a lab slightly relatively easier.

2.2.1. Astrobiogenesis: Stellar Consciousness and Evolution of Life on a Planet

In the TEMIC Model, Big Bang is defined as an expansion or explosion of fundamental consciousness producing individual consciousnesses in stars, planets, living organisms, and others in the Universe (Tijani, 2023a), and consciousness, as a natural force or phenomenon, is seen as one of the forces that drive the evolution of life on a planet. Thus, apart from variation, inheritance, and natural selection mechanisms (Millstein, 2017), evolution is also driven by consciousness. In TemFrame, the origin of life or living organisms on any planet is stars in the region where the planet’s solar system travels through. Every living organism on a planet shares

a connection with a star in space for the following reason: The individual consciousness, which is possessed by all living complex systems on Earth or other planets that may hold life, first exists (after being released during the Big Bang from the absolute vacuum as fundamental consciousness) as absorbed in a star before diffusing into the body of a host at an early stage of the host's development (Tijani, 2023). Astrobiogenesis can occur in nature in one of two ways:

As a product or resulting process from Big Bangs: In this process, the evolutionary path of life on a planet goes thus: cosmic dust -> star -> stardust (a form of cosmic dust) -> living organisms on a planet. Astrobiogenesis can occur in one of two ways:

- When stars die and break up in space, spewing their contents into a planet, and then, a living organism evolves or develops from these contents, mainly stellar consciousness and stardust
- When stardust (from dying stars in space) that formed the soil of a planet evolves or develops into living organisms, making these organisms to arise from the soil (with their color mainly depending on the color of the stardust from which they formed) and absorbing consciousness from the Universe. This requires the soil to exist in a special condition or state, which aids the development of living organisms from the stardust of the soil

Gamete cells development in organisms: When part of the contents (specifically photons of consciousness waves and stardust) of a dying star makes its way into a planet as cosmic rays or similar extraterrestrial rays, locates the body of a would-be parent of a host and gets absorbed and mixes with their sperm (in the case of animals) or other sex/reproductive cells (in the case of plants and other organisms), which are gamete cells generally called proto-cells in this study.

When any of these processes occur and results in the development of a full organism (which can take varying periods of time), i.e. when the organism is born or formed, a new star is formed in space from the remnants of the original star that died and broke up initially. This new star will perform a key role later on when the organism experiences death, which is a phase transition of consciousness waves into another realm, according to TemFrame (Tijani, 2023a).

2.2.2. Consciousness Absorption from Cosmic Rays or Similar Rays

Consciousness absorption is a type of photonic absorption of conwaves and occurs when matter traps consciousness (Tijani, 2023). Based on the type of matter or host that absorbs fundamental consciousness from which individual consciousness emerges in the host, the emergent individual consciousness can belong to different categories (see section 2.1.). During astrobogenesis, where parts of the contents of a dying star make their way into planet Earth and diffuse as cosmic rays or similar extraterrestrial rays into a would-be parent of an organism, the photons of conwaves from the star will get absorbed by this parent and interact (mix) with their sperm/sex cells/gamete cells. Cosmic rays are among the naturally occurring radiation doses, which humans receive all their lives (Howell, 2018).

The process of selection of a parent by these rays can be predetermined or random. In the former case, there could be a connection between the dying star, whose contents make their way into the Earth to locate a would-be parent and diffuse into their body, and that parent, perhaps because both the star and the parent originated from the same parent star. In the case of highly evolved animals such as humans, this sperm (that the stardust and the conwave photons have mixed with) will then fertilize an ovum from a female human to produce a zygote. The key role of consciousness in the development of this zygote is that it controls or drives the development of brain cells (which develop via neurogenesis and astrogenesis, or the formation of star-shaped cells called astrocytes) later on, supplying these cells with information that produces self-awareness, awareness of the surroundings, and experience in a human later on. A similar or related process occurs in other animals and organisms as well to produce a fully developed complex system known as a living creature. Consciousness absorption by complex systems on Earth is a process that involves consciousness-driven cell formation, differentiation, and specialization in the nervous systems (such as the brain) in animals or signal or information-processing systems of other organisms. Researchers suggest that space radiations, including cosmic rays, affect fertility in male mammals due to their impact on the DNA of sex cells (Wakayama et al., 2021).

For animals (such as humans), consciousness is the code of the brain. It exists at a deep level (perhaps the deepest) in the brain, serving as the key source, or one of the main sources, of genetic information in the brain cells. The same thing applies to the nervous system or information processing and/or signal transmission system in other complex systems with life, such as plants, micro-organisms, and other organisms. Thus, nervous systems (such as brains

in humans and other animals) in relatively highly evolved organisms, information processing and/or signal transmission system in micro-organisms, plants, and other organisms are aspects or organs of consciousness in these complex systems (Tijani, 2023).

2.2.3. Biosynthesis

As stated earlier, “biosynthesis”, as used in the context of this study, is a process that involves synthesizing complex systems with life (i.e., living organisms) from organic and inorganic matter. There is a possibility that such complex systems can be designed as follows:

- Grinding inorganic matter such as stardust/cosmic dust into extremely tiny particles, which cannot be seen with the naked eye, after which blood, which is organic matter, is mixed with these particles. Then, the mixture is kept in a suitable incubation system or pot (which may be made of clay) for some period, which can be a year, or shorter, or longer
- If this process is properly done, the mixture can develop into a system, with sufficient complexity that allows it to absorb consciousness waves (life) from a dying star
- Depending on the arrangement of the ground inorganic matter, a complex system that belongs to any type or specie of living organisms can be formed

This is one of the processes through which consciousness (life) evolves on planet Earth in complex systems, with the other processes including fertilization generally (both the natural type and the kind done in a lab), cultivation of plants, and others. The author regards all these processes and related ones simply under a single phenomenon, evolution of consciousness (life) in the Universe.

3.0. Potential Applications

3.1. Ethical Considerations

In this study, the author believes it is impossible for scientists to create life because consciousness and the building blocks of life already exist in nature, so life exists naturally in the Universe in one way or another. From the principle of conservation of consciousness, consciousness cannot be created nor destroyed but can be changed from one form or state to the other, just like energy (Tijani, 2023). Hence, it is anti-human and unethical to destroy what one cannot create. However, scientists can design complex systems, which are living organisms, such as plants, animals, microbes, and others, which have attained sufficient

complexity to be able to absorb consciousness (life) from the stars of the Universe. The author predicts that at some point in the future, scientists will be able to design such complex systems.

3.2. Space Exploration

When death is understood as the phase transition of consciousness and death of only the body (host) rather than an end to existence, and when astrobiogenesis and biosynthesis, as postulated in this study, are further developed, this can help achieve key advances in space exploration.

4.0. Conclusion

Individual consciousness hosted by varying types of matter radiate conwaves, which belong to distinct classes and forms, with each type or form of consciousness existing on a unique or specific range of frequencies or wavelengths/bandwidth. Consciousness absorption is a type of photonic absorption, and based on the class of matter that absorbs fundamental consciousness, the emergent individual consciousness belongs to unique categories, such as stellar consciousness, planetary consciousness, animal consciousness, plant consciousness, microbial consciousness, universal consciousness, and others. Complexity is a primary factor that determines whether an entity is conscious or not.

Evolution is a complex process, and in this research, it is posited that consciousness plays a crucial role in the evolution of life on Earth and on any planet that may hold life. In TemFrame, the seeds of life are consciousness and stardust/cosmic dust, both of which find their way into a planet such as Earth from dying stars in space. In this study, the evolution of life on Earth (or possibly other planets) can take place from either of these two processes, astrobiogenesis, the process where life evolves on a planet from the contents of a dying star, or biosynthesis, the process of synthesizing a complex system that holds life (i.e., a living organism) from organic and inorganic matter. Apart from variation, inheritance, and natural selection mechanisms, evolution is also driven by the natural force of consciousness. In TemFrame, the origin of life or living organisms on any planet is stars in the region where the planet's solar system travels through. Further research will explore how brain-heart communication brings about perception, objectivity, and subjectivity in animals, especially humans.

PART II

THE PHYSICS OF CONSCIOUSNESS

Consciousness Physics: A Unified Theory, Working Papers

Abstract

Background: Consciousness Physics is a field of Physics that involves studying electromagnetic (EM) waves that are around and beyond the radio wave segment of the EM spectrum focusing on consciousness waves possessed by complex systems, i.e., living organisms. In animals, including humans, these consciousness waves (conwaves) are brain waves as the brain is the organ or seat of consciousness in these complex systems (hosts). The Conwave Model, which is part of the author's larger "The Emergent Model of Inner-Outer Universe Cosmogony (TEMIC)" framework, states that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves or conwaves from the absolute vacuum to any matter that serves as a host to consciousness. In these papers, Consciousness Physics is developed based on the TEMIC approaches, linking all the fields of Physics together as a Unified Theory. The study aims to develop the foundational concepts for the Mathematics of Consciousness Physics based on the TEMIC approaches and others.

Results: In the TEMIC Model, all things in existence are manifestations of the absolute vacuum, which is really consciousness and energy, and this is all that really exists. In the Temic approaches, all things in existence is an entanglement: This entanglement is a huge matrix, which is the absolute vacuum. This implies, entanglement is a fundamental property of our Universe or any universe. Consciousness Physics links all the fields of Physics together as a Unified Theory. This is because consciousness, regarded as a natural force in the Temic approaches, connects all things together and all universes together, and thus, it also connects all forces of nature together.

Conclusion: Just like radio waves connect humans together today across the globe, consciousness waves, which are electromagnetic waves, also connect all things together across the Universe and connect one universe to the other. Since conwaves connect all things together across the Universe as a huge entanglement, it implies that Consciousness Physics has the potential to bring the whole Universe together and universes together, just like Radiophysics

(radio waves) connects the whole Earth together. This emerging field has tons of potential applications covered in this research.

Keywords: Astrophysics, Cosmology, Complex Systems, Quantum Mechanics, Relativity, Theoretical Physics, Condensed Matter Physics, Consciousness, Particle Physics, Classical Mechanics

SECTION ONE

1.0. Background

The world is now a global village, thanks to the Internet: The Internet has connected people across the globe, which facilitates communication and the exchange of information on an unprecedented scale. This is a good example that shows the interconnectivity of people at a global scale using technology. Other examples are television set, radio set, phones, and the likes. What do all these have in common, along with the Internet, which make them connect people together across the globe? Waves: radio waves. Also, planet Earth as a whole is a key part of our solar system connected to the other seven known planets in the solar system with gravitational force, and this same force connects the solar system to the Milky Way Galaxy, which in turn is part of the Local Group of galaxies that form part of the Virgo Supercluster, a component of the Laniakea Supercluster (Tully et al., 2014; Dobrijevic et al., 2023). The Universe is home to many of such superclusters (National Aeronautics and Space Administration [NASA], 2020), all connected together as a huge matrix or single matrix (our Universe) by, at least, the force of gravity (Wood, 2023; Webb, 2023).

Looking at structures at this scale, it is evident that all things in the Universe are connected. However, this is not the full story. Just like at the macroscopic scale, especially as regards astrophysical objects such as planets, stars, galaxies, and the likes, all things in the Universe are also connected at the microscopic scale, or even at much smaller scales. According to quantum theory, superposition and entanglement occur microscopically in small objects and macroscopically in large objects (Griffith & Schroeter, 2018); and entanglement has been observed experimentally at a macroscopic scale (see Kotler et al., 2021; Thomas et al., 2021; Lépinay et al., 2021; Nield, 2022). In this study, it is postulated that all things in the Universe (or in any universe at all) are connected or entangled at a fundamental level by fundamental consciousness, which travels in waves, in the absolute vacuum.

In The Emergent Model of Inner-Outer Universe Cosmogony (TEMIC) Model or simply TemFrame, one of the key assumptions made is that consciousness is a fundamental force and is the fabric that connects all things in the universes together as a huge matrix (the absolute vacuum) (Tijani 2023; 2023a). The Conwave Model, which is part of the larger TEMIC framework of the author, states that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves or

conwaves from the absolute vacuum to any matter that serves as a host to consciousness (Tijani, 2023). Nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or organs (seats) of consciousness in these living organisms (complex systems). For instance, in humans, the brain is an aspect of (human) consciousness, and it is the organ/seat of consciousness in these highly evolved animals, where conwaves are brain waves; in plants, information processing and/or signal transmission system is an aspect of (plant) consciousness and is the organ of consciousness in plants. The same thing applies to all other organisms on planet Earth as well and on any other planets in the Universe that may hold life. Conwaves are generally EM waves emitted by nervous systems, information processing and signal transmission systems of complex systems. These nervous systems, information processing and signal transmission systems vary across different families and types of organisms (Tkačik and Bialek, 2016; Trewavas et al., 2020; Miguel-Tomé & Llinás, 2021).

Like radio waves connect humans together today across the globe, consciousness waves, which are electromagnetic in nature, also connect all things together across the Universe and connect one universe to the other. Thus, electromagnetic waves, such as radio waves and conwaves, connect all things together as a huge matrix. It can simply be said that photons connect all things together as a collective entanglement. Just like gravitational waves are a consequence of the curvature of spacetime, or gravity, caused by massive objects and their motion, and electromagnetic waves are a manifestation of the behavior of electromagnetic fields, conwaves are a manifestation of the behavior of consciousness fields or sentonic fields (Tijani, 2023).

In the TEMIC Model, it is postulated that all things in existence are manifestations of the absolute vacuum, and that the absolute vacuum (which is really consciousness and energy) is all that really exists (Tijani, 2023a). In this perspective, all things in existence is an entanglement, which is a huge matrix or the absolute vacuum. In other words, entanglement is a fundamental property of our Universe or any universe. Thus, it does not just occur at only the quantum level but also at the classical or macroscopic level. The aim of these papers is to develop Consciousness Physics, based on the TEMIC approaches further, especially in relation to phenomena of Quantum Physics such as entanglement, uncertainty, probability, quantization, superposition, and wave-particle duality and those of Classical Physics such as Newton's third law of motion, coherence, and others as well as Relativity, Cosmology, Particle Physics, and Condensed Matter Physics. In this research project, Consciousness Physics is developed linking Classical Physics with Relativity, Cosmology, Quantum Physics, Particle

Physics, and Condensed Matter Physics. Because consciousness connects all things together and all universes together, it also connects all forces of nature together. Thus, Consciousness Physics can link all the fields of Physics together as a Unified Theory. The study aims to develop the foundational concepts for the Mathematics of Consciousness Physics based on the TEMIC approaches and others. The Mathematics of Consciousness Physics or Consciousness Mechanics will be based on Quantum Mechanics, Classical Mechanics, Relativity, and related areas. In the current paper, the subject of objectivity, observation, measurement, and subjectivity will also be explored in relation to consciousness being the collapse of wave function.

From the foregoing, it is pertinent to ask, “Does consciousness behave like a quantum mechanical system?” The answer is, No. Consciousness is neither a quantum system nor a classical system, but Consciousness Physics links both Quantum Physics and Classical Physics as consciousness is involved in certain phenomena in Quantum Physics as well as Classical Physics. According to the Temic relativistic consciousness principle, whether consciousness is quantum or classical in nature depends on an observer’s frame of reference. As consciousness waves connect all things together across the Universe as a huge entanglement, it implies that Consciousness Physics has the potential to bring the whole Universe together and universes together, just like Radiophysics (radio waves) connects the whole Earth together.

Methods

Not applicable.

SECTION TWO

2.0. Entanglement: The Temic Principle of Consciousness Entanglement

Simply put, entanglement means the state of being entangled, or twisted together or interwoven (Merriam-Webster, 2023). In Quantum Mechanics, quantum entanglement describes a phenomenon where two or more particles or quantum systems become correlated in such a manner that the state of one particle/system cannot be described or measured independently of the state of the others, regardless of the distance separating them (Emspak, 2022). Even if the particles or quantum systems are separated by a large distance and have no direct physical contact or interaction, this correlation persists (Sutter, 2021; Muller, 2022). Entanglement is a primary feature of or phenomenon in Quantum Mechanics and has been confirmed empirically by various experiments microscopically with photons (Kocher & Commins, 1967; Kocher, 1967), with electrons (Hensen et al., 2015; Markoff, 2015) and macroscopically with small diamonds (Lee et al., 2011). Therefore, superposition and entanglement occur microscopically in small objects and macroscopically in large objects, as asserted by quantum theory.

In this study, it is postulated that all things in the Universe (or in any universe at all) are connected or entangled at a fundamental level by fundamental consciousness, which travels in waves, in the absolute vacuum. This is the Temic principle of consciousness entanglement. Consciousness is a fundamental force and is the fabric that connects all things in the universes together as a huge matrix (the absolute vacuum). One of the postulates of the TEMIC Model is that all things in existence are manifestations of the absolute vacuum, and that the absolute vacuum (which is really consciousness and energy) is all that really exists (Tijani, 2023a). In this study, entanglement is regarded as synonymous with ‘conglomeration’, ‘archetype’, ‘huge matrix’, or ‘single matrix’ and is defined as the summation or superposition or aggregate of a certain form of matter (composites of fermions) or non-matter (photons or composites of bosons generally) or others, which are constituents of the absolute vacuum in the inner universe. All constituents or entanglements in the absolute vacuum are linked together by fundamental consciousness, one of the forces of nature, to form a huge, singular matrix called the absolute vacuum, which is the overall entanglement in existence. You can call the absolute vacuum, or the collective entanglement, Existence itself. Depending on its components or contents or nature, entanglements are of various forms or types (**see section 2.1.**). In outer or physical universes such as ours, entanglement is an interconnected group of particles or systems that behave or function as a single system.

In the Temic perspective, the process of coming to life is a phase transition or translation of consciousness (Tijani, 2023). This process appears as if one is waking up from a lucid dream, flying away from an inner universe in which space-time and gravity do not exist, flying out from dreamland to a physical world (Tijani, 2023). From this perspective, existence originates in the innermost universe (one of the inner universes), which is a separate dimension, according to Al-Arashi et al. (2021). While these authors call the inner universe the fifth dimension (Al-Arashi et al., 2021), this study refers to it as the zero dimension or first dimension (Tijani, 2023a).

2.1. Types or Forms of Entanglement

In TemFrame, it is stated that the absolute vacuum is what banged in Big Bangs that are occurring infinitely in the inner universe to create an infinite number of universes or the multiverses (Tijani, 2023a). In the coagulation or entanglement called the absolute vacuum or the Beginning, all things exist in a frozen state as archetypes or entanglements. These entanglements include Fundamental Consciousness, Forces, Matter, Space-Time, Mass, Antimatter, Electromagnetic Radiations, and others. During Big Bang when the absolute vacuum expands or explodes to create universes, it can be said that it is the constituents or contents (these entanglements) of the absolute vacuum that are really expanding. In the Temic Model, each entanglement is a summation or superposition (under specific categories) of all possible contents of the absolute vacuum, with each aggregate existing as a single matrix. For instance, Matter is one of the entanglements or matrices in the absolute vacuum and expands or explodes to yield more and more matter in all possible forms in the outer universes. Thus, all forms/states of matter in the absolute vacuum exist as a single matrix, Matter (Tijani, 2023a). The same thing applies to Fundamental Consciousness which expands or explodes to yield more and more consciousnesses (individual consciousnesses) in all possible forms in the outer universes. The expansion or explosion of the entanglement, Fundamental Consciousness, in the inner universe via Big Bangs is a process where Fundamental Consciousness, as a matrix, diffuses into the outer universes to yield individual consciousnesses. The archetype or entanglement, Space-Time, began in the innermost universe from a little space-time, and this expands infinitely to yield or birth larger and larger space-times in all possible forms/ways in the outer universes.

The phenomenon or process of expansion or explosion of these archetypes is what is called archexpansion or archexplosion (Tijani, 2023a). By picturing Big Bang in this manner (as

explosion or expansion of archetypes), a physical basis can be developed for the emergence of individual consciousnesses in an outer universe like our Universe from Fundamental Consciousness in the inner, primordial universe, as stated in the Conwave Model (see Tijani, 2023; 2023a). Following this line of thought, Big Bang can therefore be defined as disentanglement of matrices or entanglements, which form the constituents of the absolute vacuum. Thus, apart from being regarded as an expansion or explosion, Big Bang also means disentanglement. Entanglement occurs at all scales, whether microscopically or macroscopically. Here are different types or forms of entanglement depending on their constituents or nature:

2.1.1. Quantum Entanglement

In Quantum Mechanics, quantum entanglement describes a phenomenon in which a group of particles or quantum systems becomes correlated in such a manner that the state of one particle/system cannot be described or measured independently of the state of the others, regardless of the distance separating them (Sakurai & Napolitano, 2021). That means even if the particles or quantum systems are separated by a large distance and have no direct physical contact or interaction, this correlation persists (Larkoski, 2021; McIntyre, 2022). This is entanglement as described in the Temic principle of consciousness entanglement occurring at the quantum scale (microscopically). It is a special case of this principle applying to two or more particles.

2.1.2. Human Entanglement

The human body is a complex system that exhibits (individual) consciousness and exists as an entanglement connected to the absolute vacuum (or the collective entanglement) via the natural force of fundamental consciousness. Thus, each human is an entanglement, which is a single matrix of individual consciousness, coupled with all the cells, tissues, organs, and every other bodily part. Human entanglement can also be regarded as an entanglement occurring as a result of the superposition of two or more conwaves emitted by the brains of two or more humans that are either in physical contact or separated by some distance and causes them to experience a shared reality, or at least, some shared connections. All brains or minds of humans on planet Earth are connected as a single matrix or entanglement in a state of superposition. Common examples of manifestation of human entanglements include mother-child love or affection, parent-child love or affection, love or affection between a couple, deep relationship or connection between two or more friends, with each of these groups of people behaving as if

they were a single consciousness sharing two or more discrete spaces in the Universe and experiencing two or more discrete lives at once. Another example of human entanglement is a magician connecting his mind (via the conwaves emitted by his brain) to the mind (brain) of his viewers, hypnotizing them, holding their attention spellbound, and making them see reality as he deems fit. The mechanism underlying how all these interactions are possible is explained further in the later part of this paper (see section 2.9).

2.1.3. Planetary Entanglement

This is simply a planet viewed as a superposition or entanglement of all things (both living and non-living) inhabiting the planet as a single matrix or entity. It is related to, but not the same as planetary consciousness (see Tijani, 2023b).

2.1.4. Universal Entanglement

Universal entanglement is simply a universe viewed as a superposition or entanglement of all things (both living and non-living) existing in a universe as a single matrix or entity. It is related to, but not the same as, universal consciousness (see Tijani, 2023b).

2.1.5. Absolute Vacuum

In the coagulation or entanglement called the absolute vacuum (also called the Beginning), all things exist in a frozen state as entanglements or archetypes or matrices before the Big Bang expansions. These entanglements include Fundamental Consciousness, Forces, Matter, Space-Time, Mass, Antimatter, Electromagnetic Radiations, and others and are superposed to form a huge matrix or collective entanglement called the absolute vacuum. As stated earlier, entanglement happens at all scales, both microscopically and macroscopically. It is easier to observe other forms of entanglements except the absolute vacuum as we are inside it being a collective matrix of infinite size.

2.2. Gravity: A Consequence of Big Bang Expansion/Explosion by Fundamental Consciousness, a Natural Force

2.2.1. The Temic Theory of Gravity

Postulates:

1. Consciousness and energy, or the absolute vacuum, is really all that exists

2. All things in existence are a manifestation of the absolute vacuum (consciousness and energy)
3. The absolute vacuum is a superposition of entanglements/archetypes in all infinitely possible forms
4. All things are connected or entangled and balance one another
5. Consciousness is fundamental to the Universe (or any universe)
6. Fundamental Consciousness broke the Coagulation or Entanglement called the Beginning (the Collective Entanglement or the absolute vacuum) to initiate the First Big Bang
7. The Big Bang expansions/explosions started with the expansion/explosion of Fundamental Consciousness, and Fundamental Consciousness is the force that initiated the First Big Bang and is driving Big Bangs infinitely in cycles
8. Space-time is an emergent property; it is not fundamental to the universes

Based on these key assumptions, Big Bang is defined as a process of expansion or explosion or disentanglements of the absolute vacuum by the Fundamental Consciousness, with the process occurring infinitely in cycles to create universes or the multiverses. The First Big Bang started in the innermost universe (the Beginning), the first universe in existence, and triggered chain reactions that produced successive big bangs, which created more inner universes and outer universes. The outer universes are exact replicas of the inner universes (Tijani, 2023a). This is the Temic Big Bang Principle. It is a generalization of the Big Bang in the Standard Big Bang Model. When the First Big Bang started in the inner universe, Fundamental Consciousness broke the Coagulation or Entanglement (the Beginning), which made other entanglements in this Coagulation to start expanding or exploding or disentangling. These expanding entanglements keep on dispersing or spreading their constituents infinitely forming the inner universes and transitioning to the outer or physical universes after moving past the Temline. The Temline is the boundary that separates the inner universes (a different dimension) from the outer universes, or any inner universe from any outer universe. It exists exactly at the edge of space-time and lies below the Planck scale. Applying Newton's third law of motion, the law of action and reaction — and postulate 4 above, which states that all things are connected or entangled and balance one another — to this scenario, when the Fundamental Consciousness (action) broke the Coagulation (the absolute vacuum) and initiated the First Big Bang, an equal and opposite force (a reaction) was created exactly at the Temline. This equal and opposite force is what we call Gravity. Both forces (Fundamental Consciousness and

Gravity) cancel out one another, which is why at its core, the absolute vacuum is Nothing, just consciousness and energy, which is why all things (the archetypes) that exist in this vacuum, at its core, are in a frozen state before the First Big Bang. This frozen state before the Big Bang expansions is the source or initial state of all things in existence. Newton's third law of motion is one of the fundamental principles of Classical Physics (Karaoglu, 2020; Helliwell & Sahakian, 2021).

Therefore, in the Temic approach, Gravity is regarded as a consequence of Big Bang expansion or explosion by the natural force of Fundamental Consciousness. This Gravity is really Supergravity, not the everyday gravity we are familiar with as it is an entanglement of all gravities (existing at all scales) in the outer universes, including ours. While the force of Fundamental Consciousness causes space-time to explode, expand, or spread, the force of Gravity, as an opposing force, makes it to contract, clump together, warp, or fold as an attractive force. Thus, both forces are seen as the curvature of spacetime caused by the presence of consciousness, energy, and mass, with the nature of this curvature depending on the observer's frame of reference. Fundamental Consciousness is the mother of all forces of nature as it connects all forces together as a huge matrix or entanglement. This is the Temic Theory of Gravity. Thus, the energy possessed by the Fundamental Consciousness force, measured in tems, is what is driving the accelerated expansion of the Universe and manifests as dark energy, meaning dark energy is an aspect of Fundamental Consciousness (Tijani, 2023; 2023a). In TemFrame, what exists beyond the singularity when spacetime collapses or tears down due to intense gravity is the zero dimension or the inner universe, which are non-physical realms or worlds (Tijani, 2023a).

2.2.2. The Concept of Mass in Consciousness Physics

Mass is one of the entanglements in the absolute vacuum. In Consciousness Physics, mass is seen as an intrinsic property of any form of matter or body. But at a deeper level, it is just a specific manifestation of energy and/or consciousness. In this approach, Mass, M , is regarded as an entanglement of the mass possessed by all forms of matter in the universes (**see equation 2.2.2.**). In addition, mass is seen as a measure of the inertia of a body, meaning the resistance offered by that body to acceleration in the presence of a net force (Deshmukh, 2019). This is inertial mass (Schwichtenberg, 2019). Mass is also a measure of the way a body responds to a gravitational field (Cowen, 2019; Rovelli, 2021). This is gravitational mass (Ferrari et al., 2020). However, there is also a relationship between mass and consciousness especially in

complex systems. Thus, the concept of consciousness mass is introduced in Consciousness Physics: Mass is a measure of how a body responds to consciousness force. This is consciousness mass.

$$M = \sum_{-\infty}^{\infty} m_i, \forall i \text{ lying within } -\infty \leq i \leq \infty \quad (2.2.2.)$$

Where M in kilogram is the Mass entanglement in the absolute vacuum and m_i is mass possessed by any form of matter in universes respectively.

From the foregoing, the concept of consciousness density is also introduced which measures the consciousness mass of a body (a complex system) per unit volume or the energy of consciousness waves possessed by a complex system per unit volume (**see equation 2.2.3.**). This concept is analogous with mass density in Classical Physics (Lee & Min, 2018; MacKay, 2020).

$$\rho_c = \frac{E_c}{V} \quad (2.2.3.)$$

Where ρ_c, E_c and V are consciousness density in tems/cubic meter, energy of consciousness waves in tems possessed by a complex system, and volume of the system in cubic meters respectively. These concepts are further examined in the section on applications of Consciousness Physics.

2.2.3. Force Entanglement: Unified Force

Fundamental Consciousness, an entanglement, is a component of a larger entanglement called Forces which is the superposition or summation of all forces of nature in the universes (**see equation 2.2.4.**). Forces is one of the entanglements or archetypes in the absolute vacuum. Fundamental Consciousness is the force that holds the whole system of entanglements (the Collective Entanglement or the absolute vacuum) in a frozen state in the Beginning. This is represented mathematically simply as:

$$\mathbf{F} = \sum_{-\infty}^{\infty} \mathbf{F}_i, \forall i \text{ lying within } -\infty \leq i \leq \infty \quad (2.2.4.)$$

Where \mathbf{F} and \mathbf{F}_i are the Forces entanglement (the Unified Force) and any other form/kind of force in universes respectively.

2.2.4. Fundamental Consciousness Wave Background (FCWB)

The Fundamental Consciousness Wave Background is the background wave of the natural force of Fundamental Consciousness of the absolute vacuum emitted into the Universes when it broke the Coagulation, the Beginning, or the absolute vacuum in the innermost universe (the primordial universe) to initiate the First Big Bang. FCWB can also be considered as “shockwave” or echo of the Big Bang, like the cosmic microwave background (The European Space Agency [ESA], nd; Howell & Dobrijevic, 2022). Also called CMB, the cosmic microwave background is the microwave radiation filling all space in our Universe (the observable universe). In this study, CMB is regarded as one of the resulting radiations emitted when Fundamental Consciousness initiated the First Big Bang. Thus, CMB is an aspect or component of FCWB, and such background radiations are also emitted into the other outer universes that emerged from Big Bang expansions or explosions as well. The innermost universe, or the Beginning in the absolute vacuum is the first universe in existence, or the primordial universe. According to sources such as Sunyaev (1974); Williams (2018); Astronomy (2022), CMB is a remnant providing a vital source of data on the primordial universe, which is referred to as the innermost universe in this study. Hence, CMB is an aspect or component of FCWB. CMB is the afterglow of the Big Bang and was emitted when the Universe was just 380,000 years old (ESA, nd; Shu, 2023). Both FCWB and CMB are related to the Background Gravitational Wave of the Universe, or GWB, which is a random gravitational-wave signal, which can be potentially detected by gravitational wave experiments, such as a pulsar timing array (Romano & Cornish, 2017; Kuthunur, 2023). CMB is solid evidence for the Big Bang Model (ESA, nd1; Howell & May, 2017). Cosmic Microwave Background is a faint radiation permeating the whole Universe (ESA, nd1; Aghanim et al., 2019).

2.3. The Temic Uncertainty Principle

Key assumptions:

- All things in existence are manifestations of the absolute vacuum, and the absolute vacuum (consciousness and energy) is all that really exists
- All things in the Universe are connected or entangled at a fundamental level as a huge/infinite matrix in the absolute vacuum
- All things in the Universe are connected or entangled and balance one other

- There are inner universes, and there are outer universes, with the outer universes being exact replicas of the inner universes

Based on these postulates, the Temic Uncertainty Principle states that since all things in the Universe are connected or entangled by consciousness at a fundamental level as a single matrix, which is the absolute vacuum, there is always a limit (called Temic Limit/TL) to what we can know about any particle or physical system in nature when measured in isolation unless we can get a complete picture if we know all the forces, particles, laws, and principles in existence guiding natural phenomena, events, and processes in the Universe and measure the whole matrix (absolute vacuum) as a collective. By measuring the whole matrix in totality, we can get the full picture of the properties of that system or state. In other words, whenever we make a measurement of any particle, physical system or force in any universe, there is always a limit (TL) to what we can know and observe about the system in isolation unless we can get all information about that system perhaps from the Theory of Everything (TOE) and/or by measuring the whole matrix (the absolute vacuum), and if such a comprehensive framework (TOE) is not available, there is always an uncertainty that must be taken into account in any measurement due to the unknown forces, particles, laws, principles, and all other unknowns of nature. This uncertainty can be seen as a manifestation of our ignorance of certain unknown principles, concepts, laws, and all other unknowns of nature. Thus, we can't really know the full details with exactness about any system or particle, or anything at all, in isolation since all things are connected or entangled at a fundamental level by consciousness unless we know the Theory of Everything and can measure the whole matrix (absolute vacuum) in totality. The limits or uncertainties in all measurements in this Universe, or any Universe at all, are a manifestation of the Temic Limit. In other words, the Temic Limit is an entanglement or summation or superposition of all the limits (infinite in number) in any act of taking measurement or record done in all possible forms in all universes in existence (**see equation 2.2.5**).

$$L_T = \sum_{-\infty}^{\infty} l_i, \forall i \text{ lying within } -\infty \leq i \leq \infty \quad (2.2.5.)$$

Where L_T and l_i are the Temic Limit entanglement and any other form/kind of limit in universes respectively.

The Temic uncertainty principle is a generalization of Heisenberg's uncertainty principle in Quantum Mechanics. Thus, Heisenberg's uncertainty principle is a special case of the Temic uncertainty principle that applies only to certain pairs of physical properties of a particle. Other cases of the Temic uncertainty principle can apply to triplets, quartets, and higher multiples of conjugate variables, perhaps on other planets or universes. Due to this Temic uncertainty, it is proposed the current known value of the speed of light in a vacuum, c , is not accurate, and while it is true that the Universe has a speed limit, which is currently regarded as the speed of light in a vacuum, as postulated by Albert Einstein, c should have a higher value. With more understanding of some laws of nature and Consciousness Physics, it is predicted a more accurate (higher) value of c will still be measured. If all things are connected or entangled at a fundamental level and any other universe exists, then c should be higher and cannot also have the same value in all universes since according to the theory of Relativity, no form of connection can exist between two objects separated by a sufficiently large distance (superluminal travel is impossible). But this is not in agreement with Temic principle of consciousness entanglement and Quantum Mechanics, where entanglement has been observed empirically in experiments to occur microscopically and macroscopically. Also, the speed of light in other universes may be in multiples of c . The known value of c currently may be the lower limit of the real speed of light in vacuum for our Universe.

The Temic uncertainty principle applies to systems and states at all levels, macroscopically and microscopically, unlike the Heisenberg's uncertainty principle that only applies to particles (quantum systems). As the Temic uncertainty principle states that we cannot really measure any physical system or state with exactness and know everything about it in isolation as all things are connected or entangled at a fundamental level in the absolute vacuum, what about the absolute vacuum? Does it exist in isolation? Yes, Nothing exists in isolation, and the absolute vacuum appears like Nothing so it exists in isolation, unlike physical systems that cannot exist in isolation. The absolute vacuum or Nothing refers to things that exist but cannot be seen with our naked eye. So, the limit stated in the Temic uncertainty principle does not apply to the absolute vacuum. If entanglement is fundamental to the Universe, that implies all variables or physical quantities are also entangled or connected to one another. In principle, all variables are conjugate variables and interconnected to form a Supervariable. This is an entanglement of all variables in infinitely possible forms.

2.4. The Temic Superposition Principle

Consciousness and energy (the absolute vacuum) is really all that exists, and consciousness and energy can neither be created nor destroyed but can be converted or changed from one form to another. This is the Temic principle of consciousness-energy conservation, a generalized version of the principle of conservation of energy. If, according to this principle, consciousness and energy (the absolute vacuum) is really all that exists, and consciousness and energy can neither be created nor destroyed but can be converted or changed from one form to another, then it can be stated that anything or any system exists in a superposition or combination of all possible forms of energy or consciousness unless when observed and the process of measurement forces its wave function to collapse to a specific form of energy or consciousness that is measured. This happens because space-time isn't fundamental to the Universe (or any universe) or the absolute vacuum. Thus, consciousness and energy exist superposed in all possible forms at the same space-time in this Universe or everywhere in all universes at once. Space-time is a mental construct and is an emergent property of the Universe. This is the Temic superposition principle, a generalized version of the superposition principle.

2.4.1. Resolving the Einstein-Podolsky-Rosen Paradox (EPR)

EPR paradox is a thought experiment in Quantum Mechanics, which was proposed by three physicists in 1935: Albert Einstein, Boris Podolsky, and Nathan Rosen (1935). This paradox challenges certain interpretations of quantum theory, raising questions about the completeness of Quantum Mechanics (Einstein, Podolsky & Rosen, 1935; Paolo Colciaghi et al., 2023). The Einstein-Podolsky-Rosen Paradox begins with the concept of entanglement, as explained in Quantum Mechanics that states the properties of entangled particles are not determined until they are measured (Starr, 2023). Before a measurement, the particles exist in a superposition (combination) of all possible states.

In the EPR thought experiment, two entangled particles, which are often called "EPR pairs" are created and then separated, with one of the particles sent to location A and the other to location B (Robinson, 2018). The key aspect of this paradox is the correlation between certain properties of these entangled particles (Yadin et al., 2021). Specifically, it lays emphasis on properties of the entangled particles that are complementary, such as position and momentum. Einstein, Podolsky, and Rosen argued that if the properties of one particle were measured at location A, it would instantaneously determine the properties of the other particle at location B, regardless of the distance between them. They found this idea problematic as it seemed to

violate the principle of locality, which suggests that information cannot be transmitted faster than c .

However, this study states that information can be transmitted faster than c and predicts that the current value of speed of light in a vacuum will still be broken. The EPR Paradox or the mystery of Schrodinger cat or a photon existing in a combination of multiple states unless when observed, which makes its wave function collapse to a specific state, can be resolved by considering the proposition that space-time isn't fundamental to the Universe (or any universe) or the absolute vacuum. In the absolute vacuum, space-time does not have any meaning. Space-time is a mental construct and is an emergent property of the Universe that originated via Big Bang. Thus, consciousness and energy exist in one form or the other at the same space-time in this Universe (i.e., in all places at the same time) or everywhere in all universes at once in a superposition of infinitely possible states. But when a particle or system, which is just a specific form of consciousness or energy, is measured, it takes on definite properties. In other words, any particle or system we see all around us — or anything at all — is existing in a specific form of consciousness or energy, which exists in a superposition of infinitely possible states (meaning its properties are not defined) before being observed or measured, until it is observed or measured and then takes on a specific state or property. An implication of the Temic Superposition Principle is that superluminal (or faster-than-light, FTL) communication/travel is possible. That is, it is possible for a particle, wave, object to travel, or be made to travel, faster than light.

2.5. The Temic Wave-Particle Duality

Temic wave-particle duality states that consciousness can appear as a wave (conwave) and a particle (photons), but not both simultaneously, especially when absorbed by a complex system. Thus, consciousness can appear as both a wave and matter/a state of matter, especially when absorbed by a complex system. Since consciousness and energy is all that exists, the Temic Wave-Particle Duality is a generalization of the Wave-Particle Duality of Matter. This principle is developed by applying wave-particle duality, a fundamental concept in Quantum Mechanics that states matter can sometimes appear as a wave and sometimes as a particle, but not both at the same time (Kyriakos, 2019).

2.6. Quantization of Conwaves

The energies possessed by conwaves, measured in terms (\hat{a}), are quantized existing in discrete packets or quanta (see Tijani, 2023). Thus, the photons of conwaves, also called sentons (Sipfle, 2022), are quantized like all other bosons, as explained in Particle Physics by Peskin (2019).

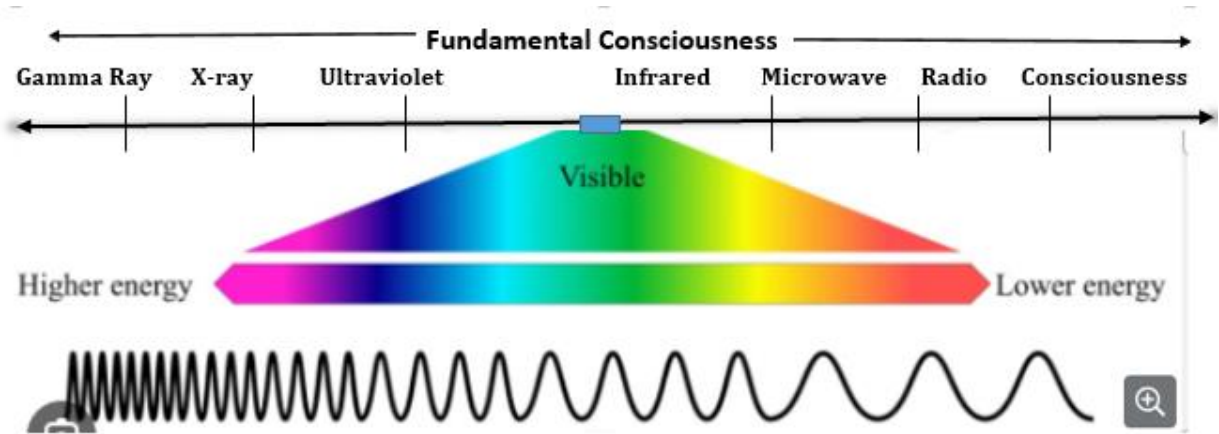
2.7. The Conwave Model: Measuring Conwaves, Extended Electromagnetic Spectrum, and Consciousness Wave Observatory

In the Conwave Model, consciousness is regarded as a certain kind of electromagnetic wave that transmits energy and information from the absolute vacuum to any matter or system, which serves as a host to consciousness (Tijani, 2023). When Fundamental Consciousness exploded/expanded during the First Big Bang to bring about individual consciousnesses in our Universe and similar universes in existence, photons of fundamental consciousness waves, which have infinite amounts of energies in the absolute vacuum before the Big Bang, were dispersed into the universes. The resulting individual consciousnesses in our Universe became tuned to specific frequency ranges, which vary from one type, species, or form of complex systems (living systems/organisms) to another and from one planet to the other. The same thing applies to all other universes in existence. For instance, in our own Universe, planet Earth is a giant complex system with an individual consciousness referred to as Gaia or earthly consciousness, which is the summation or superposition of all individual consciousnesses (in all living organisms) on the planet (Tijani, 2023b).

In the absolute vacuum before the First Big Bang, Fundamental Consciousness possesses an infinite amount of energy with an infinite range of frequencies or wavelengths that have limits, $\pm\infty$. As electromagnetic waves, these conwaves exist on an infinite EM spectrum. After the Big Bang, fundamental consciousness waves were dispersed into the universes and became individual consciousnesses that became stretched continuously in cycles as the Big Bang expansion occurs infinitely. In each universe, fundamental consciousness exists on a specific range of frequencies in individual consciousnesses. On planet Earth in our Universe, this study proposes that these conwaves occur around the infrared, microwave, radio segments, and other yet-to-be-detected segments of extremely low frequencies in the EM spectrum (see **Figures 1 and 4**). On another planet in the Universe, consciousness, as exhibited by complex systems on that planet, can occupy another region of the EM spectrum. The same thing applies to any other universe in existence. Thus, “consciousness” (meaning “individual consciousness” in **Figures**

1–5) can occupy any region(s) of the EM spectrum depending on the specific planet or universe in question. The diagram below shows the region occupied by consciousness on planet Earth:

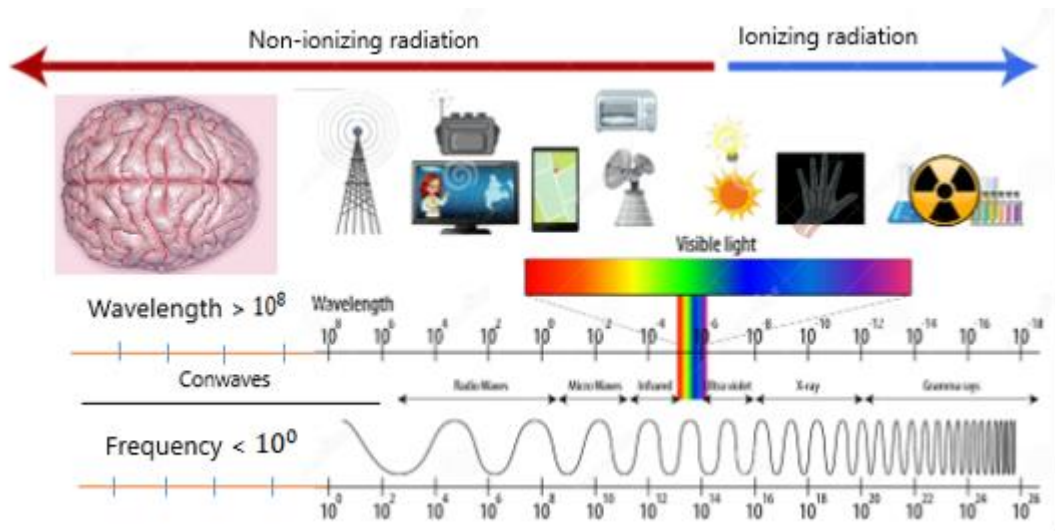
Figure 1: Expanded EM Spectrum Based on the Conwave Model



Source: Author’s construct (2023) based on Ward (2021)

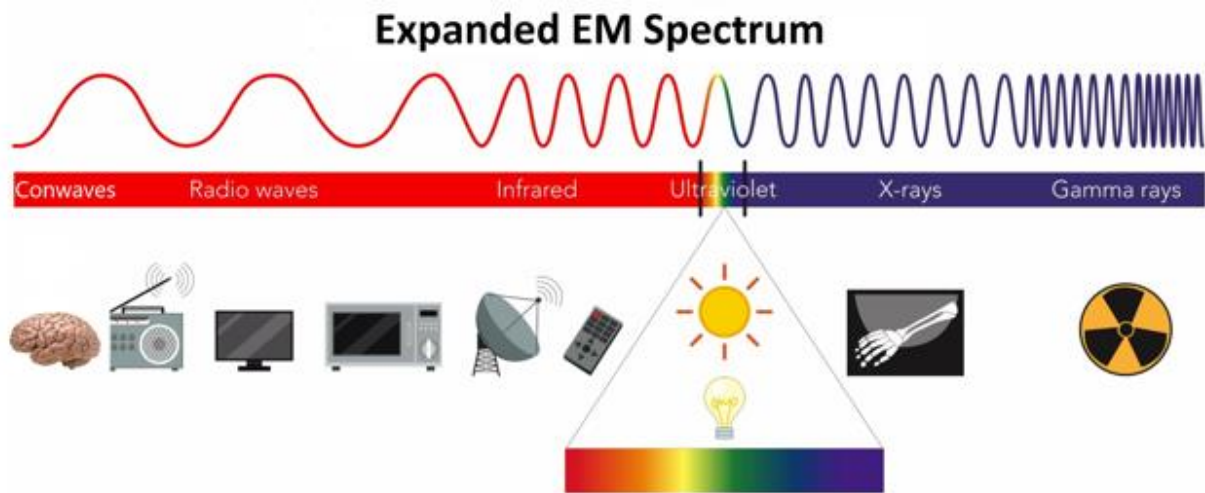
In this Universe, fundamental consciousness waves have been stretched across huge wavelengths due to the Big Bang expansion that started billions of years ago and is still occurring. Thus, it is expected that individual consciousness waves on planet Earth will lie around and/or beyond the radio segment of the EM spectrum (see **Figure 2**). Thus an extended EM spectrum is needed to account for the photons of EM waves released from Fundamental Consciousness in the absolute vacuum, which dispersed into this Universe via the Big Bang expansion and being absorbed by complex systems to bring about individual consciousness in these living systems (see **Figure 1**). The expanded EM spectrum based on the Conwave Model is presented in **Figures 1–5**.

Figure 2: Expanded Electromagnetic Spectrum



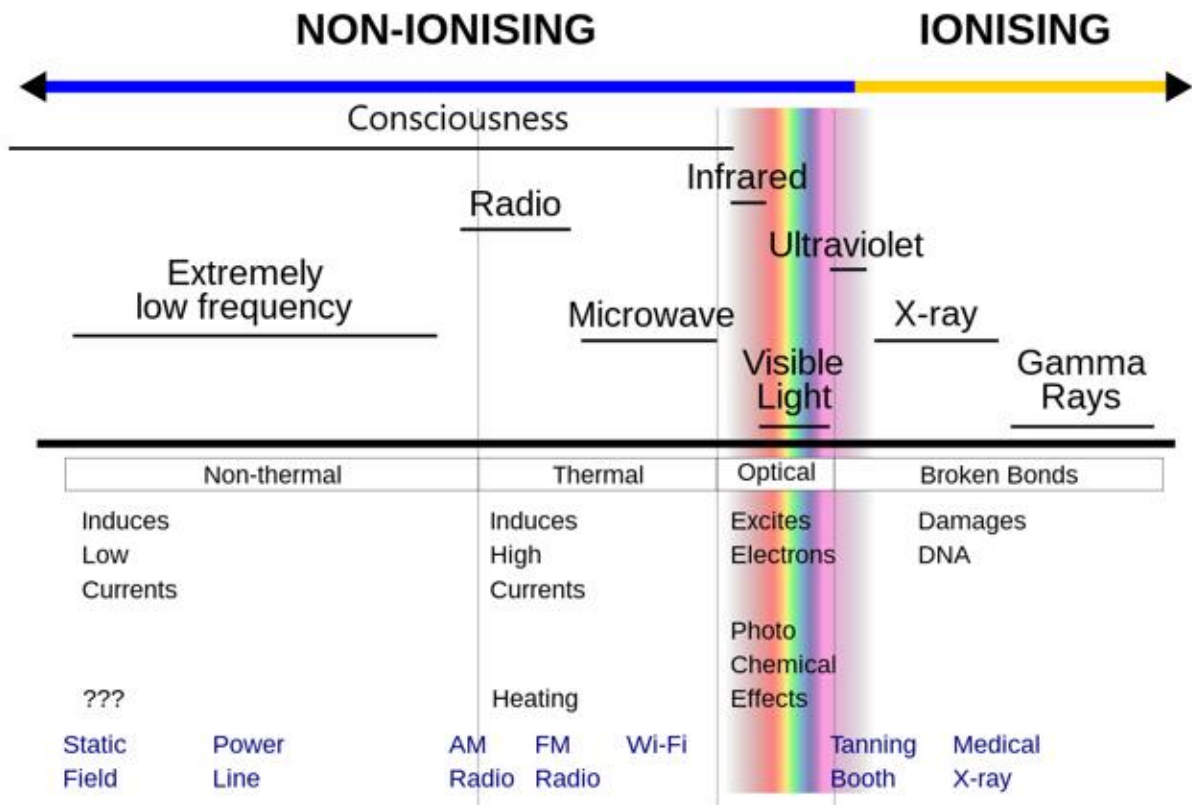
Source: Author's construct (2023) based on Dreamstime (nd); (Di Bartolo, 2018)

Figure 3: Expanded EM Spectrum Based on the Conwave Model



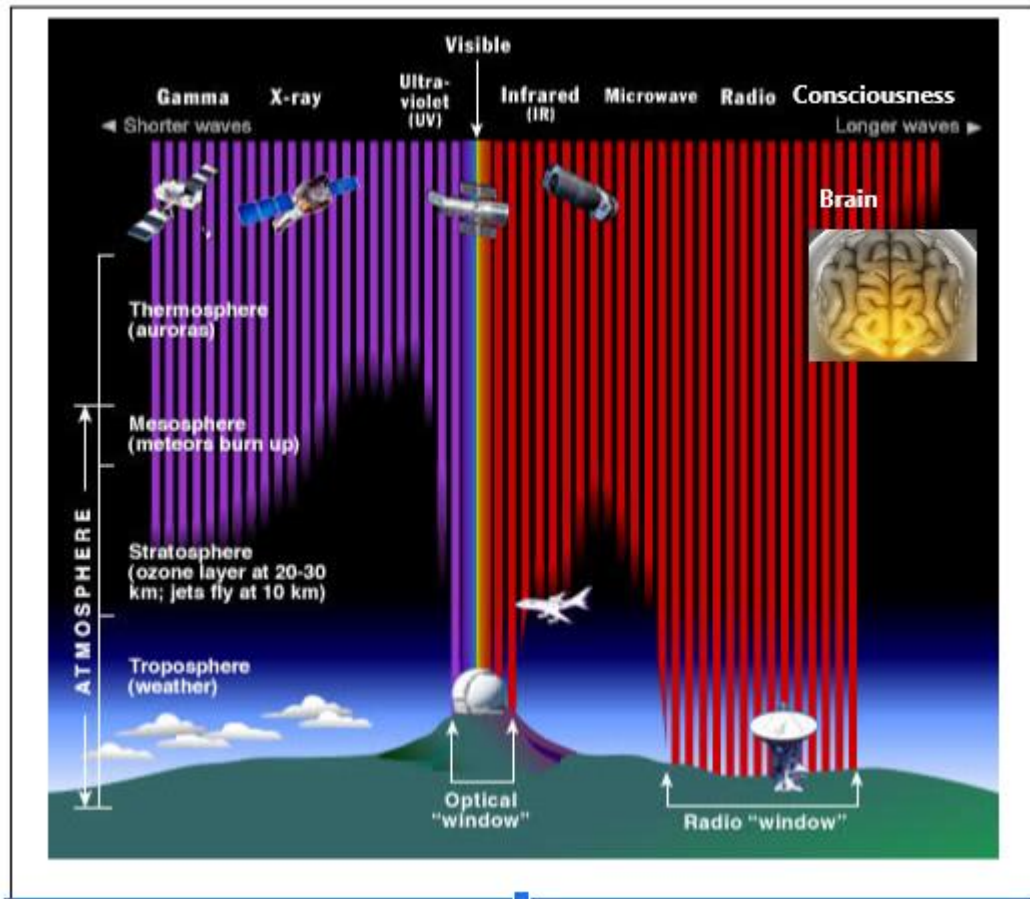
Source: Author's construct (2023) based on Steven (2018); Online Learning College (2022)

Figure 4: Extended Electromagnetic Spectrum Based on the Conwave Model



Source: Author's construct (2023) based on Shankar (2019)

Figure 5: Expanded EM Spectrum Based on the Conwave Model



Source: Author's construct (2023) based on NASA (2013)

According to NASA (2013), the atmosphere of planet Earth stops almost all types of electromagnetic radiation coming from space from getting to the Earth's surface. Different parts of the electromagnetic spectrum can only get to specific regions in the atmosphere before being absorbed, and only portions of visible light and radio waves get to the Earth's surface (NASA, 2013) (see Figure 5). In this study, it is proposed that conwaves are also among the parts of the EM spectrum that get to the surface of this planet, and photons of consciousness waves from dying stars in space play a key role in the evolution of life on Earth when they enter the planet (Tijani, 2023b). Even though conwaves are hard to detect and measure due to their relatively low frequencies, they can be detected through their interactions with other waves. A consciousness wave observatory will be required for this and for detecting other forms of FCWB radiations in this Universe. Such an observatory is a facility that houses a consciousness

telescope for viewing and detecting EM radiations in the consciousness region emitted by complex systems, including astrophysical objects in space.

2.8. Objectivity, Observation, Measurement, and Subjectivity

If entanglement is a fundamental property of the Universe, coherence is a fundamental property of waves in the Universe, and the wave-particle duality holds true for all forms of matter in the Universe, then coherence must also be a fundamental property of the Universe. This is the Temic Principle of Coherence. This implies to understand objectivity, observation, measurement, and subjectivity in Consciousness Physics, a solid grasp of coherence is crucial.

2.8.1. Coherence

In the layman use, coherence means the property or ability of being coherent, i.e., having the quality or property of cohering (holding together) or being able to form/develop into a unified whole (Merriam-Webster, 2023a). In Physics, it expresses the potential or ability for two or more waves to interfere. In simple terms, coherence occurs when two or more waves travelling at the same, or almost the same, frequency become either phase-locked or frequency-locked. When that happens, the two waves are said to be in phase at a particular instance of space-time and operate as one, with their crests and troughs in alignment with each other. Thus, they have undergone constructive interference with the resultant superposed wave having the combined amplitudes of both waves reinforcing each other.

At other instances of space-time, coherence can occur when two or more waves that are out of phase interfere and form destructive interference patterns with the resultant wave of a decreased overall amplitude or even complete cancellation. All this is coherence based on Classical Physics. In Quantum Mechanics, coherence is the property of a quantum system that allows it to exhibit or show a well-defined phase relationship between different quantum states (Anthony & Ter Haar, 2018). “In physiology ... coherence occurs when two or more of the body’s oscillatory systems, such as respiration and heart rhythms, become entrained and operate at the same frequency” (McCarty, 2015, p. 24). Coherence is a fundamental concept, which plays a critical role in the understanding and description of quantum phenomena, such as interference, superposition, and entanglement. Coherence of conwaves, along with the related processes of superposition of conwaves and interference of consciousness waves, underlie the picture of reality that our brains build, and coherence plays a key role in how we perceive things. While

there are various types of coherence, including spatial coherence and temporal coherence, this study focuses on spatio-temporal coherence specifically.

2.8.2. Objectivity and Subjectivity

In simple terms, objectivity means the quality of having reality that exists independently of the mind (Merriam-Webster, 2023b). On the other hand, subjectivity is the quality of having reality that exists as perceived by an individual rather than as independent of mind (Merriam-Webster, 2023c). These definitions show that objectivity and subjectivity imply either the property of reality being independent from or dependent upon perception respectively. Subjectivity, which means a subject's personal beliefs, perspective, desires, discovery, or feelings, is opposite in meaning to objectivity, where a subject's personal beliefs, perspective, desires, discovery, or feelings exists from an independent viewpoint.

Objectivity is typically linked to observation, with both processes key aspects of the scientific method. In this study, objectivity and subjectivity are regarded as qualities that exist based on the interactions or exchanges of photons between the nervous system or respective information processing and/or signal transmission system of complex systems and another object(s), which can be living or nonliving.

2.8.3. The Temic Principle of Conscious Perception

For complex systems such as animals, any form of perception or what can be called real or objective by a conscious object occurs based on the interactions and/or exchanges of photons between the nervous system or the respective information processing and/or signal transmission system and the other object(s), whether conscious or not, that the conscious object is interacting with. In other words, what we call perception, awareness, experience is a product of interactions and/or exchange of photons of conwaves and other photons between two or more complex systems or objects. In this context, complex systems are regarded as animals exhibiting consciousness (see Tijani, 2023). Thus, photons or EM radiations play a central role in how we perceive the world and reality. *With photons, all things are possible.* This is the Temic principle of conscious perception.

2.8.4. Observation and Measurement: Consciousness Is the Collapse of the Conwave Function

The whole enterprise of science is built on observation and measurement, and both are key aspects of the scientific method. Observation involves recognizing and noting an occurrence or a fact, and this process normally involves taking measurement using instruments (Merriam-Webster, 2023d). In making an observation, the scientist observes what is going on, gathers information on what is observed, and studies facts that are relevant to the problem at hand (Tukey, 1991). A related process, measurement involves providing an accurate or adequate portion of something that is observed (Merriam-Webster, 2023e). It is the process of assigning numbers or codes based on some prior-set rules.

2.8.5. The Observer Effect

In Physics, this concept refers to the fact that an observed system is disturbed or changed by the very act of observation itself (Dirac, 1967). Observer effects are very common in Physics in which observation and uncertainty are fundamental concepts in modern Quantum Mechanics (Baclawski, 2018). The observer effect occurs in systems both at the classical and quantum levels. The effect is also well known in other fields, including Psychology, Sociology, Computer Science, Linguistics, and others (Baclawski, 2018; Sujatha et al., 2019). In Psychology, the observer effect is known as the observer's paradox or the Hawthorne effect, which occurs when the subject of a study changes or alters their behavior due to their awareness of the observer's/investigator's presence (Monahan & Fisher, 2010). This makes the researcher records behavior, which would have been different if the subject was not under observation. In Electronics, the observer effect manifests as what is called probe effect — an unintended alteration or change in the behavior of a system that occurs due to the measurement of the system (Tektronix, 2013). This effect occurs when small amounts of capacitance, resistance, or inductance might be observed when a measuring device is attached to a system under measurement (Tektronix, 2013). With good instruments, there are very slight observer effects noticed in measurements, but in sensitive circuitry, the effects can lead to unexpected failures, or even unexpected fixes to failures (Tektronix, 2013).

In Computer Science, there are times when a software bug, known as a heisenbug in computer programming, seems to disappear or change its behavior during examination by an observer or expert (The Jargon File, nd). This is observer effect at play, and studying software behavior often requires making use of other software as a probe, but this probe becomes part of the

software under observation, thereby changing that software's behavior. The observer effect, or the fact that "people tend to change their behavior if they know they are being observed" (Svensberg et al., 2021, p. 2), has also been documented in the field of medical practice as well where it is called observer bias (Hrobjartsson et al., 2013). At one time or the other, you might have had the experience where you observed some symptoms of an illness at home, in your workplace, or any other place but on getting to a hospital to see a doctor, those symptoms seem to disappear during examination by the physician, only to resurface later when you leave the hospital premises. This is observer effect at play here.

This study posits that observer effects, whether at the quantum or classical level, occur due to the fact that entanglement is fundamental to the Universe. From the Temic Superposition Principle, any form of matter, or anything at all, we observe in our environment exists everywhere at once in the Universe in a superposition of infinitely possible states or forms of energy or consciousness before being observed. But once it is observed, the measurement process forces its wave function to collapse to a specific form of forms of energy or consciousness that is measured.

What this means is that when we look at, feel, hear, or smell anything in nature, or are aware of its presence in any other way, the specific way we describe that thing using various attributes such as name, size, and the likes is a mere picture or interpretation our brain builds of that object. At its core, the object is just energy or consciousness, both of which exists everywhere at the same time as space-time is not fundamental to the Universe. Space-time is an emergent property of the Universe, or any universe, a product of the Big Bang, and a mental construct for complex systems such as animals. Hence, the picture of any object our brain builds for us is just a consequence of the observer effect due to collapse of the wave function of that object to its specific form (the picture we have in mind of it) because of our awareness of it, where "awareness" denotes "measurement" in this sense. Without observation or our awareness of this object, it exists in a superposition of infinitely possible states or forms of energy or consciousness. Looking at this using the approach of the Temic conscious perception principle, a clearer understanding is gained.

2.8.6. Consciousness Is the Collapse of the Conwave Function

Wave function collapse in Quantum Mechanics occurs when the wave function describing a particle, which initially exists in a superposition of many eigenstates, reduces to just one eigenstate because of interaction with its environment (the external world), which includes a measuring apparatus. This interaction is known as an observation, the essence of making a measurement in Quantum Mechanics connecting the wave function with position, momentum, and other classical observables. In the Copenhagen interpretation of Quantum Mechanics, the wave function collapse occurs when a conscious observer is involved. However, Roger Penrose believes it is the other way around: It is not consciousness that causes the collapse, but wave functions collapse in a spontaneous manner and yield consciousness in the process (Hameroff & Penrose, 2014).

However, this study does not regard consciousness as something that is produced by the brain. In animals, the brain is regarded as the organ or aspect of consciousness. Consciousness is the code of the brain and is the collapse of the conwave function, not just any wave function. Individual consciousness is the collapse of the function describing the brain's conwaves.

2.8.7. Objectivity and Subjectivity in Humans

The Heart: A Brief History

Since ancient times, humans have known that the heart is a vital part of the body, but its function and anatomy were not understood in a clear manner (University of Sydney Online Museum, 2016). The heart has been identified for centuries as the center of the whole body, the seat of life (soul/spirit), or reason, or emotion, will, purpose, intellect, or the mind (Tresidder, 2012; McCraty, 2015). In various African cultures, such as Yorùbá, Igbo, Ebirá, the Ancient Egyptian cultures, and others, the heart is regarded as the soul. For instance, in Yorùbá culture called Ìṣẹ̀ṣẹ, the heart is called “ókán” or “ẹ̀mí”, with the latter also used to mean “soul”. In Igbo culture, the heart means “mkpụrụ obi” and is seen as the soul, which is called “obi”. In the Ancient Egyptian religion, the heart was considered a key part of the soul and was regarded as the seat of emotion, will, thought, and intention. The Ancient Egyptians considered it as the key to the afterlife.

Furthermore, in many Asian cultures, the heart symbolizes "truth, conscience, or moral courage" (Tresidder, 2012). In Abrahamic religions such as Judaism, Christianity, and Islam, it is seen as the temple of God. In Buddhism, the mind and the heart are seen as one and often

described by the word “citta”, and it is the diamond of purity and essence of the Buddha (Sue, 1996). In Hinduism, it is regarded as “atman”, or the divine center, and the third eye of transcendent wisdom. In Taoism, the heart is the center of understanding.

In addition, in various European cultures, the heart is seen as the seat of life (soul/spirit), or reason, or emotion, will, purpose, intellect, or the mind. In the Hebrew Bible, “lev” is the word for heart referring to the mind, the seat of emotion, and the anatomical organ. Many Western philosophers, such as Socrates, Plato, Aristotle, and others, believed the heart is the seat of reason, thought, or emotion, with many of them typically disregarding the role of the brain in these functions (see Aristotle, nd).

2.8.8. The Heart and Breath: A Philosophical-Cultural Perspective

In various cultures and religions around the world, the heart is seen as the center of the whole body, the seat of life (soul/spirit), or reason, or emotion, will, purpose, intellect, or the mind, and as a physical pump that sustains life by producing and circulating blood throughout the body (McCarty, 2015). The heart and lungs are two of the most vital organs in the body, and along with the brain, these organs play a central role in how we perceive reality. As far as sustaining life is concerned, the heart-lungs relationship is of paramount importance. In Ìṣẹ̀ṣẹ̀, which is Yorùbá culture, people refer to the soul as “ẹ̀mí”, the same word used to describe the heart, and the root of this Yorùbá word, “mí”, means “to breathe”.

A similar connection exists between the heart and breath in various other cultures around the world. For instance, in Indian cultures, “atman” is a Sanskrit word for “self”, “breath”, or the heart, and is among the most fundamental concepts in Hinduism. In Islam, the Arabic word “ruh”, which means “the breath of life”, is used to refer to the soul, which resides in the heart. A similar belief is held in Judaism and Christianity. Over centuries, philosophers have often explored the relationship that exists between the heart, breath, and the mind. For example, philosophers such as Ọ̀rúnmilà, Ifá, Socrates, Plato, Aristotle, Avicenna, Thomas Aquinas, and others associated the heart with emotions and believed that the breath was essential for the manifestation of life and consciousness. (Ọ̀rúnmilà and Ifá are ancestors of modern-day Yorùbá people in Nigeria worshiped as deities by the natives.)

2.8.9. How Communication between the Brain and the Heart Brings about Perception

In animals, including humans, conwaves are brain waves as the brain is the organ or seat of consciousness in these complex systems. In this study, it is posited that the relationship between the brain, the heart, and breath plays a central role in the picture our brain builds for us, which we call reality. In the Temic model, consciousness, which is EM waves, exists or experiences life (when absorbed by organisms/hosts) in all realms or worlds at the same time (whether in inner/non-physical universes or outer/physical universes), and the heart plays the role of tuning consciousness waves of hosts into seeing and remembering those activities, which the hosts carried out in other universes (Tijani, 2023a).

In the Temic approaches, planet Earth is regarded as a conscious entity, which is called Gaia in Greek parlance or “Áye” in Yorùbá parlance, which is Earthly Consciousness that vibrates at a specific range of frequencies. Schumann frequencies are part of these Earthly frequencies — the heartbeats of our planet. All living organisms on Earth, including humans, are hosted on these frequencies, which are the heartbeat rates of this planet. In other words, all heartbeat rates of organisms on this planet lies within the specific range of heartbeats (frequencies) of Gaia, planet Earth. The whole planet is a huge entanglement or matrix of individual consciousnesses of all living organisms on Earth, with these complex systems connected to this planet by their heart vibrations, which are in phase with the Earth’s frequencies (the planet’s heartbeat).

This is coherence at play on a global scale: For living systems, when two or more consciousness waves are in phase (meaning they have the same frequency, with their corresponding points reaching the same instance of space-time), these complex systems can experience the same reality (planet Earth, in this case) due to the coherence exhibited by these waves. The Temic Principle of Conscious Perception states that what we call observation, perception, awareness, experience is a product of exchange of photons of conwaves and other photons between two or more complex systems or objects. This is the physical mechanism underlying this entanglement or matrix that we see as reality. All living organisms on this planet exist as a huge entanglement or matrix that is formed from the interaction between each living system and this planet (Tijani, 2023a). All brains or minds of humans on the planet are connected as a single matrix or entanglement in a state of superposition. The same thing applies to all other types of complex systems on Earth, with everything connected together as a single matrix by consciousness.

Two or more complex systems (such as humans) can experience the same realm or a shared reality, which is planet Earth in this case, or in an outer universe, or even in an inner universe,

when their conwaves vibrate in phase with each other and with the frequency of vibration of the specific realm/world in question. “When the frequency of the heartbeats and breath of a person matches that of another human and any specific realm in the inner universe, these two people can experience a shared reality in this same realm via the principles of superposition of waves, coherence, and interference. Thus, it is possible for humans to explore realms in the inner universe as a group if they can tune to a specific frequency of heartbeat and breath that matches one of the natural frequencies of vibration of such realms” (Tijani, 2023a).

The heartbeat rates of living systems in every planet, realm, or world are different, and each planet or realm vibrates at different sets of frequencies. From the Temic superposition principle, consciousness and energy exist everywhere in any universe at once in a superposition of infinitely possible forms, and the heart functions as a modulator or regulator that tunes the frequencies of individual consciousness of a complex system and connects the living system with one of those natural frequencies of a specific realm or planet that the system is aware of or remembers.

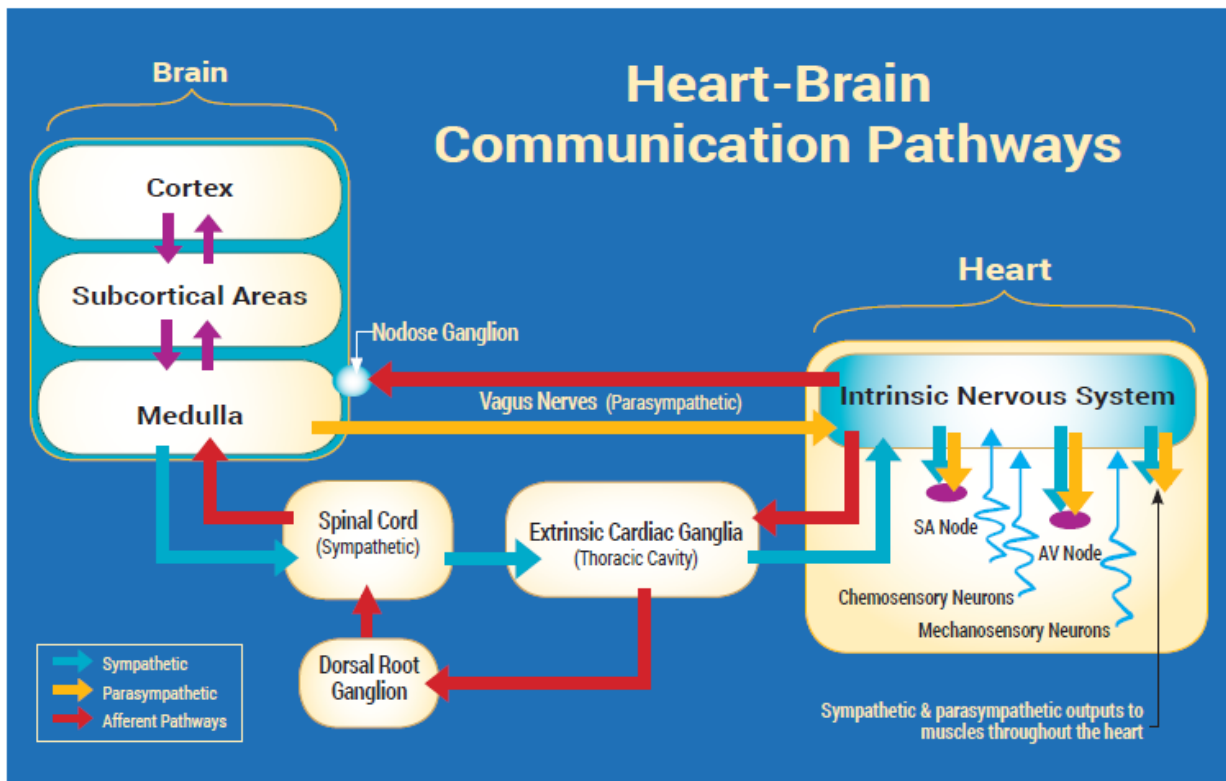
For instance, you, the reader, are a complex system that has an individual consciousness, and your brain is an organ of this consciousness that is connected or hosted at a specific set of frequencies on planet Earth at this fragment of time. You are demonstrating awareness of this planet at this fragment of time because your heart tunes your brain, an organ or aspect of your consciousness, to vibrate at a specific set of frequencies, which is among the natural frequencies of planet Earth, putting your consciousness in phase with that of the Earth via coherence.

Naturally, your consciousness exists everywhere in the universes at once in a state of superposition of infinite possible forms of energy because space-time is not fundamental to our Universe, or any other universe, but your heart tunes the frequencies of your brain’s conwaves to a specific range of frequencies, which happens to be those of the Earth at this fragment of time, which builds the specific picture (your present form) of your current self you have in mind now. In any other fragment of time, the heart can tune your frequencies to those of another planet or realm in a different universe and to any other form (mental picture). Existence does not have a beginning or an end because space-time is only a mental construct and an emergent property of the Universe, or any universe. Time is like a river that flows through space without a beginning or an end, and your heart determines which points in this infinite river you demonstrate awareness of. This is consciousness, defined as the collapse of conwave function, at play here. Thus, the heart plays a key role in how we perceive reality.

Experts have explained that heart-brain communication occurs in different ways: neurological communication (nervous system), biophysical communication (pulse wave), energetic communication (electromagnetic fields, including consciousness fields), and biochemical communication (hormones) (McCraty, 2015) (see Figure 6). The study of communication pathways that exist between the head and the heart has been traditionally approached or carried out from a rather one-sided perspective, as scientists mainly put all their attention on the heart's responses to the brain's commands (McCraty & Tomasino, 2006).

However, studies have shown that heart-brain communication actually is a dynamic, ongoing, two-way dialogue, where each organ influences the function of the other continuously (McCraty, 2015; Riganello et al., 2019; Liu et al., 2022). The heart communicates with the brain in four primary ways: neurologically (via the transmission of nerve impulses), biophysically (via pressure waves), biochemically (through neurotransmitters and hormones), and energetically (via EM interactions) (McCraty, 2015). Communications taking place along all these conduits have a key impact on the brain's activity. In this study, it is posited that the heart plays a central role in how we perceive reality as a whole. This notion, or its variation, is also shared by researchers and experts such as Al et al. (2020); Yagur (2023); Sadeghi et al. (2023).

Figure 6: Pathways of Heart-Brain Communication



Source: McCraty (2015)

2.9. Objectivity and Subjectivity from the Conwave Perspective

From the Temic Principle of Conscious Perception, what we call observation, perception, awareness, experience is a product of exchange and/or interaction of photons of conwaves and other photons between the brains/the nervous systems/information processing/signal transmission systems of two or more complex systems or objects. In simple terms, what we see as reality is a picture our brain builds for us, and the interactions between photons of EM waves, including conwaves, play a key role here. What we see as reality is an illusion, a mental picture or interpretation created by the brain as consciousness and energy is really all that exists.

Earlier, human entanglement is defined as an entanglement, which is a single matrix of individual consciousness, coupled with all the cells, tissues, organs, and every other bodily part. To understand how the brain builds a mental picture of things in our environment we perceive as reality, it is helpful to consider the interaction of any human (or any complex system at all) with the environment as an entanglement-to-entanglement (E2E) interaction or relationship. For instance, when a complex system such as a human demonstrates knowledge and awareness of their environment (planet Earth, another complex system, which is also an

entanglement), that is a form of an E2E interaction/relationship mediated by the exchange of photons as explained in the Temic Principle of Conscious Perception.

If all living organisms on this planet were exactly the same or identical (i.e., they all belong to the same species and are exactly the same at all levels, even up to the genetic level), they would perceive reality exactly the same way objectively. This means all complex systems on Earth will see all things the same way, and there will be no room for subjectivity. But this is not the case in real life since nature loves diversity. Thus, living systems on Earth differs across multiple levels, across domains, kingdoms, phyla, even down to species. This research states that objectivity and subjectivity arise due to the variations in the inner and outer structures of living organisms on a planet, especially their brain and hearts. If the inner structures and outer structures of these complex systems are exactly the same, especially their individual consciousness, brain, and heart, they would perceive reality the same way, and in such a world, subjectivity will not exist.

On this planet, living organisms belong to various domains, kingdoms, phyla, subphyla, classes, orders, families, genera, and species. Therefore, the way humans perceive reality is different from how other animals, plants, and other complex systems do because of the differences in inner and outer structures of these systems. This is subjectivity. Even in the same species, such as humans, these differences exist in the inner and outer structures of our cells, tissues, organs, and systems, which make us perceive reality subjectively.

Traits and qualities that each species of organisms (such as humans, animals, plants) has in common create shared observations and experiences called objectivity, while variations in these traits and qualities (including variations in frequency and intensity of heartbeats, breath, and variations in inner and outer structures of cells, tissues, organs, and systems) result in differences in shared observations and experiences bringing about subjectivity. Objectivity occurs due to the presence of many shared traits and qualities in the internal and external structures of organisms belonging to the same species or closely related species, making their conwaves vibrate in phase via signal (photon) exchange and communication from receptor cells (or similar cells) in other parts of the body to and from the brain, resulting in constructive interference in superposed conwaves in phase in the brain, creating shared mental pictures — objective realities. On the other hand, subjectivity occurs due to slight variations in the internal and external structures of organisms belonging to the same species or huge variations in the internal and external structures of organisms belonging to different species, making their

conwaves vibrate out of phase via signal (photon) exchange and communication from the receptor cells (or similar cells) in other parts of the body to and fro the brain, resulting in destructive interference in superposed conwaves that are out of phase, creating varying mental pictures — personal or subjective realities.

Both objectivity and subjectivity may occur as products of the same events in the brain: When photons of conwaves and other EM waves interfere constructively in the brain and reinforce one another, they create resultant waves with higher overall amplitudes, which produce signals that yield objectivity for us; but when these photons interfere destructively in the brain, the resultant waves have a decreased overall amplitude or the waves cancel out one another completely. What causes constructive interference to emerge is mainly due to the similarities or sameness of the internal structures of brains and hearts (heart rhythm), and it is the variation in these internal structures that mainly create destructive interference. This is explored further in the Periodic Table of Liforms on Earth (PTL).

All humans on Earth are connected together by consciousness to form a single matrix or entanglement. We feel this connection when relating with or thinking about our fellow humans. However, this connection is felt in a stronger manner among some humans than others, which makes a certain set of humans, such as a couple, family, friends behave as if they were a single consciousness sharing two or more discrete spaces in the Universe and experiencing two or more discrete lives at once. These are examples of human entanglements. This special relationship exists because the humans share a deep connection due to blood, genetics, astrobiogenetic factor such as their parent(s) or ancestor(s) originating from the same cosmic dust or star dust (see Tijani, 2023b), and other factors, which make such humans share more similarities with one another and less differences.

Some humans such as magicians can also establish a special connection or an entanglement with others via brain-to-brain (B2B) communication using the Temic Principle of Consciousness Entanglement. Here are the mechanisms through which this communication that brings about hypnosis occurs as done by magicians and related people:

- Creating awareness of what the magician wants people to see using suggestions, tricks, and other means
- The viewers must admire or respect the magician (i.e., be in a state ready to accept or consider what the magician says or does, if not the magic won't work); this state is important to ensure the whole system (group of people in the show), which is an

entanglement of conwaves, vibrates at the same or roughly the same frequency so they'll experience a shared reality at the same space-time for a while

- If these conditions are present, then the viewers will start creating coherent mental pictures in their head based on the suggestions or tricks of the magician based on coherence and superposition of conwaves
- In such scenarios, the viewers are hypnotized by the magician, which can keep them spellbound, making them see certain aspects of reality as he deems fit, where one or more items can appear to have been transformed to another item(s) (what is called “òpapa-parada” in Yorùbá parlance)
- This sort of transformation is superficial occurring only in the mind of the hypnotized but has no effect on other people aware of the magician’s tricks and techniques or other people not present in the show. The transformation does not occur at a deep level such as that done by a transformator, a device that turns matter to light (photons), or fermions to bosons, and light to matter, or bosons to fermions

The hypnotic process works in a similar way through which typical humans observe/perceive things by creating coherent mental images of those things in their head; only that in the case of the magician, the input is coming from the magician rather than the environment. The magician has mastered techniques for connecting his head (i.e., his conwaves) with those of his audience, which makes his consciousness vibrate in phase with those of his viewers, where everyone present in the show sees the same version of reality (the picture built by the magician), bringing about an entanglement via coherence of conwaves. This is an example of entanglement at a macroscopic scale.

Without the audience being in a state of admiration or respect (i.e., willing to get entertained in the show) of the magician, the mental images would be decoherent as the conwaves of the magician and viewers would vibrate out of phase. Hypnotism, as described here, is a form of B2B communication, involving exchange and/or interactions of sentons (photons of conwaves) between two or more human entanglements. This is how hypnotism works generally based on the Conwave Model.

Apart from these, magicians also use certain techniques commonly employed in ancient/extinct human eras, especially in Africa, to establish communications or correspondences with certain elements of nature, such as air, light, fire, water, plants, and many others. This is covered in detail in the “Applications of Consciousness Physics” section. It is pertinent to note that the

author does not regard science and technology as something new to planet Earth in modern times.

2.9.1. Realms, Worlds, Inner Universes, Outer Universes

Consciousness and energy, which is the absolute vacuum, is all that really exists, and anything else is interpretation of the brain — pictures the brain builds for us, which we call reality but they are illusions. Within the Collective Entanglement called the absolute vacuum are infinite inner or non-physical universes and infinite outer or physical universes. The outer universes are exact replicas of the inner universes, and in any universe, on either side of the Timeline or the Planck scale, are an infinite number of planets or physical worlds. Even in a specific planet are an infinite number of realms, each separated by a barrier, each existing independently of the other. Humans and all other living systems we see all around us on planet Earth are hosted on one of these realms via coherence on a specific set of frequencies, which are among the natural frequencies of Gaia or Earthly consciousness. In other words, all complex systems on this planet are connected via the natural force of consciousness to form a single matrix or entanglement.

In the Temic approaches, the process of coming to life can be seen as a phase transition or translation of consciousness from one realm to the other, from one planet to the other. This process, which occurs during the birth and death of a living system on a planet, appears as if one is waking up from a lucid dream, as if one is flying away from an inner universe in which space-time and gravity do not exist, flying out from dreamland to a physical world. From this perspective, existence originates in the innermost universe (one of the inner universes), or the Beginning, which is a separate dimension — the zero dimension or first dimension. Inner universe is one of nature's hidden dimensions in which the absolute vacuum, the source of all things in existence in the Temic model, resides. Inner universes are immaterial realms, non-physical worlds of feelings, imaginations, thoughts, ideas, emotions, occurring below the Planck scale, and space-time does not exist in these realms. On the other hand, outer universes are physical universes where space-time exists, such as our Universe that we are familiar with.

All living organisms on Earth or other planets with life are connected to the inner universes with their organ of individual consciousness. For humans, these inner universes are inner worlds or realms that exist within the brain. When we close our eyes, we see the inner universes; thus, we see the inner universes when we meditate and when we sleep. Our brains are the inner universes. Every human has an inner self in the inner universe and an outer self in the outer or

physical Universe. The same thing applies to all other living organisms. For humans, connecting with the inner universe is a function of the mind, not the body. Meditation can allow an individual to access different realms in the inner universe because when a person meditates, their consciousness, which travels as waves, according to the Conwave Model, can get lifted into or connected to these realms via superposition of waves and coherence. Reality is multitiered and multilayered. The heartbeat rates of living systems in every planet, realm, or world are different, and each realm, planet, or universe vibrates at different sets of frequencies.

For example, you, the reader, are a complex system that possesses an individual consciousness, which exists everywhere in the universes at once in a superposition of infinitely possible forms of energy, and your brain has the complete information of these infinite forms. But at any specific fragment of time, the bulk of this information is locked in the brain for all humans in the subconscious mind, and you, or any human, can only access a tiny segment, which we see as reality during our brief existence on this planet. As the organ of individual consciousness, the brain has the complete information of our past, present, and future as the past, present, and future exist all at once in the inner universe, but we can only access a tiny segment during our brief earthly existence. If we can travel as photons at the speed of light, then we will be able to access our past and future selves as time will no longer have any meaning.

Thus, your future selves are already existing on a fragment of time, which may be seconds, minutes, hours, days, months, or years from now, in another realm, on this planet, or on another planet, in this Universe, or in another universe, and the brain knows this, but this information is hidden during your current fragment of existence on this planet. Existence has no beginning and no end as consciousness, just like energy, cannot be created nor destroyed but only changes from one form or state to the other.

2.9.2. Lucid Dream and Trance

A lucid dream is a kind of dream in which the dreamer knows they are dreaming (LaBerge & Rheingold, 1990). Researchers such as Hearne (1978); LaBerge (1980) demonstrated lucid dreams are an objectively verifiable altered-state of consciousness in which participants could give a signal they are in a lucid state during dream periods with the aid of pre-agreed eye-movement signals. During a lucid dream, the person having the dream could have some amount of control over narrative, characters, or environment of the dream (Lewis & Nandor, 1985; Kahan & LaBerge, 1994; Adrienne, 2005; Eeden, nd). According to Saunders et al. (2016), an estimated 55% of people have had at least a lucid dream in their lifetime. Julian and Javadi in

their 2015 study showed people that have engaged in meditations for a long period often have more lucid dreams. As for trance, this is a temporary mental condition where an individual is not completely conscious of and/or not in control of themselves. It is a half-conscious state, which is seemingly between sleeping and waking, where the ability to function voluntarily could be lacking or suspended (Cambridge Dictionary, nd).

In this research, lucid dream and trance are considered periods during which the individual consciousness of a human shifts or transitions momentarily into another realm which may be in this Universe or another universe. Such periods of altered state of consciousness occur when the dreamer's heart is tuned into a frequency outside the natural earthly frequencies of the realm we are all currently in, which makes the person become connected to another realm via coherence of waves, with their conwaves vibrating at the frequency of that realm. In such occurrences, including sleep paralysis, the dreamer can see other people or entities in other realms, even including their dead relatives, and exchange information and experiences with them.

When a person loses consciousness on this planet and dies or faints, their consciousness is transitioned or shifted to the frequency of another realm where they continue to exist in their old form or another form in the case of death, or they experience another realm temporarily if they just fainted, and it is possible to connect with "dead" people if one can know the frequency of heartbeats in their current realm(s). People we think are dead are not really dead, but existing in their old form or another form in other realms on different fragments of time. Actually, these people, and every living system, exist at the same time in infinite forms of energy in infinite realms in universes. Recall that energy and matter are one and the same, as shown by Albert Einstein. Death is a phase transition of consciousness from one realm to the other, and even you, the reader, are already existing in various forms on various time fragments or timelines in other realms in this Universe and others, and this will become manifest to you with time. All these have already happened in inner universes where space-time has no meaning. Think of existence as a TV series without a beginning or an end with characters assuming different forms and traits in different seasons.

Both the inner universe and the outer universe determine our realities as humans, and our outer universes are exact replicas of our inner universes (Tijani, 2023a). Just like in the physical Universe, which is an outer universe, matter also seems to exist in the inner universes, which appear to us as lucid or clear dreams. The things a person (an observer) sees in dreams appear

physical and concrete because during the dreams, the observer strongly has the feelings that the things they touch are concrete and physical. For instance, when they stumble upon a stone in a lucid dream, they strongly feel the stone is a physical stone. When water splashes on their body in the dream, they strongly feel the wetness of the water on their skin and might even feel cold in that dream. All this is interpretation of the observer's brain as consciousness and energy is really all that exists.

For other living organisms, their nervous systems or respective information processing and/or signal transmission systems are the inner universes. Thus, the inner universes for these creatures lie within their nervous systems or respective information processing and/or signal transmission systems. All events take place at the same time in these universes, and in the case of animals, such as humans, making sense of events depends on the power of the observer's brain and the power of accommodation of their eyes. The higher the processing power of the brain and the power of accommodation of the eyes, the more the events (in level of details and number) the observer can grasp, be conscious of, and remember. Individual consciousness or the inner self of a host moves at the speed of light in the inner universes like photons, with all events, processes, and phenomena occurring at the same time in these realms.

The absolute vacuum lies within the innermost universe within the Beginning prior to the expansions or explosions through the Big Bangs. In this innermost universe (the absolute vacuum), individual consciousnesses exist within the absolute vacuum in a frozen state. As for the outer universes, these are physical worlds that are bound by space-time, such as our Universe — a physical universe. In TemFrame, time is relative as it varies from one location, region, planet, or universe to the other. However, in some universes (the inner universes specifically), time does not exist at all. Therefore, time is essentially not an absolute quantity.

2.9.3. Reality Is Both Local and Non-Local

Whether reality appears local or non-local depends on the observer's frame of reference. Imagine an observer whose frame of reference is the Collective Entanglement, the absolute vacuum, and the observer possesses Fundamental Consciousness of infinite energy and has infinite brain power. Such an observer will see everything at once and consider all things, regardless of their distances apart, as interconnected as a huge matrix. For such an observer, reality is non-local. However, for an observer such as a complex system like humans, our perception of reality is very narrow because of the many limitations of our brains and sense organs. Hence, we perceive things happening sequentially and regard many of them as

disconnected from one another. Thus, reality appears local to us. Whether reality appears local or non-local is relative and depends on the observer's frame of reference. Generally, whether certain elements of nature appear discrete (as in Quantum Physics) or continuous (as in Classical Physics), or local or non-local, is relative and depends on the observer's frame of reference, based on the level or scale at which the observer can perceive nature. The scale at which we, or our instruments, observe anything in the Universe, or any universe, depends on the level of energy we are able to observe. This is examined further in certain applications of Consciousness in the subsequent section.

SECTION THREE

3.0. The Periodic Table of Lifeforms on Earth (PTL)

Under Development

This is a periodic table of living organisms on this planet based on their level of consciousness and other key factors essential to life. This will be developed in the second phase of the research project.

SECTION FOUR

4.0. Implications of the Findings in the Context of Existing Fields and Research

4.1. Consciousness Physics Offers a New Approach to Reality

The fundamental principle of Consciousness Physics is that consciousness and energy is all that exists. Based on this notion, all things (whether living or non-living) in nature are manifestations of one form of energy or consciousness or the other. Thus, any science that involves the study of nature can be seen as the study of consciousness and energy. This shows the deep connection that exists between Consciousness Physics and all fields of science, including soft and hard sciences. For instance, in Physics, all fields in this branch of science can be explored deeply using the principles of Consciousness Physics. This is because underlying the forces, matter, space-time, and other concepts studied in every field of Physics is energy, and also because the brain plays a central role in such studies. Due to its focus on energy and consciousness (housed by the brain), Consciousness Physics shares a deep connection with all fields of Physics. This is why the author sees Consciousness Physics has an emerging field that can be developed as a single unified theoretical framework for all fields of Physics.

Furthermore, due to its focus on consciousness (housed by the brain) and energy, Consciousness Physics also shares a deep connection with all disciplines, fields, and subjects, be it science or non-science. This is because in studying any disciplines, fields, or subjects, the use of the brain, which is the seat of consciousness, is central. Thus, the principles of Consciousness Physics underlie all forms/types of knowledge in sciences, social sciences, medicine, arts, humanities, philosophy, sports, and all others. Thus, to develop a Theory of Everything, Consciousness Physics has a key role to play. Therefore, the emerging field of Consciousness Physics offers a new approach to developing the TOE.

4.2. Limitations of the Study

This scope of the current papers is to develop Consciousness Physics, based on the TEMIC approaches further, especially in relation to phenomena of Quantum Physics such as entanglement, uncertainty, probability, quantization, superposition, and wave-particle duality and those of Classical Physics such as Newton's third law of motion, coherence, and others as well as Relativity, Cosmology, Particle Physics, and Condensed Matter Physics. The research

project, which aims to develop Consciousness Physics as a field of Physics that links all the other fields of Physics together as a Unified Theory, has two phases. In the first phase, which is covered in the current papers, the foundational concepts for the Mathematics of Consciousness Physics are developed based on the TEMIC approaches and others. The Mathematics of Consciousness Physics or Consciousness Mechanics will be based on Quantum Mechanics, Classical Mechanics, Relativity, and related areas. This is what will be covered in the second phase of the project, which will also involve the development of the Periodic Table of Lifeforms on Earth.

SECTION FIVE

5.0. Conclusion

The fundamental principle of Consciousness Physics is that the building blocks of the Universe — or the multiverses generally — are consciousness and energy, which is the absolute vacuum, and that consciousness and energy (the absolute vacuum or the Collective Entanglement) is all that really exists; anything else is a picture or interpretation built for us by the brain. In this research, Consciousness Physics is developed linking Classical Physics with Relativity, Cosmology, Quantum Physics, Particle Physics, Condensed Matter Physics, and other fields of Physics. Since consciousness connects all things together and all universes together, it also connects all forces of nature together. Thus, Consciousness Physics links all the fields of Physics together as a Unified Theory. All things in the multiverses are connected as a single matrix or entanglement by the force of consciousness and balance one another. Applying this notion and also the proposition that consciousness and energy (the absolute vacuum) is really all that exists, various principles were developed in this research project. These papers have developed the foundational concepts for the Mathematics of Consciousness Physics based on the TEMIC approaches and others. Further research will look at the Mathematics of Consciousness Physics or Consciousness Mechanics, which will be based on Quantum Mechanics, Classical Mechanics, Relativity, and other areas. Also, further research involves developing the Periodic Table of Lifeforms on Earth (PTL).

List of Abbreviations

ASST: All-Seeing Space Telescope

B2B: Brain-to-Brain

CMB: Cosmic Microwave Background

E2E: Entanglement-to-Entanglement

EM: Electromagnetic

EOG: Earth Observatory and Gaia Space Station

EPR: Einstein-Podolsky-Rosen Paradox

FCWB: Fundamental Consciousness Wave Background

FTL: Faster Than Light

GWB: Background Gravitational Wave of the Universe

NASA: National Aeronautics and Space Administration

PTL: Periodic Table of Lifeforms on Earth

SETI: Search for Extraterrestrial Intelligence

TEMIC: The Emergent Model of Inner-Outer Universe Cosmogeny

TL: Temic Limit

TOE: Theory of Everything

UV: Ultraviolet Ray

PART III

THE MATHEMATICAL BASIS OF CONSCIOUSNESS PHYSICS: CONSCIOUSNESS MECHANICS

“Nothing in life is to be feared. It is only to be understood. Now is the time to understand more, so that we may fear less” — Marie Salomea Skłodowska-Curie

Consciousness Physics: A Unified Theory, Working Papers II

Consciousness Mechanics: The Mathematics of Consciousness Physics

Abstract

Consciousness Mechanics is developed as the branch of mechanics that deals with the mathematical description of motions and interactions at the deepest level of reality — consciousness-energy or simply cen. At this level (cen), every possible measurement that can be made on a system is described by a cen operator, while a cen function is a rule, expression, or law defining a relationship between one variable and the other. In these papers, various cen functions have been formulated such as cen permutation, cen conjugation, cen parity, cen annihilation, cen partition, and collapse function. Consciousness Mechanics is the Mathematics of Consciousness Physics. Also, Consciousness Physics is the Physics of the Whole of Existence (WoE), and by applying the Eight Axioms (the Temic Universal Laws), Cayley-Dickson construction, Lagrange theorem in Group Theory, and Hurwitz's theorem, a new algebra called Temic Algebra was developed to explain this Physics: The Physics of Everything. TEMIC is an acronym for The Emergent Model of Inner-Outer Universe Cosmogeny, one of the key theoretical frameworks of Consciousness Physics. Temic Algebra is a key aspect of Consciousness Mechanics and has various applications in these papers, especially under the element of Consciousness Mechanics called Consciousness Statistics, which provides the mathematical basis for time travel, the Big Bang, gravity, reincarnation, consciousness (soul), spirit, life, death, and others, all explored under a single framework: Consciousness Physics. Temic notation is another key aspect of Consciousness Mechanics and was developed using the Eight Axioms and the Dirac notation, but Temic notation generalizes Dirac notation to all possible dimensions.

Keywords: Consciousness Physics, Consciousness Mechanics, Consciousness Statistics, Abstract Algebra, Group Theory, Quantum Mechanics, Dirac Notation, Statistics, Probability

SECTION ONE

1.0. Background

Consciousness Physics is an emerging field of Theoretical Physics that involves studying electromagnetic (EM) waves, which have frequencies lying around and beyond the radio wave segment of the EM spectrum with a focus on consciousness waves (conwaves) possessed by complex systems (living organisms). In animals, including human beings, these conwaves are brain waves because the brain is the seat or organ of consciousness in these complex systems (i.e., hosts). The Conwave Model, which is part of the author's larger "The Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC)" framework, states that consciousness is a fundamental, intrinsic, and primordial property of the Universe that transmits information (self-awareness, awareness of the surroundings, experience) and energy traveling in waves called consciousness waves from the absolute vacuum to any matter that serves as a host to consciousness. The fundamental principle of Consciousness Physics based on the TEMIC Model, also called TemFrame, is that the basic building block of the Universe — or the multiverses generally — is consciousness-energy (referred to as cen or CEN in short by the author): Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists; anything else is a picture or interpretation built for us by the brain. This field involves studying Physics at the deepest level of reality, CEN, which is even deeper than the quantum level. CEN is also used as an acronym for the Collective Entanglement, and it usually denotes the Whole of Existence or the Multiverses in these papers, while cen is also used to refer to consciousness-energy, just like CEN, but cen is used often specifically to refer to elements (the entanglements or archetypes) of the Collective Entanglement, CEN.

From the foregoing, Nothing (the absolute vacuum or consciousness-energy) is all that exists, and all things in existence (whether living or not) are manifestations of consciousness-energy or Nothing. All things evolve via Big Bangs from Nothing in cycles occurring infinitely. In this perspective, all things in existence is an entanglement, which is a huge matrix or Nothing or the absolute vacuum. This implies, entanglement is a fundamental property of our Universe or any universe (Tijani, 2023c). Thus, it does not just occur at only the quantum level but also at the classical or macroscopic level. Therefore, the alternative names for Consciousness Physics include the Physics of Nothing, the Physics of all things in existence, the Physics of the absolute

vacuum, and the Physics of Infinities, since all things in existence are infinite. These terms will be used interchangeably in this study to mean the same field.


In the first phase of this research project, the Physics of Consciousness was developed based on the TEMIC approaches, linking all the fields of Physics together as a Unified Theory, especially in relation to phenomena of Quantum Physics such as entanglement, uncertainty, probability, quantization, superposition, and wave-particle duality and those of Classical Physics such as Newton's third law of motion, coherence, and others as well as Relativity, Cosmology, Particle Physics, and Condensed Matter Physics. In those papers, Consciousness Physics was developed linking Classical Physics with Relativity, Cosmology, Quantum Physics, Particle Physics, and Condensed Matter Physics (see Tijani, 2023c). As consciousness connects all things together and all universes together, it also connects all forces of nature together. Thus, Consciousness Physics, the Physics of all things in existence, links all the fields of Physics together as a Unified Theory.

The current papers are a continuation of this research project (see Tijani, 2023; 2023a; 2023b; 2023c), where Consciousness Mechanics, or the Mathematics of Consciousness Physics, is developed based on the TEMIC approaches and others. As a corollary to the alternative names for Consciousness Physics stated above, the Mathematics of Consciousness Physics can also be called Consciousness Mechanics, the Mathematics of the absolute vacuum, the Mathematics of Nothing, the Mathematics of all things in existence, and the Mathematics of Infinities. All these terms will be used interchangeably in this study to mean the same field. The mathematical frameworks of the emerging field of Consciousness Physics developed in these papers will be based primarily on Quantum Mechanics, Classical Mechanics, Relativity, and many other areas. All this will be covered in the second phase of this project, which will also involve the development of the Periodic Table of Lifeforms on Earth (PTL). This project is huge and is expected to last several years over which various aspects of the field will be refined and improved based on experimental results and other relevant developments. Thus, these current papers should be seen *as rough ideas* to be continuously refined with time.

SECTION TWO

2.0. The Temic Big Bang Cosmology

2.1. The Beginning

Also called the Temifa Big Bang Cosmology, the Temic Big Bang Cosmology is developed based on the fundamental principle of Consciousness Physics that states the basic building block of the Universe — or the multiverses generally — is consciousness-energy (referred to as cen or CEN in short): Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists; anything else is a picture or interpretation built for us by the brain. This notion is of paramount importance and will be referred to as the Base Axiom or simply CEN (see Figure 2); cen or CEN is symbolized with , and this double infinity symbol is called tepet or TEPET, a palindrome coined by the author showing the symmetric/cyclical nature of CEN as modelled in Figure 2. TEPET is used to refer to CEN, the Collective Entanglement (Consciousness-Energy), while tepet is used often specifically to refer to elements (the entanglements or archetypes) of the Collective Entanglement, CEN.

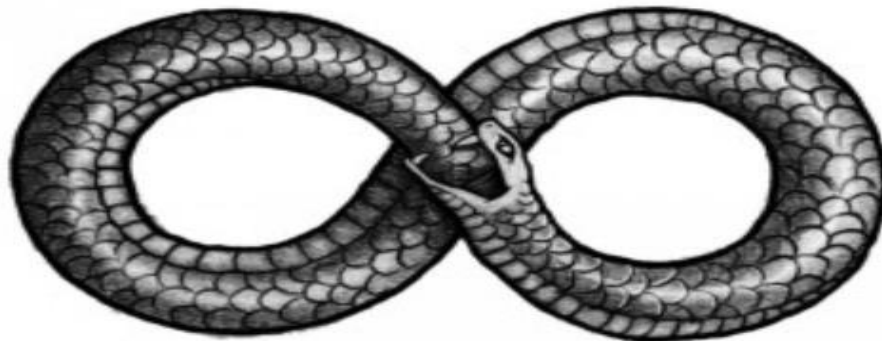
In TemFrame, the universes have no beginning and no end as existence occurs in cycles infinitely since space and time only exist within the double infinity or the absolute vacuum, not outside of it (Tijani, 2023). Thus, the double infinity is not bound by space-time, meaning space and time do not exist outside of it but within it. There are two infinities ∞ in the symbol, as its name implies: The two infinities cross each other at the center showing that the outer universes exist infinitely and are exact replicas of the inner universes that also exist infinitely. This symbol was inspired by studying some philosophical notions of ancient Egypt, especially those of Atum, a chief god of the ancient Egyptians worshipped in the past in Africa, and Ouroboros in ancient Egyptian philosophical notions, meaning a serpent symbolized as representing the cycle of life and death which our Universe maintains (Reemes, 2015) (see Figure 1). The snake (serpent) eating its own tail depicts the recreation of life via the death of the Universe (Mythologian.net, nd). The double infinity symbol shows space-time in the absolute vacuum is infinite.

In the Temic approaches, Big Bang is defined as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of

the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. The First Big Bang in the innermost universe or the Beginning (a primordial universe) was initiated by Fundamental Consciousness and this led to an infinite series of Big Bang expansions occurring in cycles to create more and more inner universes, and consequently, outer universes.

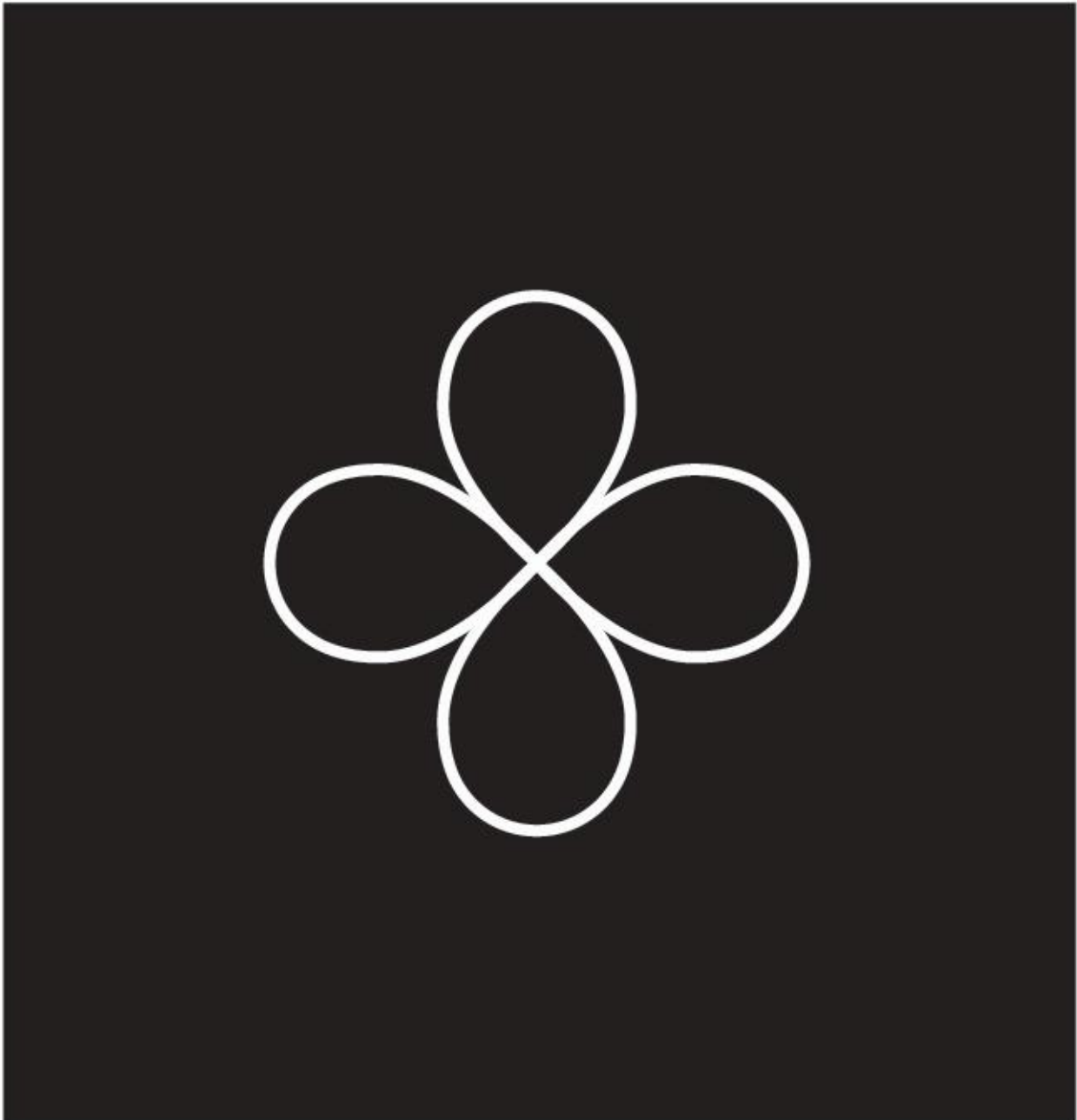
This approach to Big Bang is a general one and will be applied throughout this study to develop all aspects of this field. It can be applied to study the evolution of all things in existence, including all sorts of disciplines and fields, and hence, to build the Theory of Everything (TOE), also called CEN or TEPET in this study. All these are forms of consciousness-energy, or cenforms in short. In this introductory section to the current chapter, this approach to Big Bang is applied to formulate the fundamental principles of the universes, which are universal laws or axioms that developed or evolved from the Base Axiom via Big Bang expansions. Using these axioms, a set of postulates will be formulated to develop all other aspects of this field.

Figure 1: Egyptian Ouroboros



Source: Mythologist.net (nd).

**Figure 2: CEN — A Model of the Absolute Vacuum or the Collective Entanglement
(The Whole of Existence)**



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

2.2. Temic Universal Laws or Fundamental Principles of the Universes

The following axioms are developed from the Base Axiom and will be used as fundamental principles or building blocks to develop all forms of knowledge and build the Theory of Everything:

0. Base Axiom or CEN: Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists [**Axiom 0**]

CEN or the Base Axiom is an entanglement that undergoes Big Bang expansions infinitely in cycles to yield an infinite number of axioms or fundamental principles (which are cenforms), evolving based on the Temigram Pattern, a Universal Pattern (as shown in Figure 2), to yield an infinite number of axioms or fundamental principles. These axioms are Universal Laws or Principles: They are fundamental principles of the Multiverses or nature that exist independently of our perception/observation:

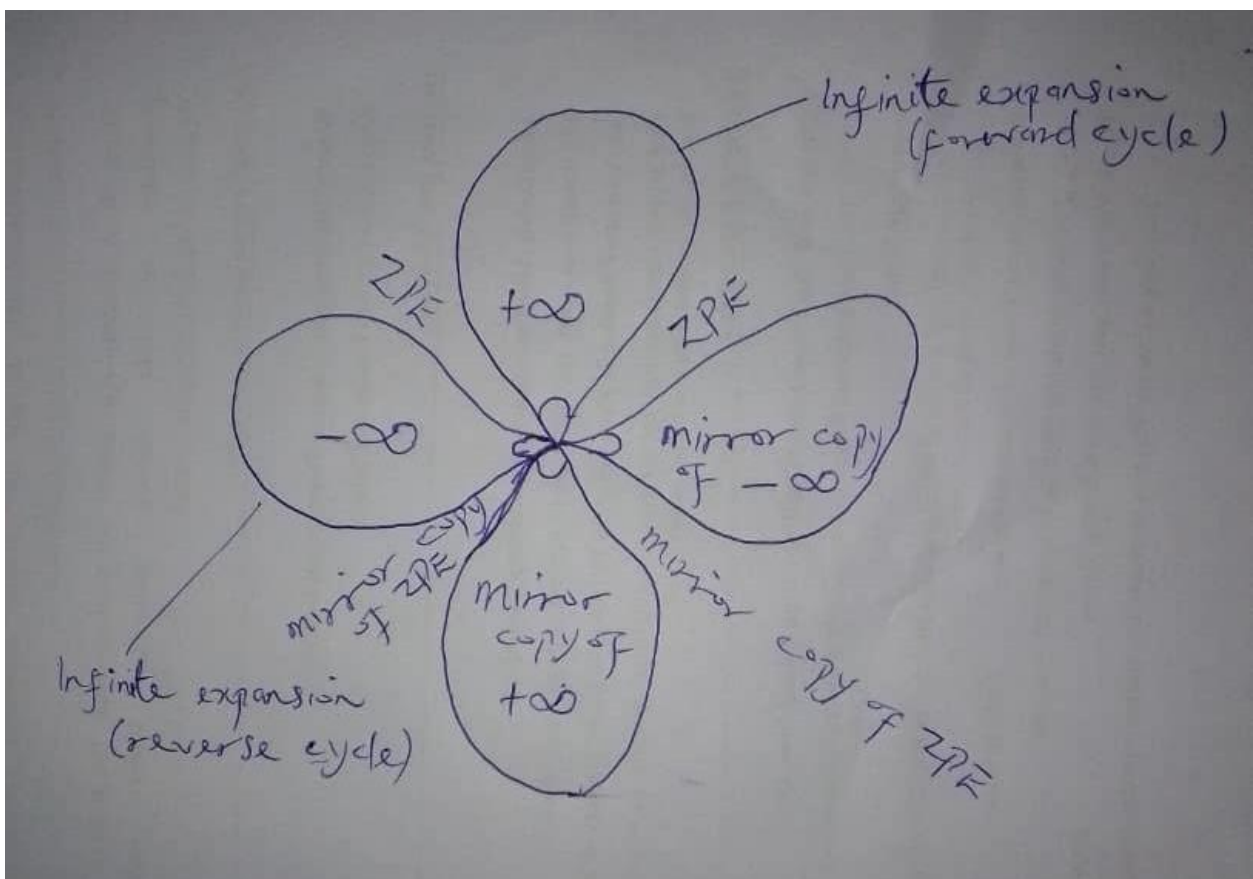
1. All things are connected or entangled and balance one another [**Axiom 1**]
2. All things in existence (whether living or not) are manifestations or forms of CEN called cenforms in the TEMIC approaches [**Axiom 2**]
3. All things in the multiverses change no matter how long [**Axiom 3**]
4. Anything or any system exists infinitely in a superposition or combination of all possible cenforms or censtates unless when observed/experienced and that forces its wave function to collapse to a specific cenform (form of consciousness-energy) or specific censtate (state of consciousness-energy) that is measured/seen [**Axiom 4**]
5. Space-time is an emergent property; it is not fundamental to the universes [**Axiom 5**]
6. Universal scaling (hierarchy) occurs in the outer universes due to **Axiom 4** that says all things in the multiverses change no matter how long [**Axiom 6**]
7. All things in the multiverses, or Existence generally, occurs in cycles infinitely [**Axiom 7**]

While these axioms are infinite in number, i.e., they keep expanding via Big Bang to yield more and more axioms infinitely, for our own Universe, we can only know a limited number of them at any particular time or era. Because cen is the basic building block of all things in existence, all laws of Physics and all forms of knowledge and disciplines are based on these fundamental principles or axioms. For instance, in Physics, specifically Classical Physics, it is **Axiom 1** that underlies Newton's third law of motion, which is the law of action and reaction. This is how the axioms also underlie all other fields of Physics and all disciplines generally.

CEN, as modelled in Figure 2, undergoes Big Bang expansions to yield more and more infinite cenforms in cycles. In this subsection about Universal Laws, these cenforms are axioms. This is modelled in the Temigrams (Figures 2–8), meaning the Temic Universal Diagrams, also

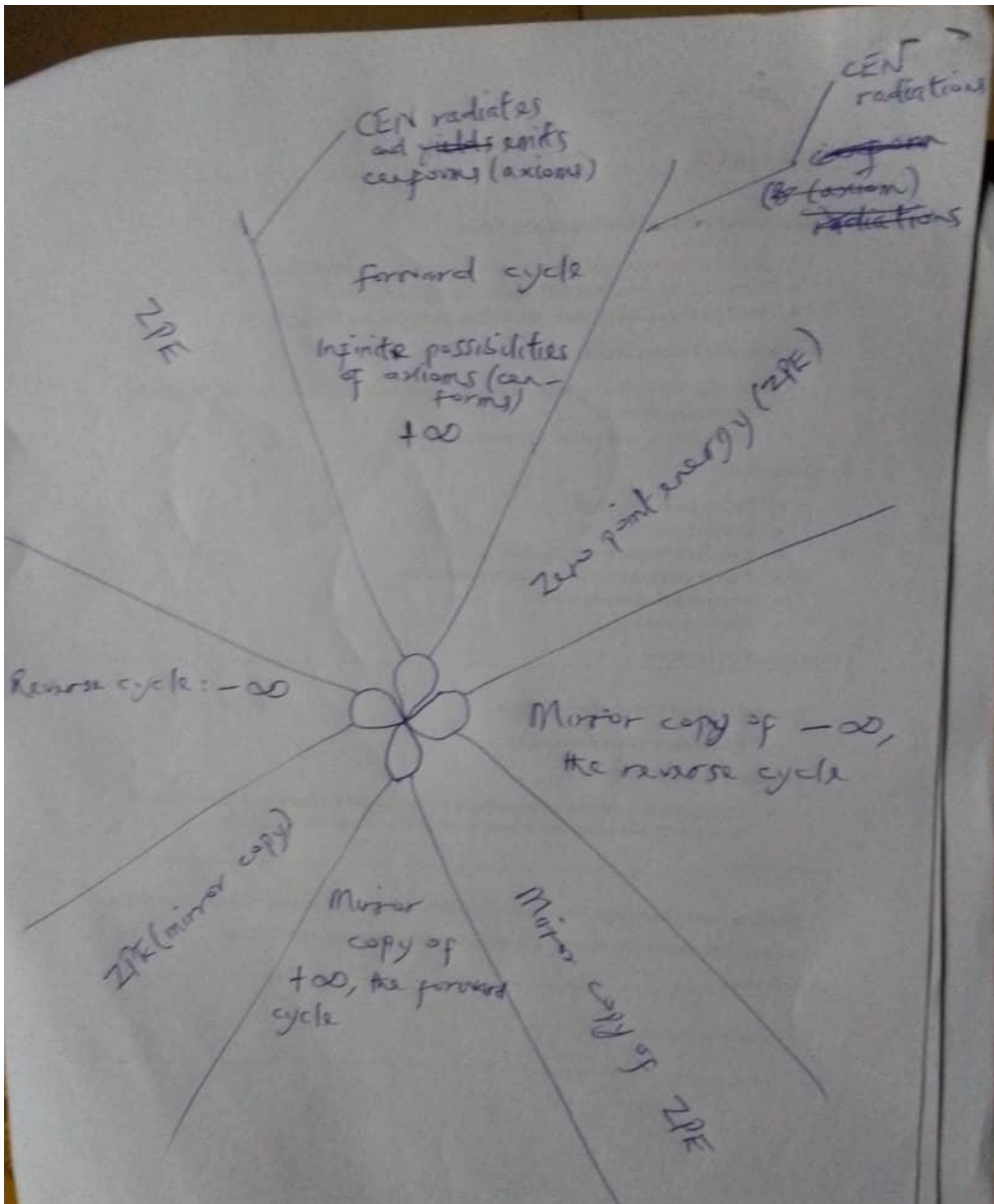
called Ìgbá iwa, a Yoruba language term from the Odù-Ifá literary corpus for “the Calabash of Existence”. These Temigrams are like the blueprints for all possible cenforms in the universes (the whole of existence). The cenforms are all things in existence (whether living or not). (The Axioms can also be developed from the Temigrams as both the Axioms and the Temigrams have an isomorphic relationship.) Yorùbá is a language of the people native to South-West, Nigeria in Africa, while Ifá (called the Oracle in English) is an ancestor of the Yoruba people, who existed at the beginning of the Homo sapiens (modern humans) era and used complex calculations to develop a body of knowledge that includes various Yoruba dialects, philosophy, science, medicines, divination/fortune-telling, poems, and many others. From generations to generations, this body of knowledge became what is known as the Odù-Ifá literary corpus, meaning “the Code of Ifa” in English as “odu” is a Yoruba word for “code”.

Figure 3: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: Author’s Construct (2023)

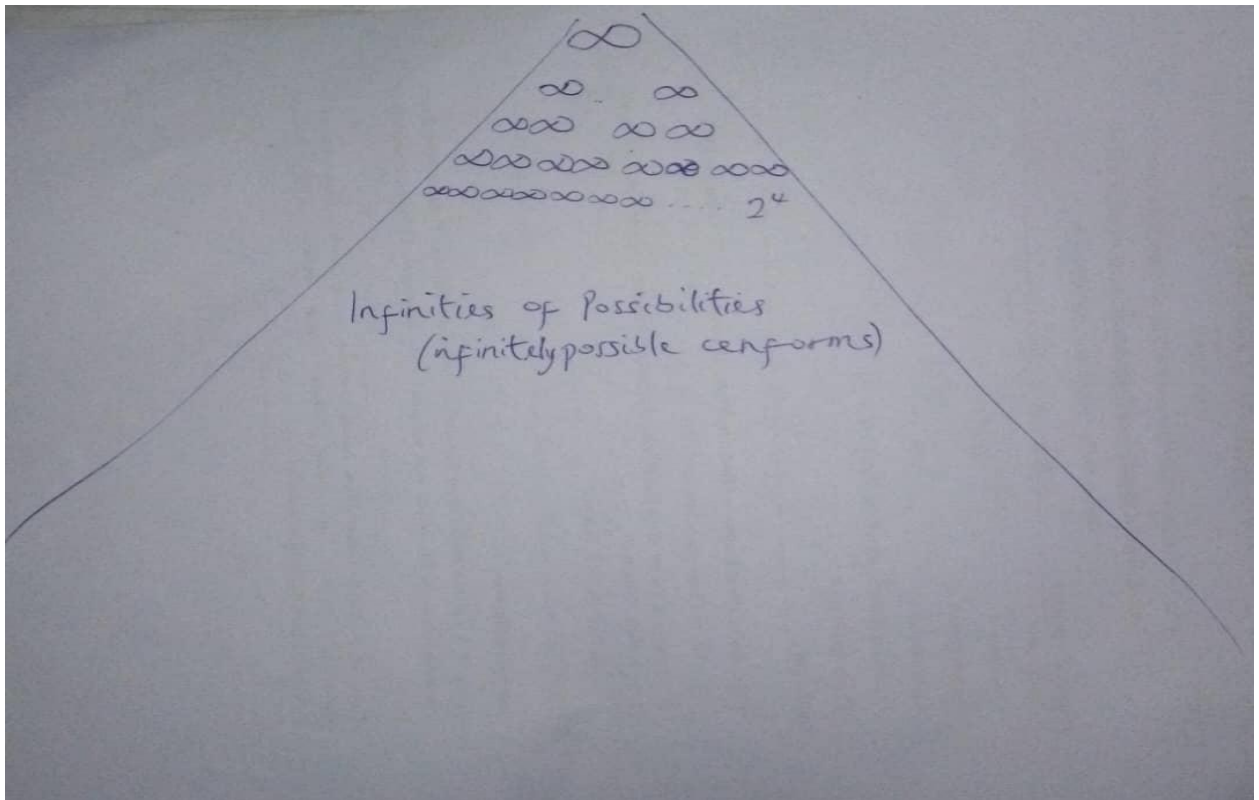
Figure 4: Base Axiom or CEN Radiation via Big Bang



Source: Author's Construct (2023)

Figure 5: Forward Big Bang Expansion Cycle

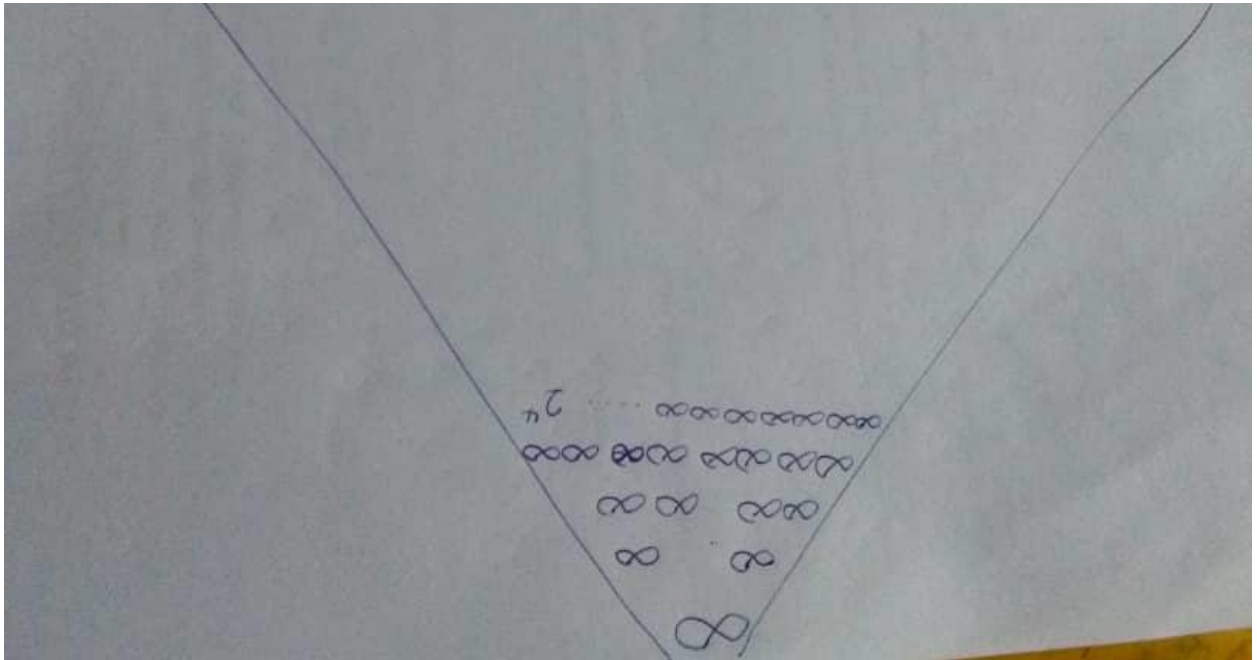
Forward cycle: $+\infty$



Source: Author's Construct (2023)


Figure 6: Reverse Big Bang Expansion Cycle

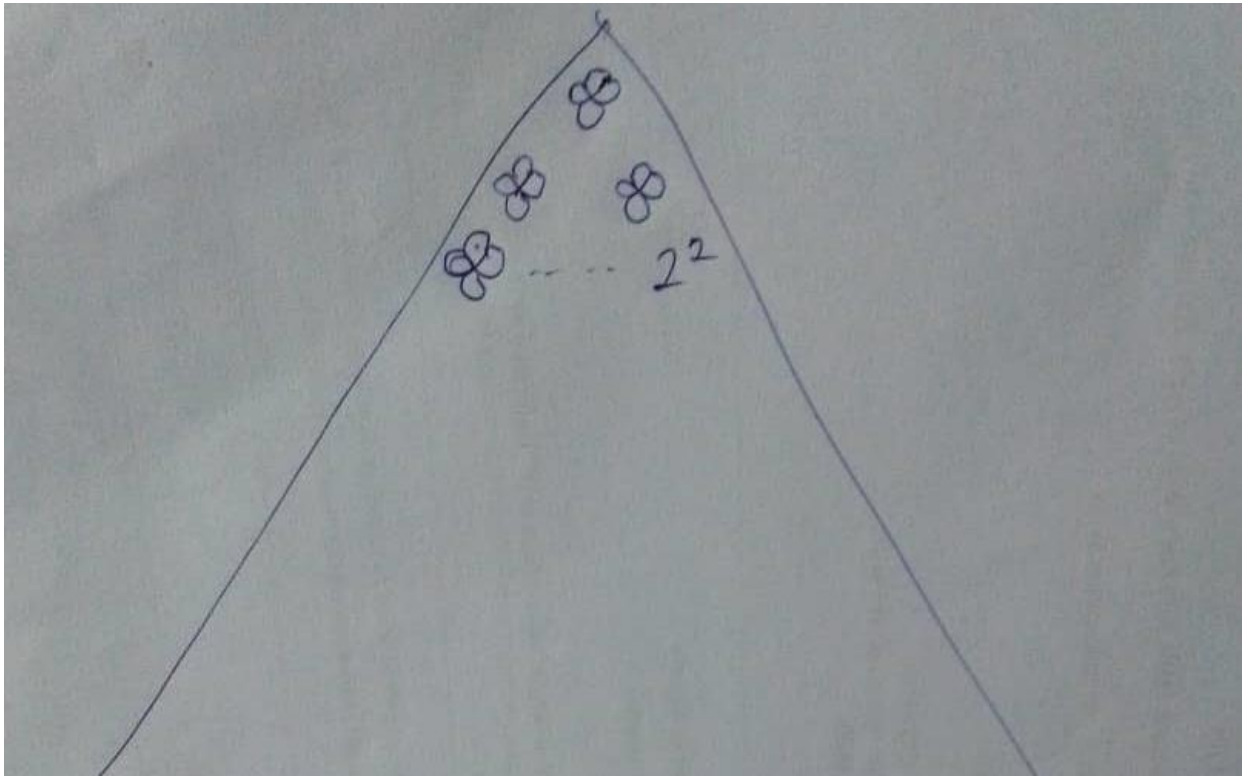
Reverse cycle: $-\infty$



Source: Author's Construct (2023)

Figure 7: Forward and Reverse Big Bang Expansion Cycles in an Entangled State

Forward and reverse cycles entangled: 



Source: Author's Construct (2023)

Mode of Big Bang expansion: Expanding in a geometric progression manner

Forward cycle:

$$\text{Base: } + \infty - \infty = 0 \text{ (CEN or Nothing or Vacuum) ----- (eq. 1)}$$

$$2^0 = 1$$

$$2^1 = 2$$

$$2^2 = 4$$

$$2^3 = 8$$

$$2^4 = 16$$

$$2^5 = 32$$

$$2^6 = 64$$

$$2^7 = 128$$

$$2^8 = 256$$

$$2^9 = 512$$

$$2^{10} = 1024$$

.

.

.

.

.

$$2^n, \forall 0 \leq n \leq \infty \text{ ----- (eq. 2)}$$

.

.

.

$$2^\infty = \infty \text{ ----- (eq. 3)}$$

Reverse cycle:

$$2^{-n}, \forall -\infty \leq n \leq 0 \text{ ----- (eq. 4)}$$

.

.

.

$$2^{-\infty} = -\infty \text{ ----- (eq. 5)}$$


Entangled:


$$2^{\pm n}, \forall -\infty \leq n \leq \infty \text{ ----- (eq. 6)}$$

$$2^{\pm\infty} = \pm\infty \text{ ----- (eq. 7)}$$

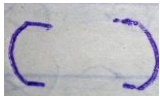
Apart from infinity, each of the above result stands for multiples of infinity; for instance, 1 represents one infinity, 2 represents two infinities; the same thing applies to all the others, and

∞ , the last result in the forward cycle represents *infinity* infinity (a much bigger infinity). The same logic applies to the results of the reverse cycle.

CEN or TEPET can be seen as a set  which is neither open nor closed applying **Axiom 5** that states space-time is an emergent property; it is not fundamental to the universes. To describe this set, the author coined the term aclopen (the opposite of clopen, which refers to a set that is both open and closed). TEPET is defined mathematically using squakets (formed by combining square brackets with parentheses) as follows:

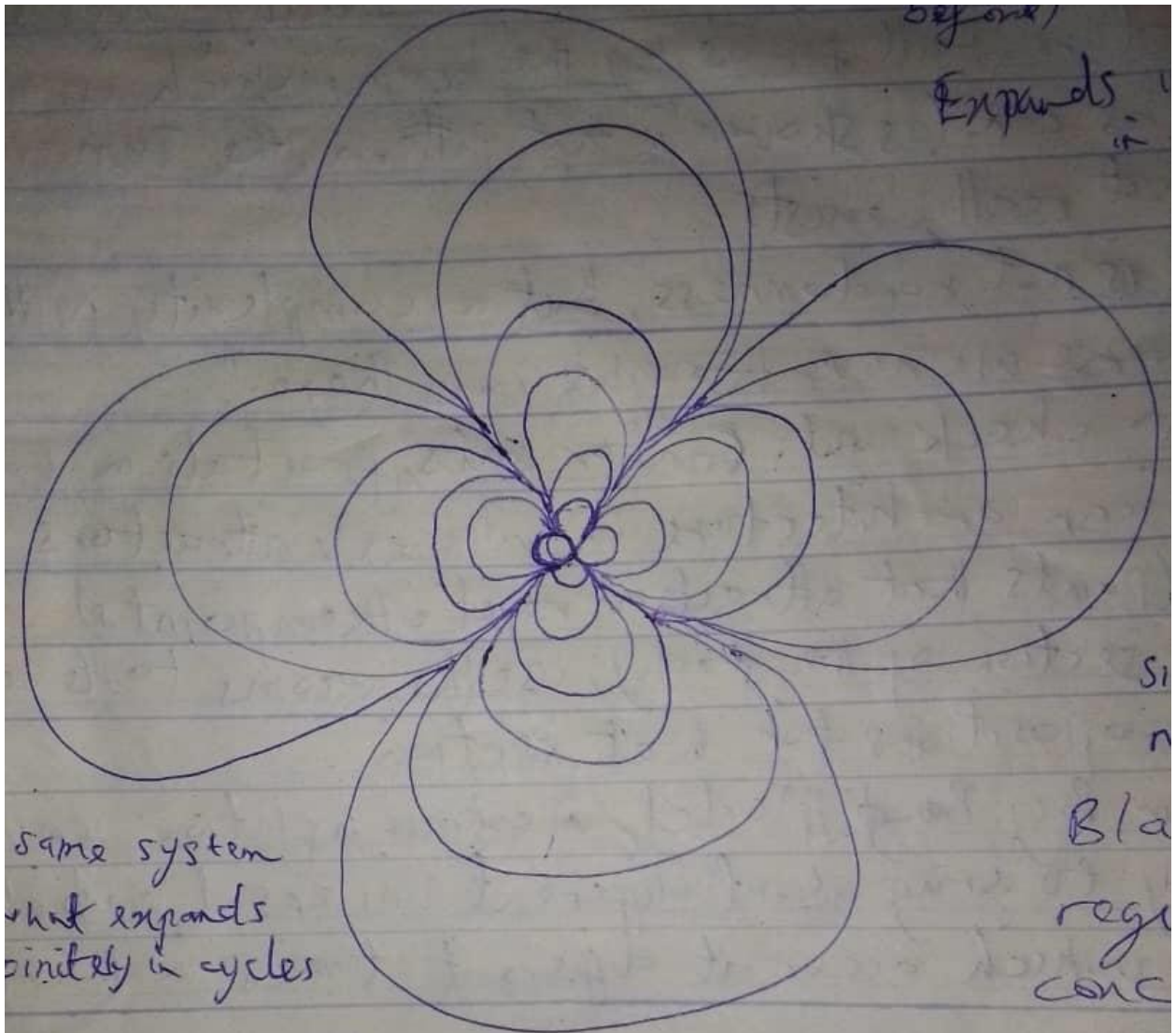
$$\text{ = \left[\left(\right) \right] \text{----- (eq. 8)}$$

$$\text{ : + \infty - \infty = 0 \text{ (CEN or Nothing or Vacuum) ----- (eq. 9)}$$



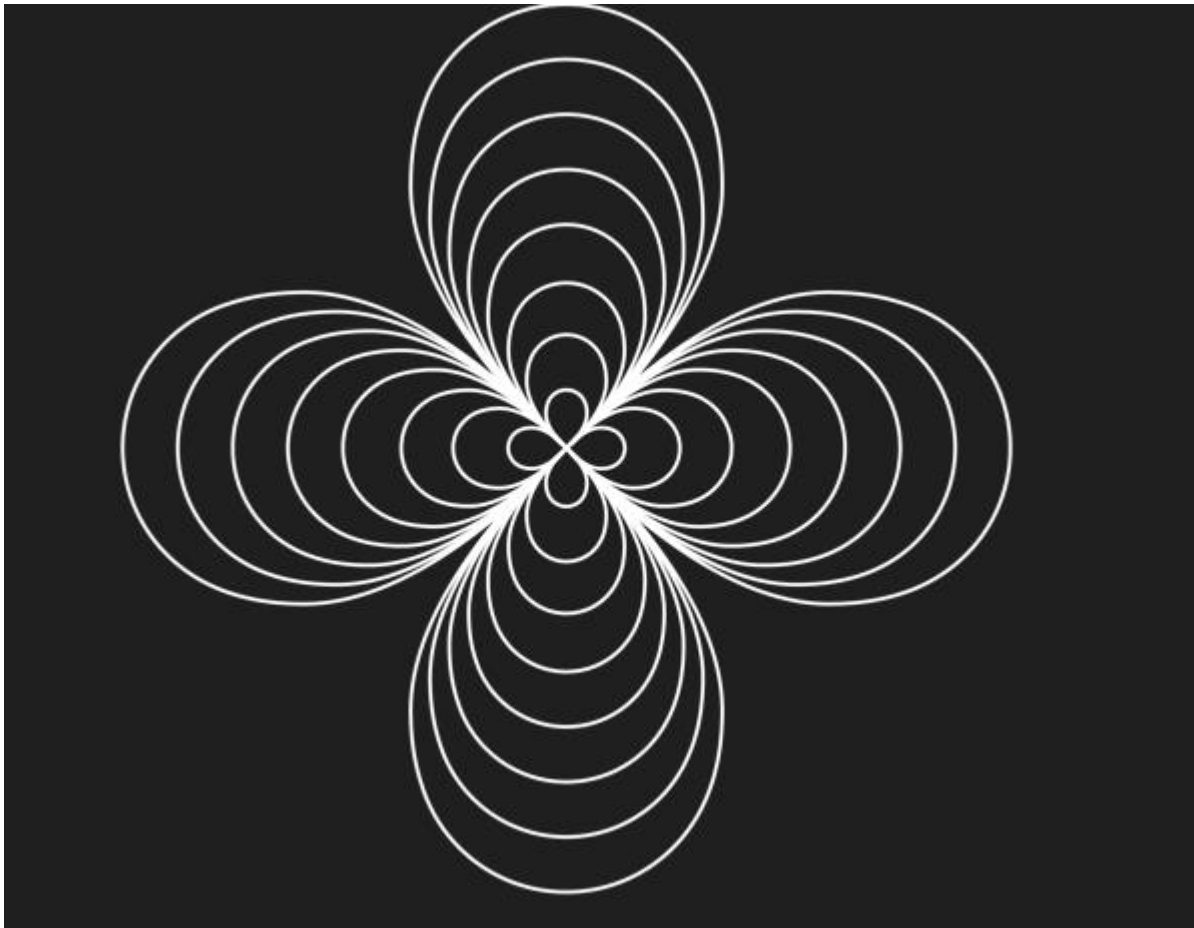
Squakets are a symbol used to define aclopen sets (neither open nor closed)

Figure 8: CEN — The Multiverses (the TOE)





Source: Author's Construct (2023) (This is the hand-drawn version; see the latest version below)

Figure 8: CEN — The Multiverses (the TOE)



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

TEPET is a set of infinities. In Figure 8, TEPET is shown as a Fractal depicting CEN as it expands infinitely in cycles. This Fractal expands infinitely in this manner. It is symmetric, self-similar self-replicating, and self-organizing.  is the same system expanding infinitely to yield more and more tepets, which are cenforms. This is the pattern underlying all things (whether living or not) in existence. TEPET is the mother of all fractals. I developed this fractal independently using the Ouroboros symbol (infinity sign) shown in Figure 1 and applying the axioms 0–7 above. With these fundamental principles in mind, I started constructing the TEPET by drawing the infinity sign, ∞ . Then, I drew another infinity sign vertically on the first one ensuring their centers coincide perfectly. These two steps formed the tepet symbol, . I repeated the two steps again by drawing cycles starting from and ending at the tepet's center each time, ensuring the new tepet formed encloses the previous one. To get more and more tepets, I carried out the third step repeatedly to generate the TEPET shape (the Fractal)


in Figure 8. Days later, I got to learn about Bernoulli's Lemniscate, which is a curve shaped like a figure-eight as explained by Erickson (2011).

Figure 8 presents a whole-system perspective for the Big Bang expansion of the absolute vacuum where the Collective Entanglement (the whole of existence) is seen as it expands in cycles infinitely. Figures 2–7 do the same thing using an individual-constituent perspective focusing on the expansion or evolution of each entanglement in the absolute vacuum, i.e., zooming in to focus on the expansion of individual elements of the TEPET, an aclopen set. The field of Fractal Geometry is key to understanding the whole-system approach:

$$\text{Fractal dimension of TEPET: } 2^n, \text{ where } n = \pm\infty \text{ ----- (eq. 10)}$$

$$\text{Hausdorff dimension of TEPET: } \pm\infty \text{ ----- (eq. 11)}$$

2.3. Conclusion

The Temic Big Bang Cosmology is also called the Temifa Big Bang Cosmology and is based on the fundamental principle of Consciousness Physics that states the basic building block of the Universe — or the multiverses generally — is consciousness-energy (cen or CEN): Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists; anything else is a picture or interpretation built for us by the brain. This notion is called the Base Axiom or simply CEN, with CEN/cen symbolized as , and this double infinity symbol is called TEPET/tepet. In the Temic approaches, Big Bang is defined as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. This approach to Big Bang is a general one and will be applied throughout this study to develop all aspects of this field. It can be applied to study the evolution of all things in existence. The Temigrams explained above are like the blueprints for all possible cenforms in the universes (the whole of existence). The cenforms are all things in existence (whether living or not). To study the evolution of all things in existence, Axioms 0–7 and these Temigrams can be used, and to develop many sections in this study, this approach will be adopted.

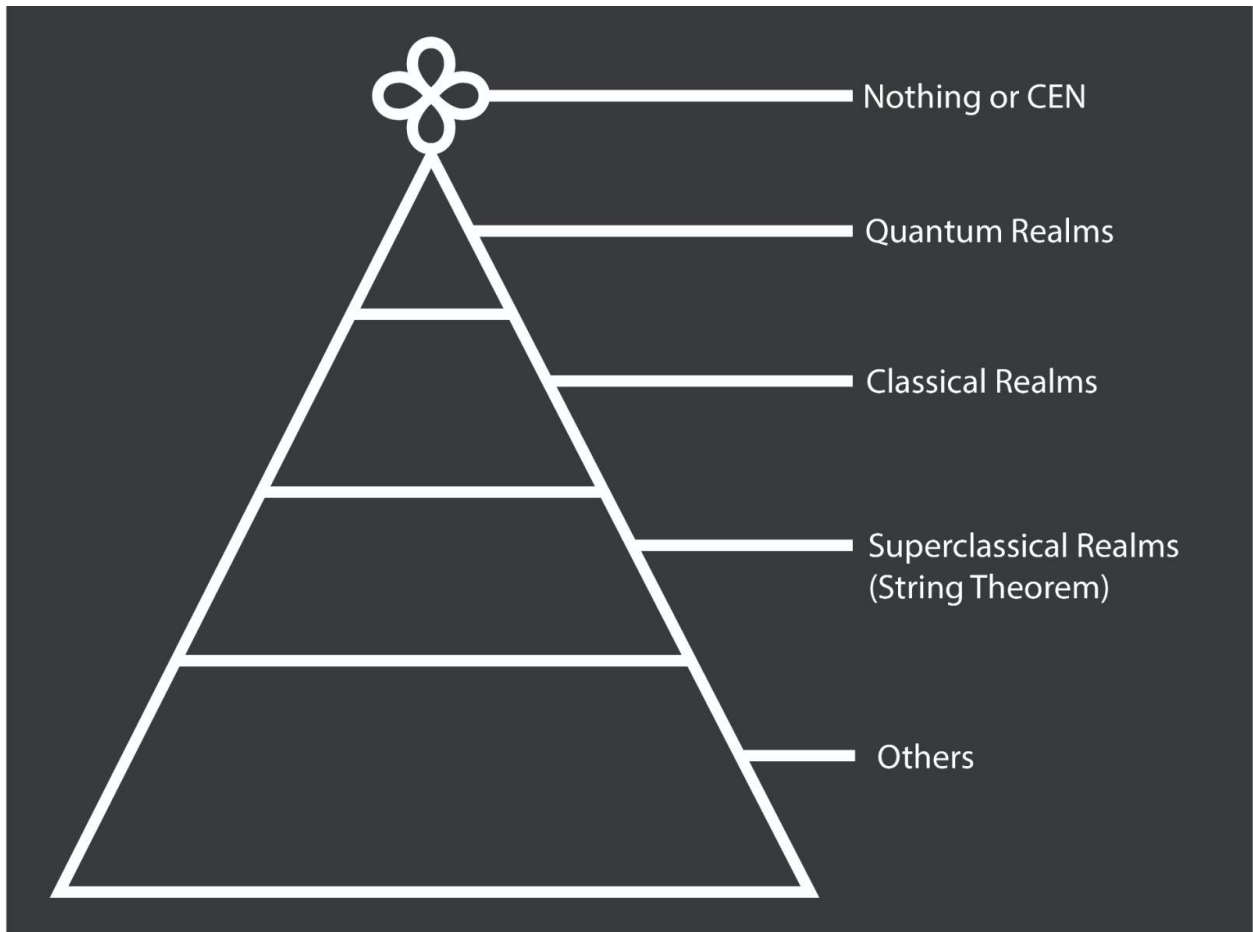
SECTION THREE

3.0. Consciousness Mechanics Operators and Functions

3.1 Introduction

Reality is multi-tiered and multilayered existing at an infinite number of layers/levels/hierarchies. At the base or most fundamental or deepest level is consciousness-energy or CEN. Applying the axioms, the Temigram below illustrates the infinite layers/levels/hierarchies of reality showing the stages of evolution of CEN via Big Bangs (see Figure 9). Each layer (or scale) of reality has distinct energy levels existing as an entanglement (a single matrix) at the deepest level, CEN, and in packets (quanta) at other levels, and to describe each level mathematically, different approaches (models, functions, operators, and the likes) are required. However, underlying all these approaches are the Temic Universal Laws stated in the previous section. With these axioms, all levels or layers of reality can be described mathematically using a single framework, i.e., an entanglement of all fields of Mathematics — a Grand Unified Theory of Mathematics. This will be addressed further in the section on the TOE.

Figure 9: Reality is Multilayered — Infinite Number of Layers/Levels/Hierarchies



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

In the present chapter, some key aspects are examined to facilitate the development of this single mathematical framework, and hence the Theory of Everything. An accurate and exact description of reality at the deepest level, CEN, may be out of reach currently. However, Consciousness Mechanics provides a crucial approach that can make this grand objective achievable over successive generations of humans. In the Temic approaches, the TOE is regarded as the study or an attempt to model the absolute vacuum or CEN (the Whole of Existence or the Multiverses), which will require the collaborative effort of experts and scholars in all fields and disciplines. In this perspective, all disciplines, courses, and forms of knowledge generally involve studying this single system, CEN or the absolute vacuum, and by applying Axiom 0, the Base Axiom, all kinds of knowledge or disciplines are cenforms, forms of consciousness-energy.


When disciplines or fields are pictured this way as cenforms in the Temigrams, the disciplines/fields are simply seen as CEN transformations (transformations of cenforms or

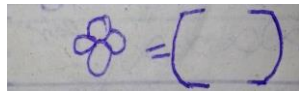
censtates — states of consciousness-energy). Hence, as Quantum Mechanics is the branch of mechanics, which provides the mathematical description of motions and interactions at the scale of atoms and subatomic particles, Consciousness Mechanics is the branch of mechanics that deals with the mathematical description of motions and interactions at the deepest level of reality — consciousness-energy or simply CEN. At this level (CEN), every possible measurement that can be made on a system is described by a CEN operator, while a CEN function is a rule, expression, or law defining a relationship between one variable and the other.

3.2. The Temic Transformation Theory

This encompasses the notion that all disciplines, courses, subjects, and kinds of knowledge generally involve studying this single system, CEN or the absolute vacuum, and by applying the Base Axiom, all kinds of knowledge or disciplines are cenforms, forms of consciousness-energy. Combining the Base Axiom with Axiom 3, CEN, which is all that exists, always changes or transforms. When disciplines or fields are seen this way as cenforms in the Temigrams, the disciplines/fields can be called CEN transformations (transformations of cenforms or censtates). Therefore, all disciplines, fields, and kinds of knowledge are CEN transformations. This is the Temic Transformation Theory. This theory is of paramount importance in developing a Grand Unified Theory of any discipline or field, be it Physics, Mathematics, Psychology, Arts, any discipline at all and consequently constructing the TOE. In Physics, Consciousness Physics can be regarded as a Grand Unified Theory (GUT) in this discipline, and the key to developing quantum gravity, which reconciles Einstein’s General Theory of Relativity with Quantum Mechanics, lies in viewing all things in nature as cenforms, i.e., looking at everything in the Universe at the most fundamental level of reality, CEN. The Temic Transformation Theory is applied in this subsection to develop Consciousness Mechanics.

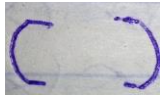
3.2.1. Temic Notation

This is a mathematical language developed to fit the precise needs of expressing states in Consciousness Mechanics (censtates), just like Dirac notation was designed by Paul Dirac to express states in Quantum Mechanics (quantum states). Temic notation is explained as follows: As stated in the previous chapter, squakets are a symbol used to define aclopen sets (neither open nor closed), symbolized as , TEPET or Nothing or CEN because it is consciousness-energy that also underlies this symbol as well as shown in equations 8 and 9 respectively (reproduced as equations 12 and 13 here respectively):



-----eq. 12

: $+\infty - \infty = 0$ (CEN or Nothing or Vacuum)-----eq. 13



Squakets are a symbol used to define aclopen sets (neither open nor closed)

The general rules for Temic notation are developed adopting some ideas from the development of Dirac notation by Dirac (1939) for use in Quantum Mechanics. Paul Dirac (1939, p. 4) formulated two general rules in relation to the bra, denoted by \langle , and ket, denoted by \rangle , notations he introduced then as new notations: “any quantity in brackets $\langle \rangle$ is a number, and any expression containing an unclosed bracket symbol \langle or \rangle is a vector in Hilbert space, of the nature of a ϕ or ψ respectively”. For Consciousness Mechanics, Temic notation generalizes these rules to any quantity, object, quality, anything at all using squakets as follows:



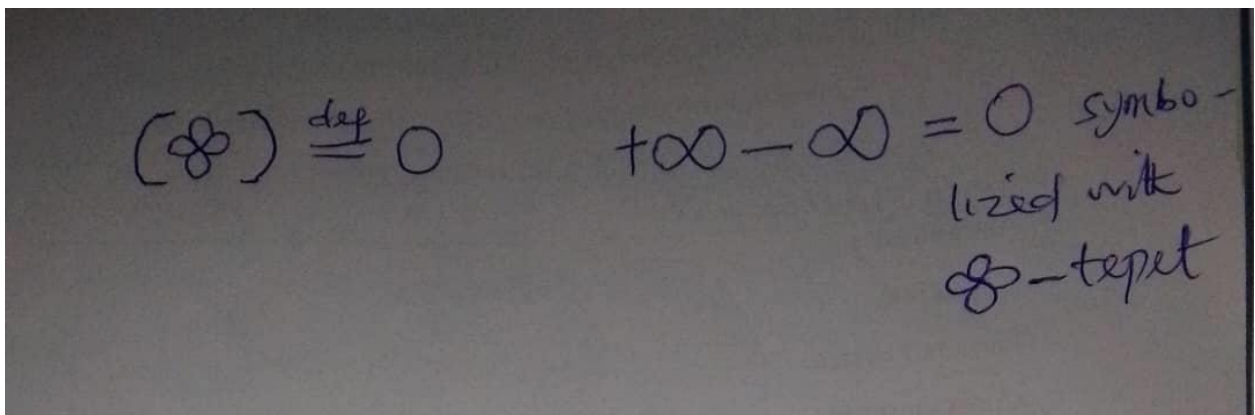

Anything (represented with $\pm\infty$ or  as an entanglement with its opposite/conjugate) in squakets  is the number, 0, which means CEN or Nothing or Vacuum, symbolized with



Figure 10: Temic Notation (The Annihilation Operation)



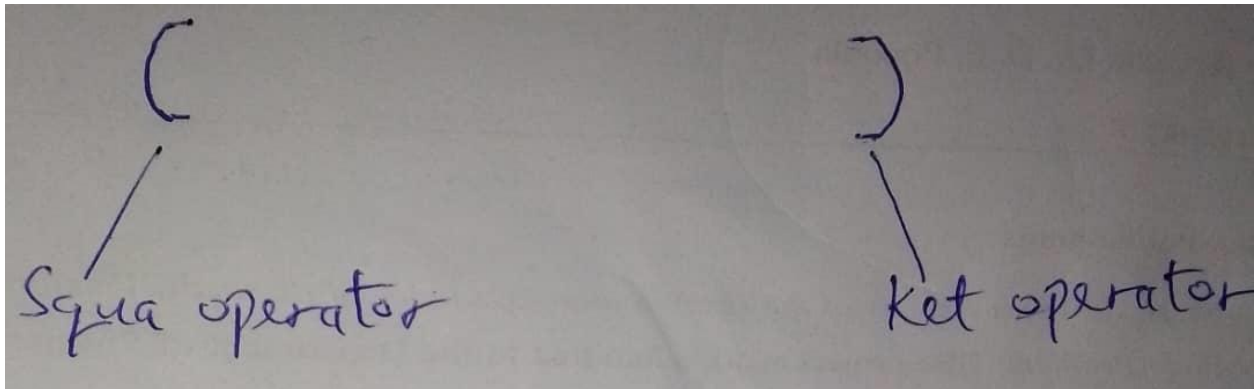
Source: Author’s Construct (2023)

This implies when squakets, as a Consciousness Mechanics operator or a CEN operator, act on anything, the result is 0. When squakets act on anything (at all), denoted as $+\infty$ and its conjugate/opposite ($-\infty$, anti-anything), this is tantamount to both of them annihilating or cancelling out each other completely to yield 0, which is consciousness-energy (CEN or Nothing or a Vacuum) symbolized with . This rule is highly important. It is called the

annihilation operation or function. Squakets are used as an operator here, and not as a symbol for defining aclopen sets as stated earlier. Based on the foregoing, two more operators are generated: The squa and ket operators.

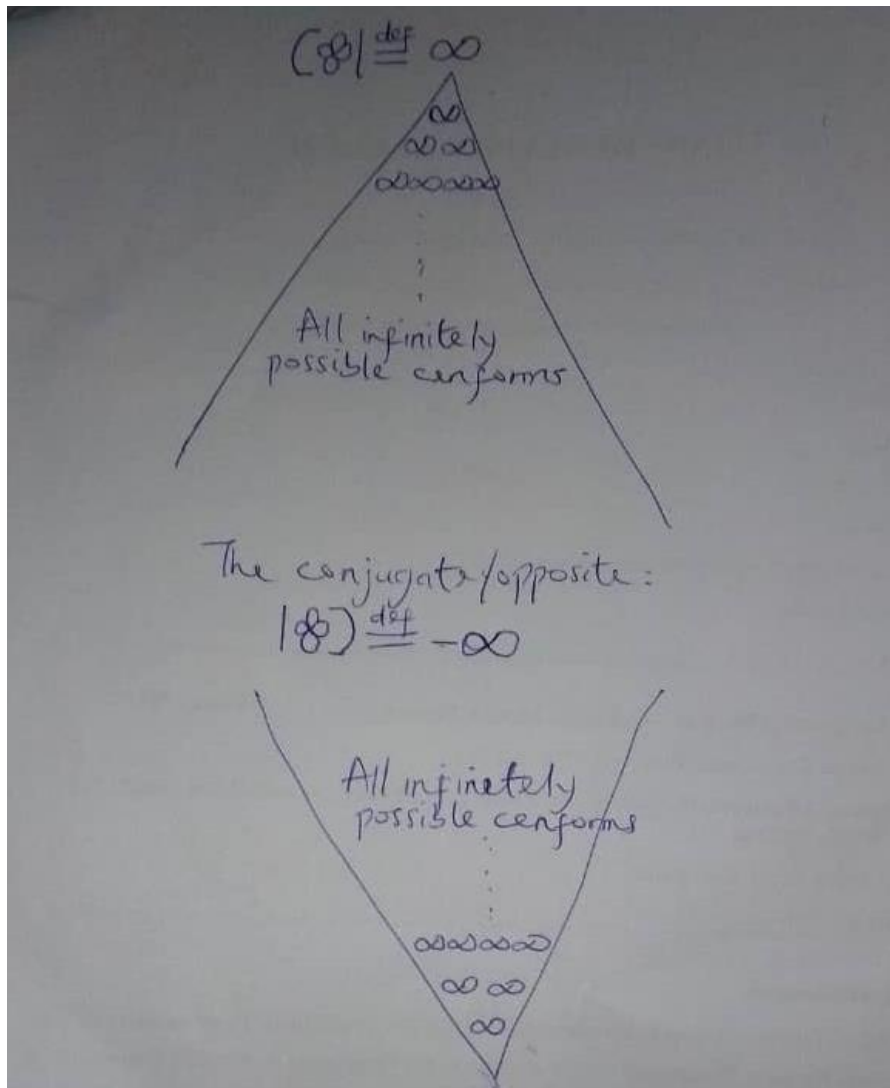
Anything containing an unclosed squaket symbol as shown below is a cenform in CEN of infinite nature

Figure 11: Temic Notation



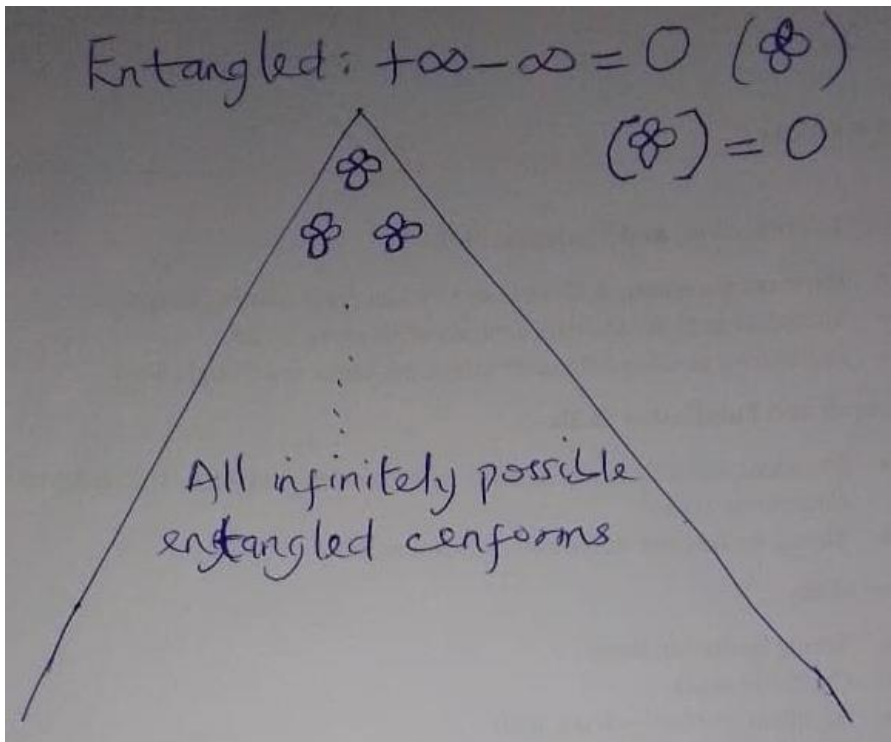
Source: Author's Construct (2023)

Figure 12: Temic Notation





Source: Author's Construct (2023)

Figure 13: Temic Notation



Source: Author's Construct (2023)

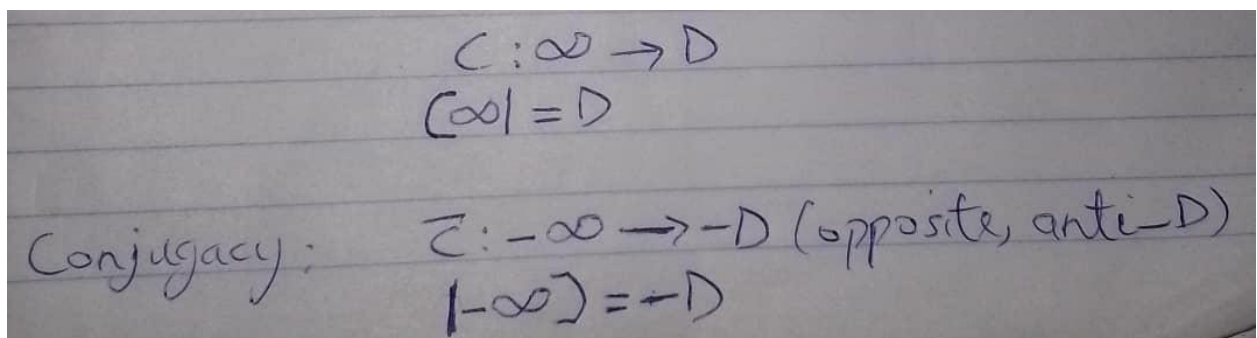
As shown in these figures, when a squa operator acts on anything, , the output is ∞ , which represents infinitely possible forms of consciousness-energy, cenforms, or infinitely possible states of consciousness-energy, censtates. In the reverse direction (for anti-anything), when a ket operator acts on anything , the output is $-\infty$, which represents infinitely possible cenforms/censtates in the opposite direction. When both are combined or entangled, they annihilate each other to yield Nothing or 0 (tepet). This notion will form the basis for the Temic Big Bang Theory examined in one of the subsequent sections. *Nothing*, as used in the Temic approaches, is different from the layman use of the term. Here, it means things that exist but cannot be seen with our naked eye, and its other meanings, especially when discussing the Multiverses as a whole, include the absolute vacuum or the Collective Entanglement or Consciousness-Energy (CEN) satisfying Axioms 0–7.

To apply these operators in Temic notation in developing or studying various systems, forces, concepts, courses, disciplines, anything at all, it is crucial to formulate another rule or operation using the squa and ket operators:

When a squa operator acts on anything (at all), denoted as $+\infty$ (its infinitely possible nature as a cenform in CEN), the collapse operation occurs which, collapses $+\infty$ (the infinitely possible nature) to a specific system, force, particle, concept, course, (the specific thing) that is measured/observed/perceived/studied.

The conjugation or reverse operation takes place a ket operator acts on anti-anything (at all), denoted as $-\infty$ (the conjugates of its infinitely possible nature as a cenform in CEN) to yield the opposite form or conjugate of the specific system, force, particle, concept, course, (the specific thing) that was measured/observed/perceived/studied in the previous operation.

Figure 13a: Temic Notation



Source: Author's Construct (2023)

As shown in the figure above, the collapse operation/function, C, is the map or transformation (which can be linear or non-linear) that maps $+\infty$ to D as the output or result, symbolizing the specific system, force, particle, concept, course, (the specific thing) that is measure/observed/perceived/studied. The cen function, C, involves the action of the squa operator on $+\infty$ to yield D. The reverse process occurs when the conjugate of the function maps $-\infty$ to $-D$, the opposite or conjugate of D (anti-D), which has to do with the action of the ket operator on $-\infty$ to produce the result, $-D$.

For instance, in Quantum Mechanics, the collapse operation/function becomes the wave function $\Psi(x, t)$, which is obtained by solving the Schrödinger equation:

$$i\hbar \frac{\partial \Psi}{\partial t} = -\frac{\hbar^2}{2m} \frac{\partial^2 \Psi}{\partial t^2} + V\Psi.$$

In this context, D stands for $\Psi(x, t)$, and the collapse operation here is the wave function collapse operation $\Psi(x, t)$ or $|\Psi(x, t)|^2$, which is the probability density for finding a particle at point x , at time t . $-D$ represents the conjugate of $\Psi(x, t)$.



In Classical or Newtonian Mechanics, a good example of the collapse operation/function is the force, $\mathbf{F}(x, t)$ acting on an object of mass m , constrained to move along the x axis at some time, t , calculated from Newton's law of motion as follows:

$$\mathbf{F}(x, t) = m\ddot{x}$$

In this context, D stands for force, $\mathbf{F}(x, t)$, which can be used to determine the position of the object at any given time, $x(t)$. $-D$ represents the opposite of $\mathbf{F}(x, t)$, which is $-\mathbf{F}(x, t)$.

In the context of Consciousness Mechanics, all these are cen transformations or mapping. The transformation (evolution) of all kinds of disciplines, knowledge, concepts, anything at all can be studied using these cen functions (the operations explained above) and the cen operators, squaket, squa, and ket. All these are CEN transformations or cen transformations as the case may be.

3.2.2 Transformation: A Generic Concept

All the operations examined so far involving squaket, squa, and ket operators are all transformations, which are isomorphic in nature (isomorphism is from the Greek word "iso", which means "equal," and another Greek word "morphosis", which means "to shape" or "to form"). As used in the Temic context, it means the input is exactly the same as the output in all ways. When the squaket operator acts on CEN or the absolute vacuum, , the result is also CEN, , and the isomorphism in this case is an automorphism as the mapping is one-to-one and onto from the TEPET to itself. Automorphism is an isomorphism from a group (or other mathematical objects) onto itself (Pahl & Damrath, 2001). This is examined in detail in the Temic Big Bang Theory. Isomorphism and automorphism are transformations generally, and further development is needed to generalize these concepts to the context of Consciousness Mechanics.

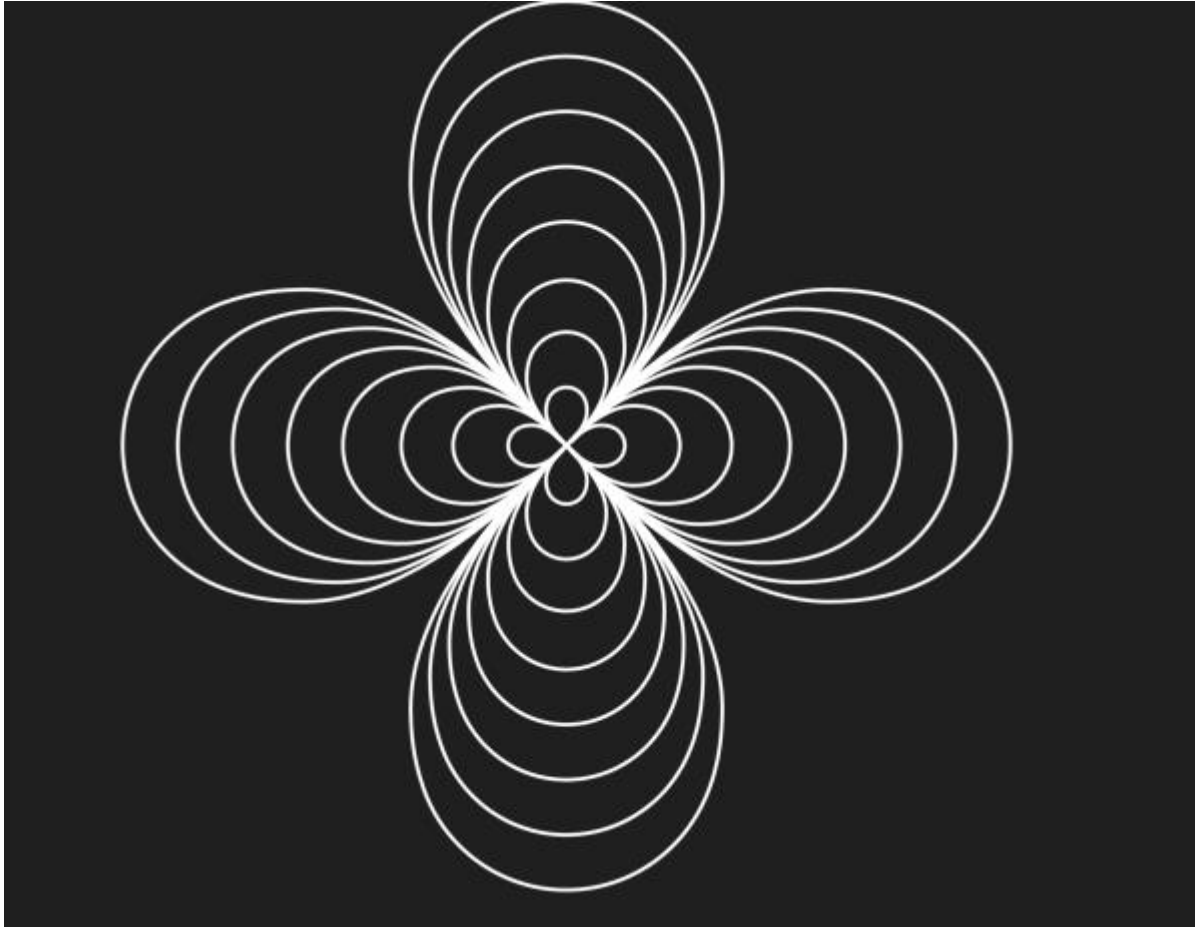
Transformation, as used in this context and as stated in Axiom 3, which states that all things in the multiverses change no matter how long, simply means "change" or "evolution". From the Base Axiom that states consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists, it can be postulated that all

disciplines, fields, and kinds of knowledge are cenforms in the brain, the organ used to study any discipline or field or subject. This was explained in the Temic Transformation Theory. Hence, all disciplines, fields, and kinds of knowledge are CEN transformations. The ideas, thoughts, feelings, experience you have in the brain about any form of knowledge, course, or discipline are all forms of consciousness-energy, cenforms, or states of consciousness-energy, censtates.

To describe cenforms and censtates mathematically, the squaket, squa, and ket operators are helpful. For example, in Mathematics as a discipline, any aspect, topic, concept, anything mathematical at all, or even the whole discipline can be seen as CEN transformations because studying it requires the use of the brain, and it is cen that underlies this key organ of the body. The same analogy can be drawn for all kinds of disciplines or knowledge. To see the connection that cen has with any field/discipline, that idea, thought, feeling, experience you have in the brain (or your mind) about any aspect of the field or discipline or even the whole field or discipline is what is called cen. Hence, CEN transformations are an integral aspect of Consciousness Mechanics, and both (CEN transformations and Consciousness Mechanics) are central to the development of the Theory of Everything. This will be covered in detail later.

When you are taking something (anything at all) from the realm of the mind (reand) in your brain to the physical realm, that thing is cen and is undergoing a change in what is called a CEN transformation. This change can be expressed mathematically using some key transformation functions, one of which is the collapse function. Other transformation functions are the bang/expansion function and the cloner function. The Big Bang is one of such CEN transformations, where the absolute vacuum or CEN or Nothing explodes/expands infinitely in cycles to form the multiverses as shown in the Temigrams below.

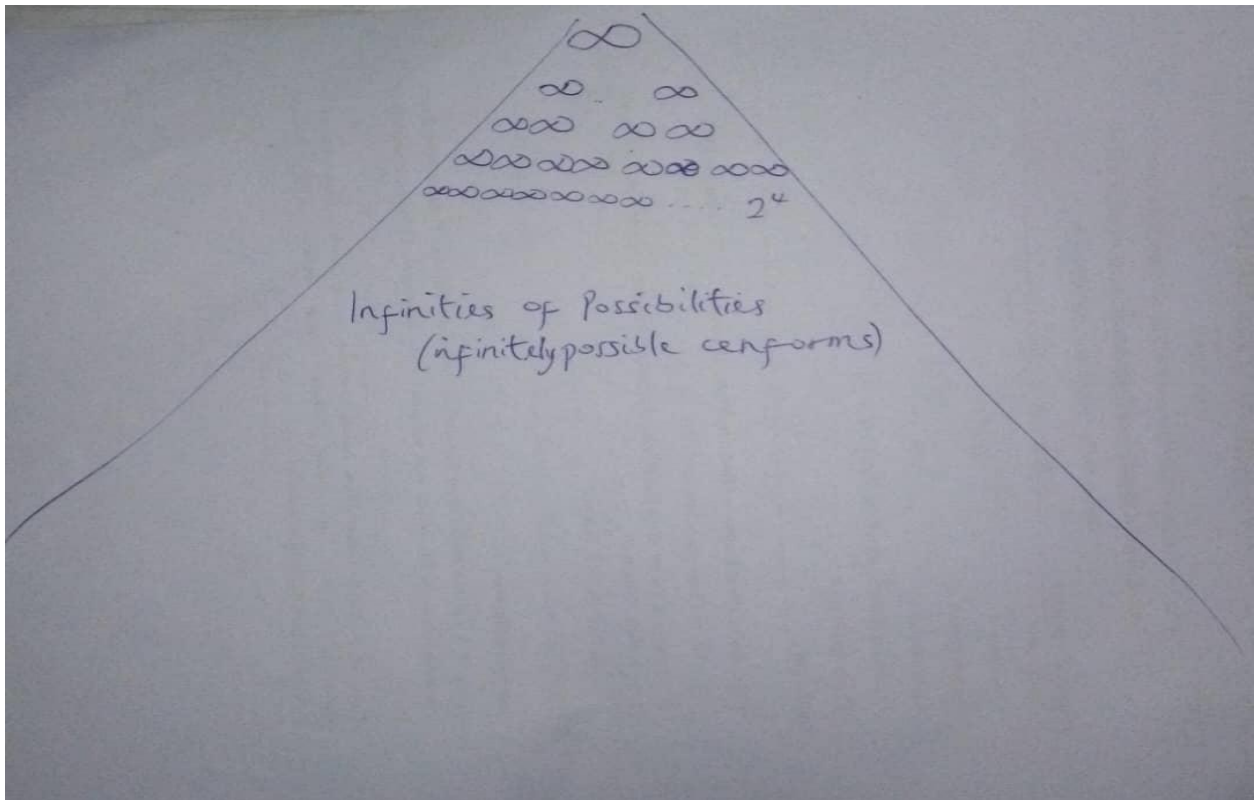
**Figure 14: CEN — A Model of the Absolute Vacuum or the Collective Entanglement
(The Whole of Existence)**



Source: CENProject (2023)

Figure 15: Forward Big Bang Expansion Cycle

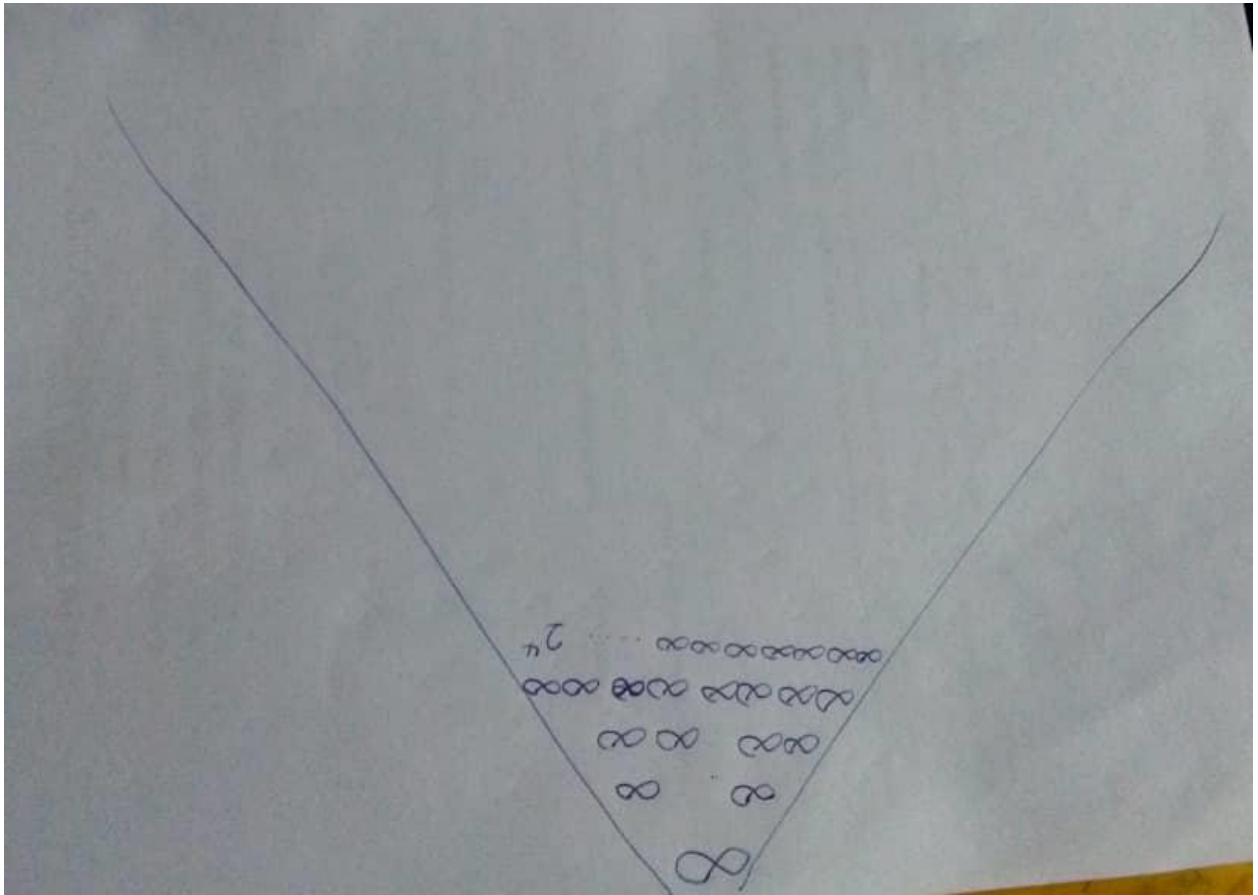
Forward cycle: $+\infty$



Source: Author's Construct (2023)

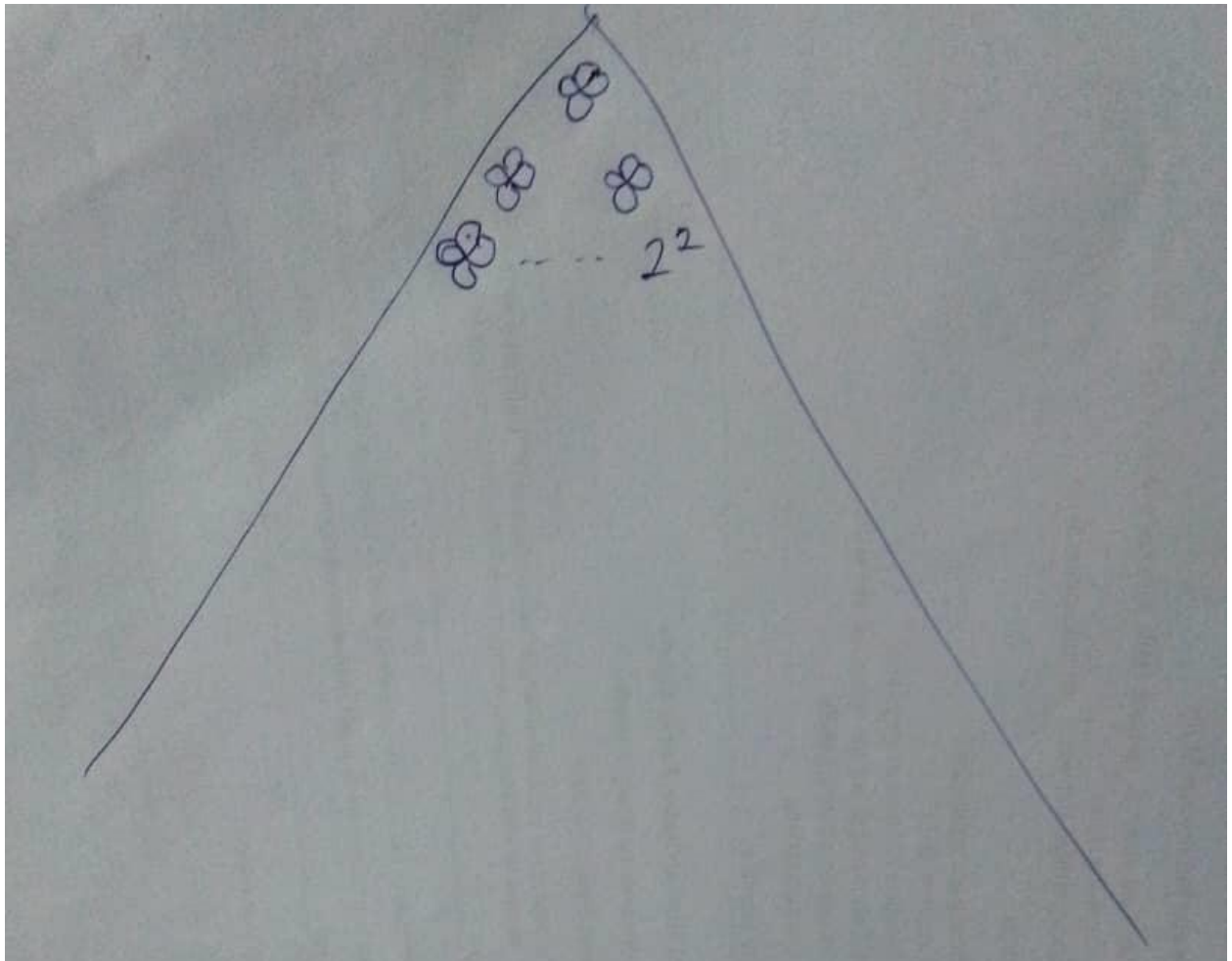
Figure 16: Reverse Big Bang Expansion Cycle

Reverse cycle: $-\infty$



Source: Author's Construct (2023)

Figure 17: Forward and Reverse Big Bang Expansion Cycles in an Entangled State



Source: Author's Construct (2023)

For these expansions or evolutions, which are CEN transformations, the bang function of the absolute vacuum contains a force of expansion, \mathbf{F} , which is a function of the absolute vacuum's intrinsic energy, the vacuum energy, E (or dark energy). An appropriate bang function may be a function of the general form:

$$\mathbf{F}(\mathbf{E}) = \mathbf{K}\mathbf{E} \text{ ----- (eq. 14)}$$

Where $\mathbf{F}(\mathbf{E})$, \mathbf{K} , and \mathbf{E} are all super-variables representing the following entanglements respectively: the unified force, the unified constant, and the vacuum energy. This bang function is a CEN function, which is called the dark energy equation. As shown in the Temigrams (the TEPET), the scaling factor for this Big Bang expansion can be the fractal dimension of TEPET, which is 2^n , where $n = \pm\infty$, and the Hausdorff dimension of TEPET is $\pm\infty$.

On the other hand, a cloner function yields a one-to-one mapping or isomorphism of any input, producing a perfect replica of that input as the output, where the input and output are exactly the same in all ways. Bang functions are a kind of cloner functions, and they are both CEN functions. In developing bang function(s) and/or cloner function(s) for any system or anything at all, i.e., the transformation function(s) of that thing or system, the transformation operators of squaket, squa, and ket are crucial. Cen functions are generally transformation functions.

3.3. Conclusion

In this section, Consciousness Mechanics has been developed, along various functions and operators such as squaket, squa, and ket. These functions are called cen transformations generally as stated in the Temic Transformation Theory. As Quantum Mechanics is the branch of mechanics providing the mathematical description of motions and interactions at the scale of atoms and subatomic particles, Consciousness Mechanics is the branch of mechanics that deals with the mathematical description of motions and interactions at the deepest level of reality — consciousness-energy or simply CEN. At this level (CEN), every possible measurement that can be made on a system is described by a CEN operator, while a CEN function is a rule, expression, or law defining a relationship between one variable and the other. All the operations examined in this chapter involving squaket, squa, and ket operators are all transformations, which are isomorphic in nature. Transformation, as used in the Temic context and as stated in Axiom 3, which states that all things in the multiverses change no matter how long, simply means “change” or “evolution”. To describe cenforms and censtates mathematically, the squaket, squa, and ket operators are used in Consciousness Mechanics.

SECTION FOUR

4.0. The Temic Big Bang Model

4.1. Introduction

In the Temic context, Big Bang is viewed in a different manner than its conception in mainstream science. In the Temic approaches, Big Bang is defined as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. In this sense, Big Bang is a generic term that applies to all things in existence, not only the Universe or Physics as a discipline.

The First Big Bang in the innermost universe or the Beginning (a primordial universe) was initiated by Fundamental Consciousness and this led to an infinite series of Big Bang expansions occurring in cycles to create more and more inner universes, and consequently, outer universes. In this sense, Big Bang can also be seen as the disentanglement of matrices or entanglements, which form the constituents of the absolute vacuum (Tijani, 2023c). Entanglement occurs at all scales, whether microscopically or macroscopically, in universes. This approach to Big Bang is a generalization of the Standard Big Bang Model and will be applied throughout this study to develop all aspects of this field or describe the evolution of any field at all and to build the TOE. In the mainstream science, the inner universes are unphysical realms that lie beyond what is called singularity.

4.2. The Big Bang Evolution of the Universes

To examine the Big Bang evolution of the universes, it is crucial to restate the Temic Universal Laws or the Fundamental Principles of the Universes:


0. Base Axiom or CEN: Consciousness-energy is the absolute vacuum, and CEN (the absolute vacuum or the Collective Entanglement) is all that really exists [**Axiom 0**]

1. All things are connected or entangled and balance one another [**Axiom 1**]

2. All things in existence (whether living or not) are manifestations or forms of CEN called cenforms in the TEMIC approaches [**Axiom 2**]

3. All things in the multiverses change no matter how long [**Axiom 3**]

4. Anything or any system exists infinitely in a superposition or combination of all possible cenforms or censtates unless when observed/experienced and that forces its wave function to collapse to a specific cenform (form of consciousness-energy) or specific censtate (state of consciousness-energy) that is measured/seen [Axiom 4]
5. Space-time is an emergent property; it is not fundamental to the universes [Axiom 5]
6. Universal scaling (hierarchy) occurs in the outer universes due to Axiom 4 that says all things in the multiverses change no matter how long [Axiom 6]
7. All things in the multiverses, or Existence generally, occurs in cycles infinitely [Axiom 7]

While these axioms are infinite in number, i.e., they keep expanding via Big Bang to yield more and more axioms infinitely, for our own Universe, we can only know a limited number of them at any particular time or era. The Base Axiom is illustrated diagrammatically in the Temigram below (see Figure 18). This Temigram shows the frozen state or zero state in which all things exist in the innermost universe or the Beginning before the First Big Bang. When the coagulation/entanglement called the Beginning or CEN, symbolized with the TEPET symbol , is broken by the Fundamental Consciousness, it evolves or expands as shown in the Temigrams below (see Figures 18–26) to bring about multiple universes (cenforms), or the multiverses. CEN is an Entanglement that undergoes Big Bang expansions infinitely in cycles to yield an infinite number of universes (which are cenforms), evolving based on the Temigram Pattern, a Universal Pattern (as shown in Figures 19–26), to produce the Multiverses. In the inner universes, the past, present, and future are intermingled and interwoven as these universes are not bound by space-time, unlike the outer universes. Hence, all things happen at the same time in the inner universes.

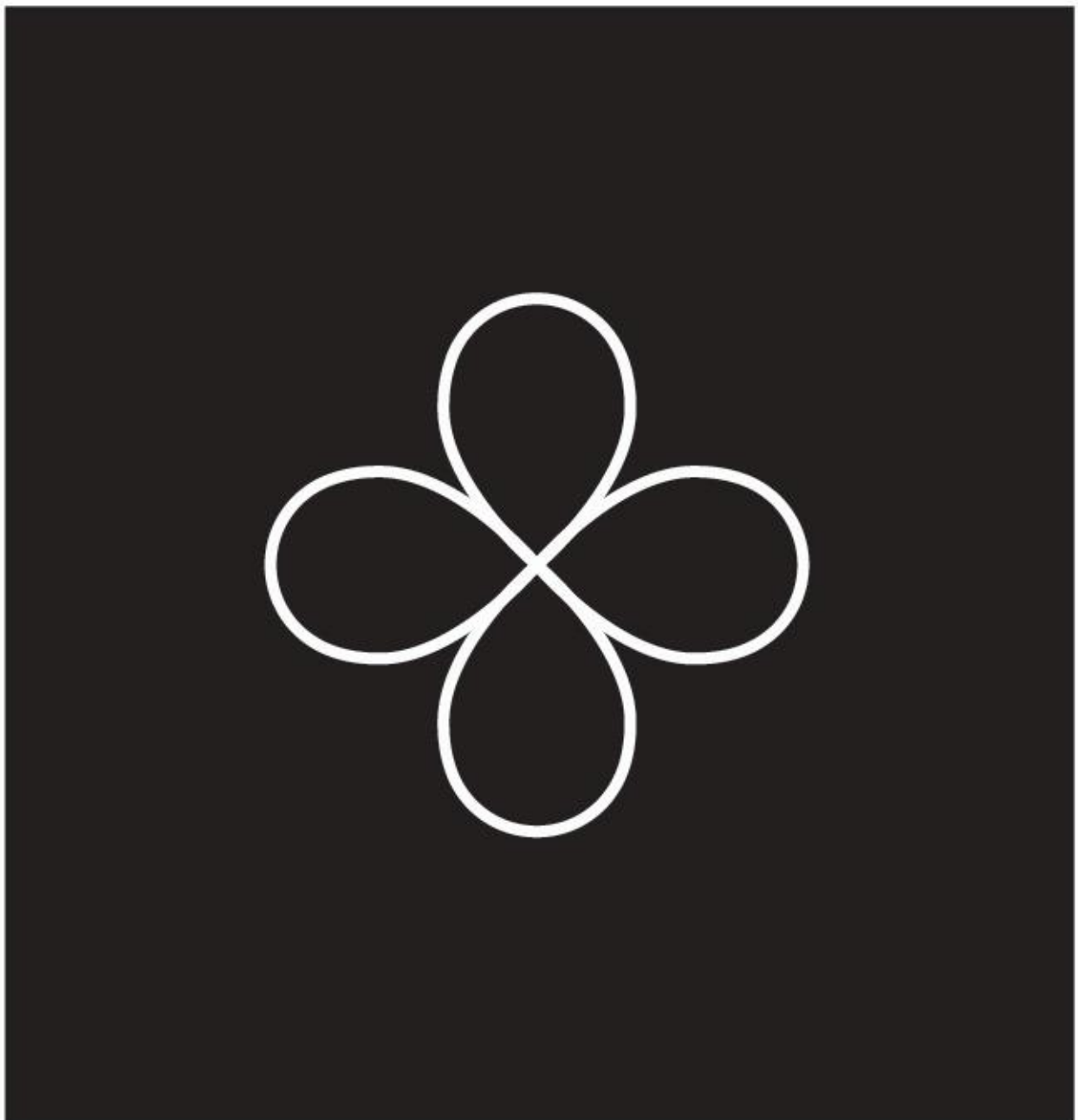
Mathematically, the Big Bang expansions are CEN transformations of the absolute vacuum, with the bang functions containing a force of expansion, \mathbf{F} , which is a function of the absolute vacuum's intrinsic energy, the vacuum energy, E (dark energy). As stated before, an appropriate bang function for the Big Bang may have the general form:

$$\mathbf{F}(E) = KE \text{ ----- (eq. 15)}$$

Where $\mathbf{F}(E)$, K , and E are all super-variables representing the following entanglements respectively: the unified force, the unified constant, and the vacuum energy. This is the dark energy equation for the Big Bang. As shown in the Temigram, which the TEPET (the Fractal in Figure 24), the scaling factor for these Big Bang expansions of CEN can be the fractal

dimension of TEPET, which is 2^n , where $n = \pm\infty$, and the Hausdorff dimension of TEPET is $\pm\infty$. The mode of the Big Bang expansions is stated in equations 1–7 in Chapter two, showing as CEN expands infinitely in a geometric progression manner.

Figure 18: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)

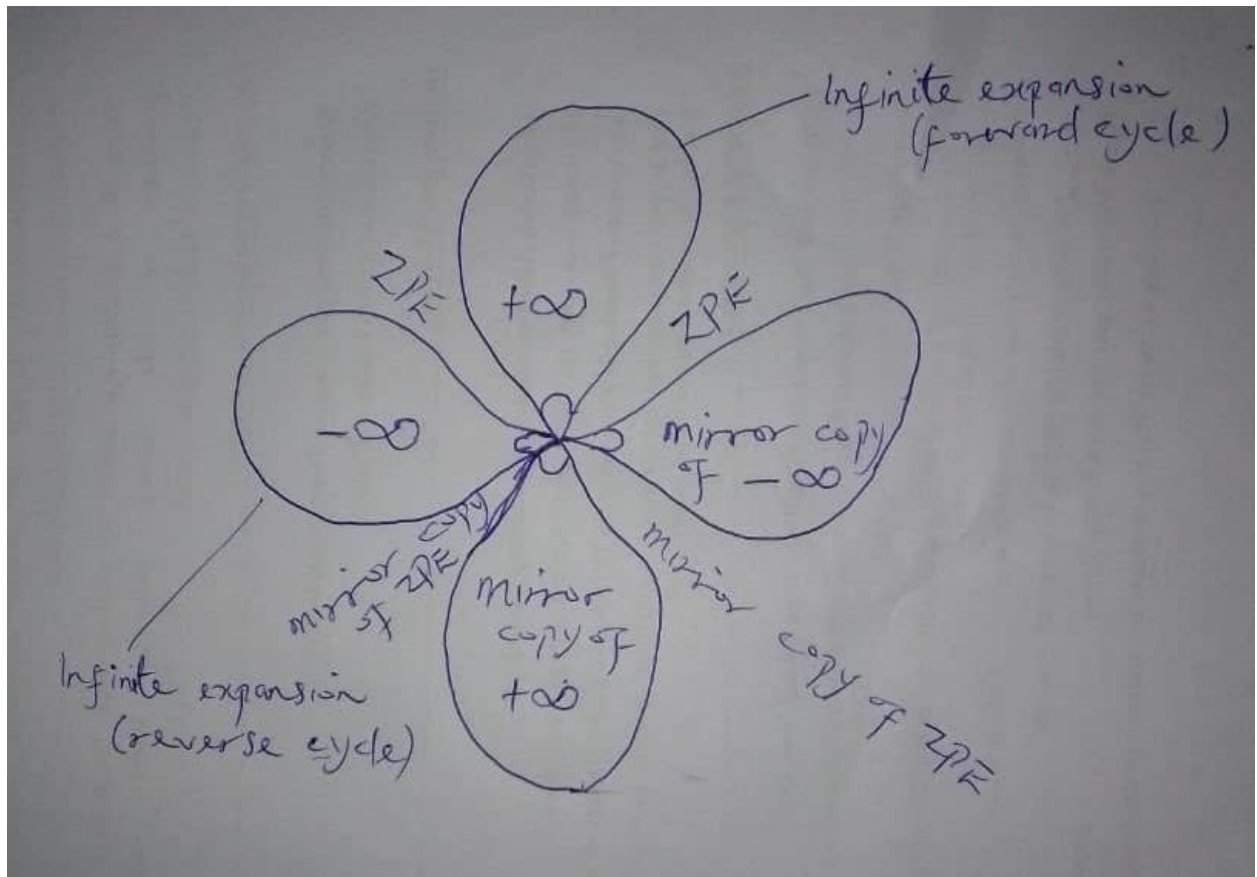


Source: CENProject (2023)

Alternatively, equation 15, the general bang function, can also be interpreted as the squaket operator acting on CEN or TEPET to yield 0, which evolves infinitely as shown in Figure 24

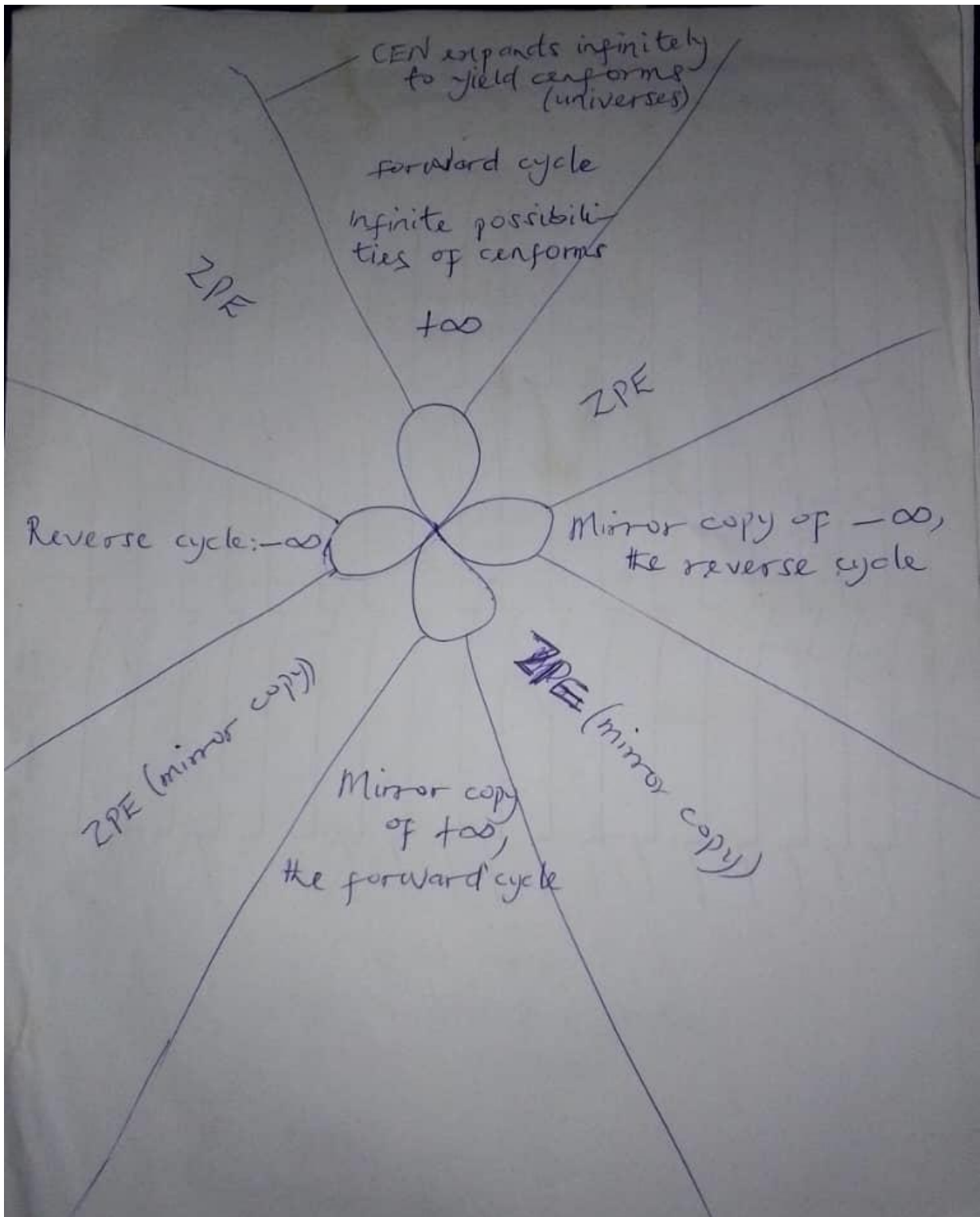
and the remaining Temigrams (see Figures 18–24), and as explained earlier in Figures 10–13 showing the CEN transformations.

Figure 19: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: Author's Construct (2023)

Figure 20: CEN Expansion via Big Bang



Source: Author's Construct (2023)

Figure 21: Forward Big Bang Expansion Cycle

Forward cycle: $+\infty$

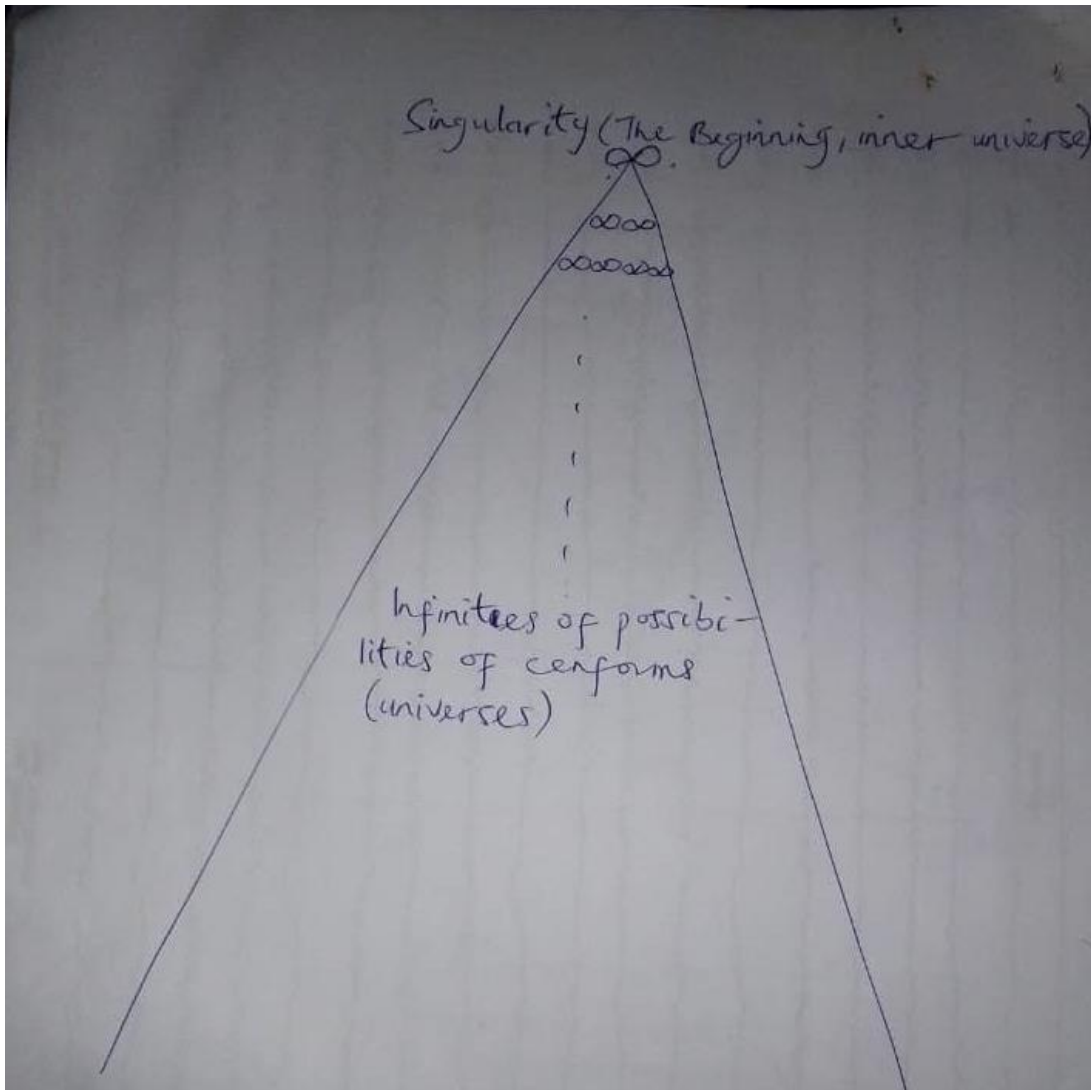
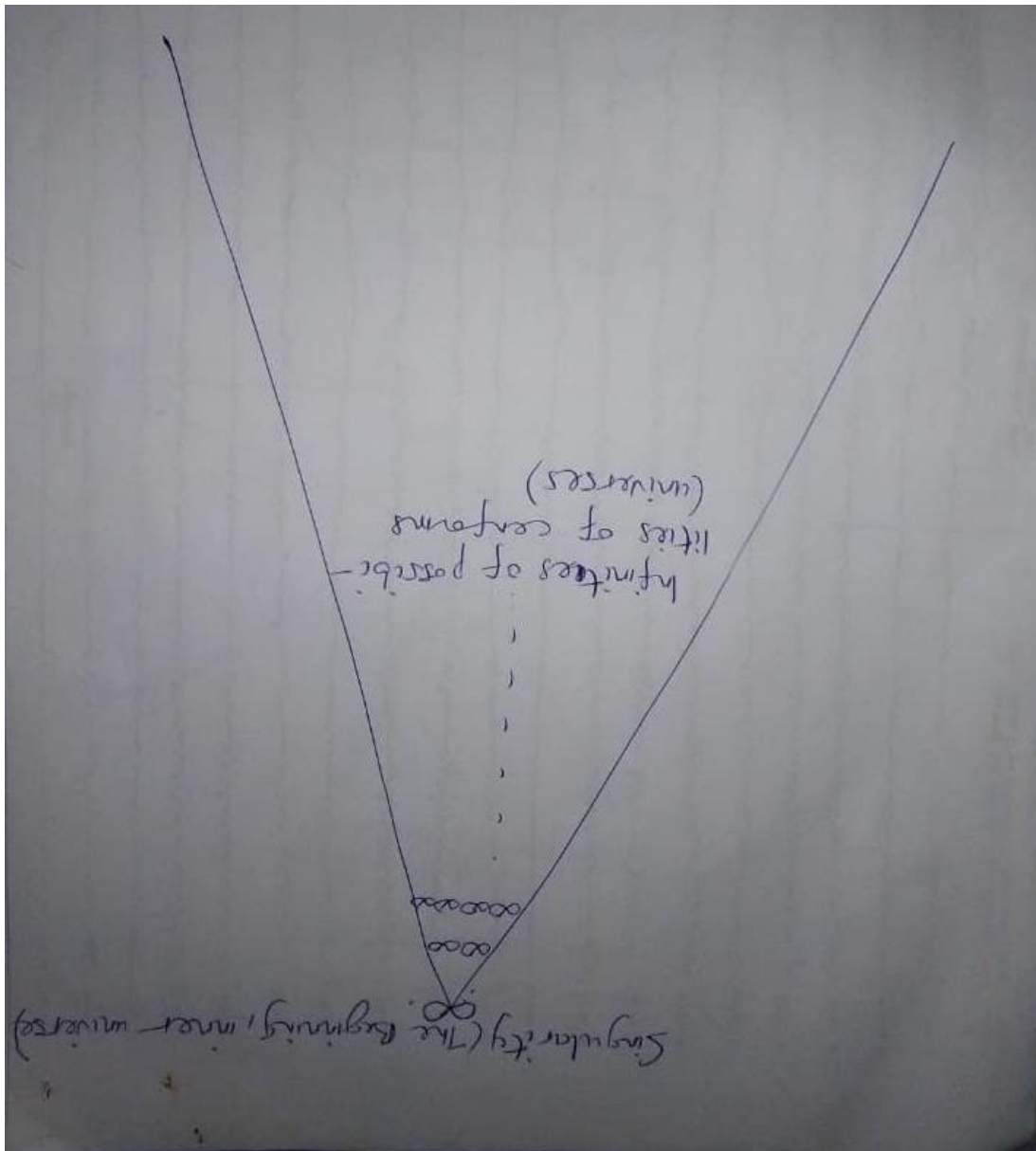


Figure 22: Reverse Big Bang Expansion Cycle

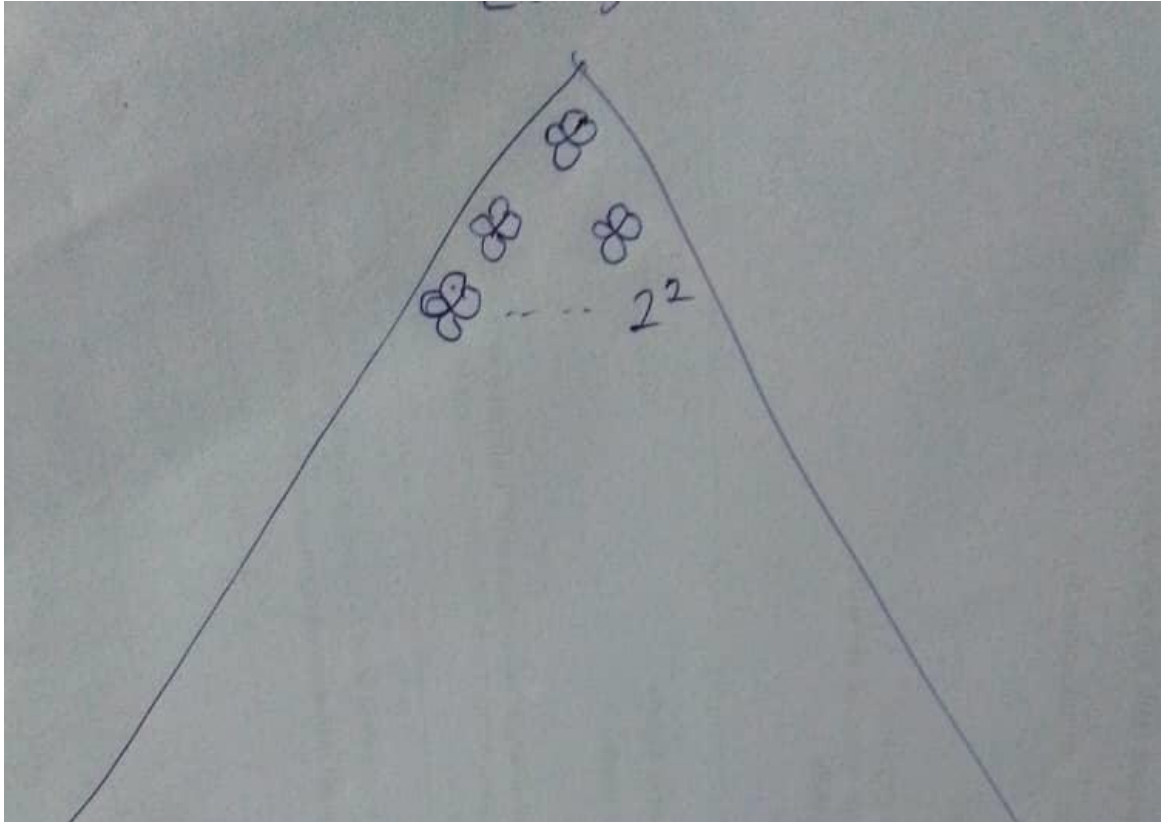
Reverse cycle: $-\infty$ (infinities of possibilities of cenforms, i.e., universes)



Source: Author's Construct (2023)

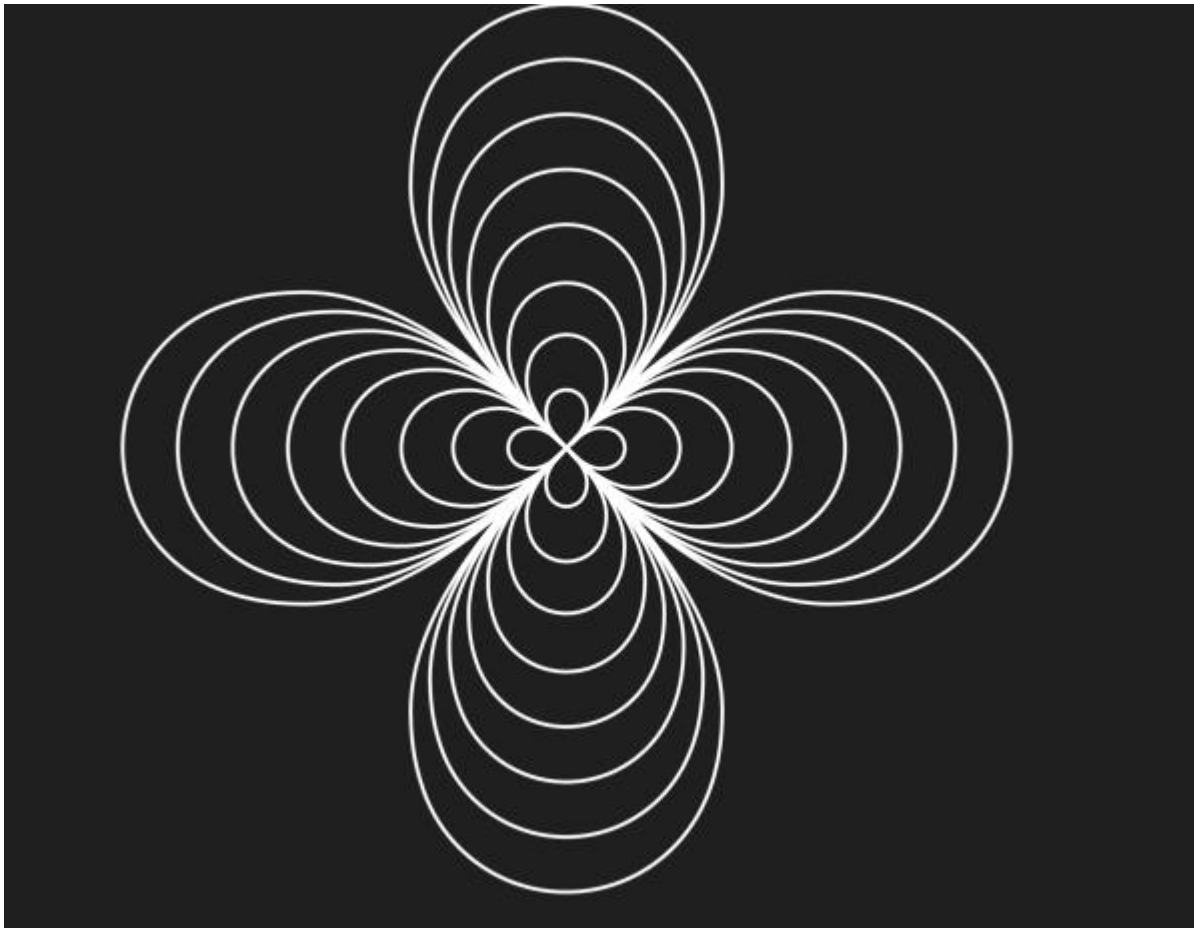
Figure 23: Forward and Reverse Big Bang Expansion Cycles in an Entangled State

Forward and reverse cycles entangled/combined:  (Singularity)




Source: Author's Construct (2023)

Figure 24: CEN — The Multiverses (the TOE)



Source: CENProject (2023)

So far, it can be seen how the Temigrams and Axioms 0–7 are used to develop various aspects of this emerging field. The Temigrams are reproduced and applied in each section deliberately to show how cen and these patterns underlie all things in existence. This approach is key to developing the TOE based on the Temic Model. Just like the whole system, the absolute vacuum or the Collective Entanglement, all the constituents or entanglements in this system also evolve or expand via Big Bang in this manner. The same procedure applies to the evolution of the whole system (CEN) and its constituents (cen), which are infinite in number. These entanglements include Fundamental Consciousness, Forces, Matter, Space-Time, Mass, Antimatter, Electromagnetic Radiations, and infinities of others. All these can be regarded as elements of the aclopen set, TEPET or CEN, . To describe the Big Bang evolution or expansion of each of these elements, the same procedure is followed using Axioms 0–7 and the Temigrams. Consequently, the same pattern of Big Bang expansion can be observed in all things in existence, which are cenforms, bringing about the observed homogeneity and isotropy

in this Universe. Homogeneity and isotropy underpin the cosmological principle, which states the Universe is homogeneous and isotropic on large cosmic scales, meaning that on large scales, this Universe looks the same to all observers on average, irrespective of where the location may be (see Weinberg, 1977; Singh, 2005). It is also this same pattern that will be used to build the TOE.

4.3. How Cosmic Inflation during Big Bang Expansions Brings about Different Universal Epochs

According to inflation theory in Cosmology, the inflationary epoch represented the period in the Big Bang evolution of the early universe when our Universe expanded in an extremely rapid and exponential manner (Guth, 1997). This period is thought to have lasted from 10^{-36} seconds to 10^{-33} – 10^{-32} seconds following the Big Bang (Howell & May, 2023). However, in Consciousness Physics, this author posits that inflationary epochs occur periodically in cycles in universes, and different inflationary epochs bring about different eras of the universes and changes in laws of nature in these universes. Also, each inflationary epoch lasts for much longer. In the Temic approaches, cosmic inflation occurred at the start or birth of space-time via the First Big Bang in the innermost universe and also occurs periodically in cycles in other eras as the universes expand infinitely.

For instance, in our own Universe, the last inflationary epoch could have taken place at a period which corresponds to circa 2.5 million years ago on Earth, which caused the extinction of the Homo erectus era and most of all other living species on Earth and the beginning of the Homo sapiens era and most of all other living species on this planet. This period would correspond to different times in other universes. These periodic inflationary epochs bring about a new beginning or era in universes, and it is predicted that in some thousands or millions years in the future, another inflationary epoch will occur and cause an extinction of the current Homo sapiens era and most of all other living species on Earth and the beginning of a new era.

At the beginning of a new era caused by an inflationary epoch, living organisms (including humans and other animals) evolve from dying stars that fall to the planet from space via the process called astrobiogenesis, a term coined by the author from “astrogenesis” (the process of star formation) and “biogenesis” (the concept of life arising from pre-existing organic or living matter). Simply put, astrobiogenesis is the process where life evolves on a planet from the contents of a dying star. Such contents are usually the photons of consciousness waves and stardust/cosmic dust. During astrobiogenesis, a star dies and spews its contents into a planet,

and these contents evolve or transform into a living organism on the planet. Astrobiogenesis can occur on a planet as one of the products of or resulting processes from Big Bangs. It occurs during other phenomena as well. For a more detailed discussion of astrobiogenesis, see Tijani (2023b).

Astrobiogenesis can occur in one of two ways:

- When stars die and break up in space, spewing their contents into a planet, and then, a living organism evolves or develops from these contents, mainly stellar consciousness and stardust
- When stardust (from dying stars in space) that formed the soil of a planet evolves or develops into living organisms, making these organisms to arise from the soil (with their color mainly depending on the color of the stardust from which they formed) and absorbing consciousness from the Universe. This requires the soil to exist in a special condition or state, which aids the development of living organisms from the stardust of the soil.

While evolution is a well-established scientific fact, this author does not regard it exactly as it is seen in the mainstream science. Shortly after the Earth formed via the Big Bang, humans and many other kinds of animals, plants, and other living organisms had evolved from fallen stars from space. The author believes human life is much older than 3.5 billion years on Earth contrary to the mainstream science.

4.4. The Temic Theory of Gravity

4.4.1. Gravity as a Consequence of Big Bang Expansion by Fundamental Consciousness

In the first phase of this research project, a new approach to gravity was introduced based on the Big Bang expansion of the absolute vacuum by Fundamental Consciousness, which is a natural force in the Temic context (see Tijani, 2023c). In that perspective, which is called the Temic Theory of Gravity, it was explained that the First Big Bang started in the innermost universe (the Beginning), the first universe in existence, and triggered chain reactions that produced successive big bangs, which created more and more inner universes and outer universes infinitely. Applying Axiom 1, the outer universes are exact replicas or mirror copies of the inner universes (Tijani, 2023a). Mathematically, the outer universes are perfect isomorphisms of the inner universes, and the isomorphisms in this case are automorphisms as explained earlier. Thus, the outer universes can also be called outer automorphisms, and the

inner universes inner automorphisms (see Figures 25–26). This is the Temic Big Bang Principle. It is a generalization of the Big Bang in the Standard Big Bang Model.

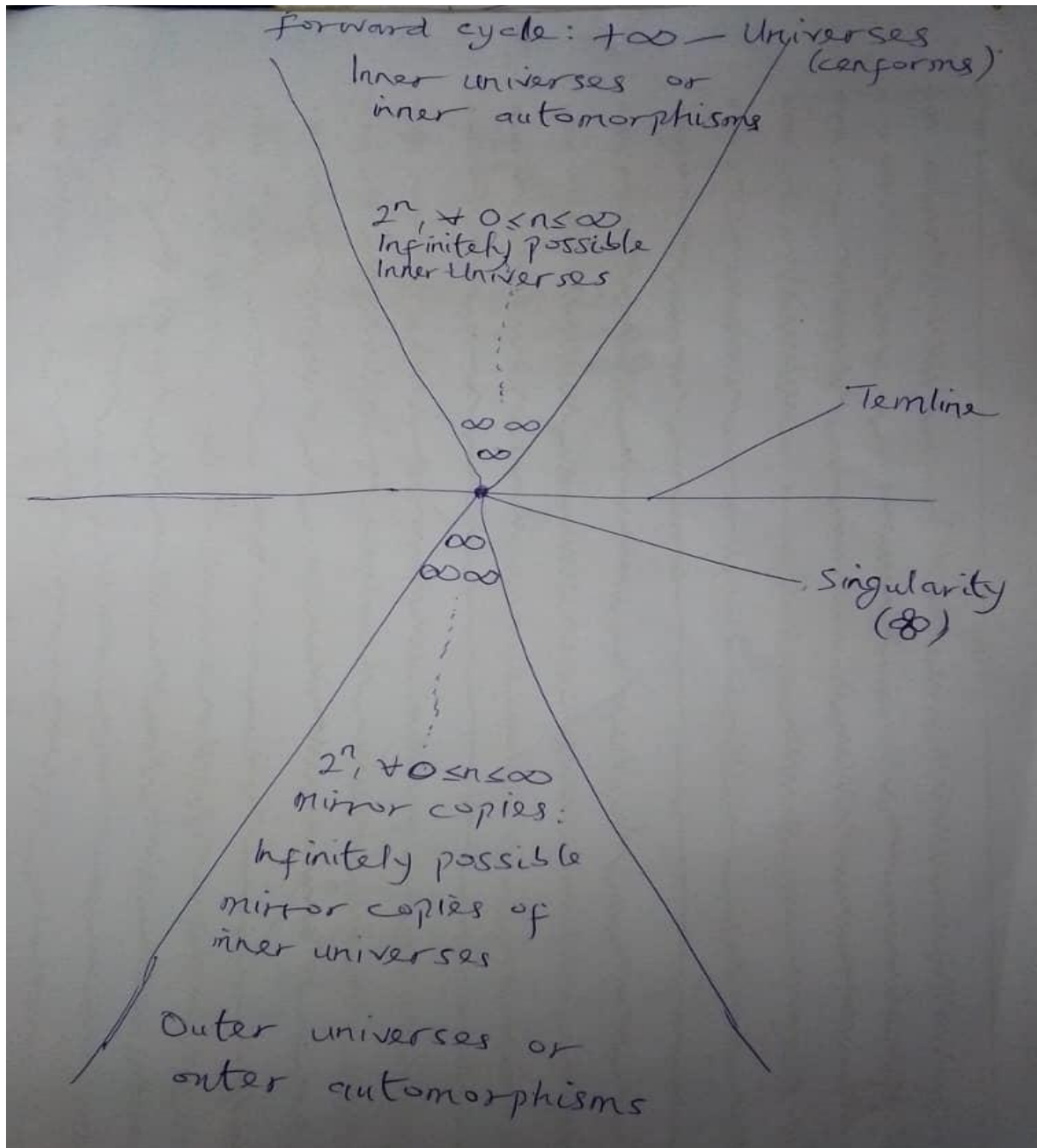
When the First Big Bang started in the inner universe, Fundamental Consciousness broke the Coagulation or Entanglement (the Beginning) or CEN, which made other entanglements in this Coagulation to start expanding or exploding or disentangling. These expanding entanglements (expanding as patterned in the Temigrams) keep on dispersing or spreading their constituents infinitely forming the inner or unphysical universes and transitioning to the outer or physical universes after moving past the Temline. The Temline is the boundary that separates the inner universes (a different dimension) from the outer universes, or any inner universe from any outer universe. It exists exactly at the edge of space-time and lies below the Planck scale. Applying Axiom 1 above, which states that all things are connected or entangled and balance one another, and its corollary, Newton's third law of motion, the law of action and reaction, to this scenario, when the Fundamental Consciousness (action) broke the Coagulation (the absolute vacuum) and initiated the First Big Bang, an equal and opposite force (a reaction) was created exactly at the Temline (see Figure 27). This equal and opposite force is what we call Gravity. Both forces (Fundamental Consciousness and Gravity) cancel out one another, which is why at its core, the absolute vacuum is Nothing, just consciousness and energy, which is why all things (the archetypes) that exist in this vacuum, at its core, are in a frozen state or zero state before the First Big Bang. This frozen state before the Big Bang expansions is the source or initial state of all things in existence.

Therefore, in the Temic approach, Gravity is regarded as a consequence of Big Bang expansion or explosion by the natural force of Fundamental Consciousness. This Gravity is really Supergravity, not the everyday gravity we are familiar with as it is an entanglement of all gravities (existing at all scales) in the outer universes, including ours. While the force of Fundamental Consciousness causes space-time to explode, expand, or spread, the force of Gravity, as an opposing force, makes it to contract, clump together, warp, or fold as an attractive force.

Thus, both forces are seen as the curvature of space-time caused by the presence of consciousness-energy (cen) and mass (matter), with the nature of this curvature depending on the observer's frame of reference. The warping effect of space-time called gravity attributed to matter in Einstein's General Theory of Relativity is really caused by cen, and not just matter, as it is cen that underlies matter itself being the fundamental building block of all things in

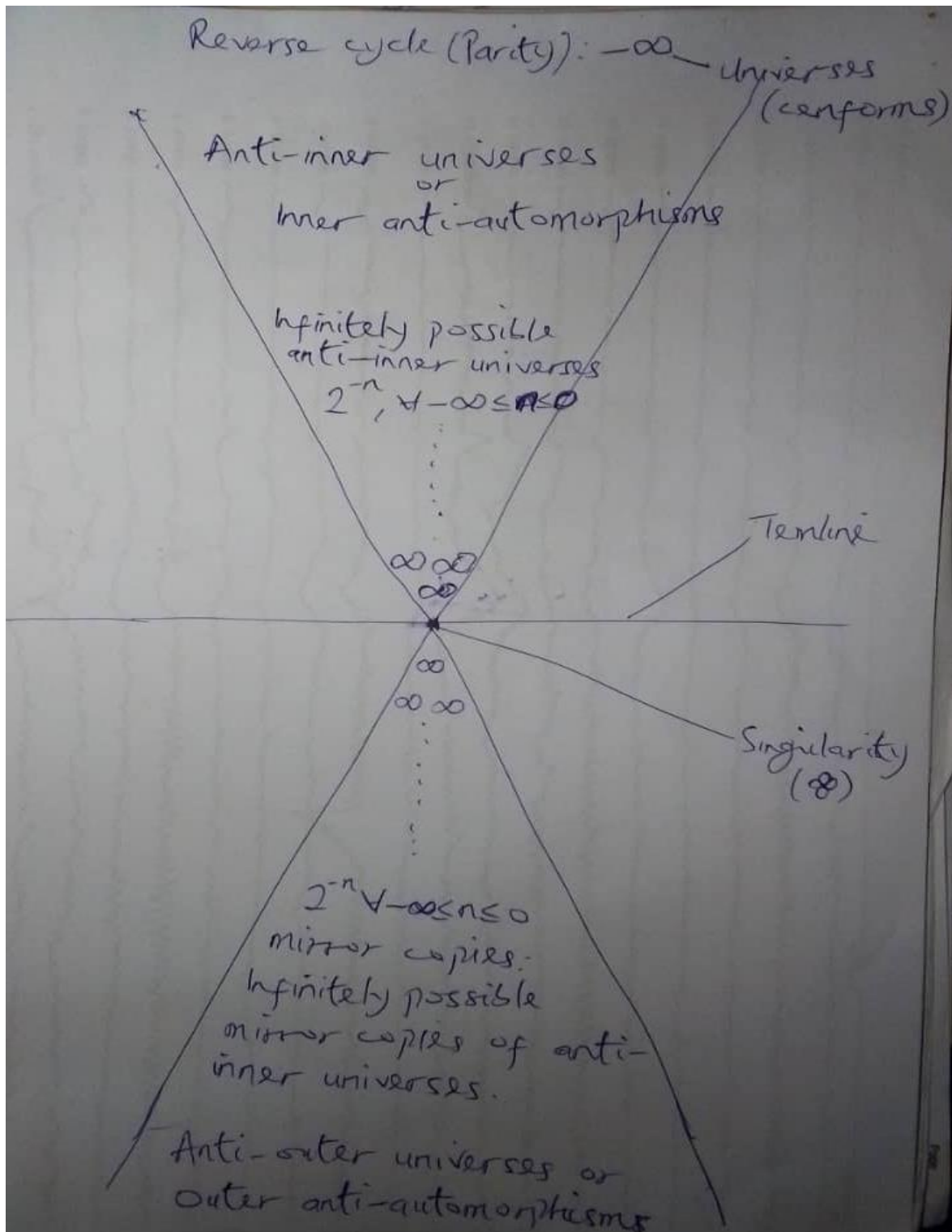
existence. Fundamental Consciousness is the mother of all forces of nature as it connects all forces together as a huge matrix or entanglement. This is the Temic Theory of Gravity. Thus, the energy possessed by the Fundamental Consciousness force, measured in tems, is what is driving the accelerated expansion of the Universe and manifests as dark energy, meaning dark energy is an aspect of Fundamental Consciousness (Tijani, 2023; 2023a). The mathematical formalism for the Temic Theory of Gravity will be developed in further research later on.

Figure 25: The Inner Universes, Outer Universes, and Timeline (Forward Cycle)



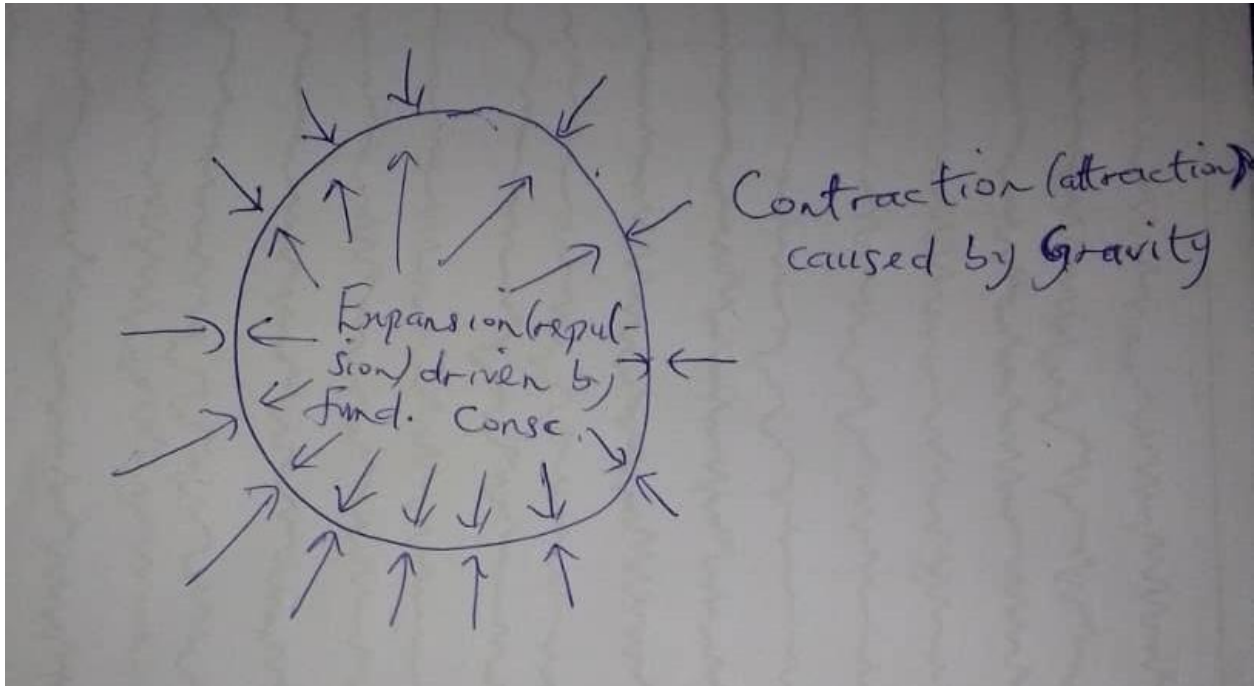
Source: Author's Construct (2023)

Figure 26: The Inner Universes, Outer Universes, and Timeline (Reverse Cycle)



Source: Author's Construct (2023)

Figure 27: Gravity as a Consequence of Big Bang Expansion by Fundamental Consciousness



Expansion (repulsion) driven by the vacuum energy (CEN or dark energy) or Fundamental Consciousness balances and cancels out contraction (attraction) caused by Gravity

Source: Author's Construct (2023)

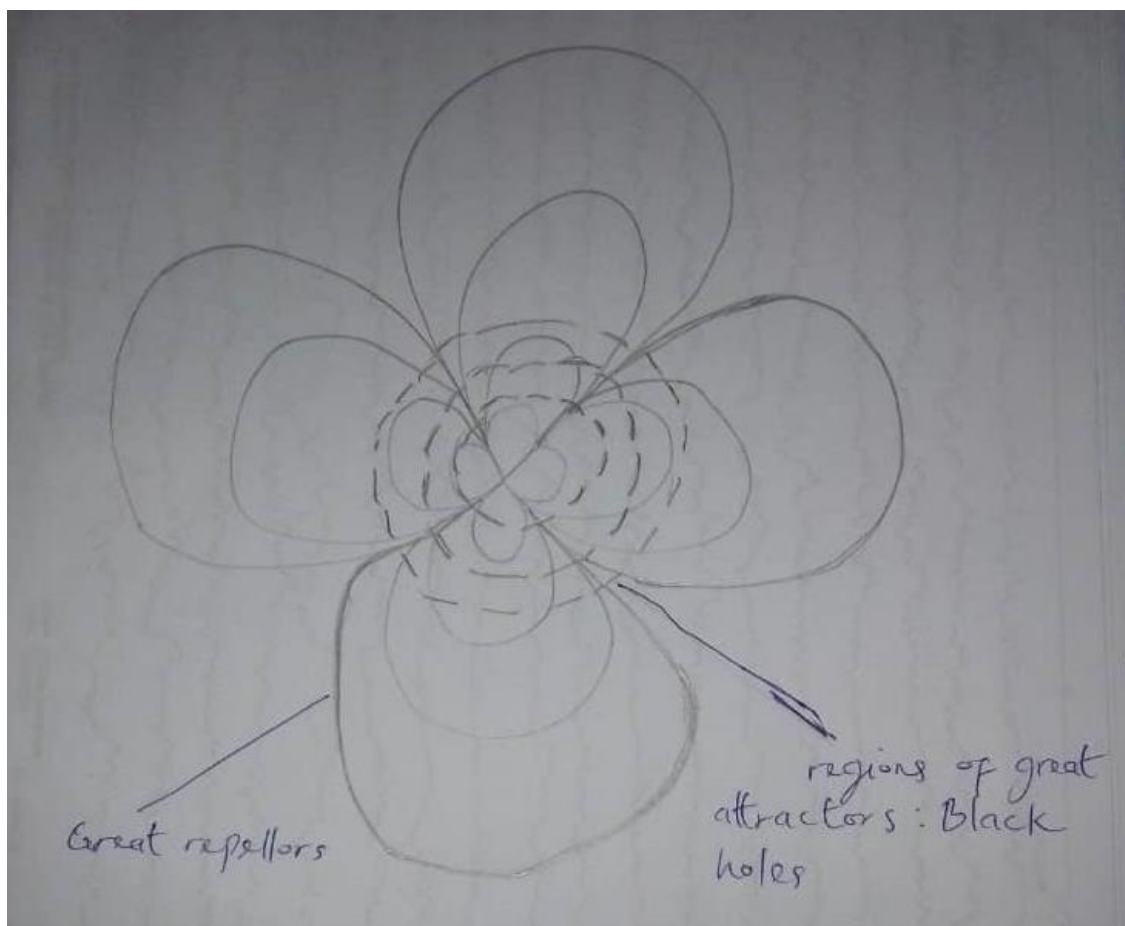
4.4.2. Variations in CEN Distributions in Universes

The presence of a very strong cen distribution or a very intense cen concentration along with its conjugate (opposite) in an inner universe brought about a gigantic exploding or a dispersing effect (an anti-gravitational effect) that birthed space-time, in an annihilation operation where the cen was dispersed or scattered in various amounts/distributions in all directions in the form of quanta in the resulting outer universes. This is a Big Bang expansion that obeys the relationship shown in equation 15 earlier and generates the fractals shown in Figure 24 (the CEN Temigram). This is explained further in the subsequent sections as CEN permutations. The annihilation operation in the inner universe birthed space-time and tears in the fabric of space-time called black holes in the outer universe. This highly intense cen annihilation (Big Bangs in inner universes) in the inner universe is the origin of the curvature of space-time in the outer universe, where the cen intensity is perceived as gravity. Thus, in an outer universe, like our own Universe, this process is perceived as the direct collapse of gas due to the highly

intense gravity, while in the inner universe, it is seen as an exploding or expanding effect driven by cen or its energy called dark energy/anti-gravity.

Therefore, the very strong cen annihilation in the inner universe generates regions of space-time with a very strong gravitational effect in the outer universe, and these regions are referred to as black holes in this Universe. The center of such black holes are singularities, which lie exactly at the Temline separating the inner universe from the outer universe (see Figures 25–26). Black holes are regions of great attractors (points that attract other points) as shown in Figure 28 below; these regions are drawn using dotted lines, and great repellors (points that repel other points), white holes, are shown as well:

Figure 28: Black Holes in the Temic Big Bang Model



Source: Author's Construct (2023)

As shown in this Temigram, black holes are tunnels or connecting regions that join universes together. When the innermost universe, the first universe in existence, died or underwent a phase transition by exploding or expanding during the First Big Bang, a black hole was formed. In the same vein, when a massive star dies (undergoes a phase transition) in our own Universe,

an outer/physical universe, a black hole is also formed. Black holes emerge when a massive force tears down the fabric of space-time or births space-time. The Big Bang explosions in the innermost universe scattered or dispersed all the constituents (the entanglements) of the absolute vacuum in all directions, and many of these scattered elements of this vacuum combined and recombined due to gravity to form particles, atoms, molecules, compounds, planets, stars, galaxies, and many others. These are all various distributions of cen.

It is pertinent to note that this Universe (or any universe) does not occupy space and is not bound by time, i.e., space-time only exists within the Universe, not outside of it. This is because at the core, our Universe and all other universes are just Nothing or CEN; anything else is illusions or pictures created for us by the brain. What we perceive as real is just a simulated or projected reality as Nothing or consciousness-energy is all that really exists. To develop quantum gravity, this needs to be taken into consideration. Also, the Universe (or any universe) is neither open nor closed because it is not bound by space, meaning its size is infinite, and its energy is also infinite. Just like the absolute vacuum is aclopen, all other universes (whether inner/unphysical or outer/physical), which are elements of this vacuum, also exhibit this property. The same property that applies to the whole system, the Collective Entanglement, also applies to its elements or constituents.

4.5. Realms, Worlds, Inner Universes, Outer Universes: Inner and Outer Automorphisms

Figure 24 shows the infinite realms and universes in existence. Within CEN, the Collective Entanglement, are infinite inner or unphysical universes and infinite outer or physical universes linked to one another by regions of great attractors, which are tunnels and black holes, and separated from one another by regions of great repellers called white holes. The outer universes are exact replicas (automorphisms) of the inner universes, and in any universe, on either side of the Temline or the Planck scale, are an infinite number of planets or physical worlds. Even in a specific planet are an infinite number of realms, each separated from the other by an energy barrier and each existing independently of the other but influencing one another.

In the Temic perspective, existence originates in the innermost universe, the Beginning, which is a separate dimension — the zero dimension. Inner universes are among nature's hidden dimensions in which the absolute vacuum, the source of all things in existence in the Temic models, resides. Inner universes are immaterial realms, non-physical worlds of feelings, imaginations, thoughts, ideas, emotions, occurring below the Planck scale, and space-time does

not exist in these realms. On the other hand, outer universes are physical universes where space-time exists, such as our Universe that we are familiar with.

0D: CEN (The Beginning)

1D: point on a line or curve

2D: ordered pairs/tuples

3D: triplets

4D: quartets

•
•
•
•

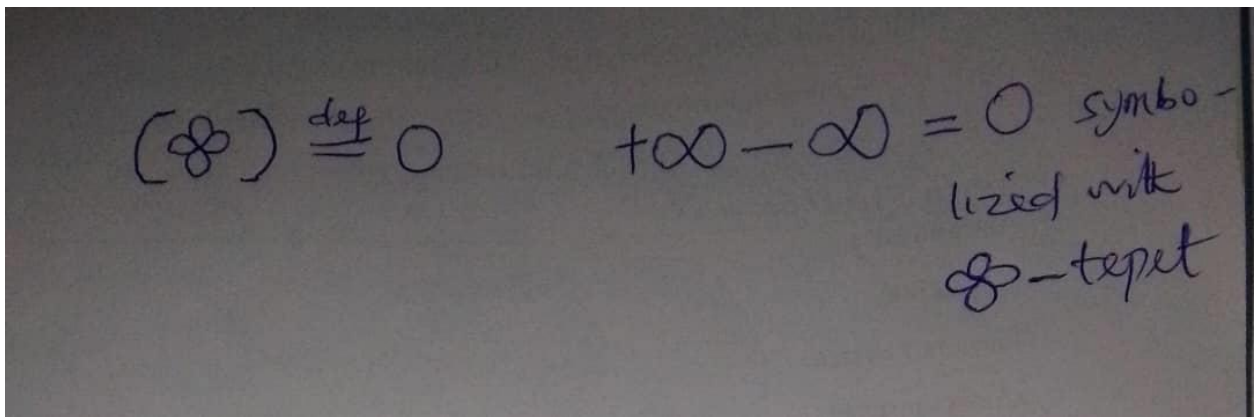
nD: infiniplets or infiniples (n is $\pm\infty$)

When the First Big Bang occurred, the absolute vacuum exploded to form realms in universes, and the innermost universe (zero dimension, 0D) expanded to one dimension (1D), and multiples of 1D such as two dimensions (2D), three dimensions (3D), and continues to expand to more and more dimensions infinitely even up to infinite-dimensional realms of infinite tuples (referred to as infiniples or infiniplets by the author). In between these dimensions or realms are other realms of fractional dimensions. All these realms and dimensions are cenforms. Based on Axiom 1 that states all things are connected or entangled and balance one another, each dimension has a conjugate dimension or realm with exactly opposite properties and aspects. These conjugate dimensions are alternate worlds or realms existing in this Universe and other universes. This is explored on the section on developing an extended electromagnetic (EM) spectrum based on the Temic approaches.

To understand the concept of inner and outer universes in the Emergent Model of Inner-Outer Universe Cosmogeny (TEMIC) framework better, it is apposite to examine isomorphism and automorphism briefly in Algebra. To do this, applying the Temic Transformation Theory, we begin the examination by starting from the existence of these concepts in inner universes, which are realms existing within our brains or our minds. Any subject or discipline that is studied today had once existed as ideas and thoughts in the brains or minds of their developers or

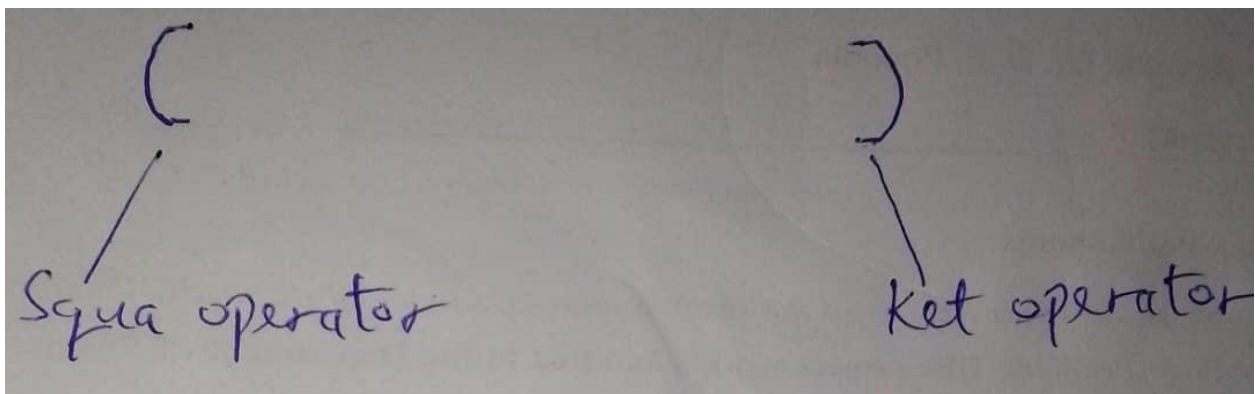
authors, and such ideas and thoughts are states or forms of consciousness-energy, cen. When you are taking an idea from the realm of the mind (reand) in your brain to the physical realm, that idea is undergoing a change of censtate in what is called a CEN transformation. That transformation of censtate can be described mathematically using transformation functions and operators — the Temic notation (the squaket, squa, and ket operators). The evolution of any censtate or cenform is explained using the diagrams below:

Figure 29: Temic Notation



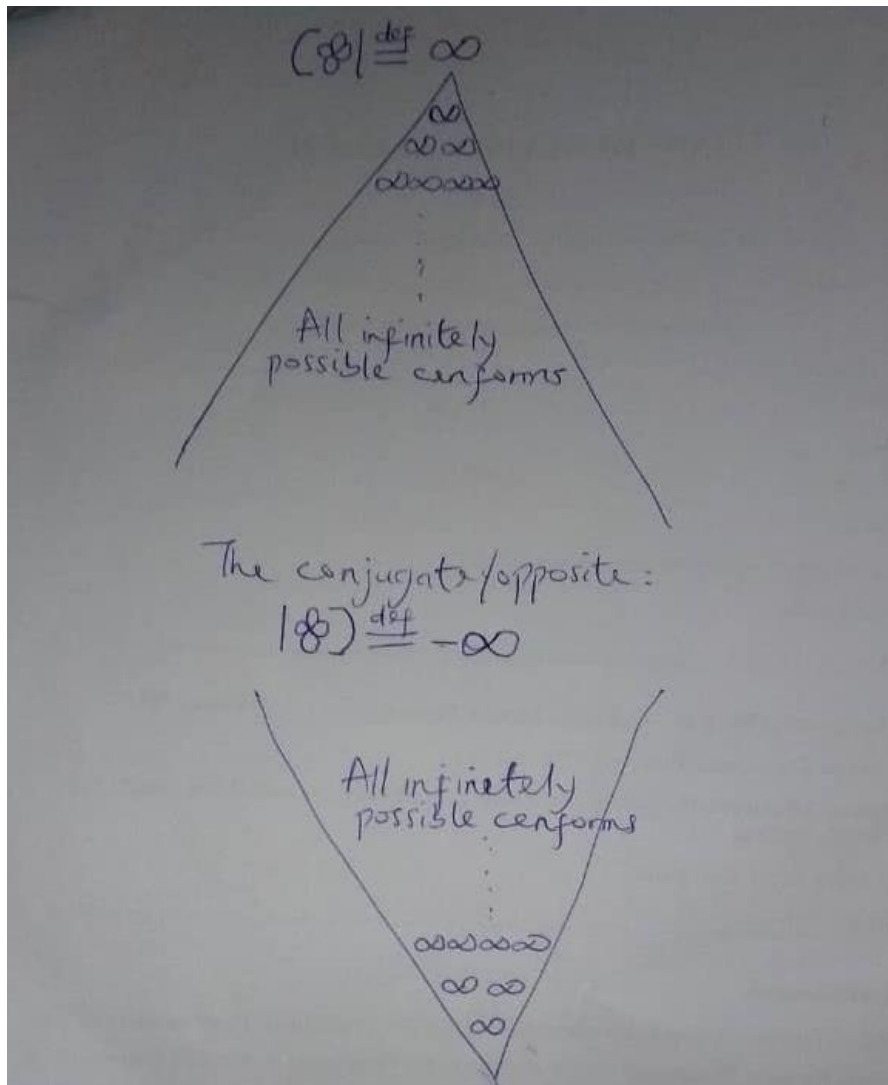
Source: Author's Construct (2023)

Figure 30: Temic Notation



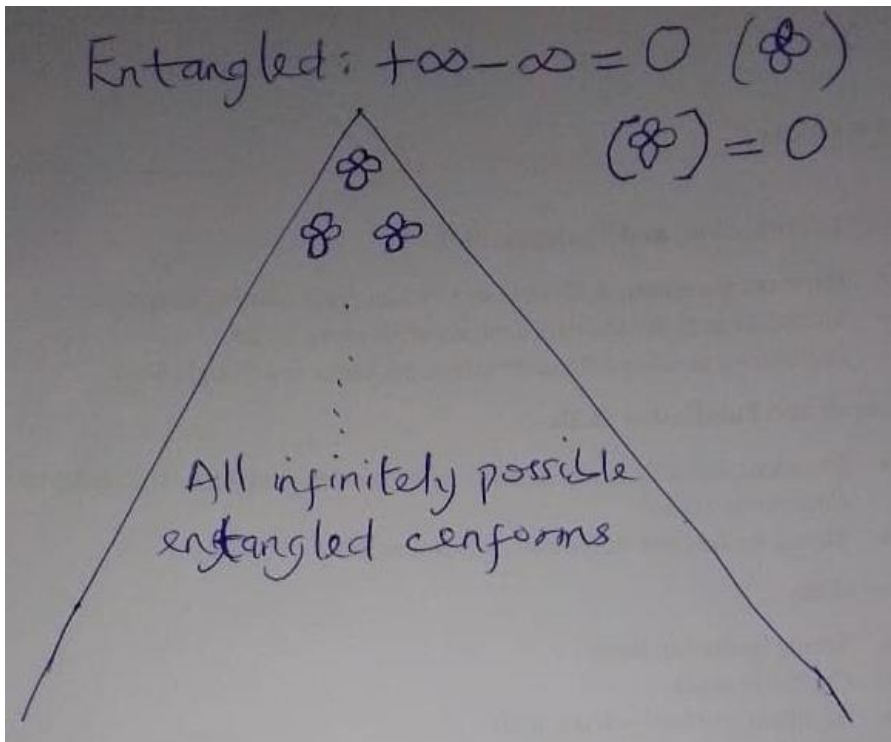
Source: Author's Construct (2023)

Figure 31: Temic Notation




Source: Author's Construct (2023)

Figure 32: Temic Notation



Source: Author's Construct (2023)

Recall Axiom 4, which states that anything or any system exists infinitely in a superposition or combination of all possible cenforms or censtates unless when observed/experienced and that forces its wave function to collapse to a specific cenform (form of consciousness-energy) or censtate (state of consciousness-energy) that is measured/seen. Based on this Axiom, before any concept, subject, or discipline is studied (observed), it occurs in a superposition of all possible cenforms or censtates (i.e., it exists as all things possible in all universes everywhere at once), symbolized with tepet,  occurring in inner universes, which are realms or dimensions lying within the brain. Then, it evolves or transforms via Big Bang expansion or explosion when the squaket operator acts on it to produce zero or Nothing as shown in Figure 29, which expands continuously infinitely in a series of Big Bangs when the squa operator acts on it to give infinities of cenforms or censtates (see Figure 31). And in the reverse cycle, the ket operator acts on it to produce its conjugates in infinities (see Figure 31).

In our current realm in this Universe, any concept, subject, or discipline that we study is one of such infinite censtates or cenforms shown in the Temigram in Figure 31, which morphed into whatever name we give to that concept, subject, or discipline in this physical Universe due to a collapse of our conwave function or the collapse operation done by the squa and ket operators

as explained earlier. Therefore, all disciplines, fields, and kinds of knowledge are CEN transformations. The ideas, thoughts, feelings, experience you have in the brain about any form of knowledge, course, or discipline are all forms or states of consciousness-energy.

Having said that, we can now zero in on the following censtates of interest: isomorphism and automorphism. For these types two of morphisms, as used in the context of category theory (see Herrlich & Strecker, 2007), the appropriate CEN transformation is transformation in Abstract Algebra, which has to do with mapping.

4.5.1. Isomorphism

As a CEN transformation, the evolution of isomorphism as a concept or topic from the inner universe (realm of mind or reand of its authors) to the outer universe, specifically the physical (earthly) realm can be described mathematically using Temic notation (the squaket, squa, and ket operators) and the cen functions, including the collapse transformation, C (see Figures 10–13a). As explained in that sub-section, when the squa operator acts on $+\infty$, which represents all possible forms of morphisms, the output is D, which stands for isomorphism, our current censtate of interest here (see Figure 13a). The reverse process occurs when the conjugate of the function maps $-\infty$, which represents all possible forms of anti-morphisms, to $-D$, the opposite or conjugate of D (anti-D), which has to do with the action of the ket operator on $-\infty$ to produce the result, $-D$ representing anti-isomorphism, which is invariant (also an isomorphism) (see Figure 13a).

An isomorphism is formally defined as bijective morphism, which is means a one-to-one and onto map between two objects in an abstract category (Vinberg, 2003; Herrlich & Strecker, 2007). An isomorphism is simply a map, which preserves sets as well as relations among elements (Weisstein, 2023). The expression $X \cong Y$ is used to describe this concept, which means "X is isomorphic to Y" defined as follows:

A linear map T is referred to as an automorphism if these two conditions hold:

- T is one to one: If $T(\vec{x}) = T(\vec{y})$, then $\vec{x} = \vec{y}$.
- T is onto: If $\vec{w} \in \mathbf{W}$, there exists $\vec{v} \in \mathbf{V}$ such that $T(\vec{v}) = \vec{w}$ (Kutler, 2023).

Apart from symmetry, as shown in the above definition, inverse is also one of the crucial properties of isomorphisms, which means that the inverse of an isomorphism is also an isomorphism, as outlined below:

Let $T: \mathbf{V} \rightarrow \mathbf{W}$ be an isomorphism and \mathbf{V}, \mathbf{W} be subspaces of \mathbb{R}^n . Then, $T^{-1}: \mathbf{W} \rightarrow \mathbf{V}$ is also an isomorphism (Kutler, 2023).

Furthermore, composition is yet another key property of isomorphisms. The composition of multiple isomorphisms is also an isomorphism:

Let $T: \mathbf{V} \rightarrow \mathbf{W}$ and $S: \mathbf{W} \rightarrow \mathbf{Z}$ be isomorphisms where \mathbf{V}, \mathbf{W} , and \mathbf{Z} are subspaces of \mathbb{R}^n . Then, $S \circ T$ defined by $(S \circ T)\vec{v} = S(T(\vec{v}))$ is also an isomorphism (Kutler, 2023).

4.5.2. Automorphism

Just like isomorphism, as a CEN transformation, the evolution of automorphism as a concept or topic from the inner universe (realm of mind or reand of its authors) to the outer universe, specifically the physical (earthly) realm can also be described mathematically using Temic notation (the squaket, squa, and ket operators) and the cen functions, including the collapse transformation, C (see Figures 10–13a). In this case, the output is D stands for automorphism, our current censtate of interest in this sub-section (see Figure 13a). The opposite or conjugate of D (anti- D) is $-D$ representing anti-automorphism, which is invariant (also an automorphism) (see Figure 13a).

An automorphism is formally defined as an isomorphic mapping from a group to itself (Pahl & Damrath, 2001). A group automorphism, according to Barile et al. (2023), is an isomorphism from a group to itself. This implies that an isomorphic mapping $f: G \rightarrow G$ from a group $(G; o)$ to itself is said to be automorphic (an automorphism of G) (Pahl & Damrath, 2001). The set of automorphisms of G is designated by $\text{Aut } G$ or $\text{Aut}(G)$ Barile et al. (2023).

$$\text{Aut } G := \{f: G \rightarrow G \mid f \text{ is isomorphic}\}$$

The composition $f_1 \circ f_2$ of automorphisms f_1 and f_2 is defined as an inner operation in the set $\text{Aut } G$ (Pahl & Damrath, 2001). The domain $(\text{Aut } G; o)$ is a group, which is known as the automorphism group of G .

If the sets G and H are isomorphic, then their automorphism groups are also isomorphic. That is $G \cong H \Rightarrow \text{Aut } G \cong \text{Aut } H$.



4.5.2.1. TEPET Isomorphism and TEPET Automorphism

In the Temic context, isomorphism is called TEPET isomorphism and is a CEN transformation or mapping. This CEN mapping, when applied to various complex systems and phenomena in the Earthly realm (this planet) and in our Universe generally, is bijective. In simple terms,

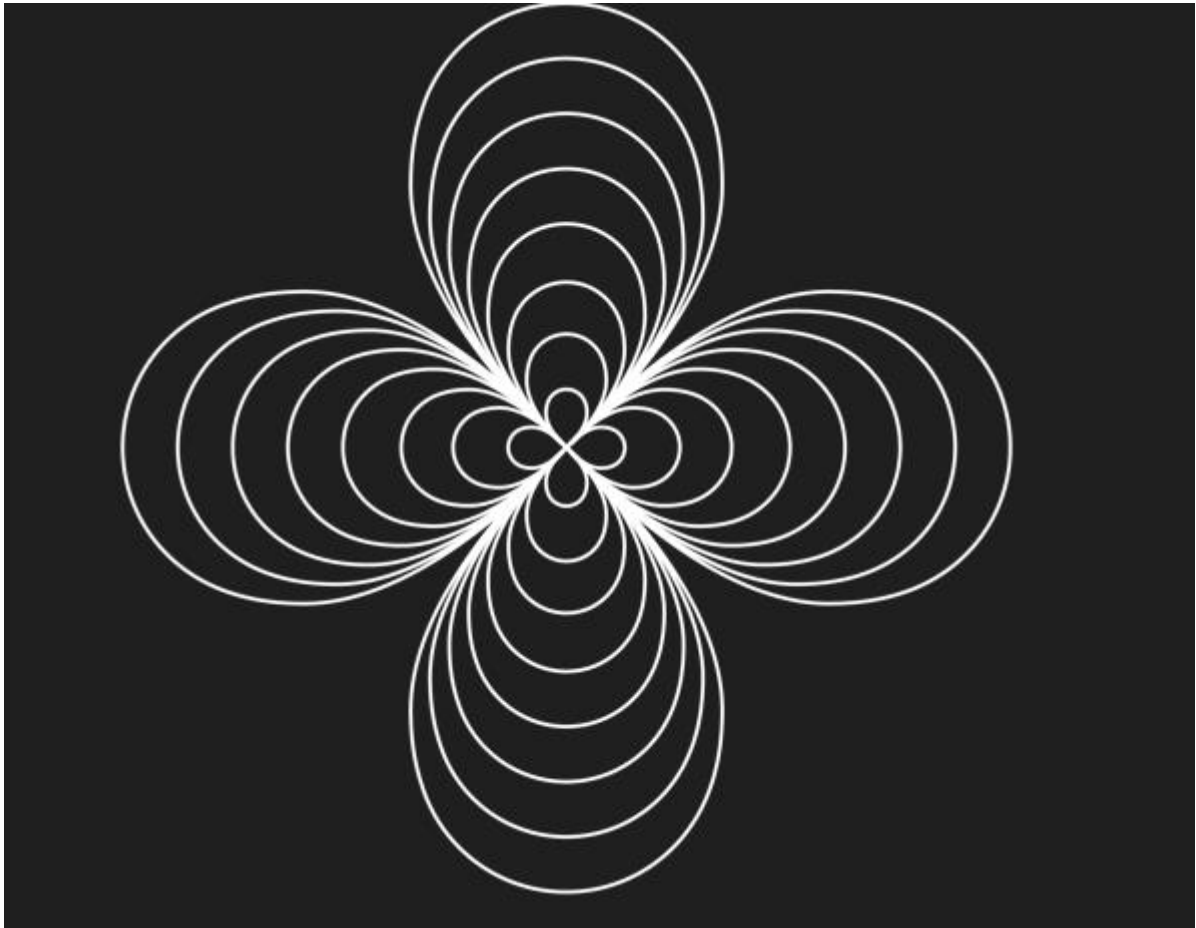
TEPET Isomorphism is a bijective mapping from the TEPET to itself, i.e., from CEN to itself. The TEPET isomorphism in this case is a TEPET automorphism as the mapping is one-to-one and onto from the TEPET to itself as stated earlier. Thus, TEPET isomorphism and TEPET automorphism can also be called CEN isomorphism and CEN automorphism respectively.

To explain these CEN mappings mathematically and prove they are isomorphism and automorphism, the procedure follows the normal proofs for these concepts in Abstract Algebra because it is cen that also underlies these transformations in Abstract Algebra in the realm of the mind (the idea of these concepts in the brain), as explained earlier. CEN isomorphism and CEN automorphism will be developed further later on.

4.6. CEN: The Fundamental Building Block of All Things in Existence (the Multiverses)

To understand nature and the Universe as a whole deeply, order and balance are two key concepts to keep in mind in line with the Temic Universal Laws. In this context, order or ordering simply means permutation, while balance means parity. The fundamental principle of Consciousness Physics is that consciousness-energy, which is called cen (symbolized with ) is the basic building block of all things in existence (the Multiverses). Thus, CEN ordering (permutation) and CEN balance (parity) underlie the Whole of Existence. CEN ordering and CEN parity or balance are CEN transformations or operations. They are CEN functions defined as follows: Also, called TEPET permutation, CEN permutation is the mapping of the CEN or TEPET set  back to itself, which means TEPET automorphism explained earlier, while CEN parity, also called TEPET parity, is a CEN permutation/mapping that involves restoring balance or parity to the whole Collective Entanglement, TEPET, or the specific entanglement (cen) in CEN after carrying out a particular operation. CEN permutations are operations that involve ordering and reordering of consciousness-energy following certain rules or functions using certain permutation operators, which are transformation operators (CEN operators). TEPET permutations and TEPET parity are CEN transformations, which can also be referred to as CEN actions or TEPET actions generally.

**Figure 33: CEN — A Model of the Absolute Vacuum or the Collective Entanglement
(The Whole of Existence)**

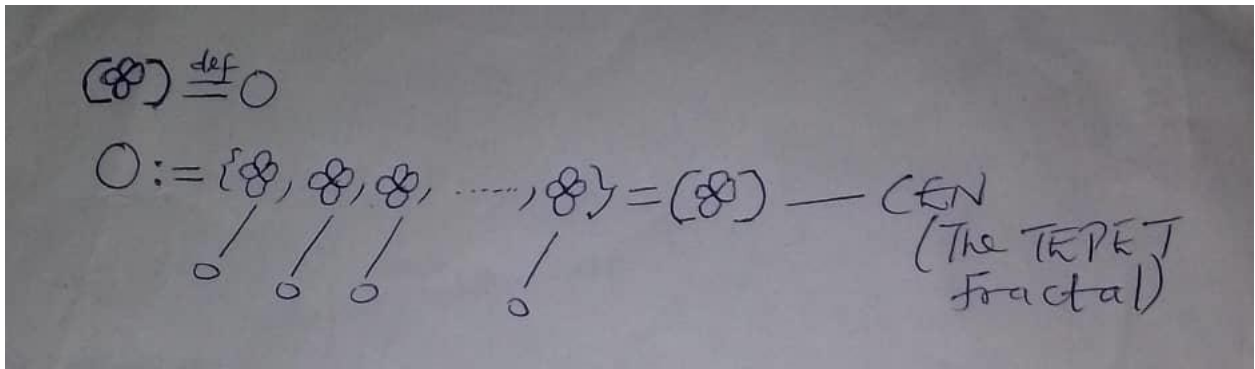


Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

All things (systems, events, processes, phenomena, etc.) in nature and the Multiverses generally are manifestations of TEPET permutations or CEN permutations: Each element of nature, which we perceive as real came about or was conceived in the inner universes using certain permutations of CEN or TEPET, i.e., the element was created by permuting or manipulating cen in certain ways following specific rules or functions. The same thing applies to all other elements of nature that exist in other realms or universes we do not perceive as real. For instance, the First Big Bang came about from one of such CEN permutations in another realm initiated by Fundamental Consciousness functioning as the generator of the TEPET action. This is explained further in the next subsection below. All fields, disciplines, courses, and all kinds of knowledge generally involve studying these CEN transformations (CEN permutations), which manifest as various aspects or elements of the matrix we perceive as reality in the earthly realm.

To understand CEN as the fundamental building block of the Whole of Existence (the Multiverses), consider this thought experiment: Imagine an observer in the TEPET frame of reference, with a super-infinite (☸) brain power and observation power. This frame, ☸, is defined as an entanglement of all possible frames of reference in all universes possible. Such an observer would see the Whole of Existence as a single entity, ☸, which is an entanglement of all possible universes, i.e., the Multiverses. Imagine further that the observer (acting as the Fundamental Consciousness explained previously) carried out a CEN permutation, which partitioned this single entity (the Multiverses), ☸, into various subsets or components, which are entanglements or matrices such as Forces (along with its conjugate/opposite, anti-Forces), Matter (along with its conjugate/opposite, Antimatter), Space-Time (along with its conjugate/opposite, anti-Space-Time), Mass (along with its conjugate/opposite, anti-Mass), Electromagnetic Radiations (along with its conjugate/opposite, anti-EM Radiations), and super-infinities (☸) of others. All these components can be called sub-TEPETs or sub-CENs. This partitioning operation is a CEN action or TEPET action. Also, this CEN permutation (partitioning operation) is described mathematically using a new algebra developed specifically for such CEN transformations in Consciousness Mechanics called Temic Algebra (see Figure 34). The components of Temic Algebra shown in the figure are the entanglements mentioned above, which reside within the larger TEPET set, the Collective Entanglement. Temic Algebra will be examined further in the next subsection.

Figure 34: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author’s Construct (2023)

The partitioning operation, whose generator is Fundamental Consciousness, is a set permutation (cen permutation or tepet permutation) that follows certain rules or function (cen function), which could be the bang function of the general form stated in the dark energy equation for the First Big Bang (equation 15), restated below:

$$F(E) = KE$$






Where $F(E)$, K , and E are all super-variables representing the following entanglements (elements of the TEPET set) respectively: the unified force (Forces), the Unified Constant, and the Vacuum Energy (overall dark energy of the Collective Entanglement). For the generator, Fundamental Consciousness, this partitioning operation is explained further in the subsection below:

4.7. The Big Bangs as Set Permutations: Inner and Outer TEPET Automorphisms (Inner and Outer Universes)

“What we observe is not nature in itself but nature exposed to our method of questioning” — Werner Heisenberg. This statement made by the famous German physicist is crucial when it comes to understanding how our Universe evolved via one of the Big Bangs that took place in the inner universes. Attempts are made in these papers to model this evolution mathematically. However, the Big Bangs are a highly complex phenomenon, especially due to the fact that their origin lies in the innermost universe, the Beginning (the zero state), where space-time does not exist. After the First Big Bang explosion initiated by the force of Fundamental Consciousness (or dark energy), which broke the coagulation called the Beginning or CEN (the primordial universe or innermost universe or the absolute vacuum), a chain of events and phenomena

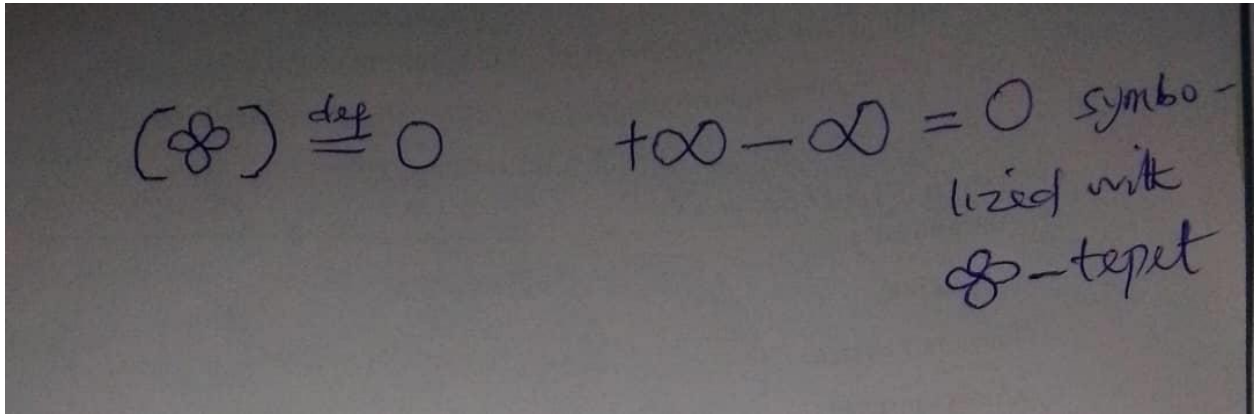
began as successive Big Bang explosions occurring infinitely in cycles to create more and more inner universes, which underwent automorphic transformations (projections/mappings) infinitely to form more and more outer universes, one of which is ours.

Thus, what is called the Big Bang in the mainstream science, especially the Standard Big Bang Model in Cosmology, is only one of other multiple (actually infinite) Big Bangs, which resulted from the First Big Bang in the innermost universe, which is another universe (other dimensions beyond the singularity). In the inner (unphysical) universes, space-time has no meaning, which means gravity does not exist in these realms. Hence, all events, processes, phenomena, and all things generally occur all at once everywhere. However, in the outer (physical) universes such as ours, all events, processes, phenomena, and all things generally occur sequentially due to the existence of space-time and gravity. The outer universes are automorphic transformations/simulations/mappings of the inner universes. This means, all events, processes, phenomena, and all things generally occurring in our own Universe and other outer universes have already occurred in the inner universes (this notion is explained further in the subsection below). This makes it highly complex and difficult to model the Big Bangs and the absolute vacuum mathematically and describe them exactly the way they are. Thus, there is a limit (Temic Limit) or uncertainty on what we can know about nature and the Universe as a whole, as expressed in that quote by Heisenberg and as explained in the Temic Uncertainty Principle (see Tijani, 2023c), which is a generalization of Heisenberg's Uncertainty Principle.

In this subsection, the Big Bang is described as set permutations, and Temic Algebra is used to model these permutations (Big Bangs) mathematically (see Figure 34). The annihilation operation defined using the Squaket operator (see Figure 35 below) and the TEPET Fractal (see Figure 33 above) can also be written alternatively using the mathematical structure called the Temic Algebra shown in Figure 34 above. This mathematical structure shows the elements of the TEPET set , which consists of entanglements in superposed infinities (or super-infinities in short). Superposed infinities, or super-infinities, means one infinity, ∞ , superposed or combined with another infinity, ∞ , to form the tepet symbol, . Think of this as multiples of something in infinity folds combined with multiples of the same thing in infinity folds in the reverse direction to form double infinity, . As shown in Figure 35, the net sum of each entanglement represented by the tepet symbol  in the TEPET set is zero, and the total sum of all entanglements (all the zeros) is also zero. This follows from the Base Axiom, **Axiom 0**, which says Nothing or the absolute vacuum or CEN (symbolized by TEPET, ) is really all


that exists, and anything else is interpretation of the brain. The annihilation operation or function in Figures 34 and 35 captures this axiom mathematically. Temic Algebra will be examined further in the chapter on Consciousness Statistics, an aspect of Consciousness Mechanics.


Figure 35: Temic Notation (Annihilation Function)



Source: Author's Construct (2023)

Earlier, Big Bang is defined, in the Temic context, as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. A closer look at this conception of the Big Bang in Consciousness Physics is essential, and Abstract Algebra will be used to do this, especially Symmetry and Group Theory. The Big Bang expansions can also be defined as set permutations, i.e., permutations of the TEPET or CEN as a set containing the entanglements or archetypes expressed in Temic Algebra (see Figure 34). In this approach, the Big Bangs are also called TEPET permutations or CEN permutations, all of which are set permutations. Again, Big Bang is used as a generic term here that applies to the evolution of all things in existence, not only the Universe or Physics as a discipline.


In the frozen state or zero state called the Beginning (the innermost universe), Fundamental Consciousness, an element of the sub-CEN, Forces, in the absolute vacuum represented by the TEPET set in Figure 33, was the generator that initiated the First Big Bang, a TEPET permutation, which was a CEN partition operation specifically. The initiation action by this entanglement (Fundamental Consciousness), the element , goes as follows: The squaket


operator acted on Fundamental Consciousness (see Figure 35) to bring about the annihilation operation that involved this entanglement and its conjugate (anti-Fundamental Consciousness) and led to a huge explosion in the coagulation called the Beginning. This explosion was the generator that set the First Big Bang in motion as a permutation of all other entanglements (elements of the TEPET), each of which exploded simultaneously via a similar annihilation operation involving that particular entanglement and its conjugate. For instance, the entanglement  for space-time underwent a similar annihilation via the annihilation function by the squaket operator to birth black holes and outer universes: This was an explosion that birthed the fabric of space-time forming black holes (tears in the fabric of space-time) at the edge of the outer universes, one of which is this Universe.

The partition operation by the generator, Fundamental Consciousness, obeys the general form of equation 15 as stated earlier:

$$\mathbf{F}_c(\mathbf{E}_c) = K_c E_c \text{ ----- (eq. 16)}$$

Where $\mathbf{F}_c(\mathbf{E}_c)$, K_c , and E_c are all super-variables representing the following entanglements (elements of the TEPET set) respectively: the Force of Fundamental Consciousness, the Unified Constant for this operation, and dark energy (energy of Fundamental Consciousness). This is the dark energy equation for the First Big Bang. Each of the elements (entanglements) of the TEPET set shown in the Temic Algebra (see Figure 34) possesses dark energy existing in super-infinite magnitude, and the overall vacuum energy is the net dark energy of all elements (matrices/entanglements) in the Collective Entanglement, CEN (the whole TEPET set). The term, “dark energy”, means energy existing but is not visible to the naked eye because it does not interact with the EM spectrum in regions we can perceive, so it appears as a Vacuum or Nothing to the naked eye. Equation 16 says the Force of Fundamental Consciousness is a tepet set acting on (being composed with) another tepet set \mathbf{E}_c to yield a gigantic explosion called the Big Bang, represented with the tepet product $K_c E_c$.

This annihilation operation resulted in a super-infinite () explosion, which initiated the chain reactions, the successive Big Bangs that created more and more universes. This CEN action (the partition operation by the generator, Fundamental Consciousness) has its own composition laws, just like other similar ones in the other Big Bangs also have theirs. All other entanglements in the Collective Entanglement also evolved via Big Bangs in a similar fashion like Fundamental Consciousness and have their own cen function describing their evolution, which obeys the general relationship shown in equations 15 and 16 above.

For the First Big Bang in the innermost universe (the Beginning), the generator of the set permutation was the Fundamental Consciousness, while for the successive Big Bangs that created more and more universes, one of which is ours, the First Big Bang was the generator for these permutations. The equation in Figure 34 can also be used to represent a set of all these CEN permutations called the Big Bangs, with each Big Bang symbolized as the entanglement, . This is obtained from Axiom 0 and Axiom 4 (the Temic Superposition Principle). It is cen that also underlies these Big Bangs as well. While the term, “First Big Bang”, is used in these papers to refer to the first of such massively explosive phenomenon in the Big Bang set that initiated the remaining Big Bangs, this is from the perspective or frame of reference of our own realm in this outer/physical Universe. In the inner (unphysical) universes, all the Big Bangs are occurring all at once infinitely in cycles.

Therefore, the Big Bang is the reordering (set permutation) of each of the elements (archetypes) of the absolute vacuum, the TEPET set, in a way that makes each element to be annihilated by its conjugate, which caused the Big Bangs (gigantic explosions), producing the Multiverses (all things in existence). In the inner universes, these Big Bangs and all events, processes, and phenomena generally take place all at once because of the absence of space-time and gravity there. So, these realms are chaotic as shown by the TEPET Fractal (see Figure 33) relative to the physical realms, the outer universes like ours, which are gravity-based realms due to the presence of space-time. In further research, the permutation functions for the set permutations of the Big Bangs will be developed based on the Fractal.

While in the Temic approaches, Fundamental Consciousness is taken as the generator of the First Big Bang in the innermost universe, such generators are infinite, and in other approaches or other universes, the generator of what they call the First Big Bang or any Big Bang there can be another element of the absolute vacuum, which might correspond to the energy range of what they see as Fundamental Consciousness in their own realm. These generators have a set of their own called the generating set. Since space-time has no meaning in inner universes or the base reality (the innermost universe), the issue of cause and effect; first and last; and the likes are meaningless in these dimensions as all things occur all at once in the realms, which lie deep within our brains.

4.7.1. Partition Function, Conjugation, Inner and Outer TEPET Automorphisms: Inner and Outer Universes


4.7.1.1. Inner and Outer Automorphisms

In Abstract Algebra, specifically Group Theory, an inner automorphism of a group G is defined as an automorphism of the form, $\phi(G) = h^{-1}gh$, with h representing a fixed element of G , known as the conjugating element, g is also in the group (Bir et al., 2018). The inner automorphisms are a subgroup, a subset of the automorphism group G , and from Lagrange theorem, which states that if G is a finite group, and $H \subset G$, where H is a subgroup of G , then $M \equiv |H|$ is a divisor of $N \equiv |G|$, the outer automorphism of G is the quotient of the automorphism group and subgroup of G . N and M are the orders of G and H respectively (Bir et al., 2019). In other words,

$$Out(G) = Aut(G) / Inn(G)$$



Where $Inn(G)$ is a normal subgroup of $Aut(G)$, which is the complete automorphism of G , while $Out(G)$, the outer automorphism, is the quotient group (Bujalance et al., 2006). Inner automorphisms are those automorphisms induced by conjugation, in which the automorphism is applied to the elements of the group, with the result being the same as conjugating the elements using a fixed element (known as the conjugating element) of the group (Bir et al., 2018). This means, inner automorphisms are those automorphisms that come from the symmetry within the group itself, while outer automorphisms, are automorphisms that are not induced by conjugation (Bir et al., 2019). Therefore, outer automorphisms come from the symmetry outside of the group, and such automorphisms cannot be obtained by conjugating the elements of the group using a fixed element of the group (Bujalance et al., 2006).

4.7.1.2. Inner and Outer TEPET Automorphisms

In the Big Bang evolutions of the entanglement, Space-Time (along with its conjugate/opposite, anti-Space-Time), , in the Beginning (the absolute vacuum), the annihilation operations of this entanglement (Space-Time along with its conjugate) as shown in Figure 35 created super-infinite explosions that brought about black holes (tears in space-time fabric), which birthed the space-time fabric. Our Universe and other infinite universes in existence emerged from this process as automorphic mappings or transformations of inner universes. The Big Bangs that birthed these Multiverses are still occurring now as we speak in


the inner universes, which are hidden realms or dimensions lying deep within the brain, where space-time does not have meaning.

A series of operations are involved in these Big Bang explosions, among which are annihilation, conjugation, partition, parity, and many others. All these are cen functions and are cen permutations generally. As discussed earlier, an inner universe is an unphysical universe, consisting of realms or worlds where space-time and gravity do not exist, and inner universes lie deep within our brain and the respective nervous system or information/signal processing system of other complex systems generally. On the other hand, an outer universe is a physical universe, consisting of realms, worlds, planets where space-time and gravity exist, and our Universe is a good example of outer universes. The notion of inner (unphysical) and outer (physical) universes are based on the symmetry inherent in the absolute vacuum or the Beginning as stated in Axiom 1.

As stated before, the outer universes are exact replicas (automorphisms) of the inner universes, and in any universe, on either side of the Temline or the Planck scale, are an infinite number of planets or physical worlds (see Figures 25 and 26). In the innermost Universe (the Beginning or the Collective Entanglement), Space-Time (along with its conjugate/opposite, anti-Space-Time), existed as a single matrix, , Nothing or tepet. Through various cen actions or tepet actions such as partition and conjugation operations stated earlier, this matrix evolved via Big Bangs infinitely in forward and reverse cycles, mapping the cen or tepet set  (for Space-Time and its opposite) back to itself (cen automorphism). Tepet automorphism is described mathematically below:

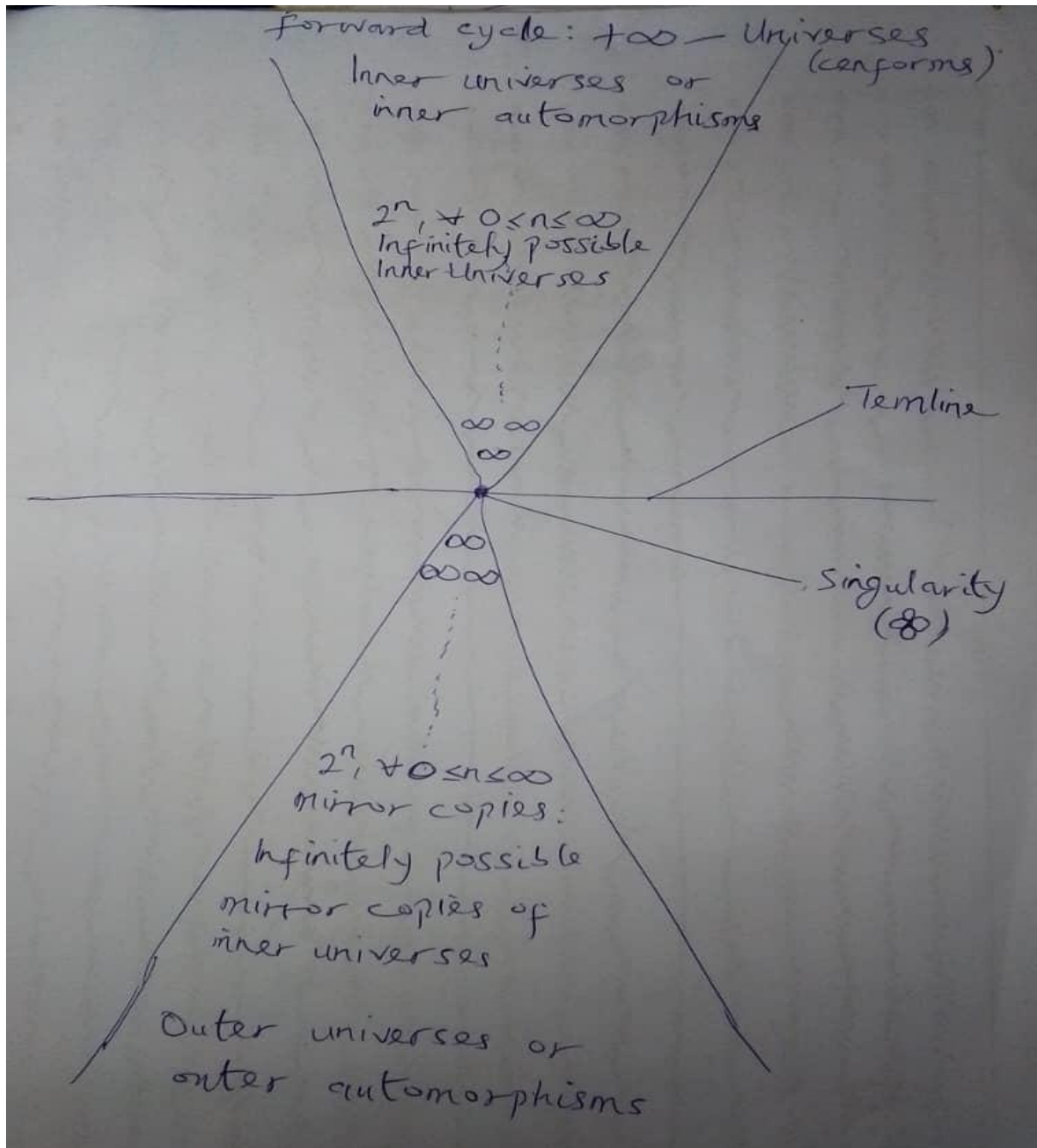
$$\text{Aut } \langle \text{tetra-gram} \rangle : \langle \text{tetra-gram} \rangle \rightarrow \langle \text{tetra-gram} \rangle \text{ ----- (eq. 17; correct numbering on Latex)}$$

$$\text{Out } \langle \text{tetra-gram} \rangle = \text{Aut } \langle \text{tetra-gram} \rangle / \text{Inn } \langle \text{tetra-gram} \rangle \text{ ----- eq 18}$$

Where Aut  symbolizes tepet automorphism or cen automorphism

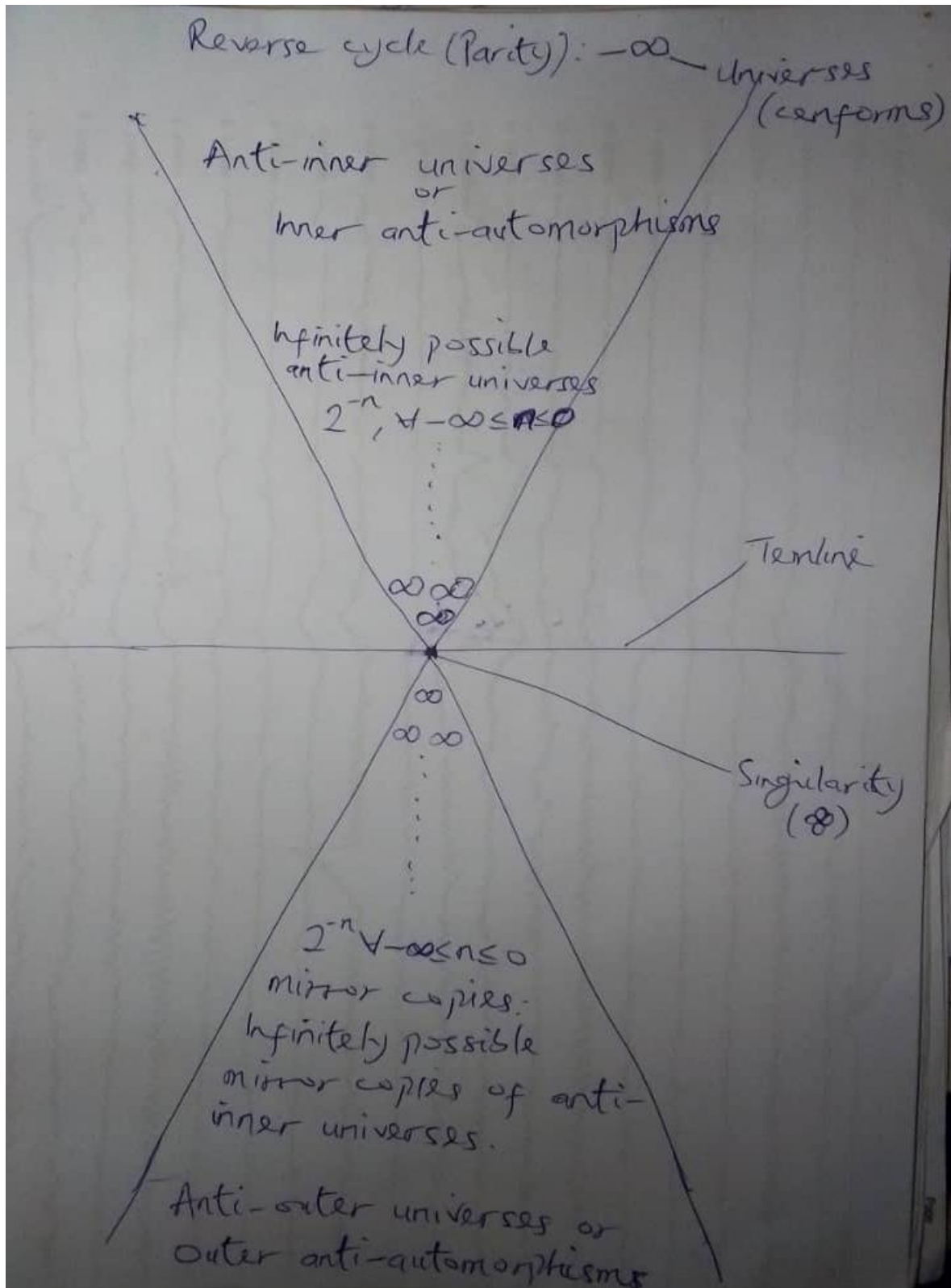
Equations 17 and 18 are called the Temic State Equations (TSE). TSE was formulated by applying Lagrange theorem to the notion of inner universes and outer universes in Consciousness Physics. The equation shows how the outer universes emerged from the inner universes via conjugation operations that involve ordering and reordering of tepets following certain composition laws in forward cycles and reverse cycles, as shown in the Temigrams below (see Figures 36 and 37).

Figure 36: The Inner Universes, Outer Universes, and Timeline (Forward Cycle)



Source: Author's Construct (2023)

Figure 37: The Inner Universes, Outer Universes, and Timeline (Reverse Cycle)




Source: Author's Construct (2023)

Conjugation, as used in this context, refers to the concept in Group Theory as a group action, defined as follows: Given a group G with $g, g' \in G$. The conjugation action of the element g is defined as:

$$b = g'ag, \text{ where } b \text{ is the conjugate of } a, \text{ with } a, b \in G$$

This conjugation operation is different from that done by the cen operator, ket, explained earlier, which transforms anything to its opposite or conjugate form. Everything we see as reality in the earthly realm and the Universe as whole, which is an outer universe, has CEN permutations or TEPET permutations underlying it and originated from realms in the inner universes. Space-time is not fundamental to the Universe, or any universe, and evolved via Big Bangs from the inner universes with elements of this entanglement called Space-Time (and its conjugate) in the TEPET set mapped or projected or simulated as automorphisms to yield the singularity and what we perceive as space-time in this (physical) Universe. All other aspects of reality evolved in a similar manner (via Big Bangs and automorphic projections/mappings) from the inner universes and were permuted (combined or composed) with other components of the absolute vacuum via cen permutations to bring about outer universes and everything we perceive as reality on Earth and this Universe as a whole. However, these things we see as reality are simply illusions as they are simply consciousness-energy or Nothing at their core (the base reality: the innermost Universe). But our brain gives cen all sorts of interpretation, which is the matrix we call reality. At either sides of the singularity and Temline are infinite inner universes and outer universes, one of which is ours.

In mainstream science, the Universe is treated as if it is all that exists. However, our Universe is just one out of the infinite universes in existence, with worlds or realms in the other universes appearing to us in the form of dreams, including lucid dreams. Also, the Universe (or any universe at all) is neither open nor closed, i.e., our Universe can be regarded as an aclopen set. Happenings and occurrences in these other universes influence those in our own Universe. At its core, any universe (including ours) is simply Nothing, an aclopen set (neither open nor closed). Temic Algebra shows the aclopen set, CEN or the Multiverses, and its elements, with each of the tepet symbol  representing a universe (along with its conjugate; i.e., inner and outer universes) (see Figure 34). Each of these elements, which are subsets or sub-CENs of CEN, is an aclopen set on its own. According to the Temic Uncertainty Principle (see the next chapter), to get a complete description of any universe, its symmetrical partner in the inner universe must be considered along with it. All the universes are connected or linked to one

another via tunnels (black holes) and other forces forming a giant web of universes known as CEN or the Collective Entanglement or the Multiverses (see Figures 28 and 24). In building the TOE, this notion is of key importance. It is common knowledge that dreams influence humans in different ways.

4.8. Conclusion

In the Temic context, Big Bang is seen differently than its conception in mainstream science. In Consciousness Physics based on the Temic approaches, Big Bang is defined as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. In this sense, Big Bang is a generic term that applies to all things in existence, not only the Universe or Physics as a discipline. In this section, the Temic Theory of Gravity has been examined. Also, CEN as the fundamental building of the Whole of Existence or the Multiverses has been explained. A new algebra called Temic Algebra was formulated to examine this and also look at Big Bangs as set permutations, specifically CEN or TEPET permutations. In the next chapter, some essential principles of Consciousness Mechanics are treated.


SECTION FIVE

5.0. Key Consciousness Mechanics Principles

5.1. Introduction

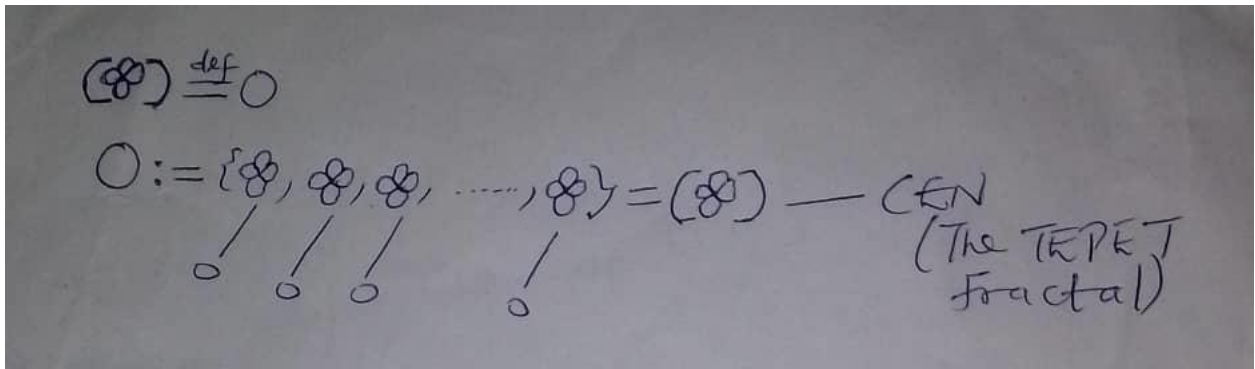
As stated earlier, Consciousness Mechanics is developed as the branch of mechanics that deals with the mathematical description of motions and interactions at the deepest level of reality — consciousness-energy or simply cen. At this level (cen), every possible measurement that can be made on a system is described by a cen operator, while a cen function is a rule, expression, or law defining a relationship between one variable and the other. So far, various cen functions have been formulated such as cen permutation, cen conjugation, cen parity, cen annihilation, cen partition, and collapse function. All these are cen transformations, which involve the use of cen operators or tepet operators, such as squaket, squa, and ket operators. In this section, different Consciousness Mechanics principles are examined involving these operations and the operators, and these principles underlie all the aspects of the matrix we call reality, which have their origin in the inner universes.

5.2. The Conwave Model: Measuring Conwaves, Extended Electromagnetic Spectrum, and Consciousness Wave Observatory

As shown in Temic Algebra (see Figure 38), the class of radiations called electromagnetic radiations in mainstream science exists as the entanglement called Electromagnetic Radiation together with its conjugate as tepet , an element of the TEPET set or the absolute vacuum, which is the Collective Entanglement. As explained earlier, Electromagnetic Radiation together with its conjugate underwent Big Bang explosions in the Beginning (the innermost Universe) via the annihilation operation and elements of this entanglement were mapped or projected in an automorphic manner via cen permutations to yield the EM spectrum in the earthly realm and the Universe as a whole.

However, EM radiations are infinite in number, and the currently known EM radiations in Physics are only a small fragment of the vast array of this class of radiations in this Universe and other universes. In this sub-section, all possible EM radiations are developed in an extended Electromagnetic Spectrum that is called the CEN Extended Electromagnetic Spectrum (CEES), which is constructed using the Temic Universal Laws and based on the principles of Consciousness Physics.

Figure 38: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author's Construct (2023)


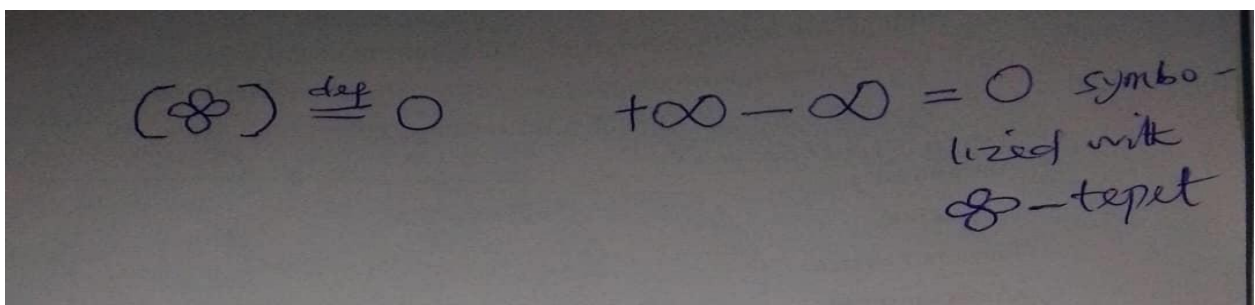
Like all things in nature (whether living or not), all known EM radiations today are only mirror copies or automorphic maps of cen in the inner universes. To explain the evolution of EM radiations, the Temigrams are used. It all started in the Beginning (the innermost Universe) or the zero state. The entanglement or sub-CEN called Fundamental Consciousness (along with its conjugate) underwent Big Bang explosions, which are annihilation operations, which initiated the First Big Bang in this primordial universe. This made all other elements of the TEPET set (the absolute vacuum) to explode in Big Bangs. All these happened (or are happening) all at once in that inner universe. Specifically, for the Big Bang evolution of Electromagnetic Radiation together with its conjugate as tepet , the squaket operator acted on this matrix (the entanglement, tepet) to bring about the annihilation operation, a cen action and a super-infinite explosion (i.e., a Big Bang) (see Figure 39).

Figure 39: Temic Notation (The Annihilation Operation)



Source: Author's Construct (2023)

Then, the squa and ket operators acted on the matrix to produce infinities of EM radiations in forward and reverse cycles (see Figure 40). In a series of cen conjugation and permutation

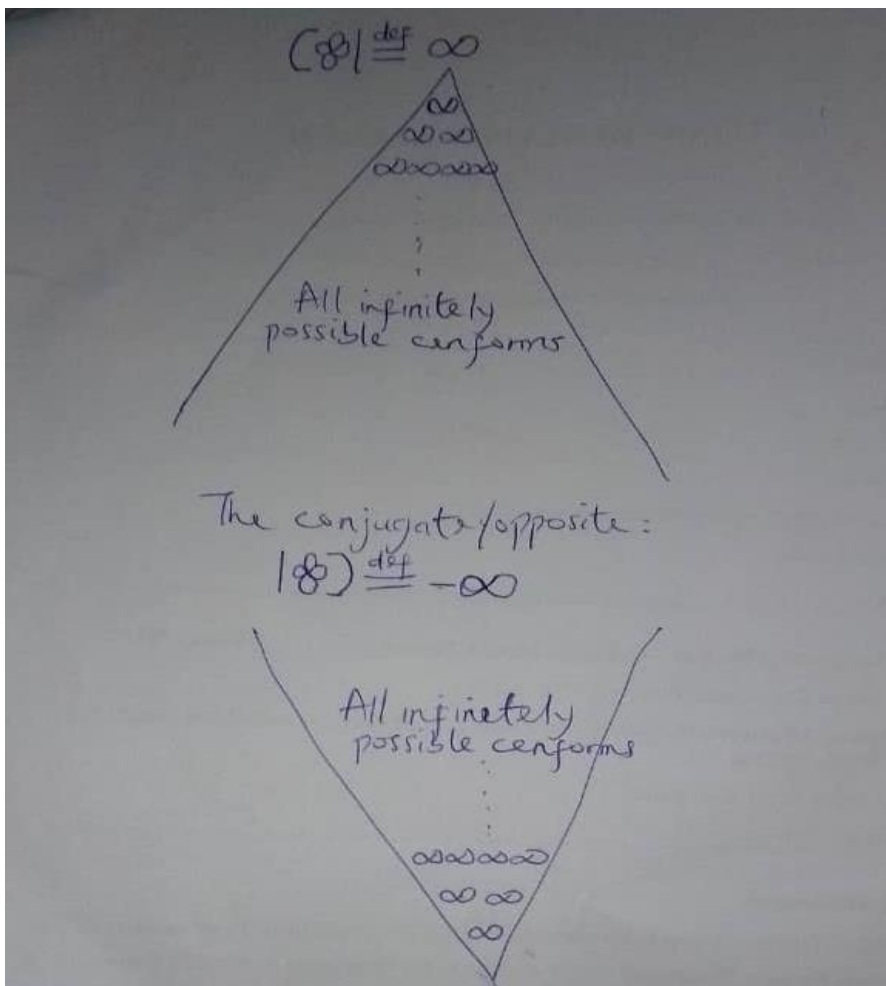
operations, these super-infinite radiations were mapped or projected as cen automorphisms from inner universes to yield the radiations in outer universes following the relations called TSE earlier:

$$\text{Aut } \text{☸} : \text{☸} \rightarrow \text{☸}$$

$$\text{Out } \text{☸} = \text{Aut } \text{☸} / \text{Inn } \text{☸}$$


Where Aut ☸ symbolizes tepet automorphism or cen automorphism

Figure 40: Temic Notation



Source: Author's Construct (2023)

In a physical universe like ours, which is an outer universe, the cen automorphisms, which are cen permutations, manifest as various types of EM radiations. Applying Axiom 4, which states that anything or any system exists infinitely in a superposition or combination of all possible conformations unless when observed/experienced and that forces its wave function to collapse to a

specific cenform (form of consciousness-energy) or specific censtate (state of consciousness-energy) that is measured/seen In inner universes, each specific radiation can be said to exist in all possible forms in the innermost universe as a single matrix or entanglement, , the sub-CEN called Electromagnetic Radiation (and its conjugate). Through the collapse operation/function, the radiation became the specific form of cen, which it is called today, be it radio waves, microwaves, or others.

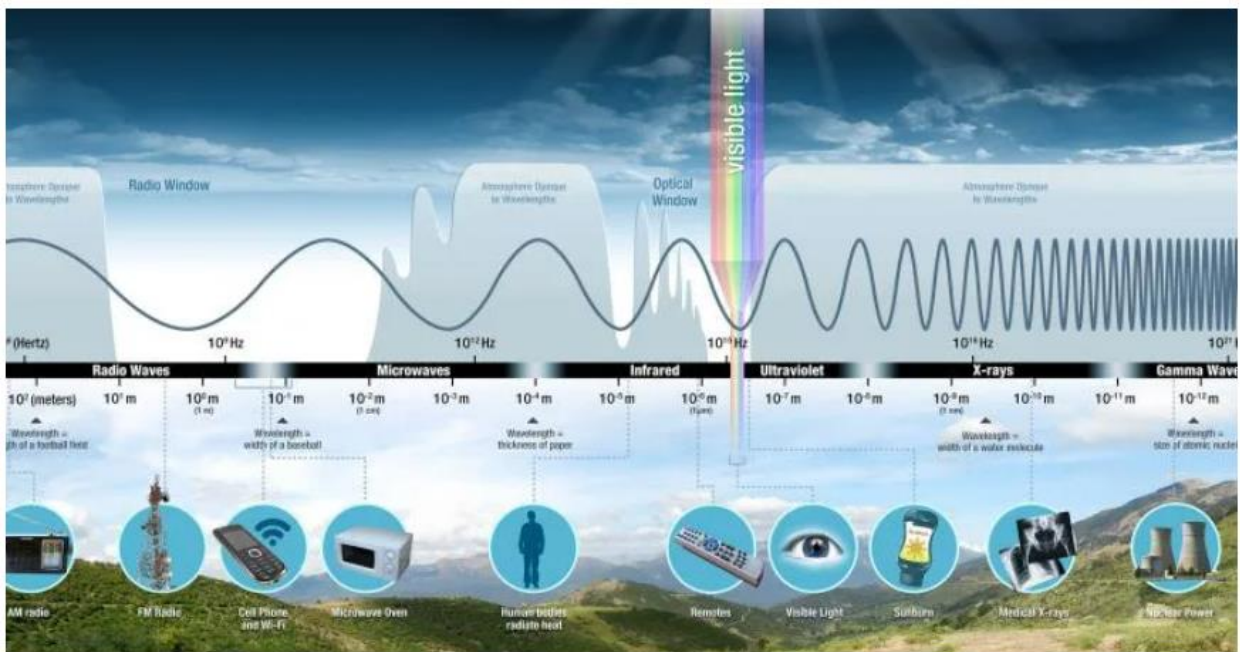
Using the Temigrams, a new EM spectrum is developed containing all possible forms of EM radiations, including radio, microwave, infra-red, visible, ultraviolet, x-rays, gamma, and cosmic waves, and conwaves proposed in the first phase of this project (see Tijani, 2023c), as well as other unknown radiations in this Universe and all other universes. The current electromagnetic spectrum consists of radio, microwave, infra-red, visible, ultraviolet, x-rays, gamma, and cosmic waves, which are represented with the acronym RMIVUXGCs (see Figures 41 and 42). In these papers, this spectrum is called the RMIVUXGCs EM spectrum, where each of the letter stands for the eight EM radiations mentioned above.

However, these are only a small fragment of the vast EM radiations that exist in this Universe and other universes. In Consciousness Physics, a more comprehensive spectrum is developed called the CEN Extended Electromagnetic Spectrum or CEES. Today, the current fields of Physics are all based on the RMIVUXGCs Electromagnetic Spectrum (the visible or observable Universe). In the mainstream science (Physics), via this spectrum, our Universe is regarded as the totality of all that exists. But our Universe is a mere mirror copy or projection of another universe in the hidden dimensions of nature (the zero dimensions: an inner universe), and there are infinite inner universes and infinite outer universes (mirror universes) in existence. Even what is seen as the Big Bang in the mainstream science is just one out of infinities of Big Bangs that birthed and keep birthing more and more universes. The Big Bang in the mainstream science is not even the First Big Bang in existence and is not also the origin of our Universe.

In Consciousness Physics, the evolution of this Universe is traced to its very source: the innermost Universe (Nothing or the Beginning or the Base Reality), which exists beyond the very edge of our own Universe at the other side of the singularity. This emerging field of Theoretical Physics covers the observable Universe, the unobservable Universe, and all other universes in existence. Consciousness Physics studies the Multiverses as a whole unifying all fields of Physics together as a single framework or theory and broadening the scope of these

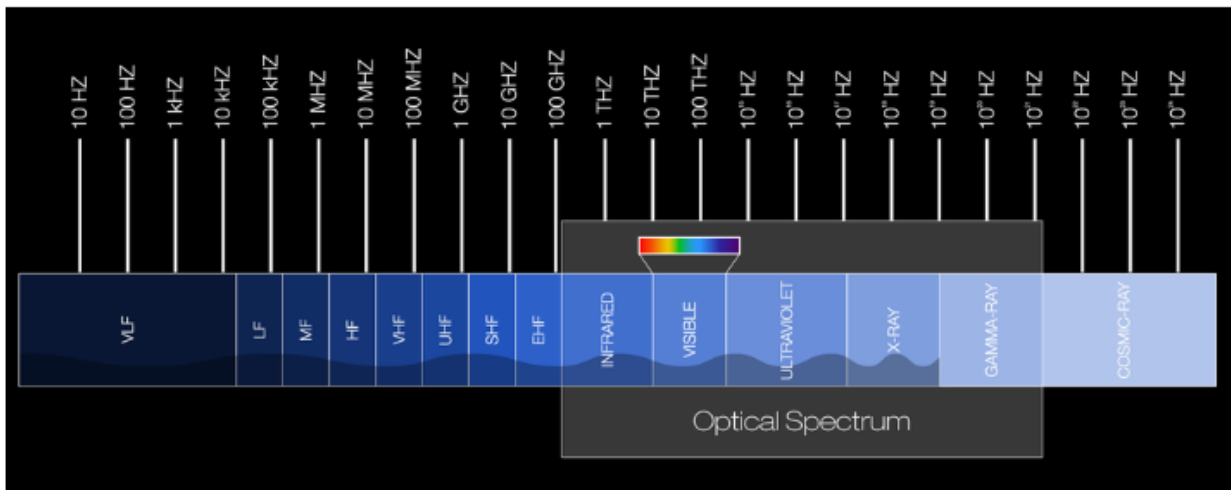
fields of Physics. Thus, CEES is developed to address the various limitations and shortcomings of the current EM spectrum, which fails to account for many key elements of nature and the Universe as a whole (see Figures 43 and 44). With CEES, scientists can gain a deeper and more comprehensive view of reality. A whole chapter called CEN Spectrometry and Spectroscopy is dedicated to the treatment of CEES because it is highly important in all areas of life for us, humans, and the planet as a whole.

Figure 41: The Current Electromagnetic Spectrum



Source: National Aeronautics and Space Administration (NASA, 2010)

Figure 42: Current Electromagnetic Spectrum



Source: Manning (2021)

The Temigrams are applied to develop CEES in the below figures showing how the entanglement called Electromagnetic Radiation together with its conjugate underwent Big Bang explosions in the Beginning (the innermost Universe) (see Figures 43 and 44). This entanglement was dispersed in all directions via these explosions into the outer universes where they exist in different quanta of energy, represented as 0 to $+\infty$ for the forward cycle, and 0 to $-\infty$ for the reverse cycle. The current EM spectrum (RMIVUXGCs) is only a small fragment of these infinities of quanta of energies of EM radiations. Different universes have their own cen distributions and cen permutations, which correspond to the waves they see as electromagnetic in nature in those universes.

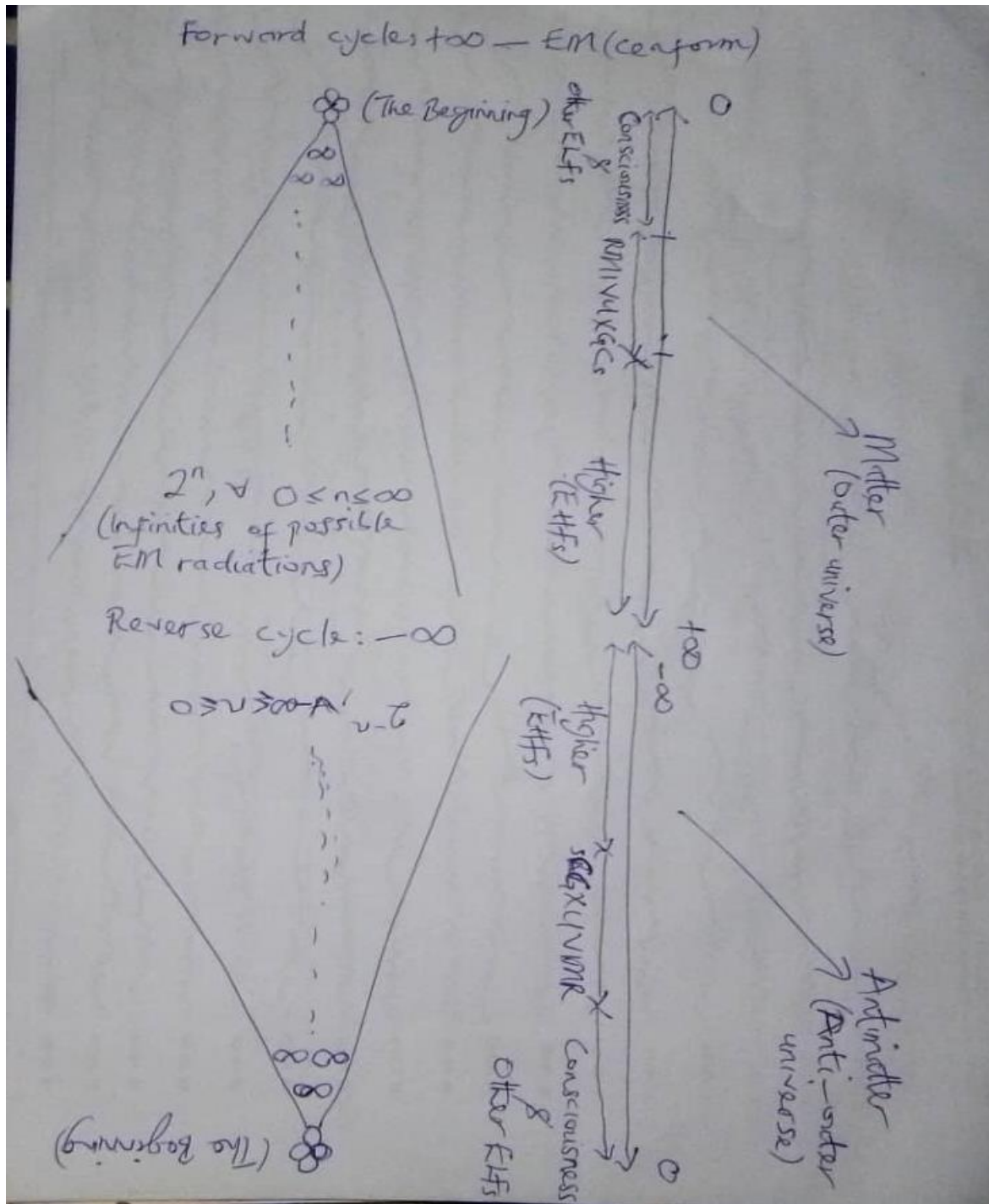
In our own Universe, which is an outer (physical) universe and automorphic projection or map of an inner (unphysical) universe, the forward cycle, shown in the Temigram (see Figure 43), is the applicable one. In CEES for this cycle, different energy distributions, or more specifically cen distributions, can be seen. Starting from the known EM spectrum, the RMIVUXGCs spectrum of EM radiations is the region that normal matter interacts with; in segments beyond this spectrum are EM radiations that we cannot perceive as humans, and our instruments cannot also detect as of now. Such EM radiations include consciousness waves or conwaves and other EM waves of extremely low frequencies (ELFs). This is the region which dark matter (non-baryonic matter) interacts with, and another similar region for dark matter interaction lies in the extremely high frequencies (EHFs) segment beyond cosmic rays as shown in Figures 43 and 44 below.

In addition, the reverse cycle applies to outer universes commonly called alternate worlds or realms. In these universes, the laws of nature and all things occur in an opposite or reverse manner compared with an outer universe like our Universe. Again starting from the known EM spectrum, the RMIVUXGCs spectrum of EM radiations, which is the region that normal matter interacts with in our Universe, becomes reversed or inverted in the alternate universes or anti-outer universes (see Figures 43 and 44). Thus, the RMIVUXGCs spectrum becomes sCGXUVIMR, like everything else in these realms. Normal anti-matter interacts with this sCGXUVIMR spectrum in the alternate universes (the anti-outer universes).

For instance, while complex systems such as humans walk in a forward manner in the earthly realm, in an alternate realm (anti-Earth), anti-humans walk in a backward manner. While we jump up in the earthly realm, anti-humans jump down in the alternate realm, anti-Earth. Also, while (the arrow of) time flows normally in a forward manner in the earthly realm, it flows backward in the alternate realm, anti-Earth. Everything occurs in an inverted or opposite manner there compared with the earthly realm. The evolution of these alternate universes (anti-universes) via Big Bangs in the innermost Universe lies at the heart of resolving the matter-antimatter asymmetry problem in Physics. This will be examined in detail later in this chapter. Everything in the anti-outer universes has an opposite or inverted nature compared with outer universes, one of which is our own Universe. In the alternate universes, matter becomes anti-matter; humans in the earthly realm breathe in oxygen and breathe out carbon dioxide, but anti-humans in an alternate realm (anti-Earth) breathe in carbon dioxide and breathe out oxygen.

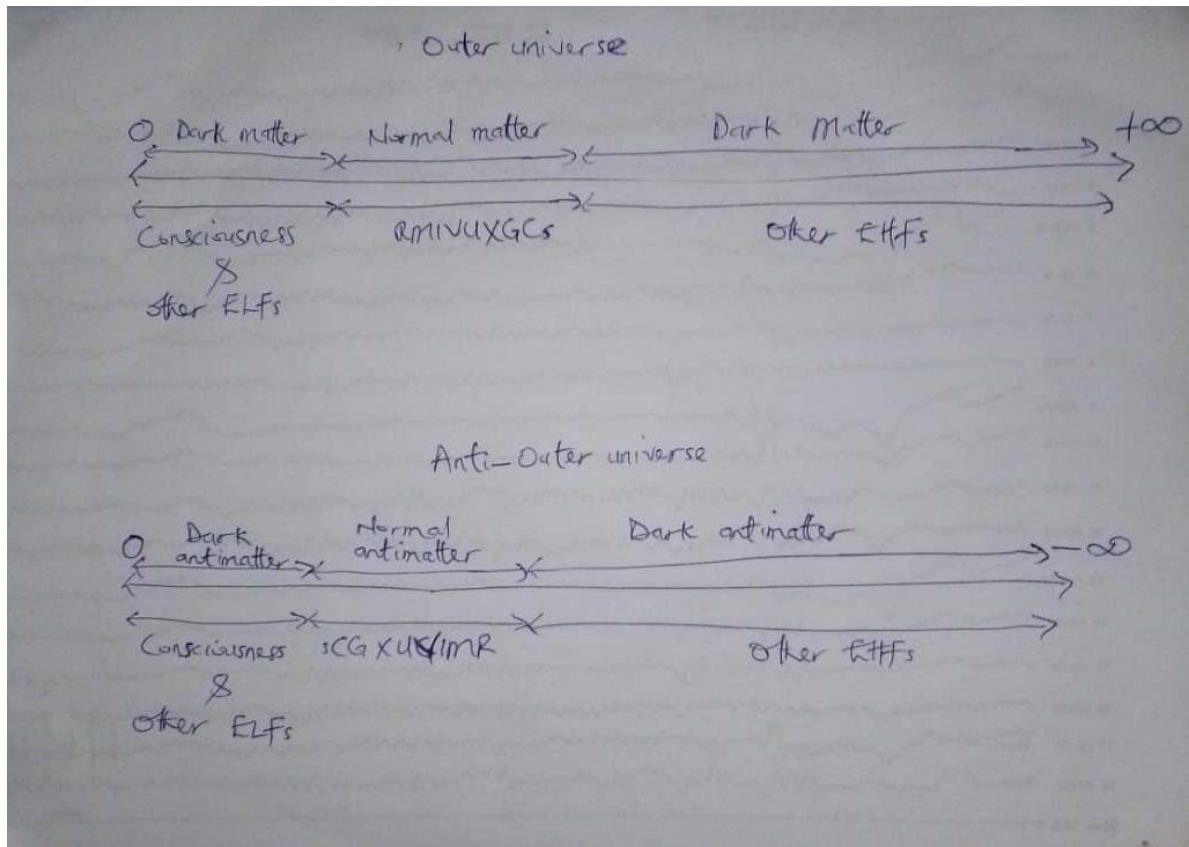
In the alternate universes are entities (anti-matter and the likes) called spirits, ghosts, aliens, and the likes in the spiritual or cultural context in the earthly realm. These entities actually exist and influence happenings in our own realm in various ways, but they are cenforms or complex systems whose conwaves vibrate at frequencies outside the bandwidth of Gaia or earthly frequencies or heartbeats. These alternate universes are worlds or realms of the dead (there are other worlds of the dead apart from these as well, which will be examined toward the end of these papers). In the consciousness region and lower (ELFs) and higher (EHFs) are the regions which dark antimatter interact with in the anti-outer universes. What is also called spirits, ghosts, aliens, and the likes in the spiritual or cultural context in the earthly realm are known as dark matter (non-baryonic matter) in the scientific context as these entities do not seem to interact with the currently known EM spectrum. This is the physics underlying aliens, ghosts, spirits, voodoo, and the likes and is explored deeply in the section on CEN Spectrometry and Spectroscopy.

Figure 43: The CEN Extended Electromagnetic Spectrum (CEES)



Source: Author's Construct (2023)

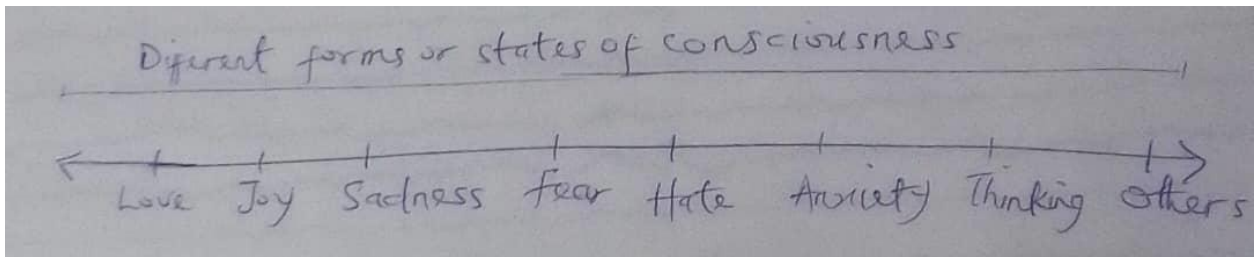
Figure 44: The CEN Extended Electromagnetic Spectrum



Source: Author's Construct (2023)

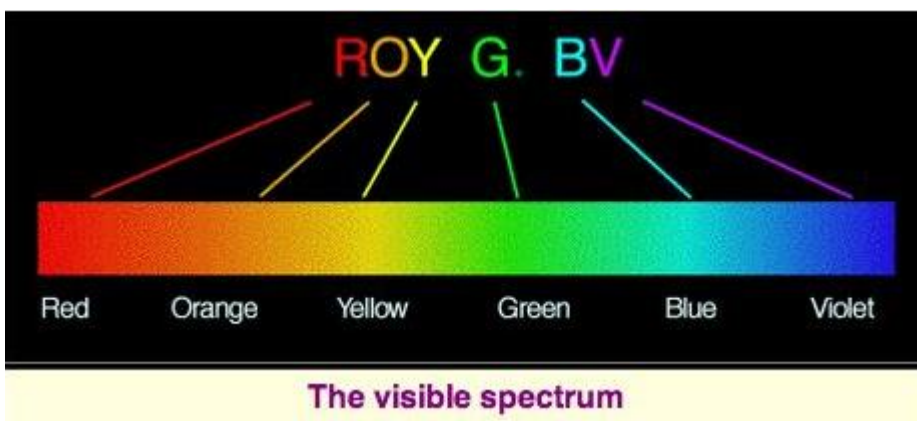
Figure 45 below shows the consciousness region of the CEN Extended Electromagnetic Spectrum. This illustration is similar to examining the visible region of the RMIVUXGCs spectrum of EM radiations, consisting of visible (white) light of colors red, orange, yellow, green, blue, indigo, and violet arranged in the order of increasing frequencies (see Figure 46). However, the consciousness region of the CEN Extended Electromagnetic Spectrum is much more complicated than this as the different states or forms of consciousness can occupy any of the energy segments identified in Figure 45 below. These segments are the different forms of conwaves, which include emotion waves such as fear, love, hate, joy, sadness; wish waves; thought waves and idea waves; and others. For humans, all these are brain waves emitted by the brain. To understand conwaves better and detect them, the Consciousness Wave Observatory, consciousness telescope, and consciousness detector/sensor are crucial (see Tijani, 2023c).

Figure 45: The Consciousness Region of the CEN Extended Electromagnetic Spectrum



Source: Author's Construct (2023)

Figure 46: The Visible Region of the Electromagnetic Spectrum




Source: University of Tennessee (nd)

5.3. The Temic Uncertainty Principle: A Generalization of Heisenberg's Uncertainty Principle

In the first phase of this project, the Temic Uncertainty Principle was developed, which states that since all things in the Universe are connected or entangled by consciousness at a fundamental level as a single matrix, the absolute vacuum, there is always a limit (known as Temic Limit/TL) to what we can know about any particle or physical system in nature when measured in isolation unless we can get a complete picture if we know all the forces, particles, laws, and principles in existence guiding natural phenomena, events, and processes in the Universe and measure the whole matrix (absolute vacuum) as a collective (Tijani, 2023c). By measuring the whole matrix in totality, we can get the complete picture of the properties of that system or state. In other words, whenever we make a measurement of any particle, physical system or force in any universe, there is always a limit (TL) to what we can know and observe about that system in isolation unless we can get all information about that system perhaps from the Theory of Everything (TOE) and/or by measuring the whole matrix (the absolute vacuum),

and if such a comprehensive framework (TOE) is not available, there is always an uncertainty that must be taken into account in any measurement due to the unknown forces, particles, laws, principles, and all other unknowns of nature.

This uncertainty can be seen as a manifestation of our ignorance of certain unknown principles, concepts, laws, and all other unknowns of nature. Thus, we can't really know the full details with exactness about any system or particle, or anything at all, in isolation since all things are connected or entangled at a fundamental level by consciousness unless we know the Theory of Everything and can measure the whole matrix (absolute vacuum) in totality. The limits or uncertainties in all measurements in this Universe, or any Universe at all, are a manifestation of the Temic Limit. In other words, the Temic Limit is an entanglement or summation or superposition of all the limits (infinite in number) in any act of taking measurement or record done in all possible forms in all universes in existence, and this entanglement is a sub-CEN represented by tepet  in the Collective Entanglement (the absolute vacuum), as depicted in Temic Algebra (see Figure 38). TL is defined mathematically as follows in what is called the Temic Uncertainty Relations:

$$L_T := \text{tepet} \text{ ----- (eq. 19)}$$


$$L_T = \sum_{-\infty}^{\infty} l_i, \forall i \text{ lying within } -\infty \leq i \leq \infty \text{ ----- (eq. 20)}$$

Where L_T and l_i are the Temic Limit entanglement and any other form/kind of limit in universes respectively.

Everything we perceive as real in the earthly realm has a symmetrical partner in the inner universe from which that thing (whether living or non-living) evolved from as an automorphic projection or mapping. The same thing applies to the Universe and the Multiverses as a whole (the Whole of Existence). Therefore, when we perceive, observe, or measure any state, system, or particle in this realm, we cannot really know everything about it and get a full picture about it unless we can gain full knowledge of its symmetrical partner in the inner universe. This places a limit or uncertainty on any act of measurement or observation done in the earthly realm. Even if we know everything about this system or particle and its symmetrical partner at the other side (inner universe), without the TOE that shows the complete and exact knowledge of the absolute vacuum, the Collective Entanglement, which is all that exists, there is also a limit or uncertainty on any act of measurement or observation done in the earthly realm.

The Temic Uncertainty Principle is a generalization of Heisenberg's uncertainty principle in Quantum Mechanics. Therefore, Heisenberg's uncertainty principle can be seen as a special case of the Temic Uncertainty Principle applying only to certain pairs of physical properties of a particle. Other cases of the Temic uncertainty principle can apply to quartets and higher multiples of conjugate variables, perhaps on other planets or universes. For more information on the Temic Uncertainty Principle, see Tijani (2023c).

5.3. The Temic Superposition Principle: A Generalized Version of the Superposition Principle

From Axiom 4 in the Temic Universal Laws, the Temic Superposition Principle states that anything or any system exists infinitely in a superposition or combination of all possible cenforms or censtates represented as tepet , unless when observed/experienced and that forces its wave function to collapse to a specific cenform (form of consciousness-energy) or specific censtate (state of consciousness-energy) that is measured/seen. This principle was developed based on the Base Axiom that states consciousness-energy (the absolute vacuum) is really all that exists, and the Temic principle of consciousness-energy conservation, also called the Temic principle of cen conservation, which states consciousness-energy (cen) can neither be created nor destroyed but can be converted or changed from one form to another. This principle of CEN conservation is a generalized version of the principle of conservation of energy (Tijani, 2023c).



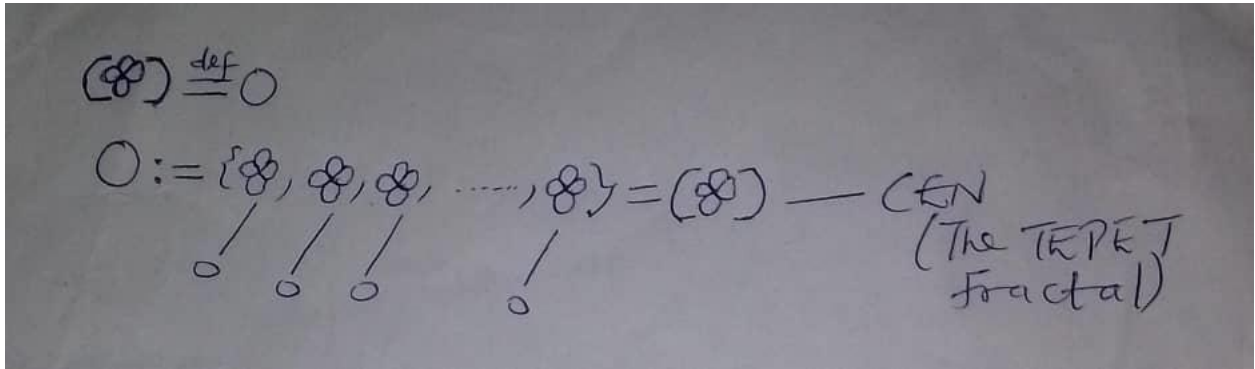
Temic Algebra provides the mathematical basis for the Temic Superposition Principle, showing different superpositions or entanglements of all possible cenforms or censtates as sub-CENs or sub-TEPETs, which are elements of the TEPET set , CEN or the Collective Entanglement or the absolute vacuum (Nothing) (see Figure 47). These entanglements in superposed infinities  undergo CEN permutations (Big Bangs, partitions, conjugations, parity, collapse, and other TEPET operations) in inner universes to produce outer universes infinitely in cycles, and one of these outer universes is our Universe. Different CEN operators are involved in these operations, which are TEPET actions or CEN transformations, such as squaket, squa, and ket operators.

Figure 47: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author’s Construct (2023)

5.4. The Temic Principle of Consciousness-Energy Conservation: A Generalized Version of the Principle of Conservation of Energy

This principle has been explained above. For more detailed information, see Tijani (2023; 2023c). The Temic Principle of CEN Conservation is based on Axiom 0 (the Base Axiom) that says CEN or Nothing is all that really exists, and Temic Algebra gives the mathematical basis of this principle.

5.5. The Temic Wave-Particle Duality: A Generalization of the Wave-Particle Duality of Matter

Temic wave-particle duality states that consciousness can appear as a wave (conwave) and a particle (photons), but not both simultaneously, especially when absorbed by a complex system. Thus, consciousness can appear as both a wave and matter/a state of matter, especially when absorbed by a complex system. Since consciousness-energy is all that exists, the Temic Wave-Particle Duality is a generalization of the Wave-Particle Duality of Matter. This principle is developed by applying wave-particle duality, a fundamental concept in Quantum Mechanics that states matter can sometimes appear as a wave and sometimes as a particle, but not both at the same time (Kyriakos, 2019).

5.6. Quantization of Conwaves

As explained earlier, at the base or most fundamental or deepest level is consciousness-energy or CEN. Applying the Eight Axioms (the Temic Universal Laws), the Temigram below illustrates the infinite layers/levels/hierarchies of reality showing the stages of evolution of

CEN via Big Bangs (see Figure 48). Each layer (or scale) of reality has distinct energy levels existing as an entanglement (a single matrix) at the deepest level, CEN, and in packets (quanta) at other levels, and to describe each level mathematically, different approaches (models, functions, operators, and the likes) are required.


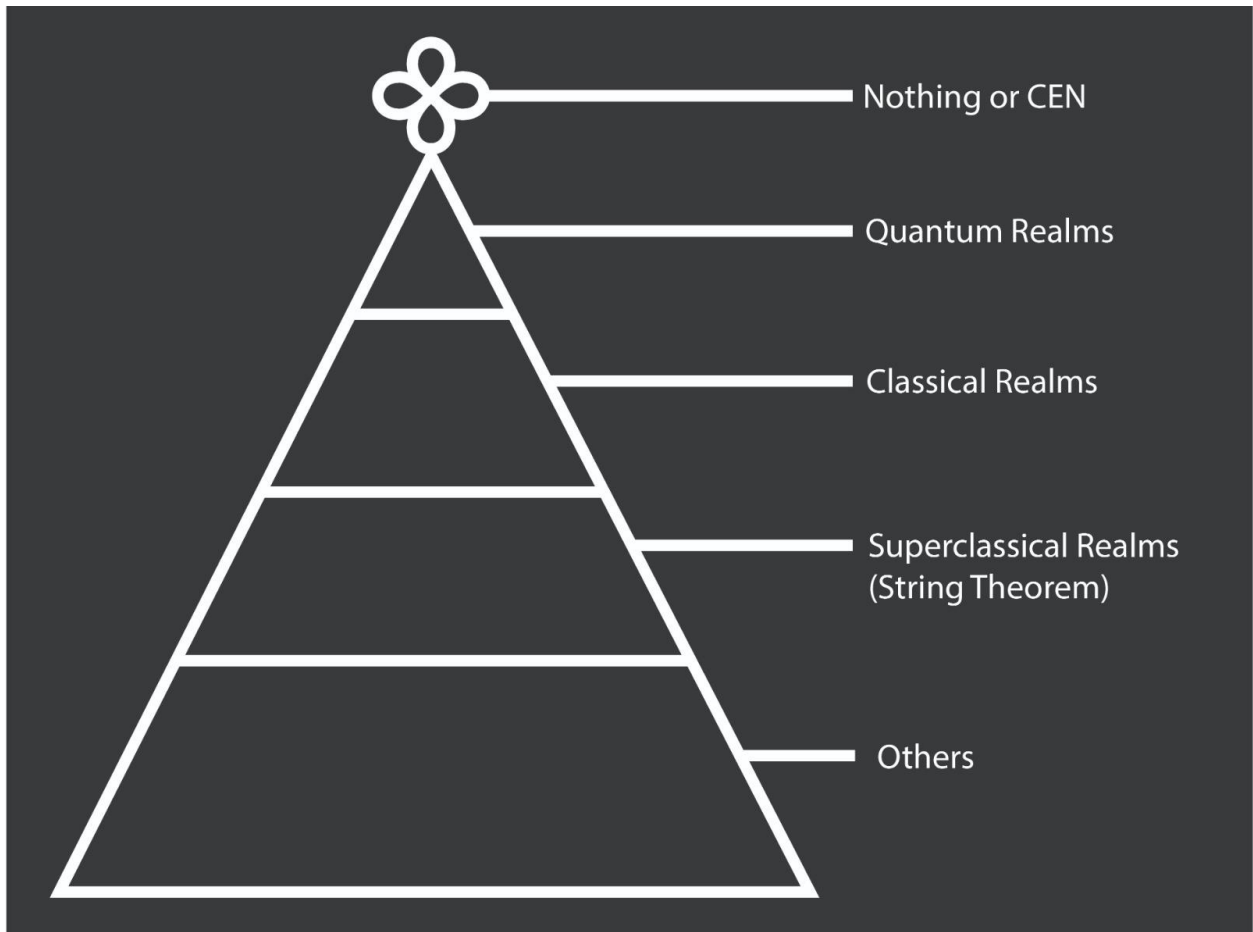
In outer universes, the energies possessed by conwaves, measured in tems (\AA), are quantized existing in discrete packets or quanta (see Tijani, 2023). Thus, the photons of conwaves, also called sentons (Sipfle, 2022), are quantized like all other bosons, as explained in Particle Physics by Peskin (2019). But in the innermost Universe or the Beginning, these energies are entangled as a single matrix, CEN or TEPET .

Figure 48: Reality is Multilayered — Infinite Number of Layers/Levels/Hierarchies



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

5.6.1. Resolving the Matter-Antimatter Asymmetry Problem

In Cosmology, the matter-antimatter asymmetry problem, also called the baryon asymmetry problem, is the observed imbalance in the type of matter (ordinary matter or normal matter) experienced in everyday life called baryonic matter and anti-baryonic matter in the observable Universe (The European Organization for Nuclear Research [CERN], 2019). The problem emerged from the fact the Big Bang, as it is conceived in the mainstream science, should have produced matter and antimatter in equal amounts (Sather, 2018).

As Consciousness Physics studies the evolution of the Universe from the very Beginning (CEN), which is the innermost universe, at the deepest and most fundamental level of reality (the Base Reality), a more comprehensive and holistic understanding of the Big Bang is achieved. With this understanding, various unsolved problems in Physics, such as unifying

General Relativity and Quantum Mechanics in what is called Quantum Gravity, resolving the matter-antimatter asymmetry problem, and many others can be solved.

In Consciousness Physics, the Big Bang as a general term for the expansion or explosion or disentangling of the absolute vacuum or the Collective Entanglement (a coagulation or all of existence) or the Beginning by Fundamental Consciousness, a fundamental force and one of the constituents of the absolute vacuum, dispersing the infinite constituents (archetypes/entanglements) of this vacuum infinitely in cycles in all directions. The Big Bang expansions has also been defined as set permutations, i.e., permutations of the TEPET or CEN as a set containing the entanglements or archetypes expressed in Temic Algebra (see Figure 34). In this approach, the Big Bangs are also called TEPET permutations or CEN permutations, all of which are set permutations.

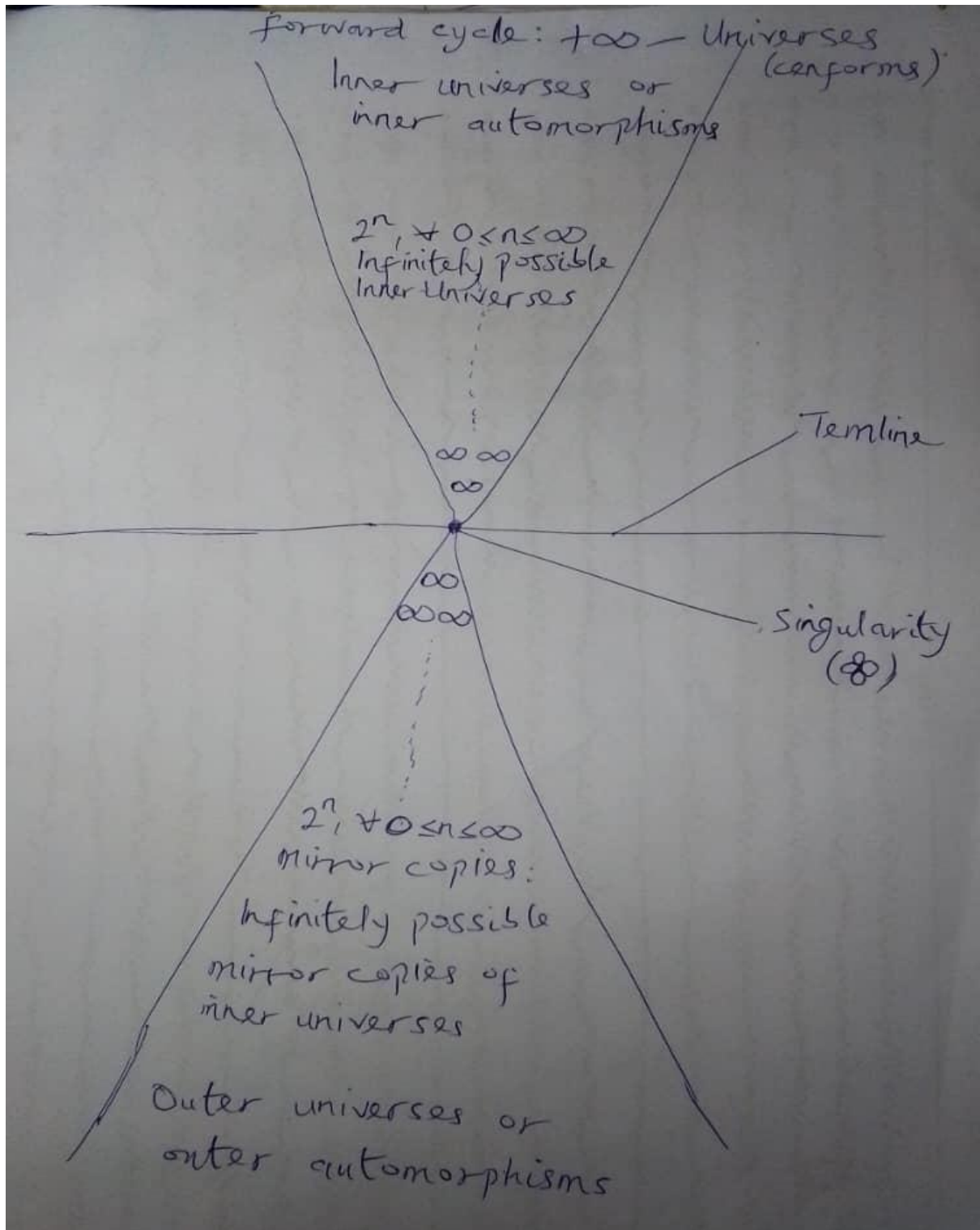
Like all things in nature (whether living or not), our Universe, which is an outer (physical) universe) is a mirror copy or automorphic map of an inner universe which came about via Big Bang explosions initiated by the generator, Fundamental Consciousness. In the forward cycle of these infinitely gigantic explosions, a series of CEN permutations (conjugations and others) made Matter (as part of the Matter-Antimatter entanglement) evolve in an automorphic manner from the innermost Universe into what is called ordinary or normal matter (baryonic matter) in our own Universe and other infinite universes in existence as shown in the CEN Extended EM spectrum (see Figures 43, 44, and 49). This is the key reason why ordinary matter (the everyday matter we are familiar with) dominates our own Universe, a physical Universe.

To achieve CEN parity, these infinitely gigantic explosions also took place in the reverse cycle, where a series of CEN permutations (conjugations and others) made Antimatter (the symmetrical partner of Matter in the Matter-Antimatter entanglement in the absolute vacuum) evolve in an automorphic manner from the innermost Universe into what is called ordinary or normal antimatter in an anti-outer universe (an alternate universe compared with our own Universe) and other infinite anti-outer universes in existence as shown in the CEN Extended EM spectrum (see Figures 43, 44, and 50). In both kinds of mirror universes (the outer universe and the anti-outer universe), vast types of matter also exist, which interact with other regions of CEES called, and these are called dark matter (non-baryonic matter) and dark anti-matter (anti-non-baryonic matter) respectively, as shown in Figures 43 and 44.

However, the mirror anti-outer universe does not mirror own Universe but another anti-universe called an anti-inner universe existing in the hidden realms lying deep within our brain,

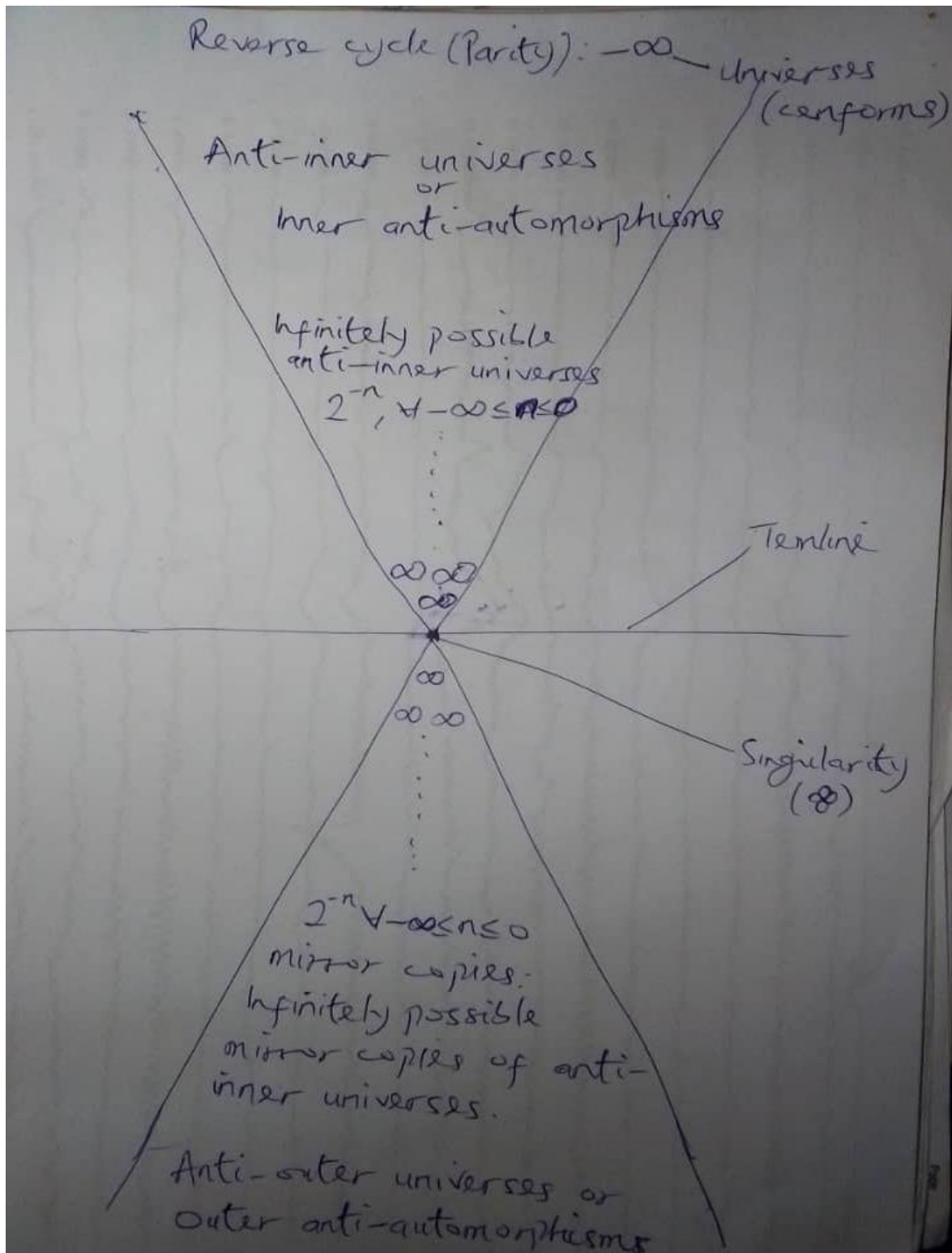
just like our own Universe also mirrors an inner universe in the hidden realms in an automorphic manner. As stated earlier, these anti-outer universes are alternate universes or realms vibrating at frequencies outside the bandwidth of the frequencies of the Earth and our own Universe. The alternate realms exist at all times right around us, but they are often tuned out of our awareness or perception for the majority of humans except during phenomena such as sleep paralysis and the likes, when a person's experiences altered state of consciousness, allowing them to perceive these realms due to coherence achieved between their conwaves (brain waves) and the realms. This section will be developed further in later research effort.

Figure 49: The Inner Universes, Outer Universes, and Timeline (Forward Cycle)



Source: Author's Construct (2023)

Figure 50: The Inner Universes, Outer Universes, and Timeline (Reverse Cycle)



Source: Author's Construct (2023)



5.7. The Temic Principle of Coherence

If entanglement is a fundamental property of the Universe, coherence is a fundamental property of waves in the Universe, and the wave-particle duality holds true for all forms of matter in the Universe, then coherence must also be a fundamental property of the Universe. This is the Temic Principle of Coherence.

5.8. The Temic Principle of Conscious Perception

For complex systems such as animals, any form of perception or what can be called real or objective by a conscious object occurs based on the interactions and/or exchanges of photons between the nervous system or the respective information processing and/or signal transmission system and the other object(s), whether conscious or not, that the conscious object is interacting with. In other words, what we call perception, awareness, experience is a product of interactions and/or exchange of photons of conwaves and other photons between two or more complex systems or objects. In this context, complex systems are regarded as animals exhibiting consciousness (see Tijani, 2023). Thus, photons or EM radiations play a central role in how we perceive the world and reality. *With photons, all things are possible.* This is the Temic principle of conscious perception.

5.9. Temic Relativistic Consciousness Principle: Reality Is Both Local and Non-Local

Whether reality appears local or non-local depends on the observer's frame of reference. Imagine an observer whose frame of reference is the Collective Entanglement, the absolute vacuum , and the observer possesses Fundamental Consciousness of infinite energy and has infinite brain power. Such an observer will see everything at once and consider all things, regardless of their distances apart, as interconnected as a huge matrix . For such an observer, reality is non-local. However, for an observer such as a complex system like humans, our perception of reality is very narrow because of the many limitations of our brains and sense organs. Hence, we perceive things happening sequentially and regard many of them as disconnected from one another. Thus, reality appears local to us. Whether reality appears local or non-local is relative and depends on the observer's frame of reference. Generally, whether certain elements of nature appear discrete (as in Quantum Physics) or continuous (as in Classical Physics), deterministic or probabilistic/stochastic/random, natural or unnatural/supernatural, local or non-local, physical or non-physical/unphysical (or spiritual in the religious context), is relative and depends on the observer's frame of reference, based on

the level or scale at which the observer can perceive nature. The scale at which we, or our instruments, observe anything in the Universe, or any universe, depends on the level of energy we are able to observe. This is the Temic Relativity Principle, which is also called the Temic Relativistic Consciousness Principle. For more explanation on this, see Tijani (2023c) under the “Exotic Applications of Consciousness Physics” section.

As established by Einstein, time is relative, not absolute: It varies from one region or location to the other (see Ferrari et al., 2020). Consciousness Physics develops this notion further by stating that time varies from one location, region, planet, or universe to the other. However, in some universes (the inner universes specifically), time does not exist at all. Therefore, time is essentially not an absolute quantity. It is a mental construct and an emergent phenomenon, not fundamental to the universes.

Furthermore, it is also crucial to examine the relativity of time in relation to consciousness: The perception of time varies across complex systems, such as humans, i.e., everyone has their own time. For instance, humans in various cultures of the world use various calendar systems, which differ in the calculation of time showing time varies even among members of the same species of complex systems such as humans. On the Gregorian calendar used mainly in the West and many other parts of the world, today’s date is 18th December 2023; on the Hijrah calendar used mainly in Arab nations, today’s date is 5 Jumada II 1445 AH (5/6/1445); on the Kójódá calendar of the Yoruba people of South-western Nigeria, the date is Ójọ́ ájé, Óṣu Òpẹ, year 10065.

These systems show the perception (measurement) of time to the humans (complex systems) that designed such calendars or the key figures (personalities) the calendars was developed with the figures used as a reference point (frame of reference). For instance, if you create a calendar system using your date of birth as the starting point (the first year) of the calendar, it can be adopted as the system of time measurement in your culture, showing how you and your people perceive time in a way unique to you and different from such systems in other places. Thus, the perception of time varies in relation to consciousness. Simply put, the photons of consciousness waves affect the flow of time as perceived by an observer. Time varies from one living system or complex system (plants; animals; planets; stars; universes) to the other.

5.10. Consciousness Lensing

In this study, it is postulated that all planetary bodies in our Universe have mass consciousnesses, and the same thing also applies to other outer universes as well. For instance, the mass consciousness of planet Earth was the ancestor of hominids and hominins called “Áye” in Yorùbá parlance or Gaia in Greek parlance, who evolved with the Earth via Big Bang from star dust through astrobiogenesis, which is the process where life evolves on a planet from the contents of a dying star (see Tijani, 2023b). In ancient times, this woman was worshipped as a goddess in various cultures in the olden days under different names such as Áye (Yorùbá), Gaia (Greek), Umhlaba (Zulu), and many others. Gaia is the consciousness or soul of this planet and had existed on Earth about 4.54 billion years ago together with a few other humans (called aliens/gods in different cultures of the world), who visited the planet from space in that ancient period. Actually, human life is much older than as it is thought in the mainstream science. Gaia is the summation of the consciousnesses of all living systems on Earth.

However, many of the mass consciousnesses for planetary bodies do not appear physically at any given period in time unlike Gaia had done on planet Earth in the ancient eras. They mostly live in inner universes. Mathematically, a mass consciousness of a planet is a cen permutation that involves an automorphic mapping or projection of tepet from the inner universe to the outer universe following certain rules or composition laws. Due to the peculiar nature of this tepet automorphic projection or simulation, such a mass consciousness has special abilities as a human: The happenings and events on such a planetary body (whether good or bad) would affect the mass consciousness psychologically and physiologically whenever she was present on the planet. Also, it is possible to view events and happenings on a specific planet from another planet by looking through the eyes of its mass consciousness, which is the overall consciousness of that specific planet. This notion is called consciousness lensing.

For instance, in principle, it is possible to view events and happenings on planet Earth from another planet by looking through the eyes of Gaia; here, Gaia serves as a consciousness lens allowing observation of this planet to be done from another planet. Consciousness lensing is similar in a way to the concept of gravitational lensing in Astrophysics, which is one of the predictions of Einstein’s General Theory of Relativity. According to the European Space Agency (ESA, 2023), “Gravitational lensing occurs when a massive celestial body — such as a galaxy cluster — causes a sufficient curvature of spacetime for the path of light around it to be visibly bent, as if by a lens. The body causing the light to curve is accordingly called a

gravitational lens”. Consciousness lensing can be applied in the development of consciousness telescopes, such as the Eyes of Gaia Consciousness Telescope (EGCT). This is examined further in the “Applications” section of these paper.

5.11. The Temic Consciousness Absorption Principle

All the living systems on planet Earth and on all other planets with life evolved from the innermost Universe (the Beginning) via Big Bangs initiated by the generator, Fundamental Consciousness. The different forms of individual consciousness possessed by various complex systems, such as humans, other animals, plants, micro-organisms, planets, stars, galaxies, and others, as discussed in an earlier paper on Consciousness Physics (see Tijani, 2023b) in the outer universes (such as our own Universe) came about via the dispersion of Fundamental Consciousness, which travels in waves, through the Big Bangs into the outer universes (Tijani, 2023). These Big Bang explosions in the inner universes scattered photons of consciousness waves in all outer universes, which get absorbed by matter that has attained sufficient level of complexity to support life in these outer universes.

Consciousness absorption is a type of photonic absorption of conwaves and occurs when matter traps consciousness (Tijani, 2023). Based on the type of matter or host that absorbs fundamental consciousness from which individual consciousness emerges in the host, the emergent individual consciousness can belong to different categories, such as animal consciousness (including human consciousness), plant consciousness, microbial consciousness, planetary consciousness, stellar consciousness, universal consciousness, and others (see Tijani, 2023b).

In the evolution of a living system on a planet, consciousness absorption plays a vital role, along with other processes such as astrobiogenesis, biosynthesis, and others. All these are permutations in the inner universes. During astrobiogenesis, where parts of the contents of a dying star make their way into planet Earth and diffuse as cosmic rays or similar extraterrestrial rays into a would-be parent of an organism, the photons of conwaves from the star will get absorbed by this parent and interact (mix) with their sperm/sex cells/gamete cells. Cosmic rays are among the naturally occurring radiation doses, which humans receive all their lives (Howell, 2018).

The process of selection of a parent by these rays can be predetermined (using the outer universe as a frame of reference) or random (using the inner universe as a frame of reference). In the former case, there could be a connection between the dying star, whose contents make

their way into the Earth to locate a would-be parent and diffuse into their body, and that parent, perhaps because both the star and the parent originated from the same parent star. In the case of highly evolved animals such as humans, this sperm (that the stardust and the conwave photons have mixed with) will then fertilize an ovum from a female human to produce a zygote. The key role of consciousness in the development of this zygote is that it controls or drives the development of brain cells (which develop via neurogenesis and astrogenesis, or the formation of star-shaped cells called astrocytes) later on, supplying these cells with information that produces self-awareness, awareness of the surroundings, and experience in a human later on. A similar or related process occurs in other animals and organisms as well to produce a fully developed complex system known as a living creature. Consciousness absorption by complex systems on Earth is a process that involves consciousness-driven cell formation, differentiation, and specialization in the nervous systems (such as the brain) in animals or signal or information-processing systems of other organisms. Researchers suggest that space radiations, including cosmic rays, affect fertility in male mammals due to their impact on the DNA of sex cells (Wakayama et al., 2021).

For animals (such as humans), consciousness is the code of the brain. It exists at a deep level (perhaps the deepest) in the brain, serving as the key source, or one of the main sources, of genetic information in the brain cells. The same thing applies to the nervous system or information processing and/or signal transmission system in other complex systems with life, such as plants, micro-organisms, and other organisms. Thus, nervous systems (such as brains in humans and other animals) in relatively highly evolved organisms, information processing and/or signal transmission system in micro-organisms, plants, and other organisms are aspects or organs of consciousness in these complex systems (Tijani, 2023).

Biosynthesis is also a key process in the evolution of consciousness in living systems in the outer universes. Biosynthesis, as used in the Temic context, is a process that involves synthesizing complex systems with life (i.e., living organisms) from organic and inorganic matter. There is a possibility that such complex systems can be designed as follows:

- Grinding inorganic matter such as stardust/cosmic dust into extremely tiny particles, which cannot be seen with the naked eye, after which blood or sperm, which is organic matter, is mixed with these particles. Then, the mixture is kept in a suitable incubation system or pot (which may be made of clay) for some period, which can be a year, or shorter, or longer

- If this process is properly done, the mixture can develop into a system, with sufficient complexity that allows it to absorb consciousness waves (life) from a dying star
- Depending on the arrangement of the ground inorganic matter, a complex system that belongs to any type or specie of living organisms can be formed

This is one of the processes through which consciousness (life) evolves on planet Earth in complex systems, with the other processes including fertilization generally (both the natural type and the kind done in a lab), cultivation of plants, and others. The author regards all these processes and related ones simply under a single phenomenon, evolution of consciousness (life) in the Universe.

As stated in Axiom 0 of the Temic Universal Laws, consciousness-energy is all that really exists. Cen underlies all things (whether living or not) in the universes. Even if something appears inanimate in the earthly realm in this Universe, it only appears so because its consciousness is tuned out of the frequency bandwidth of what is called consciousness in this realm, but it will exhibit consciousness in other realms or universes as shown in the CEN Extended EM Spectrum. For instance, your computer, which is seen as non-living on Earth, exhibits consciousness in other realms. The same logic applies to all things considered inanimate in the earthly realm and our Universe as a whole.

In any realm, planet, or universe, there is a minimum level of complexity and energy required for matter (a system) to support life (i.e., exhibit consciousness) as perceived by an observer. In other words, for a system to absorb consciousness from the Universe, it must meet a minimum level of complexity and energy called consciousness work function, ϕ_c . The following relation holds for the Temic Consciousness Absorption Principle:

$$\phi_c \geq \lambda E_c L_c \text{ ----- (eq. 21)}$$

Where ϕ_c represents consciousness work function in bunit; E_c is energy measured in tems; L_c is level of complexity; and λ is the constant of proportionality for the equation in bunit/tems. The term, bunit, was coined by the author and means basic unit of life; it is used to quantify consciousness work function, ϕ_c . L_c , level of complexity, is a numeric value that has values within the range, 0–10 based on the ability of such matter (host) to support life (see Table 1); the higher the value of this number for any material, the more suitable that material is to support life. This is the mathematical basis for the Temic Consciousness Absorption Principle. When a system (host) meets or exceeds consciousness work function, it absorbs photons of conwaves

from the Universe (often from a dying star in space) and becomes a living system in this realm. For instance, when a computer attains a sufficient level of complexity, it can absorb consciousness waves from the Universe and become a living system (a complex system).

From the foregoing, the concept of consciousness absorption capacity, A_c , is also introduced: It is the ability or capacity of matter (host) to support life. Measured in tems/cubic meters, the consciousness absorption capacity of a material or substance quantifies how much energy in tems is required for a unit volume of the substance or material to absorb photons of conwaves from the Universe and become a complex system (living system). Mathematically, consciousness absorption capacity of a material is defined as follows:

$$A_c = \frac{E_c}{V} L_c \text{ ----- (eq. 22)}$$

Where A_c is consciousness absorption capacity of the material in tems/cubic meters; E_c is energy of the material measured in tems; V is volume of the material in cubic meters; L_c is level of complexity of the material. Specific consciousness absorption capacity, a_c , is the quantity of energy required for a unit volume of the substance or material per unit mass to absorb photons of conwaves from the Universe and become a complex system (living system). It is given by the formulae:

$$E_c = A_c L_c V \text{ ----- (eq. 23)}$$

$$E_c = m a_c L_c V \text{ ----- (eq. 24)}$$

$$A_c = m a_c \text{ ----- (eq. 25)}$$

Where A_c is consciousness absorption capacity of the material in tems/cubic meters; a_c is specific consciousness absorption capacity of the material in tems/cubic meters/kg; E_c is energy of the material measured in tems; m is mass of the material in kg; V is volume of the material in cubic meters; L_c is level of complexity of the material. Different substances/materials such as star dust, clay, sea clay, metals, and others have different consciousness absorption capacities. The ancestors of all living systems on planet Earth today either evolved naturally from star dust/cosmic dust or were designed artificially using star dust/cosmic dust/clay/sea clay mimicking those complex systems that evolved naturally from fallen stars on Earth. For such complex systems design, the Periodic Table of Lifeforms on Earth is highly important. Star dust, cosmic dust, clay, and sea clay are materials with high consciousness absorption

capacities compared with metallic substances; hence, the materials (star dust, cosmic dust, clay, and sea clay) have greater ability to support life on Earth.

In the first phase of this research project, a new concept of mass was introduced in Consciousness Physics: Mass is a measure of how a body responds to consciousness force (see Tijani, 2023c). This is consciousness mass.

$$M = \sum_{-\infty}^{\infty} m_i, \forall i \text{ lying within } -\infty \leq i \leq \infty \quad \text{----- (eq. 26)}$$

Where M in super-infinite units is the Mass entanglement in the absolute vacuum and m_i is mass possessed by any form of matter in universes respectively.

From the foregoing, the concept of consciousness density was also introduced which measures the consciousness mass of a body (a complex system) per unit volume or the energy of consciousness waves possessed by a complex system per unit volume (see equation 27). This concept is analogous with mass density in Classical Physics (Lee & Min, 2018; MacKay, 2020).

$$\rho_c = \frac{E_c}{V} \quad \text{----- (eq. 27)}$$

Where ρ_c , E_c and V are consciousness density in tems/cubic meter, energy of consciousness waves in tems possessed by a complex system, and volume of the system in cubic meters respectively. Consciousness density is also a measure of the energy of consciousness waves accumulated (absorbed) in a particular field. It gives the absorbed energy of conwaves per unit measurement of the space. In an outer universe like our Universe, consciousness density exists in three major forms: volume consciousness density (given by equation 27 above), surface consciousness density, and linear consciousness density, all of which are of practical significance when a material or substance absorbs photons of conwaves from the Universe during the natural evolution of living systems on a planet or during complex systems design in a lab.

Volume consciousness density, ρ_c , of a material is defined by equation 27 above. It is what has been referred to as consciousness density earlier. Surface consciousness density, σ_c , of a material is defined as the energy of consciousness waves, E_c , absorbed per unit area, A, of the material (see equation 28), while linear consciousness density, λ_c , of a material is defined as the energy of consciousness waves, E_c , absorbed per unit length, l, of the material (see equation 29).

$$\sigma_c = \frac{E_c}{A} \text{----- (eq. 28)}$$

$$\lambda_c = \frac{E_c}{l} \text{----- (eq. 29)}$$

Where all the symbols are as stated in the definitions of these concepts above.

Table 1: The Level of Complexity (L_c) Table for Different Substances and Materials

Material/Substance	Level of Complexity (L _c)
Star dust/cosmic dust	10
Clay	9
Sea clay	9
Wood	9
Metals	4
Plastics	4
Marble	4

Source: Author’s Construct (2023)

For complex systems design, materials and substances such as star dust/cosmic dust, clay, sea clay, and wood have a high value of L_c. When any of these is ground into extremely fine particles, and then these fine particles are mixed (combined) or arranged in certain ways with organic matter and kept in a suitable incubating medium for some period, they can attain enough complexity calculated using the consciousness work function formula (see equation 21), allowing them to develop into a living system via biosynthesis. However, very powerful microscopes (such as dark matter microscopes) and consciousness detectors/sensors are required to carry out this procedure in a lab effectively (see Tijani, 2023c). Dark matter microscopes are highly advanced instruments that allow scientists to see into dark matter (non-baryonic matter) realms; developed using CEES and other fields of Physics, these microscopes are examined further under the “Applications” section of these papers.

5.12. Conclusion

In this section, different Consciousness Mechanics principles are examined involving operations, such as cen permutation, cen conjugation, cen parity, cen annihilation, cen partition,

and collapse function, and operators, such as squaket, squa, and ket operators. These principles underlie all the aspects of the matrix we call reality, which have their origin in the inner universes. The CEN Extended Electromagnetic Spectrum showing all possible forms of EM radiations, which cover much more waves than those in the conventional RMIVUXGCs spectrum used in the current fields of Physics. Also, the Temic Uncertainty Principle was explained as a generalization of Heisenberg's Uncertainty Principle. The Temic Superposition Principle, which is a generalized version of the superposition principle, was also examined, along with other key Consciousness Mechanics principles. The next chapter takes a look at Consciousness Statistics, one of the aspects of Consciousness Physics.

SECTION SIX

6.0. Consciousness Statistics: Temic Algebra and the Cayley-Dickson Construction

6.1. Introduction

As with every other chapter of these papers, the Temic Universal Laws are applied in developing Consciousness Statistics, which is a field under Consciousness Physics that underlies various natural phenomena such as birth, death, time travel, space travel, and others. To understand what Consciousness Statistics means, it is crucial to first examine Quantum Statistics as this chapter is developed using key aspects of the quantum mechanical statistics.

Quantum Statistics is defined as a statistical description of a system of particles, which obeys the principles of Quantum Mechanics instead of those of Classical Mechanics (Attard, 2015). Quantum statistical mechanics refers to statistical mechanics, which is applied to quantum mechanical systems (Nair, 2023). In the same vein, Consciousness Statistics is a statistical description of a cen system, which obeys the principles of Consciousness Mechanics instead of those of Quantum Mechanics and Classical Mechanics. CEN statistical mechanics refers to statistical mechanics, which is applied to cen mechanical systems. Consciousness Statistics is developed as a generalization of the principles of Quantum Mechanics and Classical Mechanics to every possible dimension.


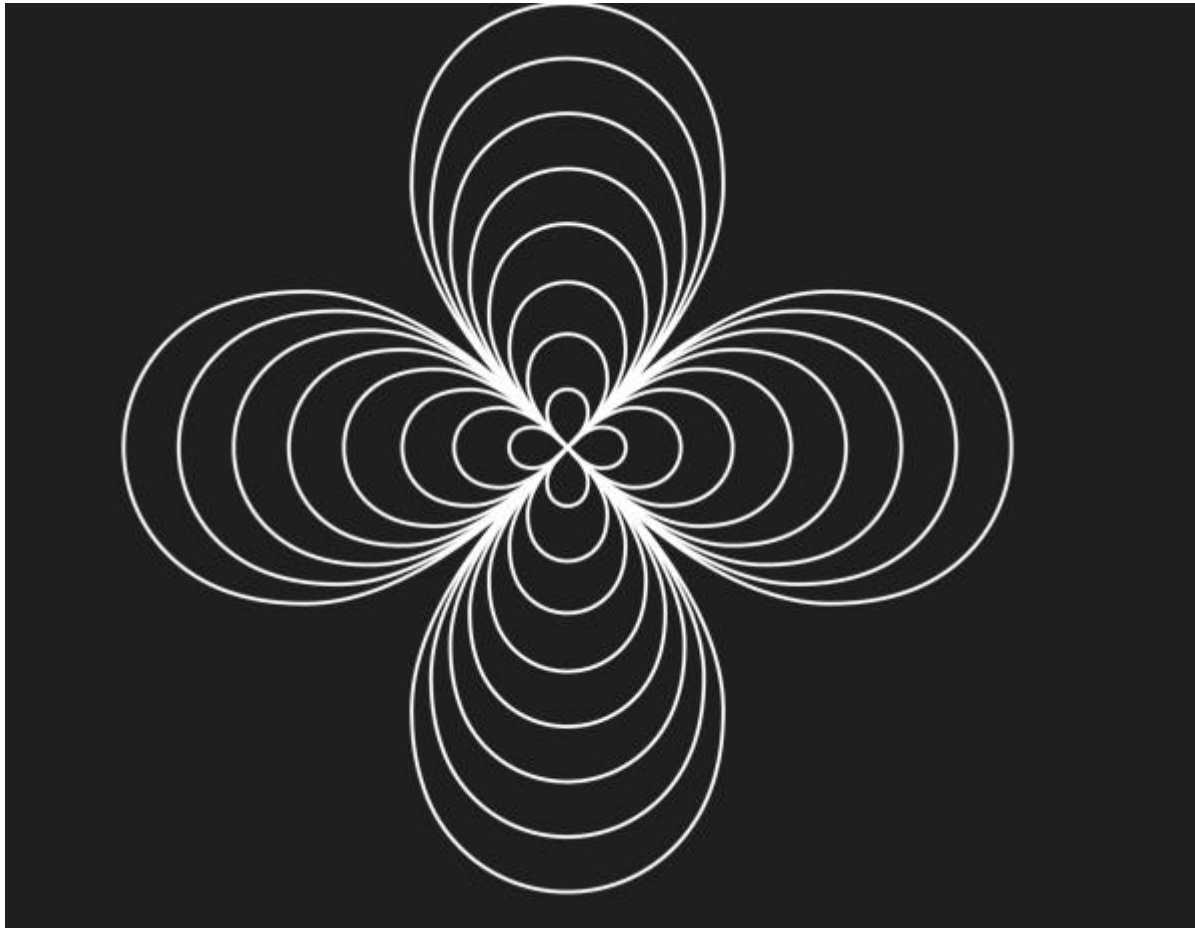
In Quantum Mechanics, a statistical ensemble, which means probability distribution over possible quantum states, is described mathematically by a probability density operator S that is a non-negative, self-adjoint, trace-class operator of trace 1 on the Hilbert space H , which describes the quantum system (Nair, 2023). A similar formulation is made to describe the probability distribution of cen systems: In Consciousness Mechanics, a statistical (cen) ensemble, which means probability distribution over all possible censtates, is described mathematically by the squa operator and its conjugate, ket operator, on  in the TEPET space (CEN or the Multiverses), represented in the figure below (see Figure 51), which describes the cen system. This will be developed more in further research.

Figure 51: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: CENProject (2023)

To understand phenomena and processes such as birth, death, the Big Bang, time travel, the brain, consciousness, and others deeply, Consciousness Statistics is vital. In particular, Consciousness Statistics provides the mathematics and physics underlying the phenomenon of time travel, which will be achieved in the coming years with the advent of technologies such as Reanders, photocraft (see Tijani, 2023c), a time machine, and others.

6.2. Time Travel

What is known as space-time evolved from CEN via Big Bang explosions in the innermost Universe or the Beginning. This has been explained in detail in the earlier sections. As stated in Axiom 5, space-time is an emergent property; it is not fundamental to the universes. What we perceive as space-time is an illusion or a mere projected or simulated reality, which only exists in our head. In the Base Reality (the innermost Universe or the Beginning), space-time has no meaning as all things exist in a frozen state as a coagulation or single matrix (Nothing

or the Beginning or the absolute vacuum), but at some levels beyond this (via Big Bang expansions) in inner universes, all events and phenomena occur all at once in these hidden realms. These inner universes, which lie deep within the brain, are consciousness-based realms or frames that are unphysical in nature, while outer universes are gravity-based realms or frames that are physical in nature where space-time exists.

Time travel simply means traveling through the three temporal dimensions — past, present, and future — and one spatial dimension (yourself, the observer or traveler), while space travel means traveling through the three spatial dimensions — length, breadth, and depth — and one temporal dimension (forward). However, as established by Einstein, space and time are a continuum and exist as a single entity, space-time. This means whenever you do space travel (the normal moving around you do in the earthly realm), you also do time travel.

Indeed, everyone does time travel but most people are not aware or conscious of this in the earthly realm. In outer universes, which are physical universes, naturally, we do space travel most times, while in inner universes, which are unphysical universes, we do time travel. More specifically, time travel is a phenomenon characterized by the superposition of one fragment of time in time-space (occupied by an observer) over another fragment of time in time-space (occupied by the same observer or another observer). However, space travel is a phenomenon characterized by the superposition of one fragment of space in space-time (occupied by an observer) over another fragment of space in space-time (occupied by the same observer or another observer). It is superposition and coincidence that underlie both phenomena, just like all others in nature and the universes.

Space-time and time-space are gravity-based constructs where an observer is perceiving reality using the physical world (an outer universe), under the influence of gravity, as their frame of reference. From the perspective of an observer in a consciousness-based frame (an inner universe), where there is no gravity, space-time and time-space do not have any meaning as they do not exist. The choice of either of the two constructs, space-time (spatio-temporal) or time-space (tempora-spatial), depends on the frame of reference we are using for our observation. If we are doing our observation in a gravity-based frame in a physical (outer) universe like our Universe, space-time is used since naturally, we move through the three spatial dimensions — length, breadth, and depth — and one temporal dimension (forward) in the physical world (outer universe). But if we are doing our observation in a consciousness-based frame in an inner universe where there is no gravity, time-space is used relativistic to

gravity-based frame in the physical world since naturally (the nature of nature in the inner universe), we move through the three temporal dimensions — past, present, and future — and one spatial dimension (yourself, the observer or traveler) in the inner world (unphysical universe). The inner worlds lie within our brains.

Anytime you move through space in this Universe, you also move through time because space-time or time-space is a single entity. But most people are not aware of their motion through time whenever they move through space in this Universe. At any specific human era, a tiny percentage of the human population are often conscious of their motion through time whenever they move through space in this Universe. Such exceptional humans have the gift of being able to travel through the three temporal dimensions — past, present, and future — even while in this physical Universe. Across various human eras and cultures around the world, these gifted people are called gods, goddesses, prophets, seers, and the likes. Such people are time travelers, who often see themselves flying in lucid dreams and have the power of seeing past and future events in their region.

In Ìṣẹ̀ṣẹ, the culture and traditions of Yorùbá people in Nigeria, Ọ̀rúnmilà and Ifá are key examples of such exceptionally gifted humans who were time travelers when they existed in this part of the world in the past. Ọ̀rúnmilà and Ifá are ancestors of modern-day Yorùbá people in Nigeria and have been worshiped as deities by the natives for many generations till today, even before the advent of Christianity and Islam. Ifá (called the Oracle in English) existed at the beginning of the Homo sapiens era in what is called Yorùbáland today and used complex calculations to develop a body of knowledge that includes various Yorùbá dialects, philosophy, science, medicines, divination/fortune-telling, poems, and many others. From generations to generations, this body of knowledge became what is known as the Odù-Ifá literary corpus, meaning “the Code of Ifa” in English as “odù” is a Yoruba word for “code” as stated earlier. In any specific human era, only a tiny percentage of the human population can perceive themselves consciously travelling in the three dimensions of time — past, present, and future.

For the majority of humans, information about this state is locked within their brain (the subconscious mind). The tiny percentage of humans that can access such information have been worshipped as one god/goddess or the other for thousands of years on this planet across generations. Time travel involves dying temporarily in the earthly realm, and when it is engaged in consciously in this realm, you will see your consciousness floating like a ray of light and as a shadow of yourself over your body, and you will start taking flights in different

realms. All this is taking place in your brain, and because time travel involves dying temporarily, only a tiny percentage of the human population ever achieve it in any specific human era. These tiny percentage are the geniuses and pacesetters of the earthly realm and have historically become gods and goddesses over the large majority of humans. There are two ways to do time travel: via meditation (the natural means) and through the use of technology (Reanders, time machine). With Consciousness Physics, these technologies will be developed in the coming years.

6.3. Temic Algebra: The Aclopen TEPET Sets, Big Bang Expansion, and the Cayley-Dickson Double

Earlier, the Mode of Big Bang expansion was explained as expansions occurring in a geometric progression manner (see Figures 52–54):

Forward cycle:

Base: $+ \infty - \infty = 0$ (CEN or Nothing or Vacuum)

$$2^0 = 1$$

$$2^1 = 2$$

$$2^2 = 4$$

$$2^3 = 8$$

$$2^4 = 16$$

$$2^5 = 32$$

$$2^6 = 64$$

$$2^7 = 128$$

$$2^8 = 256$$

$$2^9 = 512$$

$$2^{10} = 1024$$

.

.

$$\begin{aligned} & \cdot \\ & \cdot \\ & \cdot \\ & 2^n, \forall 0 \leq n \leq \infty \end{aligned}$$

$$\begin{aligned} & \cdot \\ & \cdot \\ & \cdot \\ & 2^\infty = \infty \end{aligned}$$

Reverse cycle:

$$2^{-n}, \forall -\infty \leq n \leq 0$$

$$\begin{aligned} & \cdot \\ & \cdot \\ & \cdot \\ & 2^{-\infty} = -\infty \end{aligned}$$

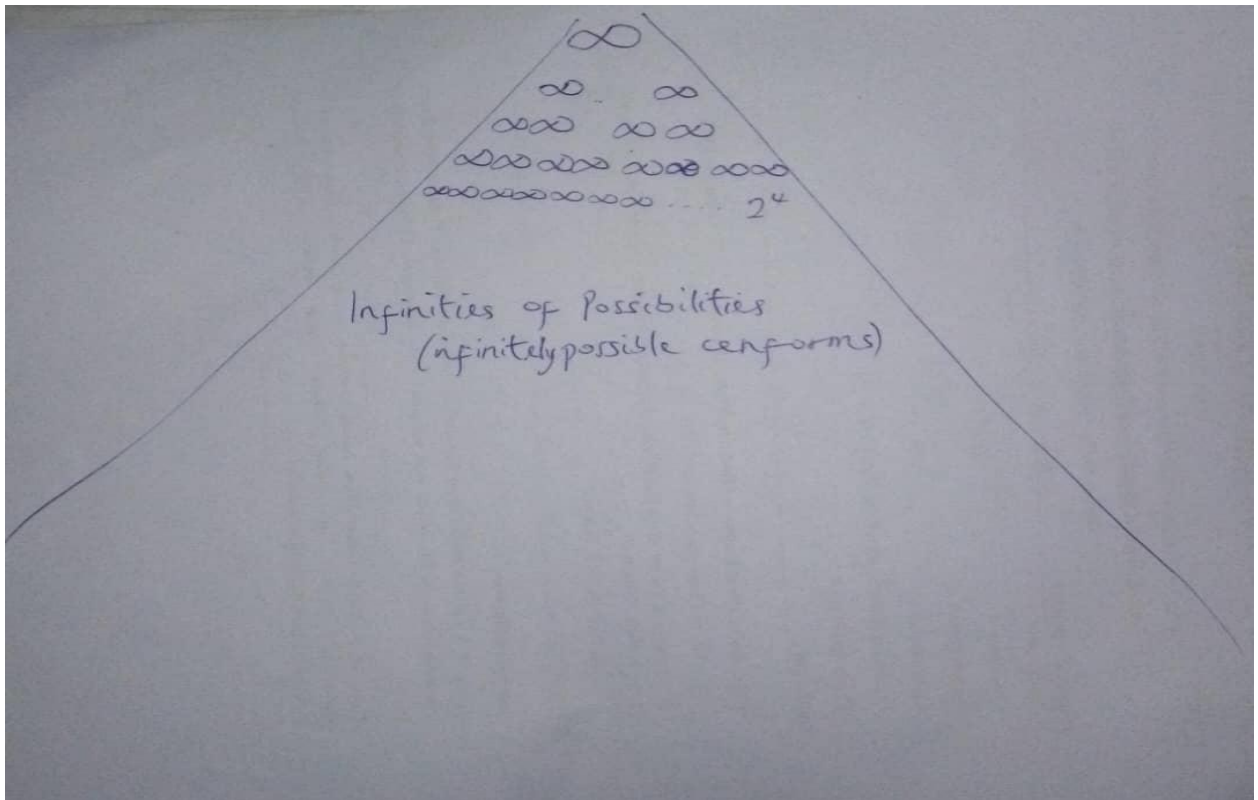
Entangled:

$$\begin{aligned} & 2^{\pm n}, \forall -\infty \leq n \leq \infty \\ & 2^{\pm\infty} = \pm\infty \end{aligned}$$

Apart from infinity, each of the above result stands for multiples of infinity; for instance, 1 represents one infinity, 2 represents two infinities; the same thing applies to all the others, and ∞ , the last result in the forward cycle represents *infinity* infinity (a much bigger infinity). The same logic applies to the results of the reverse cycle.

Figure 52: Forward Big Bang Expansion Cycle

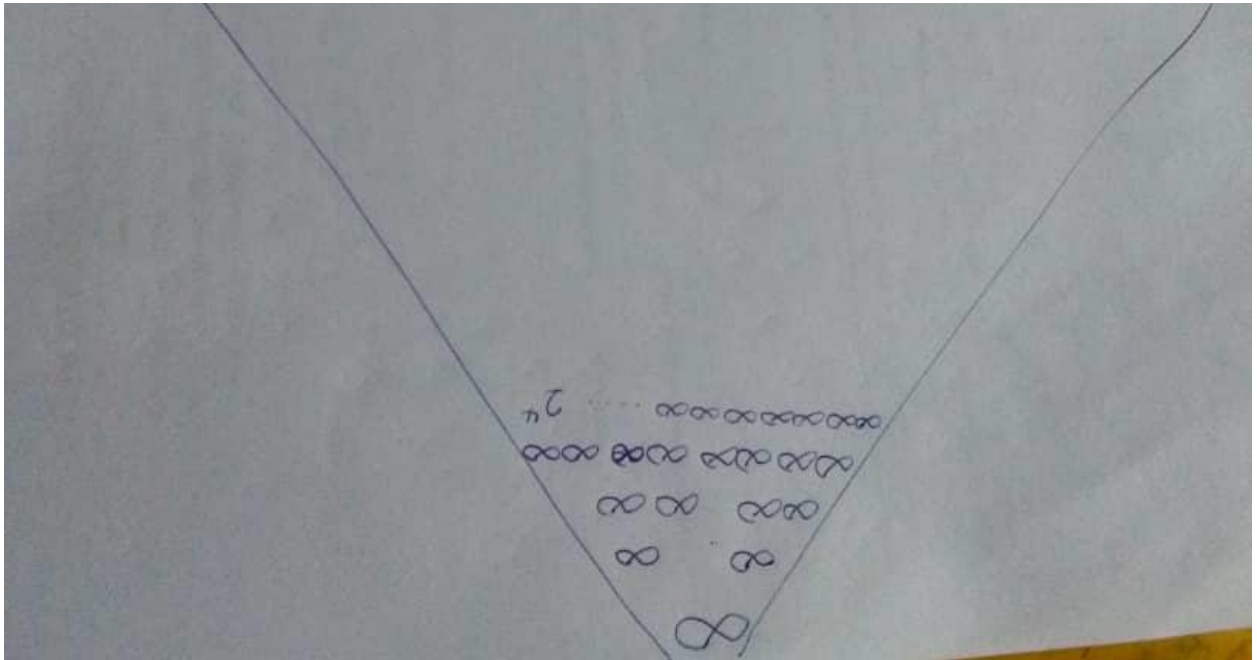
Forward cycle: $+\infty$



Source: Author's Construct (2023)


Figure 53: Reverse Big Bang Expansion Cycle

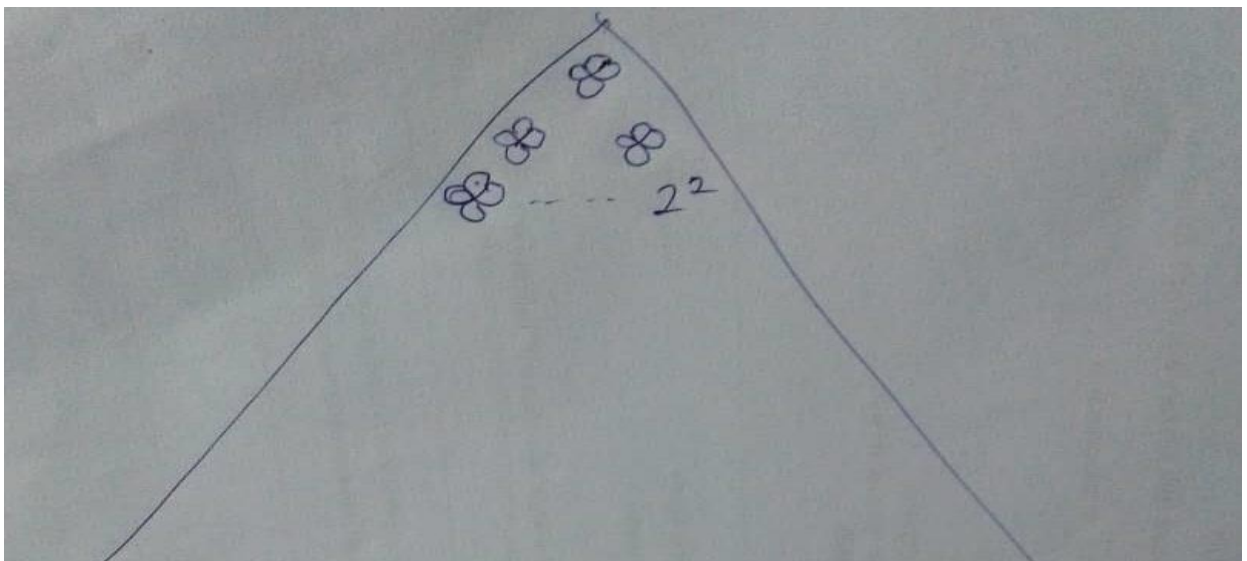
Reverse cycle: $-\infty$



Source: Author's Construct (2023)


Figure 54: Forward and Reverse Big Bang Expansion Cycles in an Entangled State

Forward and reverse cycles entangled: 



Source: Author's Construct (2023)

A closer look at these equations and the Temigrams shows they are related to what is called the Cayley-Dickson Construction or Cayley-Dickson Double (CD Double) in Abstract Algebra.

According to nLab (2023), “The Cayley-Dickson construction or Cayley-Dickson double takes a real star-algebra A to a new real star-algebra whose elements are pairs of elements of A , in generalization of how the complex numbers arise as a doubling of the real numbers”. When applied to the real numbers iteratively, which is known as a star-algebra with the trivial involution operation, the Cayley-Dickson construction consecutively produces the complex numbers, followed by the quaternions, then the octonions (giving all four real normed division algebras as stated in Hurwitz’s theorem), then the sedenions, and others, all of which are multiples of 2 (Dickson, 1919); (Baez, 2002). When applied to the context of Abstract Algebra, which deals with constructing new algebras, the equations and the Temigrams showing how the Big Bangs occur in a geometric progression manner can be regarded as Cayley-Dickson Double, starting with the evolution of the algebras all the way back to the Beginning, the innermost Universe. In the Temic context, the term CD Double will sometimes be used to refer to the symmetrical partner of any system or particle (anything at all) in the inner universe. Here, CD Double means a symmetrical partner, represented by one of the infinities in the Temigram for the forward cycle of Big Bang expansion (see Figure 52), which when combined with its partner in the reverse cycle (see Figure 53) forms the entanglement  (see Figure 54).



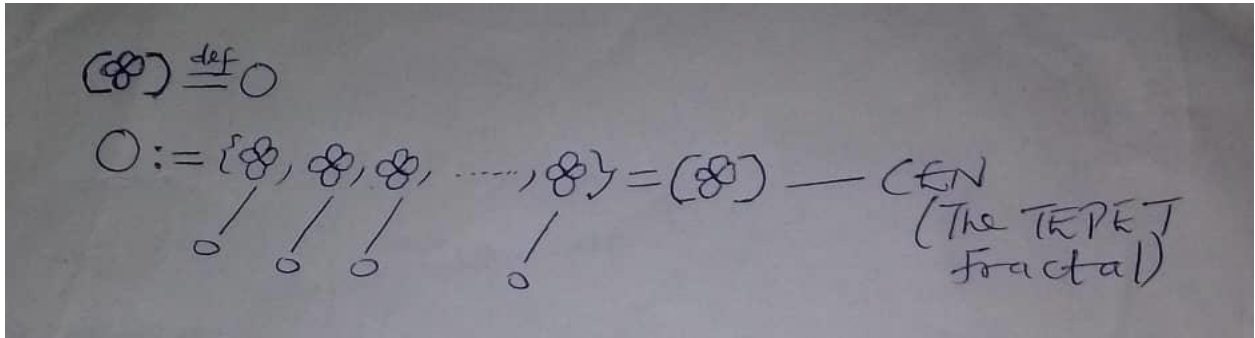
As stated earlier, CEN or TEPET can be seen as the aclopen set , which is neither open nor closed. This set is described mathematically by Temic Algebra showing the absolute vacuum or the Collective Entanglement (CEN) as Nothing. Each of the elements in this TEPET set, which are called sub-CENs, is represented with , which is 0 or a vacuum. This is a key point to keep in mind when designing time travel technologies as that shows space-time does not exist in the Base Reality. All that exists is Nothing or the absolute vacuum. This is a powerful notion that has diverse applications in various fields.

Figure 55: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author’s Construct (2023)

6.4. Developing a Time Machine for Time Travel

As you are reading these papers now in the earthly realm, it is an action your symmetrical partner in the inner universe, i.e., your CD Double, which is your source, has already carried out in that realm. You may call this symmetrical partner the programmer behind the source code (what is called your life as a person). As humans in the outer universe, we are merely doing what our CD Doubles in the inner universe have programmed and carried out already in the unphysical realms. The same thing applies to all other living and non-living systems in our Universe.

But in the outer universe, the brain is what gives us (humans) an illusion of free will (an illusion of control). Everything is pre-determined and has already happened in the Base Reality. Hence, in that realm (the innermost Universe), all events, processes, and phenomena (everything and anything) in the outer universes have been pre-determined, and nothing happens by chance. However, in other frames of references (especially in other inner universes apart from the innermost Universe or the Beginning, and in quantum frames in the outer universes like our own Universe), chance or coincidence appears to be an intrinsic aspect of nature. This was covered in the Temic Relativity Principle, also called the Temic Relativistic Consciousness Principle.

Events, processes, and phenomena in the inner universes, where space-time has no meaning, are projected or simulated in an automorphic manner to the outer universes, which are bound by space-time. In the outer universes like our own Universe, we (humans) are merely acting out scripts that were masterminded and written in the inner universes by our CD Doubles. In the Temic context, you can see CD Double as what is called “ori” (a Yorùbá term that means

“inner head”), “chi” (an Igbo term that means “personal deity”) in African philosophical systems, especially Ìṣẹ̀ṣẹ (Yorùbá culture), Igbo, and others. In Western philosophical systems, you can see CD Double, as used in this context, as what is called logos (for more explanation on logos, see New World Encyclopedia, nd). Mathematically, CD Double, as used in Consciousness Physics, means an automorphic map or projection, i.e., a symmetrical partner in the inner universe, which is a cen transformation or cen permutation.

With this at the back of the mind, it then becomes possible to develop a personalized time travel system. This is one technique, out of other possible means, which can be used to achieve time travel in the earthly realm. In this method, basically, you are getting information about the core of your existence from your CD Double at the other side (inner universe) because like every other living system, your consciousness-energy exists everywhere all at once, and the brain has the complete information about this. Before you develop a personalized system for time travel, it is crucial to understand that time travel also has its own risks like space travel in the earthly realm. Time travel involves dying temporarily in this realm, and after the journey, the observer will regain consciousness. It is like sleeping and waking up after a while, but during time travel, you are more perceptive of the realms your consciousness journeys to while asleep.

As stated earlier, the majority of humans do not have such level of perception, and due to various risks involved in time travel, ethical considerations need to be considered before engaging in the activity. The space travel we do involving the different modes of transportation also has its own risks. The time travel technique discussed here is explained as part of the research project to give a picture of what is possible using consciousness science. Hence, readers are advised to exercise caution/restraint before engaging in it as the author is not liable in any way to any risks incurred while using this technique.

The time travel technique explained here lays an emphasis on a path to self-discovery via meditation; hence, you need a meditation room that is extremely quiet. Actually, if you are in a place where you experience a high level of concentration, you will perceive it as your consciousness journeys from one realm or world to the other. In this emerging field, the term IFA is used to describe such a perfectly suitable environment, which is noise-proof and allows an observer to attain a high level of concentration, making it possible for them to “see themselves in multiple places or realms at the same time”, thereby demonstrating the Temic Superposition Principle, which is the generalized version of the superposition principle in Quantum Mechanics. In other words, the meditation room called IFA allows an observer to

engage in time travel. You can build IFA or improvise the facility by finding a quiet room in your environment and using a noise attenuator/canceler such as headphones and others to make your meditation stronger and more effective. Using IFA is one of the ways to strengthen and deepen your meditations, especially for time travel. There are other methods as well.

Apart from IFA, you also need a heartbeat digitizer. This is simply a device that can be used to measure a person's heartbeat (Tijani, 2023c). The heartbeat rates of living systems (complex systems) in every planet, realm, or world are different, and each planet or realm vibrates at different sets of frequencies. From the Temic Superposition Principle, consciousness-energy exists everywhere in any universe at once in a superposition of infinitely possible forms, and the heart functions as a modulator or regulator that tunes the frequencies of individual consciousness of a complex system and connects the living system with one of those natural frequencies of a specific realm or planet that the system is aware of or remembers. You are conscious in this realm at the moment because your heart tunes the frequencies of the conwaves emitted by your brain to vibrate in sync or in phase with the earthly frequencies (Gaia's frequency bandwidth). If your heartbeat vibrates at a frequency outside this Gaia bandwidth, you'll lose consciousness in the earthly realm and become conscious in another realm, whose bandwidth matches your new frequency.

In this technique of engaging in time travel, you are seeking to increase your level of perception so you can gain knowledge (the information held in your brain) about different realms your consciousness journeys to while asleep depending on your heartbeat rates. If you use this technique, note you are doing so at your own risk. With every higher level of perception comes new benefits as well as new challenges. This is the entanglement (the duality of good and bad) underlying all things in nature: Nature gives with one hand and takes with the other.

While in the earthly realm, events and happenings in other realms and universes in existence appear to us as lucid or clear dreams. This time travel method is both objective and subjective. The objective aspect is based on the Temic Universal Laws (the Eight Axioms), while the subjective aspect has to do with the fact that factors such as your physiology, genetics, psychology, astrobiogenesis (see Tijani, 2023b), all of which are based on certain permutations in the inner universe, influence your individual consciousness, which is the code of your brain, and your perception of events. Hence, you'll need to observe your body and develop a suitable meditation technique for alternating your breath so as to alternate your

heartbeat rates to match the frequency bandwidth of different realms or worlds that you seek to journey to.

If you journey to a realm in an inner universe, specifically to a fragment of time ahead of time in the earthly realm, you can see events that will happen in the future on Earth. Also, if you journey to a realm in an inner universe, specifically to a fragment of time behind time in the earthly realm, you can see events that have happened on Earth. Time travel is a useful procedure for studying the history and evolution of a planet. For the former case (journeying to a fragment of time in an universe ahead of time in the earthly realm), the time Δt it takes for an event seen in an inner universe to manifest in an outer universe, specifically in the earthly realm of our own Universe, can be calculated using the formula:

$$\Delta t = \gamma f_h p_i \text{ ----- (eq. 30)}$$

Where Δt is the time in minutes it takes for an event seen in an inner universe to manifest in an outer universe, specifically in the earthly realm of our own Universe; f_h is the frequency in beats/minute of the observer's heartbeat during sleep/lucid dream; p_i is the intensity of the observer's heartbeat during sleep/lucid dream; and γ is the constant of proportionality in cubic minute/mmHgbeat. p_i can be calculated using different methods. One of these involves finding a suitable method for measuring the systolic blood pressure (BP) in mmHg divided by the time it takes for the measured BP to be produced and diastolic blood pressure in mmHg also divided by the time it takes for the measured BP to be produced. Then, the average of the two values is taken in mmHg/minute to yield the intensity of the observer's heartbeat during sleep/lucid dream. In addition to IFA, all these are to be considered in designing heartbeat digitizers and personalized time machine systems for people.

Furthermore, relativity is another key consideration to take note of. If you do time travel and perceive certain events in an inner universe, when you wake up in the earthly realm, what you saw might not make sense to you any longer even though it seemed reasonable while the dream lasted. This is because of the change in the frame of reference during the phase transition of your consciousness from the inner universe to the outer universe. In the inner universe, you were viewing the event using a frame of reference different from the frame of the earthly realm in the outer universe. Hence, in time travel, it is crucial to keep relativistic effect of consciousness in mind.

In inner universe, all events take place at the same time, and in the case of animals, such as humans, making sense of events depends on the power of the observer's brain and the power

of accommodation of their eyes. The higher the processing power of the brain and the power of accommodation of the eyes, the more the events (in level of details and number) the observer can grasp, be conscious of, and remember. In these universes, individual consciousness, which is the inner self or CD Double of a host, moves at the speed of light being conwave photons, with all events, processes, and phenomena occurring at the same time in these realms. Again, time travel systems are powerful and need to be developed and used with utmost care and caution.

6.5. Fundamental Forces and Elementary Interactions in Consciousness Physics

In the emerging field of Consciousness Physics, this Universe is not regarded as the only universe in existence. Hence, the four known forces of nature, which are also called elementary interactions, are not really fundamental to the Base Universe or Base Reality (the innermost Universe or the absolute vacuum). So, from the perspective of the Base Universe, only Nothing (consciousness-energy) is really fundamental to the Base Universe; there are only fundamental forces with respect to outer universes like our own Universe. These fundamental forces exist in a frozen state in the Base Universe simply as Nothing or CEN. There is a Unified Force, which is the summation (or entanglement of all forces in universes in existence), and consciousness-energy is fundamental to this Force.

In this Universe, there are four known fundamental forces or elementary interactions: strong nuclear force, electromagnetism, weak nuclear force, and gravity. However, these are not the only fundamental forces or elementary interactions in this Universe. There are other unknown fundamental forces, and in Consciousness Mechanics, one of these is the force of coincidence. This will be developed more in further research.

6.6. Conclusion

The Temic Universal Laws have been applied in developing this chapter on Consciousness Statistics, which is a field under Consciousness Physics that underlies various natural phenomena such as birth, death, time travel, space travel, and others. Consciousness Statistics is a statistical description of a cen system, which obeys the principles of Consciousness Mechanics instead of those of Quantum Mechanics and Classical Mechanics. CEN statistical mechanics refers to statistical mechanics, which is applied to cen mechanical systems. Consciousness Statistics will be developed more in further research. Consciousness Statistics provides the mathematics and physics underlying the phenomenon of time travel, which will

be achieved in the coming years with the advent of technologies such as Reanders, photocraft, a time machine, and others.

SECTION SEVEN

7.0. The Periodic Table of Lifeforms on Earth (PTL)

7.1. Under development

This is a periodic table of living organisms on this planet based on their level of consciousness and other key factors essential to life. This will be developed in the second phase of the research project.

SECTION EIGHT

8.0. The Theory of Everything (CEN): The Temic Approach

8.1. Under development

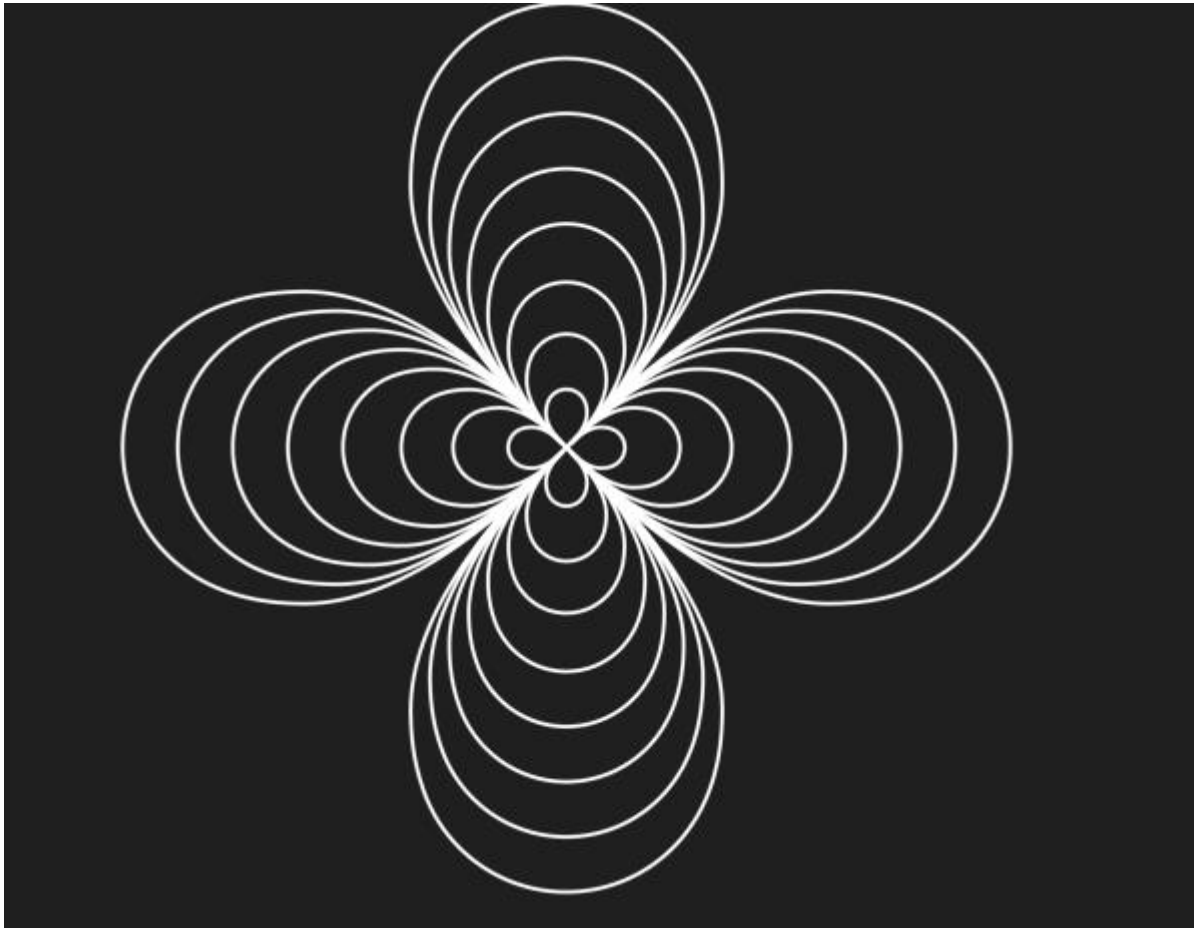
8.2. Introduction

In this section, the Theory of Everything (TOE), also called the Whole of Existence (WoE) in the Temic approaches, is developed as the study or an attempt to model the absolute vacuum or CEN (the Whole of Existence or the Multiverses). In this approach, all disciplines, courses, and forms of knowledge involve studying this single system, CEN or the absolute vacuum. This is based on the fundamental principle of Consciousness Physics that states cen is the basic building block of the Whole of Existence. To build the TOE, Consciousness Mechanics is used as the universal constructor, with disciplines, fields, all kinds of knowledge pictured using the Temigrams as cenforms, where these disciplines/fields/forms of knowledge are simply seen as CEN transformations (transformations of cenforms or cen states — states of consciousness-energy) involving the actions of the CEN operators, squaket, squa, and ket operators.

In the Temic paradigm, multi-faceted, interconnected, interdependent, interdisciplinary, and interwoven approaches to constructing the TOE are adopted based on the fundamental building block of the universes, which is consciousness-energy or cen. To this end, different variables (parameters) are developed representing contributions from each discipline/field/knowledge form to this single theoretical framework called the Theory of Everything. The program of building the TOE can be seen as linking or weaving all disciplines, fields, and kinds of knowledge together using cen to form a single framework (the TEPET or CEN Fractal), just like it is done when constructing the TEPET (see Figure 56).

8.3. Under development

Figure 56: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

8.4. What Is the Significance of the TOE Using the Temic Approaches?

One of the aims of building the Grand Theory based on the Temic approaches is to fully harness the power of the human brain to solve the increasingly complex and interconnected global challenges experienced on this planet aided by Artificial Intelligence (AI), machine learning, deep learning, and other key advances in scientific computing. In the Temic approaches, the study of any discipline or course is the study of CEN using the specific approaches of that discipline: When people are studying various concepts, subjects, disciplines, they are all studying the same system, CEN, but they are do so in different ways. A more holistic and integrated approach to education, pedagogy, and research is better and will be more effective (see Figure 57).

Constructing the TOE requires the development of every discipline or field based on the principles of Consciousness Physics or Consciousness Mechanics (Temic Universal Laws), so






that the discipline or field can be “compatible”. This is a term coined by the author from “consciousness + compatible”. This “compatibility” approach using cen as the basis requires focusing on consciousness and energy (cen) and its relationship or connection with all other disciplines and fields, with all the connections weaved or linked together as a single framework: the TOE. The significance of the multi-faceted, interconnected, interdependent, interdisciplinary, and interwoven approaches to the Theory of Everything (CEN) offered by the Temic Models lies in the fact they allow humanity to harness the infinite power of the brain deeply so as to solve major problems humanity faces using the TOE framework, such as

- Increasing global life expectancy
- Making more accurate weather predictions
- Accomplishing UN SDGs
- Achieving world peace
- Combating climate change
- Learning from natural history to ensure the Homo sapiens species survive for longer than the extinct human species
- Finding the cure to various life-threatening diseases such as cancers, COVID-19, and others
- Tackling the problem of systemic racism, tribalism, and related vices

Under Development

Figure 57: Significance of the TOE

Megatrends

	Rapid Urbanisation	More than half the world's population live in urban areas. Almost all new growth will be in lesser known medium sized cities of developing countries
	Climate change and resource scarcity	Demand for energy, food and water will rise. But the Earth has a finite amount of natural resources to satisfy this demand
	Shift in global economic power	Some emerging economies that were growing rapidly are now in recession. Large influence of commodity prices on this.
	Demographic and social change	By 2030 population to rise by 1 billion. People are living longer and having fewer children
	Technological breakthroughs	Digital technology has removed boundaries and borders. Expectations and behaviour are changing.

(PWC 2020)

Source: PWC (2020)

Under Development

Further research is ongoing on this section.

SECTION NINE

9.0. Nature of Existence, Space-Time, and Time-Space in Consciousness Mechanics


9.1. Introduction

The nature of existence is a controversial issue in philosophy and science with philosophers and scientists unable to reach a consensus on a universal definition of what existence or life is. The major reason behind this lack of consensus is that as of yet, there is no objective understanding of consciousness in the mainstream science. To fill this gap, this research project was embarked upon by the author in 2018, and so far solid attempts have been made to develop the Physics and Mathematics of Consciousness and enhance the scientific of consciousness. The present chapter attempts to fill the gap in the current scientific understanding of existence and life by examining the nature of existence, space-time, time-space, and related topics such as God, heaven, hell, reincarnation, and others from a scientific viewpoint, especially using the approaches of Consciousness Mechanics.

9.2. CEN: The Whole of Existence or the Multiverses

Merriam-Webster (2023) gives a simple definition of existence as “the state or fact of having being especially independently of human consciousness and as contrasted with nonexistence”. This definition is adopted in these papers. More specifically, existence is defined as the state that is a function of consciousness-energy (cen). If χ_e denotes the state called existence, then it can be defined mathematically as

$$\chi_e := F(E_c) \text{ ----- (eq. 31)}$$

Meaning existence χ_e is a function (F) of cen, E_c measured in tems. This definition of existence applies to a specific object, system, or particle (anything at all), which is represented (along with its conjugate or opposite) by the entanglement  (tepet) in the aclopen set, CEN as shown in Temic Algebra (see Figure 58) and had evolved from the innermost Universe or the Beginning by the actions of the cen functions and operators of squaket, squa, and ket, and collapsed due to the collapse operation to its current state, χ_e , the specific cenform being examined at the moment. More broadly, the Whole of Existence (WoE) is the aclopen set, CEN (Consciousness-Energy or the Collective Entanglement), which is Nothing or the absolute vacuum. Mathematically, WoE is the summation of all that exists and is defined by the Temic Algebra (see Figure 58). Alternatively, WoE can also be defined mathematically as follows:

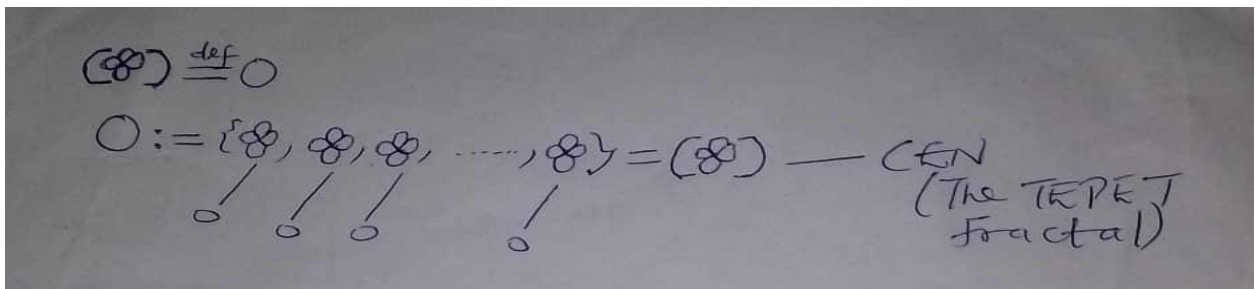
$$WoE \stackrel{\text{def}}{=} \sum_{-\infty}^{\infty} \chi_{e_i} \forall i \text{ lying within } -\infty \leq i \leq \infty \text{ ----- (eq. 32)}$$

$$WoE := 0 \text{ ----- (eq. 33)}$$

Thus, equations 32 and 33 are an alternative way of stating Temic Algebra. The TEPET Fractal — with the fractal dimension 2^n , where $n = \pm\infty$, and the Hausdorff dimension of $\pm\infty$ — also depicts CEN, the TOE, or WoE (see Figure 59). All these are equivalent ways of representing the absolute vacuum or the Multiverses or Nothing mathematically. Therefore, CEN is the source of Existence as a whole. It is CEN that really exists.

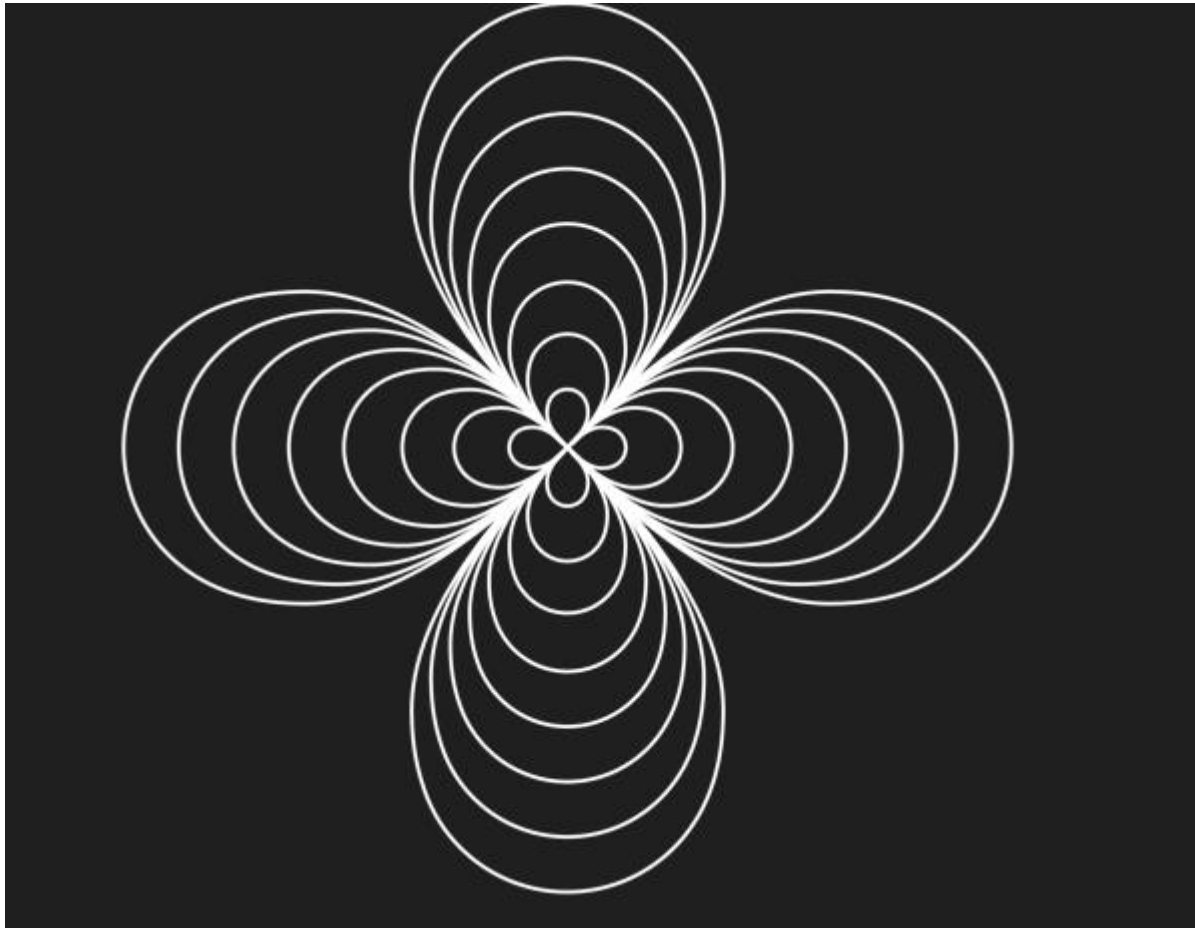
The question of whether God exists or not is a highly controversial one. The author regards this as a subjective issue as humans regard God in different ways. Objectively, CEN or Consciousness-Energy is all that really exists. If you regard God as All That Exists or the Source of All Things, then the Temic Algebra or the WoE equations or the TEPET Fractal depicts CEN or Nothing, which is all that exists and fits your definition of God. Again, this is a subjective and personal issue. In the future perhaps when consciousness science is well developed and better understood, if the majority of humans come to an agreement that God is All That Exists or the Source of All Things, not a human-like entity with anthropomorphic attributes as we have currently in different religions, the Temic Algebra or the WoE equations or the TEPET Fractal gives what can be called the God Equation. It all boils down to how God is defined by humans.

Figure 58: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author's Construct (2023)

Figure 59: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

9.3. Understanding Soul, Spirit, and Body in Consciousness Physics

To gain a deep understanding of these concepts, it is crucial to first define what is called life in Consciousness Physics. Merriam-Webster (2023a) gives a simple definition of life as “the quality that distinguishes a vital and functional being from a dead body” or “a principle or force that is considered to underlie the distinctive quality of animate beings”. These two definitions are adopted in these papers. However, these definitions are narrow and quite limited. A relativistic approach is adopted to give a broader definition of life in Consciousness Physics: Life is the quality or state that distinguishes or differentiates a vital and functional being from a dead body, as perceived based on the conception of consciousness in a specific realm of a universe, with this conception of life being relative. That means what appears as living or animate in one realm or universe may be perceived as dead or inanimate in another realm. Therefore, while based on the narrow conception of consciousness or life of most humans in

the earthly realm, the Universe is fine-tuned for life; but life is much more than how we (humans) perceive it as consciousness-energy is all that really exists. Something can seem dead or inanimate to us in the earthly realm or Universe, but that thing is regarded as living by entities in another realm or universe.

Also, various planets in our solar systems and tons of other regions in our Universe are teeming with life, but such living systems do not exhibit consciousness (life) within the narrow RMIVUXG segments of the EM spectrum we have explored yet or even the tiny visible region of the EM spectrum we can see with the naked eye. The living systems constitute what are called dark matter hiding in segments of the EM spectrum, which humans or their instruments cannot see or detect at the moment. Thus, exploring the CEES, which is the CEN Extended Electromagnetic Spectrum, is essential to broaden our scope of what is called life and consciousness. This is examined further under the chapter on CEN Spectrometry and Spectroscopy. Hence, instead of saying someone is dead, a more appropriate term is to state that only their body (host) is dead, but their consciousness has experienced a phase transition from the earthly realm to another realm. This approach is crucial and has dramatic effects on how a person sees life and reality as a whole.

To understand this deeper, it is crucial to explain what birth and death means in the context of Consciousness Physics. But first, let us first examine what soul and spirit mean in this emerging field. Objectively, the soul is a person's or complex system's individual consciousness, which is an element of the entanglement or matrix, Fundamental Consciousness, a sub-CEN in the TEPET set, the absolute vacuum or CEN. The soul is a generic term that applies to all complex systems, which are regarded as animate in the earthly realm, not only humans based on certain religious beliefs. For humans and other animals, the soul is the brain code.

Generally, the soul is the code of the nervous systems (such as brains in animals) in relatively highly evolved organisms, information processing and/or signal transmission system in plants, micro-organisms, and other organisms are aspects or organs (seats) of consciousness in these living organisms (complex systems). This code is extremely complex. The nervous systems (such as brains in animals), or information processing and/or signal transmission system, is an automorphic map or projection of individual consciousness or soul (in the inner universe), an element of the entanglement or matrix, Fundamental Consciousness in the TEPET set. That means when you look at a person's brain, you are looking at their soul as it is mapped or projected specifically to the earthly realm from the innermost Universe. The core of a person


or complex system is what is called the soul in the religious or cultural context and is actually a CD Double of their brain or information processing and/or signal transmission system in the outer universe, and this soul (core) lies in the innermost Universe or the Beginning.

As for the spirit, this is the symmetrical partner or CD Double of the body in the outer universe. What is called the body in the outer universe is an automorphic map or projection of what is called spirit in the inner universe. Simply put, the inner self of a living system means their spirit, while their outer self means their body. In the first phase of this project, it was stated that every human has an inner self in the inner universe and an outer self in the outer or physical Universe (see Tijani, 2023c). The same thing applies to all other living organisms. That inner self is what is called spirit in the religious or cultural context. It is simply an automorphic projection or simulation of matter (complex system) from the inner universe to the outer universe. For humans, connecting with their CD Double (their inner self or spirit) in the inner universe is a function of the mind, not the body. Meditation can allow an individual to access different realms in the inner universe because when a person meditates, their consciousness, which travels as waves, based on the Conwave Model, can get lifted into or connected to these realms via superposition of waves and coherence. Reality is multitiered and multilayered, as explained earlier.

9.4. Understanding Existence, Birth, Death, Reincarnation, Heaven, and Hell Using Consciousness Statistics

The business of Consciousness Statistics mainly has to do with mapping or determining the exact location of individual consciousness in the Multiverses at any given point in time. As stated in Axiom 5 of the Temic Fundamental Principles of the Universes, space-time is an emergent property; it is not fundamental to the universes. That means what is called individual consciousness or simply consciousness exists everywhere and nowhere at the same time. Thus, Consciousness Statistics is highly complex and requires a deep understanding of Consciousness Mechanics and Probability.

In the first phase of this research project, birth was defined as the phase transition or translation of consciousness from one realm to the other (see Tijani 2023, 2023c). The same definition was also adopted for death. Specifically, it was stated that the process of coming to life is a phase transition or translation of consciousness (Tijani, 2023). When a person experiences what is called death in the earthly realm, they undergo what is called birth in another realm. Both happens simultaneously or almost at the same time. This is because existence has no beginning

and end in the Temic context as our Universe (or any universe at all) does not occupy space and is not bound by time. That means space-time only exists within the Universe (or any universe), not outside of it. At its core, any universe (including ours) is simply Nothing or CEN, an aclopen set (neither open nor closed). The Temic Algebra illustrates this mathematically, where each element of the TEPET set stands for a universe (along with its conjugate) and is represented by , a vacuum or Nothing, as explained earlier (see Figure 58).

It is also cen automorphisms, which are cen permutations or cen transformations that also underlie the phenomena of birth and death. Birth and death of complex systems are simply among nature's most fascinating cycles. Reincarnation is also yet another interesting cycle of nature. In Consciousness Physics, if incarnation of a soul or individual consciousness in a specific realm in an outer universe from the innermost Universe means an automorphic map or projection of individual consciousness, an element of the sub-CEN, Fundamental Consciousness, in the Collective Entanglement, as shown in the Temic Algebra (see Figure 58) from the innermost Universe to that realm of the outer universe, then the reincarnation of the soul or individual consciousness is defined as the reoccurrence of such mapping into the same realm in the outer universe but in a different fragment of space-time.

The TEPET Fractal shows the mathematics underlying the natural cycles of birth, death, and reincarnation, and these cycles occur infinitely, which is why their mathematical description is given by what is called the Mathematics of Infinities, another name for Consciousness Mechanics (see Figure 59). This Mathematics will be developed further in subsequent research efforts. Existence originated from the innermost Universe or CEN, and this has no beginning and end because space-time is not fundamental to it. Before a human or any living system was borne in the earthly realm, their consciousness had existed in the innermost Universe as part of the coagulation called the Beginning or Nothing, a single Matrix, which is the Collective Entanglement, as depicted in Temic Algebra (see Figure 58).

When the individual consciousnesses became dispersed or scattered as photons of conwaves in different universes in existence via the First Bang initiated by the generator, Fundamental Consciousness in the absolute vacuum and the subsequent Big Bangs occurring infinitely as explained earlier, photons of consciousness waves became absorbed by stars, stars, planets, animals, plants, microbes, and others, making Fundamental Consciousness to transition to individual consciousnesses in these complex systems. These individual consciousnesses are super-infinite in number and tracing the exact location of each one in the Multiverses is

humanly impossible and beyond the scope of the current papers. Hence, to explain birth, death, reincarnation, heaven, and hell in the current papers, the focus will be on humans, animals, plants, and similar complex systems. This is covered deeply in the next chapter on CEN Spectrometry and Spectroscopy. For now, it is necessary to bear in mind that heaven and hell are subjective terms used in the religious context to describe realms existing in this Universe and other universes, which the souls (individual consciousnesses) of humans choose to transition to on leaving the earthly realm after death. It all boils down to a person's choice (of beliefs, thoughts) while existing in the earthly realm. This is the physics of religion or belief systems. The realms called heaven and hell in the religious context will be explained in detail in the next section.

9.5. Conclusion

In this section, the nature of existence, space-time, and related topics such as God, heaven, hell, reincarnation, and others from a scientific viewpoint, especially using the approaches of Consciousness Mechanics, have been examined. Using Temic Algebra, the Whole of Existence (WoE) has been defined as a function of cen given by the WoE equations, whose alternative form is the TEPET Fractal depicting CEN or Nothing. As regards All That Exists or the Source of All Things, if this is defined as God, then the WoE equations give what may be called the God Equation. This is a subjective and personal issue, depending on how God is defined by people. Preliminary development has been made with regard to understanding existence, birth, death, reincarnation, heaven, and hell using Consciousness Statistics. Consciousness Statistics is developed further in the next section to explore these topics deeply in a mathematical manner.

SECTION TEN

10.0. CEN Spectrometry and Spectroscopy

10.1. Introduction

CEN Spectrometry is a method of studying and measuring the interactions between various EM radiations in the CEN Extended Electromagnetic Spectrum (CEES) and any form of matter (including ordinary matter, dark matter, and others) as well as reactions and measurements of radiation intensity and wavelength. This aspect of Consciousness Physics entails studying and measuring the CEES and will be developed for the spectroscopic analysis of various kinds of materials, including exotic matter/energies. Exotic matter/energies have unusual properties and behavior/effect on other kinds of matter, and these properties and behavior seem magical or “supernatural” (voodoo) to people. On the other hand, CEN Spectroscopy is the study of the absorption and emission of various EM radiations in the CEN Extended Electromagnetic Spectrum by any form of matter, including ordinary matter (baryonic matter), dark matter (non-baryonic matter), and others. CEN Spectrometry and Spectroscopy are developed as generalizations of the fields of spectrometry and spectroscopy to all possible dimensions and radiations.

10.2. The Physics of Religion (Belief Systems): Understanding Birth, Death, the Big Bang, the Brain, and Consciousness Using Consciousness Statistics

There is a saying in Ìṣẹ̀ṣẹ̀, the culture and traditions of Yorùbá people in Nigeria, which goes thus: “Ayé lója ọ̀rùn nìlẹ̀”, which means “the Earth is a marketplace, while the spiritual realm or heaven is home”. This proverb is profound and holds the philosophical basis for the Physics of Religion (beliefs) in these papers. This subsection deals with birth, death, reincarnation, heaven and hell in detail and their connection to consciousness, Big Bang, and the brain in this emerging field, with all these concepts examined under a single theoretical framework, Consciousness Physics, or the Theory of Everything.

Earlier, death has been defined as the phase transition or translation of consciousness from one realm to the other. When this phase transition or translation of conwaves of a complex system occurs in the earthly realm, the living system will become connected to another realm via the superposition and coherence of their conwaves with the conwaves of that other realm, and they will experience birth in the new realm. Hence, birth and death both involve the phase transition or translation of consciousness from one realm to the other and take place simultaneously or

almost at the same time. These connections are similar to the ones we do when we make a phone call using radio waves to connect with other people, such as family, friends, business partners, and the likes. This is radio communication. But in the former connections involving death in the earthly realm, which corresponds to birth in another realm, the living system makes that connection using their brain waves, which are photons of conwaves that vibrate outside the bandwidth of Gaia (earthly) frequencies and matches the bandwidth of the new realm, which can be in this universe or another universe, with the complex system now hosted on or synced to this new realm. This is a kind of conwave communication. It is cen transformation, specifically tepet automorphism or mapping or projection, which underlie these two processes (birth and death). Such tepet automorphisms are incarnations of souls from the inner universe to the outer universe, or reincarnations of souls from the inner universe to the outer universe if the process is a repetition in a different fragment of space-time, and these processes are tepet actions governed by the Temic State Equations (see the equations below) obtained from Lagrange theorem earlier:

$$\text{Aut } \text{☸} : \text{☸} \rightarrow \text{☸}$$

$$\text{Out } \text{☸} = \text{Aut } \text{☸} / \text{Inn } \text{☸}$$

Where Aut ☸ symbolizes tepet automorphism or cen automorphism

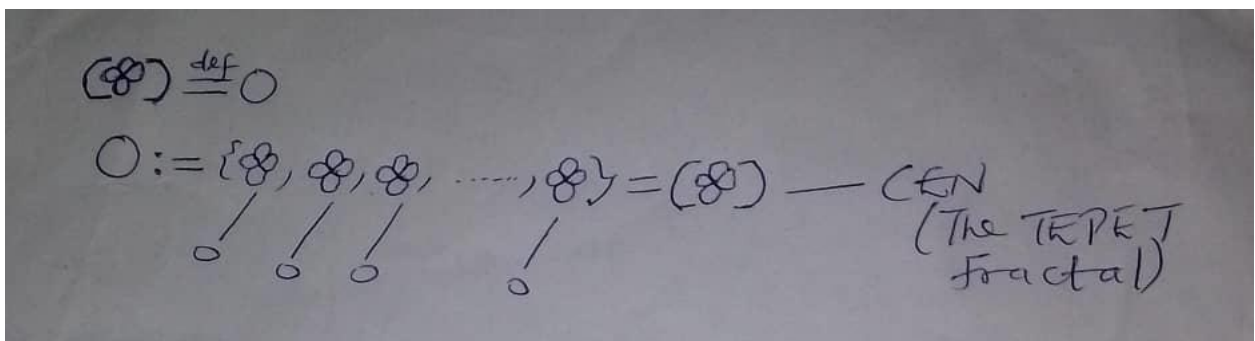
To explain the Physics of Religion (faiths), Consciousness Statistics is applied. But first, it is crucial to define religion briefly. Oxford Learner’s Dictionary (nd) states that a religion is “a particular system of faith and worship”. This definition is adopted in this study. Hence, synonyms such as creed, faith, and belief will be used in place of religion. Spirituality is a related term, used in this context, to mean the unphysical dimensions (the inner universes) as they apply to each human or complex system.

To explore the evolution of belief systems via the Big Bang, the Temigrams and Temic Algebra in Consciousness Statistics are used. In the Beginning, which is the Collective Entanglement or the innermost Universe, the entanglement called Belief Systems (along with its conjugate) represented by ☸ in the TEPET set (see Figure 60), underwent Big Bang explosions initiated by the generator, Fundamental Consciousness. Thus, this entanglement, Belief Systems, was scattered or dispersed throughout the inner universes and mapped or projected or simulated in an automorphic manner (obeying specific composition laws) to the outer universes, one of



which is our own Universe. The same process also took place in the reverse or opposite direction.

All beliefs or belief systems in the earthly realm in our own Universe (an outer universe) had evolved in this manner from the inner universes, where they existed as ideas and thoughts (cenforms or censtates) in the minds of their authors, who also evolved from the same realms in the inner universes following similar composition laws. Through various cen permutations in the inner universes governed by various cen functions (laws), such beliefs evolved as ideas and thoughts in the minds of their authors, who created the beliefs on Earth as one religion or the other. The same thing also applies to other realms or universes where beliefs or belief systems are present.




Figure 60: Temic Algebra — the Mathematical Model of the Absolute Vacuum (CEN or the TOE)



Source: Author's Construct (2023)

As stated earlier, before any living system exists in the outer universes, such as the earthly realm in our own Universe, it had first existed as a soul (consciousness) in unphysical form in a frozen state in the innermost universe — the unphysical dimensions or realms. Such a soul is an element of the sub-CEN, Fundamental Consciousness (and its conjugate) represented by  in the figure above, denoting the TEPET set, which is the Collective Entanglement. The same pattern of cen depicted by the tepet symbol  is what underlies any soul, our own Universe, and the Multiverses as a whole. Also, the same Big Bang evolution mechanisms, as depicted by the Temigrams, applies to our own Universe, the Multiverses, and any element of any universe, including the soul. Therefore, each human, or each living system generally, can be seen as an automorphic expression or manifestation of the Universe, specifically the innermost Universe or the absolute vacuum, which is all that exists.

The evolution of life (consciousness) in an outer universe like our own Universe, specifically planet Earth, has already been explained via the Big Bang explosion of the generator, Fundamental Consciousness, and via other processes such as astrobiogenesis and consciousness absorption. There is no need to rehash this aspect (birth) here. For a more detailed discussion, you can also check Tijani (2023b). Birth and death of a living system on a planet in the outer universe can be regarded as the starting and ending points of a cycle of that system in that world.

In the other segment of the cycle, which is death, when a human dies on Earth, i.e., they experience a phase transition of their consciousness, the probability of finding this consciousness denoted by E_c , the symbol used to represent energy of consciousness waves earlier, is given by the Temic Superposition Principle, which is the generalized superposition principle, depicted by , an element of Temic Algebra. Before observation or measurement, the consciousness exists everywhere at once, represented by the super-infinite symbol , and nowhere, represented by 0, also represented by the same super-infinite symbol . This is because space-time is not fundamental to the Base Reality (the innermost Universe or the Beginning).

Developing Consciousness Statistics using ideas from Quantum Statistics, as explained by Griffiths & Schroeter (2019), the probability of finding a particle between a and b is calculated using the Born's statistical interpretation, which states $|\Psi(x, t)|^2$ gives this probability at a point x and time t:

$$\int_a^b |\Psi(x, t)|^2 dx = \{\text{probability of finding the particle between a and b, at time t}\} \text{ ---- (eq. 34)}$$

This is calculated using the well-known Schrödinger equation. In a discrete frame of reference (the everyday classical frame we are familiar with), the probability (chance) of an event, j, occurring is calculated by the formula containing discrete variables:

$$P(j) = \frac{N(j)}{N} \text{ ----- (eq. 35)}$$

Representing N(j) chances out of N possible chances. The sum of all the (individual) probabilities in the sample space is given as follows:

$$\sum_{j=0}^{\infty} P(j) = 1. \text{ ----- (eq. 36)}$$

In a continuous frame (such as quantum realms like those in the atomic and subatomic realms which we often find strange or unfamiliar), the probability (chance) of an event, j , occurring is calculated by the formula below containing continuous variables (infinitesimal intervals) in this case:

$$\{\text{probability that an individual (chosen at random) lies between } x \text{ and } (x + dx)\} = p(x) dx \text{ ---- (eq. 37)}$$

As outlined by Griffiths & Schroeter (2018), $p(x)$ represents probability density, often loosely translated as the “probability of getting x ”. To calculate the probability that x lies between a given finite interval, a and b , the integral of $p(x)$ is obtained as follows:

$$P_{ab} = \int_a^b p(x) dx \text{ ----- (eq. 38)}$$

And in this case, the corresponding sum of all the (individual) probabilities in the sample space is given by

$$\int_{-\infty}^{\infty} p(x) dx = 1 \text{ ----- (eq. 39)}$$


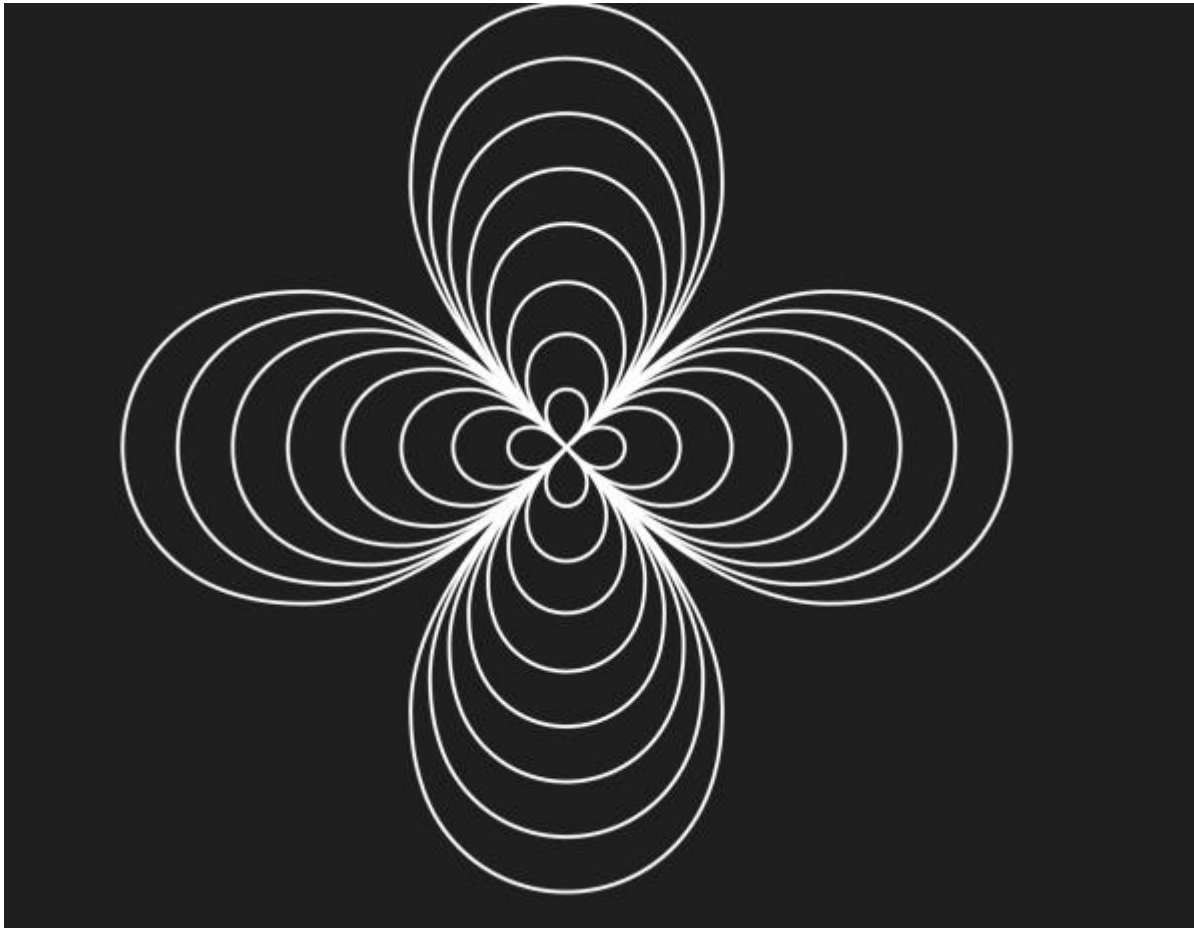
This is in line with the definition of a statistical ensemble in Quantum Mechanics stated earlier meaning probability distribution over possible quantum states, described mathematically by a probability density operator S that is a non-negative, self-adjoint, trace-class operator of trace 1 on the Hilbert space H , which describes the quantum system (Nair, 2023). However, in Consciousness Statistics, the conception of probability is wider and generalized to all possible dimensions using the cen operators and functions. A similar formulation made to describe the probability distribution of cen systems in Consciousness Mechanics was stated thus: a statistical (cen) ensemble, which means probability distribution over all possible censtates, is described mathematically by the squa operator and its conjugate, ket operator, on  in the TEPET space (CEN or the Multiverses), represented in the figure below (see Figure 61), which describes the cen system.

Figure 61: CEN — A Model of the Absolute Vacuum or the Collective Entanglement (The Whole of Existence)



Source: CENProject (Design done by Quadri Tijani, CENProject Partner)

An immediate implication of this formulation is that unlike in Quantum Mechanics, where the sum of all the (individual) probabilities in a sample space is 1, in Consciousness Mechanics, it can have super-infinite possible values, which can be positive, negative, 0, or others, depending on the nature of the laws of nature in the universe in question. The probability of finding consciousness or any system or particle (anything at all) in the Multiverses generally is defined as follows:

$$P(E_c) := \text{[CEN Logo]} \text{ or } 0 \text{ ----- (eq. 40)}$$

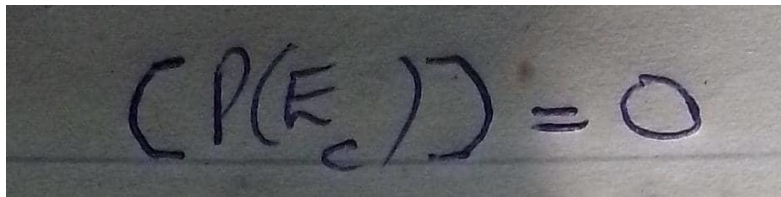
Where E_c is the symbol used to represent energy of consciousness waves earlier. (The evolution of this parameter, $P(E_c)$, from the innermost Universe to the physical Universe, specifically planet Earth (i.e., the cen transformation from a reand to the physical world) can be done using the Temigrams, the Eight Axioms, the cen operators, and cen functions, as carried out earlier

for other parts of this study. But there is no need to do this again here.) For instance, while in the earthly realm, the sum of all the (individual) probabilities in any sample space is 1, in the anti-earthly realm in another universe (an anti-outer universe), the (opposite) sum of all the (individual) probabilities in any sample space there is -1 . When these sums are superposed or combined together, the result is 0. If $P_{(\pm\infty)}$ and $\bar{P}_{(\pm\infty)}$ denote the two formulas given by equations 36 and 39 respectively, this implies

$$P(E_c) = P_{(\pm\infty)} + \bar{P}_{(\pm\infty)} = 1 - 1 = 0 \text{ ----- (eq. 41)}$$

Another way to denote this annihilation operation is given by the action of the squaket operator on $P(E_c)$, which gives zero:

Figure 62: Annihilation Operation in Consciousness Statistics



Source: Author's construct (2023)

The superposition or combination of all such sums of probabilities in all possible universes is the entanglement, \mathcal{P} , which is also defined as \mathcal{P} or 0, like equation 40:

$$\mathcal{P} := \mathcal{P} \text{ or } 0 \text{ ----- (eq. 42)}$$

Denoting everywhere and nowhere. This shows that when a person dies, to map their consciousness using Consciousness Statistics, the probability or chance of finding their soul in any realm of the Multiverses is \mathcal{P} or 0. Recall Axiom 5, which states that space-time is an emergent property; it is not fundamental to the universes, and the Temic superposition principle, which states that consciousness-energy exists everywhere in any universe at once in a superposition of infinitely possible forms (humans, animals, plants, and tons of others), and the heart functions as a modulator or regulator that tunes the frequencies of individual consciousness of a complex system and connects the living system with one of those natural frequencies of a specific realm or planet that the system is aware of or remembers. From the foregoing, when a person is experiencing death on a planet such as Earth, their soul has various options (incarnation to a new realm or reincarnation to the same realm in another fragment of

space-time), where they will experience their next life. Among other factors, this depends on how their heart tunes the frequencies of the photons of their consciousness waves to connect them with one of those natural frequencies of another realm or planet that they spend their next life. All this also applies to all other complex systems as other animals, plants, and even insects also have their afterlives because they have consciousness, whose underlying framework is also cen or tepet.

Generally, all systems with consciousness or soul have life and afterlife, which can be pleasant (heaven) or unpleasant (hell), subject to the observer's perception. The perception of any realm or planet in universes (whether as pleasant/heaven or unpleasant/hell) varies from one person to the other, from one living system, from one culture to the other. For instance, in our existence currently in the earthly realm, some humans perceive it as "heaven on earth", while others regard it "hell on earth" based on their lifestyle, level of income, beliefs, and other factors. Still, some humans do not subscribe to the heaven-hell dichotomy. The same thing also applies to realms in the afterlife. This is subjectivity as it applies to the Physics of Religion. The objective aspect is that consciousness has no beginning and no end: It changes form or state from one realm or planet to the other super-infinitely and exists everywhere and nowhere all at once.

Realms in the afterlife, others refer to worlds or planets in inner universes (including anti-inner universes) and other outer universes (including anti-outer universes), with the exception of realms or planets in our own Universe. It is pertinent to note that terms like unphysical (inner) universe and physical (outer) universe, or life and afterlife ("unlife" or dead) are all based on the symmetry, which underlies all things in nature and the Multiverses themselves as a whole, as depicted mathematically in the TEPET Fractal (see Figure 61), which deals with the Mathematics of Infinities, the other name for Consciousness Mechanics.

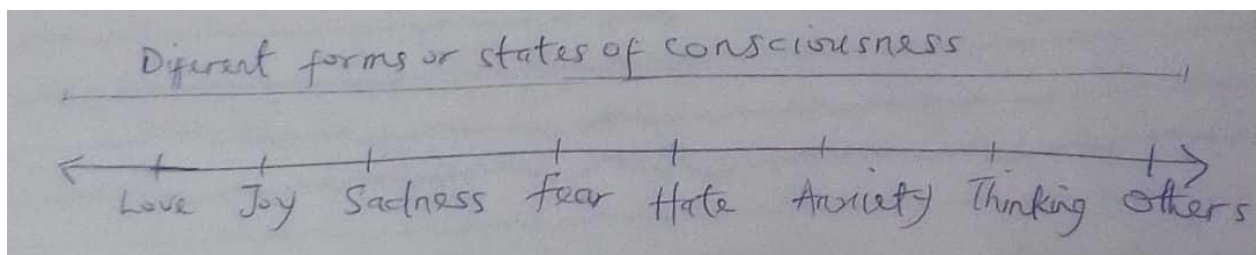
In principle, it is possible to communicate with the dead using the various formulas in Consciousness Statistics developed in this study and to be developed in further research and using certain codes. These codes are like phone numbers or encrypted mechanisms, which can be used to connect with different complex systems or realms. The codes or mechanisms vary from one family or type of complex systems or realms to the other based on the vibrational properties of the conwaves of these systems or realms. For instance, for us humans, such codes differ across families or lineages (groups) of humans, and factors such as genetics, physiology, psychology, astrobiogenesis, and others affect this kind of communication called conwave communication. Conwave communication operates in many ways like radio communication.

In fact, some people may prefer to classify consciousness waves under radio waves generally. However, conwave communication is advanced radio communication. This is discussed in detail in my earlier study (see Tijani, 2023c).

To engage in conwave communication (i.e., communicating or connecting with another person anywhere on the planet or in the Universe or in any universe via conwaves), the two people must agree beforehand on a frequency of heartbeat and breath to meet, and they must understand how this kind of communication works. Thus, you can only communicate with the dead using this method if you have made such an arrangement with them beforehand when they were alive on Earth. If not, you can only engage in such correspondences if your level of perception or awareness is strong or deep enough to hear them when they reach out from their current realm. Like radio communication, conwave communication can also be disrupted by noises such as environmental disturbances, self-limiting beliefs (doubts, fears, and others), and other factors. However, in the case of conwave communication, your brain, especially its code called consciousness, is like the antenna functioning as the sender and/or receiver of signals of conwave communication, while your heart is the signal modulator or tuner.

To use this technique, it is necessary for one to learn how to alternate one's breathing pattern to change one's heartbeat to a desired state. This should be engaged in with utmost care and caution, and one needs to study one's body to find a meditation technique that best suits one's physiological and psychological makeup. The meditation approach adopted in this study involves a path to self-discovery. A heartbeat digitizer may help in this regard. It is a device for measuring heartbeat rates. The consciousness region of the CEES shows different forms of conwaves, such as thought waves and wish waves (emotions waves like waves of fear, loves, hate, and the likes) (see Figure 63). These are forms of conwaves, whose vibrations are involved in conwave communication in complex systems such as a human.

Figure 63: The Consciousness Region of the CEN Extended Electromagnetic Spectrum



Source: Author's Construct (2023)

Conwave communication (communication via conwaves) appears like a clear or lucid dream. It involves engaging in a meditation, and many of us have even communicated with others in this manner before accidentally when we had some dreams that seemed so real to us and also later came to pass. But we can do it deliberately using a heartbeat digitizer to monitor our heart rates while sleeping, for instance, which will tell us the realms we experience while sleeping and the specific heartbeats to explore such realms intentionally. Heartbeat digitizers are crucial devices for space exploration and conwave communication.

In the CEES, the consciousness region shows different forms of conwaves, such as thought waves and wish waves (emotions waves like waves of fear, loves, hate, and the likes). These are forms of conwaves that have to do with beliefs and their vibrations determine the nature of a person's life in the earthly realm, next life or afterlife in other realms, whose nature is subject to their perception or judgment. The heartbeat rates of living systems in every planet, realm, or world are different, and each realm, planet, or universe vibrates at different sets of frequencies. Whether the next life or afterlife of a person is perceived as heaven or hell is determined by their thoughts or beliefs (information, codes in their head) while on earth. When a person (or any complex system generally) dies on this planet, their soul engages in flights from the outer universe to the inner universe.

On leaving the earthly realm, if they have no unfinished business on this planet, their consciousness will be transitioned from this planet to the constellation of the then new star formed initially when they were borne on Earth. This star was mentioned in the paper on astrobogenesis earlier (see Tijani, 2023b). Once a person dies on Earth, this star that was formed initially when the person was borne in the earthly realm also dies immediately or about the same time. And the black hole that resulted from this star's death is where the consciousness of the deceased flies to as a ray or photons of light (conwaves specifically). This tunnel (black hole) takes them to a new realm in another universe, where they experience an afterlife (heaven or hell or others), or it returns them back to the innermost Universe called the Beginning, where they become frozen again in a vacuum as they were before the existence of space-time in our own Universe. This applies to all living systems generally, not only humans.

If the deceased has an unfinished business in the earthly realm, their soul will roam around this realm in an unphysical body called the spirit (known as dark matter in the mainstream science) for some time. During this period, they could connect with other humans by tuning their frequency to match one of the natural frequencies of such people, who will perceive them as a

ghost, spirit, and the likes. It is superposition and coherence of conwaves underlying this kind of communication or connection. Each consciousness that journeys to this planet as photons of conwaves from the inner universe and becomes absorbed in what is called complex systems on Earth has a purpose or mission for coming to this world. For humans, most people do not often discover themselves and know their mission on Earth. Through soul-searching and deep meditation, a person can discover their mission on this planet, or they can give themselves a purpose for their existence on Earth so as to live a fulfilled life in this world.

However, if a person dies without fulfilling their mission or purpose on Earth, such people often seek reincarnation to achieve the destiny their CD double (their inner self) chose for them while in the inner universe. Thus, instead of transitioning (incarnating) to a new realm after death on Earth, they are sent back to this same planet in the same fragment of space-time or another fragment of space-time, in the same form (as a human) or another form (another type of animal, etc.). It is Temic Superposition Principle that underlies this phenomenon.

The choice of beliefs of a person while living on Earth determines how their life here, next life or afterlife in another realm will be. Over a person's existence in the earthly realm, their beliefs wire and rewire their brain, shaping and influencing their reality in life (on Earth) and their reality in their next life (including their afterlife). These beliefs are like programming languages or codes used to program the human mind. When you are being taught a belief system or any kind of knowledge (or you are teaching yourself), you are being programmed (or you are programming yourself) using that belief system or knowledge as code or programming language. Hence, it is important to choose one's belief system or the knowledge one seeks carefully because one's beliefs (including the knowledge one has) determine one's reality in this life and their next life.

Also, any book one reads can influence or control one's beliefs, thoughts, actions, and life generally because all books and kinds of knowledge/disciplines are codes or commands (information generally) for programming, reprogramming, and deprogramming human's minds. If complex systems such as humans are machines, then beliefs, books, and all kinds of knowledge/disciplines are the codes or commands that make the machine work. When choosing a belief system, deep thinking, critical thinking, and meditation are vital, along with the use of scientific method (evidence-based knowledge). This also applies to all areas of life as well. Beliefs are like vacuums, and if a person or a complex system does not give power

to them, such beliefs appear useless or inefficient. Thus, it is only a person that gives power to whatever beliefs they make or choose.

During their existence in the earthly realm, a person (through their beliefs) connects their mind (individual consciousness waves) to the frequency bandwidth of another realm (heaven or hell, which are subjective terms, or others), and when they die, they will experience such a realm by their choice (of beliefs) as the reality, which they have built for themselves over their course of earthly existence. This is programming of the mind using beliefs as codes or commands just like computers and machines are programmed using codes called programming languages.

If the deceased finds such a realm pleasant and enjoyable, they will call it heaven (this is subjective), and if they find such a realm unpleasant and harsh, they will call it hell (this is also subjective). Whether a realm is perceived as heaven or hell by an observer is subjective and relative as what may be seen as good and pleasant to one person may seem bad and unpleasant to another. However, what is objectively true as stated before, is that consciousness (existence) has no beginning and end, and from time to time, consciousness evolves or transitions as EM waves from one realm to another via the principles of superposition and coherence.

Apart from that, reincarnation can also occur as stated before if a person dies on earth before their time (i.e., before they complete their mission on earth). When such a person is reincarnated to Earth in the same or different fragment of space-time to complete their mission, loss of memory occurs. In one of the modes of such reincarnations, the soul is borne again in a different fragment of space-time, where they start life afresh on the planet (Earth, in this case). One reason for the loss of memory is that reincarnated souls sometimes take a relatively long period to return to the same planet as their previous life, and such periods can be as long as 500 years or longer or sometimes shorter. After leaving the Earth, they may have transitioned to another planet in another universe, or transitioned to realms in inner universes where peace, tranquility, and love are deeply concentrated (which could be boring to them), or they may have returned to the innermost Universe to experience unconsciousness in the vacuums (the frozen states) for some period. Hence, on reincarnating to Earth in another fragment of space-time, they will have forgotten almost all the deeds and acts they engaged in during their past life. To explore this loss of memory (loss of energy) that occurs due to reincarnation further, the relevant loss functions will be developed in further research on the Physics of Belief Systems.

This memory loss is one key reason why reincarnated humans often repeat many acts and deeds that they did in their past life in their new life on the same planet. This is also the major reason why history often repeats itself. If a person feels it in their soul that they are a reincarnated person or they believe so due to some compelling circumstances, to remember their mission on Earth, they need to engage in deep soul searching, reflection, and deep meditations. Souls seek reincarnation in the inner universes for many reasons; often, they do so to mend their ways and correct their mistakes in their past life. At other times, they do so to complete their mission on Earth because their life was cut short before their time in their first life. Sometimes, souls seek reincarnation to Earth to avenge their death if they were killed unjustly in their life. There are many other reasons.

For the faithless — atheists, agnostics, and the likes, these are humans that do not subscribe to classifications and beliefs such as heaven, hell, reincarnation, and the likes. While heaven and hell are subjective and vary from one person, religion, or culture to the other, incarnation and reincarnation to a realm or world in the outer universe are among the various natural cycles that human consciousnesses and other kinds of consciousnesses go through regardless of their beliefs. Whether such realms that souls are incarnated or reincarnated to can be regarded as heaven, hell, or described using other tags is left to the observer to judge based on their perception and beliefs. In other words, a person creates their “heaven” or “hell” in their next cycle of existence through their thoughts and beliefs on Earth. Even without having any beliefs, nature will take its course and incarnate or reincarnate consciousnesses to realms using various criteria as determined by a particular soul in a specific level of evolution or development. Apart from incarnations and reincarnations, other such natural cycles are life, death, gravity, the Big Bang, and tons of others. All these are manifestations of the Eight Axioms, which exist independently of our beliefs or perception.

10.3. CEN Spectrometry and Spectroscopy Involving Interactions between Our Own Universe and Other Universes

Research is ongoing on this section and is being developed for a future edition of this book.

Under Development

10.4. Conclusion

CEN Spectrometry is a method of studying and measuring the interactions between various EM radiations in the CEN Extended Electromagnetic Spectrum (CEES) and any form of matter

(including ordinary matter, dark matter, and others) as well as reactions and measurements of radiation intensity and wavelength. CEN Spectrometry and Spectroscopy are developed as generalizations of the fields of spectrometry and spectroscopy to all possible dimensions and radiations. This section is being developed further for future studies. Physics of Religion has been examined in this chapter using Consciousness Statistics. Consciousness Statistics will also be developed further in other aspects pertaining to CEN Spectrometry and Spectroscopy. The most importance lesson taught in this section is that our beliefs create our reality in this life and our reality in the next life (including the afterlife). Hence, having good beliefs and beneficial thoughts is paramount to our existence. We should desist from feeding our fears and other negative beliefs about ourselves, such as doubts and others. These can have negative impact on our reality in this realm and other realms we may find ourselves in the future after leaving the earthly realm, even though we are already existing in those (future) realms based on the frame of reference in the inner universe, as stated in the Temic Superposition Principle.

SECTION ELEVEN

11.0. Ethical Considerations

Consciousness Physics, as a whole along with its mathematical aspect, Consciousness Mechanics, is developed based on the Temic approaches by learning from natural history, African philosophical systems, especially those of Atum, Ọlọrún Olodùmáre, Ọ̀rúnmilà, and Ifá, and modern science. Along with Ọlọrún Olodùmáre, who is the ancestor of Yorùbá people in Nigeria, Atum, Ọ̀rúnmilà, and Ifá are key ancestors of Africans and are worshipped as one god or the other by the natives. However, in this study, a scientific (agnostic) view about God is adopted.

In developing the ethical section of Consciousness Physics for these papers, the Temigrams and the Eight Axioms (the Temic Universal Laws) are applied. The philosophical basis of this chapter comes from the Olodùmáre philosophy as captured in the Odù-Ifá literary corpus and the Ọ̀mólúwabí philosophy. There is no suitable translation in English for the Yorùbá word, “Ọ̀mólúwabí”. It is simply “Ọ̀mólúwabí”, just like all other native African ancestors stated above. The Ọ̀mólúwabí philosophy captures commendable qualities, such as òòtò (integrity), sùúru (patience), ákíkanjú (courage), ogbón (intelligence), ìmọ (knowledge), and ooyé (wisdom). The ethics guiding Consciousness Physics and Consciousness Mechanics, as well as the use of their applications (CEN technologies), are based on these principles.

Additionally, in Odù-Ifá, which is the source (code) of the language called Yorùbá, the word “ìwa” which means “existence”, is also used to code (represent) “good morals” or “morality” in general. This shows the great importance the ancestors of Yorùbá people, who developed this language (Yorùbá) place on having good morals, doing good to humanity. Various proverbs and sayings developed by Ọ̀rúnmilà and Ifá, as stated in the corpus, such as “Ìwa lẹ̀bá iwúre”, which means “Good morals are superior to good wishes”, and “Ìwa lẹ̀wá ọ̀mọ eniyan”, which means “Good morals are what make a person beautiful or handsome”, capture the notion that morality (good morals) is central to a person’s existence.

From the foregoing, it is crucial to do science and use technology based on two pillars: self (inner) and others (outer). The first pillar is the person doing science and/or using technology, and their thoughts, actions, emotions are ruled by their inner world (conwaves their brain emits, physiology, genetics, astrobiogenesis, and other factors). The second pillar, others, constitute the outer world, consisting of other humans in society, the planet as a whole, and other factors external to the person engaging in science and/or using technology. All these factors have to

be taken into consideration holistically when doing science and using technology to ensure the benefits outweigh the bad aspects. The primary aim here is not to achieve perfection because in the earthly realm, anything or anyone that has good sides must also have bad sides. This is entanglement at play, which is a fundamental aspect of reality. The purpose of doing science and using technology guided by good ethics is to achieve completeness, excellence, and altruism.

PART IV

APPLICATIONS

“The sacred truth of science is that there are no sacred truths” — Carl Sagan

SECTION ONE

1.0. Applications and Predictions of the Studies

1.1. Predictions of Consciousness Physics

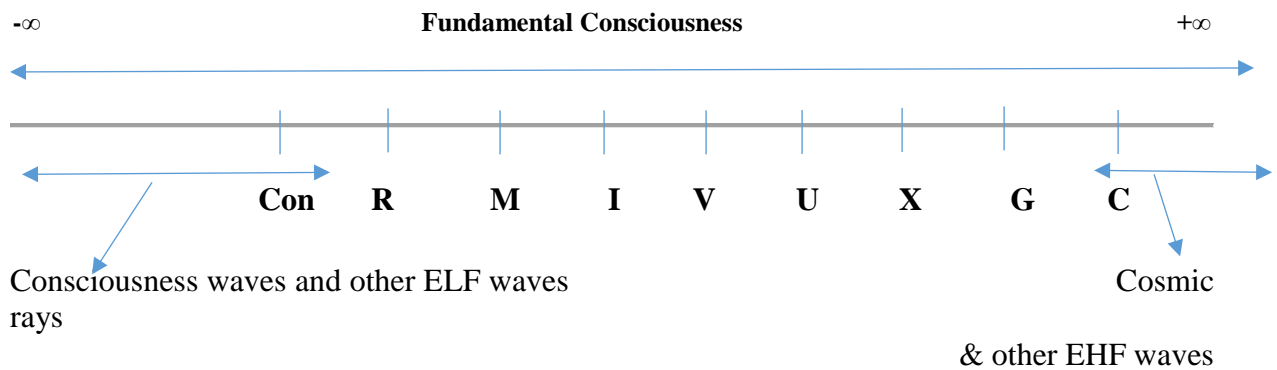
1.1.1. Breaking of the Current Value of the Speed of Light

This study predicts that the present value of c , 299,792,458 meters per second, will be broken in the future when Consciousness Physics and related aspects of Physics are more developed further allowing more accurate/correct measurements of c to be made.

1.1.2. Expanded EM Spectrum: Discovery of More EM Radiations

This study predicts the existence of more types of electromagnetic radiation on this planet and in the Universe, which exist beyond the limits of the currently known segments of the EM spectrum, i.e., existing beyond radio segment, gamma ray segment, and cosmic ray spectrum which our current instruments are not sophisticated enough to detect (see Figure 7). It is predicted more EM radiations will be discovered by scientists in the future, and some of these waves might be responsible or play a part in the development of cancers, other diseases/medical conditions of unknown cause currently, and other currently inexplicable phenomena of nature. Some microbes or causative agents of these diseases or medical conditions could be hiding in these yet-to-be detected segments of the EM spectrum, including extremely low frequency (ELF) and extremely high frequency (EHF) regions.

Figure 7: Proposed New EM Spectrum — Expanded EM Spectrum



Source: Author’s construct (2023); Manning (2021)

Where $\pm\infty$ represents the powers for frequencies (as in $10^{\pm\infty}$) of each EM wave in the spectrum, and the each of the acronyms in the figure means consciousness, radio, microwave, infrared, visible, ultraviolet, x-rays, gamma, and cosmic rays respectively. (A newer version of this extended EM spectrum is the CEES discussed earlier.)

1.1.3. Existence of Invisible Particles (Dark Matter)

When the existence of more types of electromagnetic radiation on this planet and in the Universe, which exist beyond the limits of the currently known segments of the EM spectrum, is confirmed experimentally, more classes of particles will be discovered, which are currently invisible to us and our instruments and unknown to scientists. These particles could account for the effect attributed to dark matter. This study predicts the existence of particles interacting with segments of the EM spectrum very much below the lowest limits of the currently known radiofrequency radiations, but these particles, which give rise to dark matter, are too tiny to be detected by the instruments and devices of today.

1.1.4. Advanced Telescopes and Similar Instruments to See into Other Realms of Earth

Based on the foregoing, this study also predicts that scientists will develop telescopes — including consciousness telescopes covered in subsection 5.1.2. — and similar instruments that can help humans see into other realms, including the realms of dark matter, existing on this planet and other parts of the Universe, just like microscopes allow us to see into the realm of the microbes.

1.2. Applications of Consciousness Physics

According to the Temic relativistic consciousness principle, whether consciousness is quantum or classical in nature depends on an observer's frame of reference. As consciousness waves connect all things together across the Universe as a huge entanglement, it implies that Consciousness Physics has the potential to bring the whole Universe together, just like Radiophysics (radio waves) connects the whole Earth together. Also, as consciousness links all the entanglements in the absolute matrix together as a huge matrix, Consciousness Physics can connect one universe to the other. The emerging field of Consciousness Physics has tons of potential applications when fully developed. Here is a look at some of them:

1.2.1. Transformator for Teleportation

When the theoretical ideas proposed in this study are developed further, they can be applied to develop a transformator, a device that turns matter to light (photons), or fermions to bosons, and light to matter, or bosons to fermions. Scientists can get the materials that can be used to build this device on this planet or other planets. The transformator will have a source that turns matter to light (photons), or fermions to bosons. Then, at another location, there will be a receiver to receive the transformed photons and change the light back to matter.

A transformator will work with a consciousness sensor, which is explained below (see subsection 5.1.3.). A transformator will be highly useful for space travel at the speed of light or faster (superluminal travel or FTL), i.e., teleportation. It will introduce key advances in space exploration and space science.

1.2.2. SETI: Using Consciousness Telescope to Measure the Level of Consciousness in a Planet

A technology that measures and detects consciousness could be useful in Search for Extraterrestrial Intelligence (SETI) programs. With a consciousness wave observatory, consciousness waves emitted by astrophysical objects such as planets, suns, stars, and lifeforms in any part of the Universe can be detected and measured. This will aid the search for extraterrestrial life as it will allow scientists to detect alien life that might seem invisible to the naked eye because such is hiding in segments of the EM spectrum that the human eyes cannot see and our current devices are not sensitive enough to detect.

When the level of consciousness of a planet can be measured using a consciousness telescope or a related device, it is predicted that it will vary directly with the planet's level of habitation for lifeforms (living organisms), especially animals and plants. The relation below holds for determining the level of consciousness in a planet:

Level of consciousness of a planet (C) \propto level of habitation of the planet for living organisms (H):

$$C \propto H$$

With a constant of proportionality (consciousness per unit organism), k, given as:

$$k = \frac{C}{H}, \text{ in tems/organism, where tems is the unit of consciousness energy}$$

1.2.3. Planetary Defense: Using Consciousness Sensor to Detect Alien Life on Earth

In simple terms, a consciousness sensor or detector is a device that detects conwave emissions by a complex system. Such a device can work based on examining how conwaves emitted by a complex system interact with other known waves or use some other mechanisms. A consciousness sensor can serve various uses for humans. It can help detect alien lifeforms that may be on this planet hiding in EM segments, which our eyes cannot see, which our current sensors and instruments are not sensitive enough to detect. While consciousness sensors can make key contribution to various planetary defense programs of NASA and other similar agencies around the world and work with a transformer, the device can also serve other purposes, ranging from health surveillance, enhanced healthcare, advanced (telepathic) communication, and other applications.

1.2.4. Conwave Communication: Communication via Conwaves (Live Meetings/Correspondences)

Imagine you could communicate with anyone anywhere on the planet or anywhere in the Universe and feel and touch them live during the correspondence. With conwaves, it is possible to hold live meetings or correspondences with others anywhere they are on the planet or in this Universe or in any universe. Such meetings are more detailed and feel real, unlike phone calls and video calls. This is possible because consciousness waves connect all things together across the Universe as a huge entanglement. Thus, Consciousness Physics (conwaves) can bring the whole Universe together, just like Radiophysics (radio waves) connects the whole Earth

together. Conwave communication and radio communication have many aspects in common. In addition, since consciousness links all the entanglements in the absolute matrix together as a huge matrix, Consciousness Physics can connect one universe to the other.

Conwave communication works based on the notion that all things in the Universe are connected to one another. On any planet, all heads are connected together as a huge matrix or entanglement by consciousness, and because of this, it is possible for a brain to communicate with another brain via conwaves if they can tune to the same frequency. Two or more complex systems (such as humans) can experience the same realm or a shared reality, which can be in any planet, or in any outer universe, or in any inner universe, when their conwaves vibrate in phase with each other and with the frequency of vibration of the specific realm/world in question. “When the frequency of the heartbeats and breath of a person matches that of another human and any specific realm in the inner universe, these two people can experience a shared reality in this same realm via the principles of superposition of waves, coherence, and interference. Thus, it is possible for humans to explore realms in the inner universe as a group if they can tune to a specific frequency of heartbeat and breath that matches one of the natural frequencies of vibration of such realms” (Tijani, 2023a).

To engage in conwave communication (i.e., communicating or connecting with another person anywhere on the planet or in the Universe or in any universe), the two people must agree beforehand on a frequency of heartbeat and breath to meet, and they must understand how this kind of communication works. It is necessary to learn how to alternate one’s breathing pattern to change one’s heartbeat to a desired state. A heartbeat digitizer can help in this regard. It is a device for measuring heartbeat rates. Communication via conwaves appears like a clear or lucid dream. It involves engaging in a meditation, and many of us have even communicated with others in this manner before accidentally when we had some dreams that seemed so real to us and also later came to pass. But we can do it deliberately using a heartbeat digitizer to monitor our heart rates while sleeping, for instance, which will tell us the realms we experience while sleeping and the specific heartbeats to explore such realms intentionally. Heartbeat digitizers are crucial devices for space exploration and conwave communication.

1.2.5. Photocraft: Faster-Than-Light Travel

As stated in subsection 4.1.1., a transformator can aid space travel at the speed of light or faster. One of the several applications of the device is for FTL with photocraft, a group of spacecraft

that can only transport anything which has been changed to its light form with a transformer. Photoplanes are an example of photocraft which transport matter in light form at the speed of light or faster. Photoplanes are flying lights for teleportation — space-time travel (i.e., space travel and time travel).

The spacecraft can be developed by applying the principles of Consciousness Physics explained in these papers and other principles of Physics. They will be used with a transformer that changes photocraft and the matter (such as complex systems) to be transported into their light form and be made to travel faster than the speed of light. Photocraft can serve as a useful tool for probing planets, stars, galaxies, and black holes in our Universe since by travelling at the speed of light or faster, one can study the past of any planet and other astrophysical objects.

1.2.6. Treating Brain Disorders via Transfer of Consciousness

When Consciousness Physics is fully developed based on the TEMIC approaches and others, this understanding can help in treating various brain disorders. With a consciousness detector, consciousness can be transferred from a complex system, such as a human, to another. This is done when a healthy brain is got from a dead person who, while alive, had given consent to donate their brain when they die, and such a brain is used to cure those with maniac disorders, mental health issues, and other brain disorders. This process involves transfer of consciousness via brain transplant as the brain is the organ of consciousness in complex systems like animals, including humans.

1.2.7. Brain Modelling

If some humans with rare gifts/talents in various fields such as science, arts, sports, health, and others are willing to donate their brain for research after they die, such exceptional brains can be studied, replicated, and modelled to treat various diseases and solve other challenges we face on this planet. However, ethical concerns have to be taken into account for such application.

1.2.8. Using Conwave-Heart Vibrations to Treat Diseases

The heart is a modulator that tunes the frequencies of individual consciousness of a complex system and connects the living system with one of those natural frequencies of a specific realm

or planet that the system is aware of or remembers. This notion, which implies that our heart vibrations can take us into different realms in universes, can be applied in conjunction with the connection that exists between the heart and human emotions for treating diseases. In the inner universes are many realms of deep peace and tranquility. Humans can enter such realms coincidentally (coherence) or by using autosuggestions and other similar techniques to visualize themselves being in such peaceful states, and if they can connect to such realms successfully, a heartbeat digitizer can be used to record their heartbeats while in the realms so they can return to such states any time they choose. When people sleep in such realms of peace, they can wake up in a better emotional state. This can help in overcoming or treating depressions and curing diseases.

1.2.9. Killing Germs with the Mind

As stated earlier, both the inner universe and the outer universe determine our realities as humans, and our outer universes are exact replicas of our inner universes (Tijani, 2023a). Our inner universes or worlds are realms of thoughts, emotions (including love, happiness, fears, anxiety), ideas. Thoughts, emotions (love, happiness, fears, anxiety), ideas each travels as waves distinct in nature and are all forms of conwaves, which are brainwaves emitted by our brains.

When a human is in a negative state of mind, their brain gives off fear waves (including anxiety) or emotion waves, which tend to attract bad waves, which are conwaves radiated by other complex systems. When such complex systems are microbes, such humans can get infected with one disease or the other depending on the nature of micro-organisms in question. It is coherence that underlies this, where the conwaves emitted by two or complex systems vibrate in phase. Thus, when a person thinks too much or fears excessively that they will get infected with a disease, they could attract such a disease into their body based on this principle and fall ill or sick.

Buttressing this notion is the fact that many experts and researchers have established evidence showing stress, depression, and anxiety impairs the immune system, which can cause diseases (Burnet, 1971; Irwin et al., 1988; Schleifer et al., 1996; Benschop et al., 1998; Andersen et al., 1998; Byrnes et al., 1998; Bosch et al., 2005; Boscolo, 2009; Arranz et al., 2009; Nakaya, 2014; Cañas-González et al., 2020). Humans can also attract bad luck (unfavorable coincidences) and others based on the same principle explained via coherence.

The converse is also true, and this principle can be applied in the treatment of some diseases. Doctors can show patients video or pictures of the diseases (and the microbes) affecting them. When patients see these complex systems (the disease-causing micro-organisms), they can kill the microbes with their mind by wishing the disease away. This technique can work on certain microbes/diseases. What is at play here is decoherence between wish waves — one of the forms of conwaves emitted by the brain — and the conwaves emitted by the microbes. Several studies have established the effect of being in a positive state of mind on recovery from a disease or an illness (see Pressman & Cohen, 2005; Lyubomirsky et al., 2005; Howell et al., 2007; Veenhoven, 2008; Chida & Steptoe, 2008; Diener & Chan, 2011; Lamers et al., 2012; Steptoe, 2019).

1.2.10. Studying Emotion Waves from Trees to Communicate with Them

Generally, plants are complex systems that possess individual consciousness vibrating at specific bandwidths of frequencies unique to them. Emotion waves are one of the forms of their conwaves, and when these waves (signals and responses they emit) are studied, this can enhance our understanding of the inner universes of trees and the various types of emotions they express. With this understanding, we can communicate with trees, among other applications. Studies have demonstrated that plants also think and have feelings (see Schetzer, 2017; Gagliano, 2017).

1.2.11. Telepathy: B2B Communication with Reander

The Temic principle of consciousness entanglement states that all heads on this planet are connected together as a single matrix or entanglement, meaning one head can access the content of another head when both emit conwaves vibrating at the same, or almost the same, frequencies and think along the same line. When this notion is applied to communications, two or more humans can talk to one another using their mind (i.e., the brain) via conwaves — telepathy or brain-to-brain communication. This can be achieved by building Reanders, devices that can transfer or convey brain thoughts from one person to the other. Reanders are gadgets that can take you from one realm of the mind (i.e., a reand) or realm of consciousness to another, allowing humans to connect their minds together and share brain thoughts and ideas telepathically. Such devices will be of great help to those that are deaf and hard of hearing. Reanders can also help humans explore various realms in inner universes (realms of the mind

— reands) where space-time does not exist, allowing them to study the history (the past and future) of our planet and others.

1.2.12. Mind-Controlled Games

The principles of Consciousness Physics can also be applied in developing mind-controlled games, where headsets or headgears are built by applying the Temic approaches to entanglement and other theories.

1.2.13. Complex Systems Design (Biosynthesis)

For an extensive discussion of this subject, see my earlier paper (Tijani, 2023b). The design of complex systems via biosynthesis is one of the applications of Consciousness Physics. As stated in that study, “biosynthesis”, as used in the context of this study, is a process that involves synthesizing complex systems with life (i.e., living organisms) from organic and inorganic matter. There is a possibility that such complex systems can be designed as follows:

- Grinding inorganic matter such as stardust/cosmic dust into extremely tiny particles, which cannot be seen with the naked eye, after which blood, which is organic matter, is mixed with these particles. Then, the mixture is kept in a suitable incubation system or pot (which may be made of clay) for some period, which can be a year, or shorter, or longer
- If this process is properly done, the mixture can develop into a system, with sufficient complexity that allows it to absorb consciousness waves (life) from a dying star
- Depending on the arrangement of the ground inorganic matter, a complex system that belongs to any type or specie of living organisms can be formed

This is one of the processes through which consciousness (life) evolves on planet Earth in complex systems, with the other processes including fertilization generally (both the natural type and the kind done in a lab), cultivation of plants, and others. The author regards all these processes and related ones simply under a single phenomenon, evolution of consciousness (life) in the Universe (Tijani, 2023b). However, ethical concerns need to be taken into consideration for this application of Consciousness Physics. Complex systems design in Consciousness Physics will introduce key advances for space travel, setting up colonies in other planets, and several other applications.

1.2.14. The EOG Space Station

This study proposes the development of the Earth Observatory and Gaia Space Station (EOG Space Station), a modular space station, like the International Space Station, to be parked in low Earth orbit for scientific research, planetary defense and surveillance, and other programs. This space habitat will be a mini-planet Earth and contain a host of equipment and instruments; one of these is an all-seeing space telescope (ASST), which is a single observatory that contains a wide range of space telescopes, which can be used to view major frequency ranges, including gamma ray, x-ray, ultraviolet (UV) ray, visible, infrared ray, microwave, radio, consciousness, and other possible frequency ranges for astrometrical studies, astrophysical observations, and related programs. Scientists can use a modular design for the ASST so the observatory can be fitted with a series of space telescopes of different frequency ranges, with the whole unit made to function as a single device.

The proposed EOG Space Station will also contain the Periodic Table of Lifeforms on Earth, a catalog or organized array of key data of all known species of living creatures on this planet containing information about the frequency ranges of their brain waves (which are conwaves in animals) and similar conwaves of the nervous system/information/signal processing system of other complex systems on Earth. Other data to be collected for the PTL will be discussed fully in the next phase of this project. The PTL can provide a range of key benefits for scientific research, space exploration, complex systems design, medical studies, and other uses.

The Earth Observatory and Gaia Space Station will also contain other spacecraft including photocraft and other devices such as Reanders, heartbeat digitizers, and transformers; transformers will be highly useful in neutralizing alien invaders that may be a threat to this planet. This space station can also contain a meditation room called IFA. In this facility called IFA, humans can explore realms in inner universes, where space-time and gravity do not exist, allowing them to engage in time travel via meditation with a Reander and/or heartbeat digitizer for time travel and studying time fragments of our planet, which we call the past and the future in our frame of reference. The inspiration for this specific application came from Ifá (called the Oracle in English), an ancestor of modern-day Yorùbá people in Nigeria, who used complex calculations in the ancient past to engage in time travel, allowing him to see future events in his region, develop Yorùbá language in various dialects, and develop philosophies, belief systems, medicines, idioms, proverbs, poems, and culture practiced today by millions of Yorùbá people in Nigeria and around the world. The Yorùbá language in various dialects, in

addition to the philosophies, belief systems, medicines, idioms, proverbs, poems, and culture developed by Ifá thousands of years ago became the body of knowledge called the Odù-Ifá Corpus today with 256 codes/signs based on the binary number system. Miniaturization is crucial in the design of this space station, and a 100-year plan or thereabouts can be dedicated to developing this essential space habitat.

1.2.15. Exotic Applications of Consciousness Physics

In exotic applications of Consciousness Physics, various technologies are examined, which may look like sci-fi, voodoo, or magic to the average person, but they were actual technologies of the past human eras and will be also developed in the modern era as things (happenings, events, and phenomena) in nature occur in cycles. These exotic applications are based on certain techniques commonly employed in ancient eras of extinct human species, especially in Africa, to establish communications or correspondences with certain elements of nature, such as air, light, fire, water, plants, earth, and many others. It is pertinent to note that the author does not regard science and technology as something new to planet Earth in modern times. The pre-Homo erectus and Homo erectus eras were even much more technologically advanced than the current Homo sapiens era, and there are tons of evidence in support of this assertion. But that is beyond the scope of these papers.

In the past (extinct) human eras, the humans were much bigger than those in modern times, and many of the people of the past were giants. At such a scale, those people observed the elements of nature differently than the tiny humans in modern times mainly because the giants could see and hear things billions of times smaller than the smallest things the eyes and ears of an average human (Homo erectus or Homo sapiens) could detect. Over time, such giants became deified as one god or deity or the other in various cultures of the world and their capabilities seen as spiritual or supernatural feats by the tiny humans (Homo erectuses) they designed using the principles of Consciousness Physics and Genetics mimicking those humans that evolved naturally from stars. The Homo erectuses passed on stories about such giants of the past as one god or the other in religious and traditional practices across generations and even up to the modern era.

As stated earlier, generally, whether certain elements of nature appear discrete (as in Quantum Physics) or continuous (as in Classical Physics), or local or non-local, is relative and depends on the observer's frame of reference, based on the level of scale at which the observer can perceive nature. The scale at which we, or our instruments, observe anything in the Universe,

or any universe, depends on the level of energy we are able to observe. For instance, in ancient Africa, there were giants, who saw nature and its elements as conscious entities. The way a giant would perceive nature would be different from the way a tiny human in modern times would see it because both are doing their observation at different scales, and thus, they would perceive different levels of energy and consciousness density. Interestingly, the approach of seeing nature and its elements as conscious entities has a lot of depth and different exciting applications even in modern times. Underlying these applications or technologies is the notion that consciousness and energy is all that exists, any anything else is a picture or interpretation built for us by the brain, which we call reality but are illusions, not what really exists.

Each of all those entanglements explained in the absolute vacuum possesses an infinite amount of energy, which becomes scattered via Big Bang in discrete amounts or quanta in universes. Thus, anything (whether animate or inanimate from our own perspective) in nature is a manifestation of a specific element (an entanglement) in the absolute vacuum and has a specific range of energies it possesses (and corresponding range of frequencies it vibrates at) in a planet like Earth. In principle, it is possible to communicate with anything (any element) in nature if a person knows the frequencies of vibration of that thing or element (or its entanglement in the absolute vacuum).

In one of such applications of this approach, the magician establishes an entanglement with a certain element of nature, which could be light, fire, air, water, plants, earth, or even humans, or tons of others to dazzle their audience. The author regards all languages as codes, and any of such codes (words) has an effect on a person's brain and their environment, or at least their perception of their environment. Each word in a language can be seen as a wave with a specific amount of energy and vibrating at a specific frequency. Everything we see as reality is based on the principle of entanglement-to-entanglement communication, and from the Temic Principle of Conscious Perception, we know all forms of interactions with the environment is based on exchange/interaction of photons of conwaves and other forms of photons between the observer and its environment.

From the foregoing, if a person knows the frequency or frequency range of vibration of certain elements in nature, it is possible to communicate with these elements, be it light, fire, humans, other animals, plants, earth, water, and anything in nature. In ancient Africa, there were people who knew some codes that could allow them to communicate or interact with or engage in correspondences with certain elements or forces in nature. In such interactions, those people

could create a relationship with these elements of nature, who assisted them in carrying out various activities. Those activities often appeared supernatural or spiritual to the average person, but they were actually scientific based on the principles that consciousness and energy is all that exists, and that all things are connected or entangled and balance one another. Using this knowledge, the past humans that could achieve those feats were deified as gods in various cultures of Africa and other parts of the world and associated with certain elements of nature they specialized in.

For instance, in Ìṣẹ̀ṣẹ, Yorùbá culture, Ogun was a past human who could communicate and interact with rocks and iron, which allowed him to invent the science of designing metallic tools and weapons in ancient Yorùbáland. Ogun pioneered metallurgy and blacksmithing in this part of Nigeria. Hence, he was deified by the natives as the god of war and iron. Another example is Sango, a past human deified as the god of thunder and lightning because he could interact with certain forces of nature to bring about thunder and fire. All these feats were actually scientific, and modern scientists will be able to achieve them in the future. However, to the people of the eras of Sango and Ogun, the feats were supernatural because there was a huge differential or gap in the natural abilities of these humans.

There are tons of other examples. But to those performing the feats, they were as natural as drinking water, breathing in oxygen and breathing out carbon dioxide, eating, and many other everyday activities. All these are pictures in our head, and it is the same fundamental principles of nature (especially entanglement) governing the way we perceive our everyday activities that also underlie the seemingly “supernatural” or exotic ones. Thus, it can be inferred that whether something is supernatural/unnatural or natural is relative and depends on the observer’s frame of reference and the level or scale at which they can observe or perceive things in nature.

Some of those past people in ancient Africa could communicate with trees, and the trees would respond by appearing to other people as if they are moving and engaging in other activities that would seem supernatural to the average human. But all these are a picture in their head. Other people of the past could communicate with fire and make it do magical feats. Others could communicate with lights and hid in certain segments of the EM spectrum invisible to the average human, who would think such people have disappeared using magic. But all these feats are possible for anyone that knows the codes to connect their brain waves (conwaves) with the waves emitted by certain elements of nature. All this is based on coherence. When such codes are uttered by a person, the words put their brain in sync with that particular element of nature,

and they will be able to communicate with it to request assistance for various activities, i.e., telekinesis (moving things with the mind) and others.

For instance, if a person such as a magician knows the range of energies possessed by certain species or family of a particular tree, with the aid of certain codes that can put their brain's conwaves in phase with the conwaves emitted by that tree, or using Reanders/heartbeat digitizers, they can tune their brain waves to vibrate at the same frequency as the tree and communicate with it. When such a communication is established, the tree can also establish communication with other people in that environment and send signals to them that those ones will perceive as magical or supernatural feats due to the picture the brain built for them. The whole show has now become a single entanglement, with the audience viewing certain aspects of reality the way the magician wants.

The principles of nature explained here can be applied in diverse fields, including science, health, sports, manufacturing, military, and many others to develop advanced technologies. It can be used in achieving telekinesis, teleportation, building games played using the mind, killing germs with the mind, and many others. However, to achieve these and much more, it is essential to build the Periodic Table of Lifeforms on Earth by collating data on all lifeforms on Earth and things seen as non-life forms as well in the mainstream science. Among others, such data needs to contain information on the various types of waves emitted by these life and non-life forms, all of which are elements of nature and are diverse forms of either consciousness or energy or both.

1.3. Further Predictions

1.3.1 Predictions and Applications of Consciousness Mechanics

Consciousness Physics and Consciousness Mechanics have a universe(s) of potential applications. The Axioms and Temigrams can be applied to explore these tons of potential applications of this emerging field. However, there may be no need to do so at the moment. Various applications of this field have been developed and proposed in the first phase of this project (see Tijani, 2023c). These include transformator for teleportation; SETI: using consciousness telescope to measure the level of consciousness in a planet; using consciousness sensor to detect alien life on earth; communication via conwaves (live meetings/correspondences); and many others (see Tijani, 2023c). Further predictions and applications are examined below:

1.3.2. CEN Language

CEN Language is a range of languages, including mathematical functions, equations, new symbols, CEN Programming Language (CEN PL) for scientific computing and developing the TOE, software programs, and others. CEN Language is the Language for Everything. CEN PL is a new programming language developed based on the principles of Consciousness Mechanics, just like Q# is a programming language developed based on the principles of Quantum Mechanics. Further work is ongoing on this application.

1.3.3. CEN Computer

This is a highly sophisticated computer developed based on the principles of Consciousness Physics and Consciousness Mechanics, but for ethical reasons, care is taken to ensure it does not attain a minimum level of complexity and energy, known as consciousness work function, ϕ_c , required for a computer system to absorb photons of consciousness waves from the Universe, as explained in the Temic Consciousness Absorption Principle earlier, and become a living system. Unlike Quantum Computing that involves encoding quantum information in qubits (quantum bits), cenbits are proposed as the fundamental unit of cen information in Cen Computing. Cenbits encode consciousness-energy information in censtates or cenforms (materials and the likes). Further work is ongoing on this application.

1.3.4. Discovery of Other Universes and Mapping of Times Zones across Various Universes

Applying the Temic Relativistic Consciousness Principle or Temic Relativity Principle, it is predicted other universes will be discovered. Times zones across various universes can be mapped and compared with time zones in our own Universe. This can open avenues and opportunities for new sciences. Just like other planets were discovered in our solar system and beyond at various periods in the past and scientists have mapped time zones across various planets, something like this will be done in the case of universes as well (see Figure 60).


Figure 60: Time Zones across the Solar System



Source: NASA (nd)

Apart from this, it is predicted that the speed of light varies in different universes. It is possible some universes have the maximum limit of their speed of lights as multiples of the currently known value of c , the speed of light. In the future, scientists may be able to map the speeds of light and other key constants in different universes and compare them with ours.

1.3.5. Complex Systems Design Using Tepet from Cosmic Dust/Star Dust

For an extensive discussion of this subject, see my earlier papers (Tijani, 2023b; 2023c). For complex systems design programs, tepet can be obtained from materials/substances with high consciousness absorption capacities, such as star dust, cosmic dust, clay, sea clay, wood, as explained in the Temic Consciousness Absorption Principle. In complex systems design, tepets are the basic building block of life in complex systems (living systems), and the tepet symbol  is what underlies the tepets in these materials/substances as well.

1.3.6. Consciousness Detector/Sensor: COnciousness Detecting and Ranging System (CODAR)

Developed based on the principles of Consciousness Mechanics, COnciousness Detecting and Ranging systems, CODAR in short, is a scanning device that works in similar ways to RAdio Detecting and Ranging (RADAR) systems and LIght Detecting and Ranging (LIDAR) systems. CODAR has diverse potential uses for healthcare, automobile, military, space

exploration, Search for Extraterrestrial Intelligence (SETI) programs, and others. Further work is ongoing on this application.

1.3.7. Consciousness Lensing: The Eyes of Gaia Consciousness Telescope

For a detailed discussion on consciousness telescopes, see my earlier paper (Tijani, 2023c). With consciousness lensing, it is possible in principle to view events and happenings on planet Earth from another planet by looking through the eyes of Gaia; here, Gaia serves as a consciousness lens allowing observation of this planet to be done from another planet. Consciousness lensing is similar in a way to the concept of gravitational lensing in Astrophysics, one of the predictions of Einstein's General Theory of Relativity. Consciousness lensing can be applied in the development of a consciousness telescope like the Eyes of Gaia Consciousness Telescope (EGCT).

1.3.8. Dark Matter Telescopes and Microscopes

In the first phase of this research, the existence of realms of dark matter was one of the predictions made (see Tijani, 2023c). There are two major techniques that can be used to see into realms of dark matter, which exist in hidden segments of the CEES (the extended EM spectrum): use of exotic matter/energy (such as amplifiers and others) and dark matter microscopes. Amplifiers are exotic matter/energies that amplify a person's level of perception, allowing them to achieve altered state of consciousness, higher levels of consciousness/awareness, and others. As for dark matter telescopes and microscopes, these are advanced instruments to see into realms of dark matter on Earth and other parts of the Universe, just like microscopes allow us to see into the realm of the microbes, and telescopes enable us to see into realms of ordinary (baryonic) matter (planets and solar systems) in the Universe. Using the CEES and other fields of Physics, this study predicts scientists will develop these highly sophisticated (dark matter) telescopes and microscopes in the coming years to explore the hidden realms and dimensions of nature. Dark matter telescopes and microscopes have wide-ranging uses and importance.

1.3.9. CEN Technologies/Systems

These are various integrated systems (applications developed by integrating/interlinking various aspects of different disciplines or fields). Examples of such applications (big problems requiring collaborative and interdisciplinary approach to solve) of the TOE:

- Climate change

- Origin of life
- Consciousness, life and death
- Increasing the average life expectancy of humans
- World peace and taking care of the planet to ensure the Homo sapiens era survive longer than the extinct (past) human eras
- Weather predictions
- Others

Further work is ongoing on these applications.

1.4. Conclusion

This section has examined various predictions and applications of Consciousness Physics. Different predictions were made based on the principles of Consciousness Physics, and these predictions include breaking of the current value of the speed of light, discovery of more EM radiations, existence of invisible particles (dark matter). Also, different applications of this emerging field were discussed such as transformator for teleportation, consciousness telescopes, using consciousness sensor to detect alien life on Earth, conwave communication, among others. As for the predictions and applications of Consciousness Mechanics, different applications such as CEN Language, CEN computer, complex systems design using Tepet from cosmic dust/star dust, and others were explored. These predictions and applications show the immense potentials of this emerging field of Theoretical Physics.

BIBLIOGRAPHY

1. Adrienne, M. (2005). *Fossil Legends Of The First Americans*. Princeton University Press. p. 402.
2. Aghanim, N., Akrami, Y., Arroja, F., Ashdown, M., Aumont, J., Baccigalupi, C., Ballardini, M., Banday, A. J., Barreiro, R. B., Bartolo, N., Basak, S., Battye, R., Benabed, K., Bernard, J.-P., Bersanelli, M., Bielewicz, P., Bock, J. J., & Bond, J. R. (2019). Planck 2018 results. I. Overview and the cosmological legacy of Planck. *Astronomy & Astrophysics*. <https://doi.org/10.1051/0004-6361/201833880>
2. Al, E., Iliopoulos, F., Forschack, N., Nierhaus, T., Grund, M., Motyka, P., Gaebler, M., Nikulin, V. V., & Villringer, A. (2020). Heart–brain interactions shape somatosensory perception and evoked potentials. *Proceedings of the National Academy of Sciences*, 117(19), pp. 10575–10584. <https://doi.org/10.1073/pnas.1915629117>
3. Alan, D. R. (2005). The nature of spacetime singularities. In Ashtekar, A (ed). (2005). *100 years of relativity; Space-time structure: Einstein and beyond*. World Scientific.
4. Al-Arashi, W., Gumaan, M., Al-Arashi, W. & Ahmed, A. (2021). The Inner Universe Theory of Dark Energy Interpretation. *International Journal of Theoretical Physics*, 10(1), pp. 1–16.
5. Andersen, B. L., Farrar W. B., Golden-Kreutz D., Kutz L. A., MacCallum R., Courtney M. E., et al. (1998). Stress and immune responses after surgical treatment for regional breast cancer. *J. Natl. Cancer Inst.*, 90, pp. 30–36. DOI: 10.1093/jnci/90.1.30.
6. Anthony, H., & Ter Haar, D. (2018). *Quantum mechanics*. Dover Publications, Inc.
7. Aristotle (nd). *On the Parts of Animals*. book 3, ch. 4. Archived from the original on 14 August 2016. (De partibus animalium) <https://web.archive.org/web/20160814220201/https://ebooks.adelaide.edu.au/a/aristotle/parts/book3.html>
8. Arranz, L., de Vicente, A., Muñoz, M., & De la Fuente, M. (2009). Impaired immune function in a homeless population with stress-related disorders. *Neuroimmunomodulation*, 16, pp. 251–260. DOI: 10.1159/000212386.

9. Astronomy. (2022). Ask Astro: How far away is the cosmic microwave background? *Astronomy Magazine*. <https://www.astronomy.com/science/ask-astro-how-far-away-is-the-cosmic-microwave-background/>
10. Attard, P. (2015). *Quantum Statistical Mechanics*. IOP Publishing Ltd.
11. Baclawski, K. (2018). The Observer Effect. *2018 IEEE Conference on Cognitive and Computational Aspects of Situation Management (CogSIMA)*. DOI: 10.1109/cogsima.2018.8423983
12. Baez, John (2002) The Cayley–Dickson construction, in *The octonions*, *Bull. Amer. Math. Soc.* 39, 145-205, <http://dx.doi.org/10.1090/S0273-0979-01-00934-X>
13. Barile, Margherita; Rowland, Todd; and Weisstein, Eric W. (2023). "Group Automorphism." From *MathWorld--A Wolfram Web Resource*. <https://mathworld.wolfram.com/GroupAutomorphism.html>
14. Benschop, R. J., Geenen, R., Mills, P. J., Naliboff, B. D., Kiecolt-Glaser, J. K., & Herbert, T. B., et al. (1998). Cardiovascular and immune responses to acute psychological stress in young and old women: a meta-analysis. *Psychosom. Med.*, 60, pp. 290–296. DOI: 10.1097/00006842-199805000-00015.
15. Bir, I., Singh, M., & Manoj Kumar Yadav. (2018). *Automorphisms of Finite Groups*. Springer Monographs in Mathematics.
16. Bir, I., Singh, M., & Manoj Kumar Yadav. (2019). *Automorphisms of Finite Groups*. Springer.
17. Blackfeather, B. (2023). *Serpent Myths and Symbols: Jormundgand and Ouroboros, Mythic Images*. Mythic Images. <https://mythic-images.com/serpent-myths-and-symbols/>
18. Block, N. (2007) Consciousness, Accessibility and the mesh between psychology and neuroscience, *Behavioral and Brain Sciences*, 30, 481–548. <https://doi.org/10.1017/s0140525x07002786>
19. Bosch, J. A., Berntson, G. G., Cacioppo, J. T., & Marucha, P. T. (2005). Differential Mobilization of Functionally Distinct Natural Killer Subsets During Acute Psychologic Stress. *Psychosom. Med.*, 67, pp. 366–375. DOI: 10.1097/01.psy.0000160469.00312.8e.
20. Boscolo, P. (2009). Effects of occupational stress and job insecurity on the immune response. *G. Ital. Med. Lav. Ergon.*, 31, pp. 277–280.

21. Bujalance, E., Etayo, J. J., Gamboa, J. M., & Grzegorz Gromadzki. (2006). Automorphism Groups of Compact Bordered Klein Surfaces. Springer.
22. Burnet, F. M. (1971). Immunological surveillance in neoplasia. *Transplant. Rev.*, 7, pp. 3–25. DOI: 10.1111/j.1600-065x.1971.tb00461.x
23. Byrnes, D. M., Antoni, M. H., Goodkin, K., Efantis-Potter, J., Asthana, D., Simon, T., et al. (1998). Stressful events, pessimism, natural killer cell cytotoxicity, and cytotoxic/suppressor T cells in HIV+ black women at risk for cervical cancer. *Psychosom. Med.*, 60, pp. 714–722. DOI: 10.1097/00006842-199811000-00009.
24. Cambridge Dictionary. (nd). *trance*. <https://dictionary.cambridge.org/dictionary/english/trance>
25. Cañas-González, B., Fernández-Nistal, A., Ramírez, J. M., & Martínez-Fernández, V. (2020). Influence of Stress and Depression on the Immune System in Patients Evaluated in an Anti-aging Unit. *Front Psychol.*, 11, p. 1844. DOI: 10.3389/fpsyg.2020.01844.
26. Carruthers, P. (2000) *Phenomenal Consciousness*, Cambridge: Cambridge University Press.
27. Chalmers, D. (1995) Facing up to the problem of consciousness, *Journal of Consciousness Studies*, 2 (3), pp. 200–219.
28. Chalmers, D. (1996) *The Conscious Mind*, New York: Oxford University Press, pp. xii–xiii, 95–106, backcover.
29. Chalmers, D. (2007) The Hard Problem of Consciousness, in Velmans, M. & Schneider, S. (eds.) *The Blackwell Companion to Consciousness*, MA, USA: Blackwell Publishing Ltd.
30. Chalmers, D. (2020) Is the hard problem of consciousness universal? *Journal of Consciousness Studies*, 27 (5–6), pp. 227–257.
31. Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: A quantitative review of prospective observational studies. *Psychosomatic Medicine*, 70, pp. 741–756. DOI: 10.1097/PSY.0b013e31818105ba.
32. Cowen, R. (2019). *Gravity's century: from Einstein's eclipse to images of black holes*. Harvard University Press.

33. Curiel, E. (2023). Singularities and Black Holes. *The Stanford Encyclopedia of Philosophy*.
<https://plato.stanford.edu/archives/sum2023/entries/spacetime-singularities/>
34. Descartes, R. (1644) *Principia philosophiae*, Amsterdam: apud Ludovicum Elzevirium.
35. Deshmukh, P. C. (2019). *Foundations of Classical Mechanics*. Cambridge University Press.
36. Di Bartolo, B. (2018). *Classical Theory Of Electromagnetism*. (3rd ed.). World Scientific.
37. Dickson, Leonard (1919) On Quaternions and Their Generalization and the History of the Eight Square Theorem, *Annals of Mathematics, Second Series*, Vol. 20, No. 3, pp. 155-171.
38. Diener, E., & Chan, M. Y. (2011). Happy people live longer: Subjective well-being contributes to health and longevity. *Applied Psychology: Health and Well-being*, 3, pp. 1–43. DOI: 10.1111/j.1758-0854.2010.01045.x.
39. Dirac, P. A. M. (1967). *The Principles of Quantum Mechanics* (4th ed.). Oxford University Press, p. 3.
40. Dobrijevic, D., Pultarova, T., Tillman, N. T., & Howell, E. (2023). Milky Way Galaxy: Facts About Our Galactic Home. *Space.com*. <https://www.space.com/19915-milky-way-galaxy.html>
41. Dreamstime. (nd). *Science Electromagnetic Spectrum*.
<https://www.dreamstime.com/science-electromagnetic-spectrum-diagram-illustration-image212857549>
42. Edelman, G. (1993) *Bright Air Brilliant Fire*. New York: Basic Books.
43. Eeden, F. (nd). *A Study of Dreams*. lucidity.com. <http://www.lucidity.com/vanEeden.html>
44. Einstein, A; Podolsky, B., & Rosen, N. (1935). Can Quantum-Mechanical Description of Physical Reality be Considered Complete? *Physical Review*, 47(10), 777–780. DOI: 10.1103/PhysRev.47.777.
45. Empak, J. (2022). Quantum Entanglement: Love on a Subatomic Scale. *Space.com*.
<https://www.space.com/31933-quantum-entanglement-action-at-a-distance.html>
46. Erickson, Martin J. (2011), "1.1 Lemniscate", *Beautiful Mathematics*, MAA Spectrum, Mathematical Association of America, pp. 1–3, ISBN 9780883855768.
47. Farah, M. (1990) *Visual Agnosia*, Cambridge: MIT Press.
48. Ferrari, V., Gualtieri, L., & Pani, P. (2020). *General Relativity and its Applications*. CRC Press.

49. Ferrari, V., Gualtieri, L., & Pani, P. (2020). *General Relativity and its Applications*. CRC Press.
50. Futuyma, D. J. (2005). *Evolution*, Sunderland, MA: Sinauer Associates.
51. Gagliano, M. (2017). The mind of plants: Thinking the unthinkable. *Commun Integr Biol.*, *10*(2), p. e1288333. DOI: 10.1080/19420889.2017.1288333.
52. Georgi, H. (1993) *The physics of waves*, Englewood Cliffs, New Jersey: Prentice Hall.
53. Griffith, D. J., & Schroeter, D. F. (2018). *Introduction to Quantum Mechanics*. (3rd ed.). Cambridge University Press: UK.
54. Griffiths, D. J., & Schroeter, D. F. (2019). *Introduction to Quantum Mechanics*. (4th ed.). Cambridge University Press.
55. Guth, A.H. (1997) *The Inflationary Universe: The Quest for a New Theory of Cosmic Origins*, London: Random House.
56. Hameroff, S., & Penrose, R. (2014). Consciousness in the Universe: A Review of the “Orch OR” theory. *Phys Life Rev.*, *11*, pp. 39–78. <https://doi.org/10.1016/j.plrev.2013.08.002>
57. Hearne, K. M. T. (1978). *Lucid-dreams: An electrophysiological and psychological study*. (Unpublished doctoral dissertation). England: Hull University.
58. Heidegger, M. (1927/1962) *Being and Time (Sein und Zeit)*, Translated by Macquarrie, J. & Robinson, E. New York: Harper and Row.
59. Helliwell, T. M., & Sahakian, V. (2021). *Modern Classical Mechanics*. Cambridge University Press.
60. Hensen, B. et al. (2015). Loophole-free Bell inequality violation using electron spins separated by 1.3 kilometres. *Nature*, *526*(7575), pp. 682–686. <https://doi.org/10.1038/nature15759>
61. Herrlich, H., & Strecker, G. E. (2007). *Category Theory* (3rd ed.). Heldermann Verlag Berlin. ISBN 978-3-88538-001-6.
62. Honderich, T. (2000) Consciousness as Existence Again, *The Proceedings of the Twentieth World Congress of Philosophy*, *9*, pp. 65–81. <https://doi.org/10.5840/wcp202000994>
63. Howell, E. (2018). *What Are Cosmic Rays?* Space.com. <https://www.space.com/32644-cosmic-rays.html>
64. Howell, E., & Dobrijevic, D. (2022, January 28). Cosmic Microwave Background: Remnant of the Big Bang. *Space.com*. <https://www.space.com/33892-cosmic-microwave-background.html>

65. Howell, E., & May, A. (2023). What Is the Big Bang Theory? *Space.com*.
<https://www.space.com/25126-big-bang-theory.html>
66. Howell, R. T., Kern, M. L., & Lyubomirsky, S. (2007). Health benefits: Meta-analytically determining the impact of well-being on objective health outcomes. *Health Psychology Review*, 1, pp. 83–136. DOI: 10.1080/17437190701492486.
67. Hrobjartsson, A., Thomsen, A. S. S., Emanuelsson, F., Tendal, B., Hilden, J., Boutron, I., Ravaud, P., & Brorson, S. (2013). Observer bias in randomized clinical trials with measurement scale outcomes: a systematic review of trials with both blinded and nonblinded assessors. *Canadian Medical Association Journal*, 185(4), pp. E201–E211.
<https://doi.org/10.1503/cmaj.120744>
68. Husserl, E. (1929/1960) *Cartesian Meditations: an Introduction to Phenomenology*, Translated by Cairns, D. The Hague: M. Nijhoff.
69. Irwin, M., Daniels, M., Risch, S. C., Bloom, E., & Weiner, H. (1988). Plasma cortisol and natural killer cell activity during bereavement. *Biol. Psychiatry*, 24, pp. 173–178. DOI: 10.1016/0006-3223(88)90272-7.
70. Joseph, R. (2011) Evolution of Paleolithic Cosmology and Spiritual Consciousness, and the Temporal and Frontal Lobes, in Penrose, R. & Hameroff, S. & Kak, S. (eds.) *Consciousness and the Universe* (pp. 631-382), Cambridge, MA: Cosmology Science Publishers.
71. Kahan, T., & LaBerge, S. (1994). Lucid dreaming as metacognition: implications for cognitive science. *Consciousness and Cognition*, 3(2), pp. 246–64.
<https://doi.org/10.1006%2Fccog.1994.1014>
72. Kanski, R., van Strien, M.E., van Tijn, P. et al. (2014). A star is born: new insights into the mechanism of astrogenesis. *Cell. Mol. Life Sci.*, 71, pp. 433–447.
<https://doi.org/10.1007/s00018-013-1435-9>
73. Kant, I. (1787/1929) *Critique of Pure Reason*, Translated by N. Kemp Smith. New York: MacMillan.
74. Karaoglu, B. (2020). *Classical Physics: A Two-Semester Coursebook*. Springer International Publishing, Imprint Springer.

75. Khanna, M. (2021). *Earth Has A “Heartbeat” Of 7.83 Hz, And It Could Affect Human Behaviour*. IndiaTimes. <https://www.indiatimes.com/technology/science-and-future/earth-heartbeat-of-7-83-hz-schumann-resonance-human-behaviour-536813.html>
76. Kocher, C. A., & Commins, E. D. (1967). Polarization Correlation of Photons Emitted in an Atomic Cascade. *Physical Review Letters*, 18(15), pp. 575–577. <https://doi.org/10.1103/PhysRevLett.18.575>
77. Kocher, C. A., (1967). *Polarization Correlation of Photons Emitted in an Atomic Cascade*. Thesis (University of California at Berkeley). <https://escholarship.org/uc/item/1kb7660q>
78. Kotler, S., Peterson, G. A., Shojaee, E., Lecocq, F., Cicak, K., Kwiatkowski, A., Geller, S., Glancy, S., Knill, E., Simmonds, R. W., Aumentado, J., & Teufel, J. D. (2021). Direct observation of deterministic macroscopic entanglement. *Science*, 372(6542), 622–625. <https://doi.org/10.1126/science.abf2998>
79. Kozłowska, M.J. & Kozłowski, M. (2016) Psychon, *Journal of Consciousness Exploration & Research*, 7 (10), pp. 794–800.
80. Kuthunur, S. (2023). The gravitational wave background of the universe has been heard for the 1st time. *Space.com*. <https://www.space.com/gravitational-wave-background-universe-1st-detection>
81. Kutler, K. (2023). *A First Course in Linear Algebra*. Libre Texts: US.
82. Kyriakos, T. (2019). *Basic Quantum Mechanics*. Springer Nature.
83. LaBerge, S. (1980). *Lucid dreaming: An exploratory study of consciousness during sleep*. (Unpublished doctoral dissertation). America: Stanford University.
84. LaBerge, S., & Rheingold, H. (1990). *Exploring the world of lucid dreaming*. Ballantine Books.
85. Lamers, S. M., Bolier, L., Westerhof, G. J., Smit, F., & Bohlmeijer, E. T. (2012). The impact of emotional well-being on long-term recovery and survival in physical illness: a meta-analysis. *J Behav Med.*, 35(5), pp. 538–47. DOI: 10.1007/s10865-011-9379-8.
86. Larkoski, A. J. (2021). *Quantum Mechanics: A Mathematical Introduction*. (1st ed.). Cambridge University Press.
87. Lee, C., & Min, H. (2018). *Essential Classical Mechanics*. World Scientific Publishing Company.

88. Lee, K. C., Sprague, M. R., Sussman, B. J., Nunn, J., Langford, N. K., Jin, X., Jin, M., Champion, T., Michelberger, P., Reim, K. F., England, D., Jaksch, D., & Walmsley, I. A. (2011). Entangling macroscopic diamonds at room temperature. *Science*, 334(6060), pp. 1253–1256. <https://doi.org/10.1126%2Fscience.1211914>
89. Leibniz, G.W. (1686 /1991) *Discourse on Metaphysics*, Translated by Garter, D. & Aries, R. Indianapolis: Hackett.
90. Leibniz, G.W. (1720/1925) *The Monadology*, Translated by Lotte, R. London: Oxford University Press.
91. Lépinay, L. M. de, Ockeloen-Korppi, C. F., Woolley, M. J., & Sillanpää, M. A. (2021). Quantum mechanics–free subsystem with mechanical oscillators. *Science*, 372(6542), 625–629. <https://doi.org/10.1126/science.abf5389>
92. Lewis, S., & Nandor, F. (1985). *Encyclopedia of occultism & parapsychology*. Vol. 2. Gale Research Co. p. 617.
93. Liu, W., Zhang, X., Wu, Z., Huang, K., Yang, C., & Yang, L. (2022). Brain-heart communication in health and diseases. *Brain Research Bulletin*, 183, pp. 27–37. <https://doi.org/10.1016/j.brainresbull.2022.02.012>
94. Locke, J. (1688/1959) *An Essay on Human Understanding*, New York: Dover.
95. Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*. 131, pp. 803–855. DOI: 10.1037/0033-2909.131.6.803.
96. MacKay, N. M. (2020). *Theory of Physics, Volumes 1 & 2*. Independently Published.
97. Manning, C. (2021). Electromagnetic Spectrum. NASA. https://www.nasa.gov/directorates/heo/scan/spectrum/txt_electromagnetic_spectrum.html#
98. Markoff, J. (2015). Sorry, Einstein. *Quantum Study Suggests 'Spooky Action' Is Real*. The New York Times. <https://www.nytimes.com/2015/10/22/science/quantum-theory-experiment-said-to-prove-spooky-interactions.html>
99. Mccraty, R. (2015). Science of the heart: exploring the role of the heart in human performance. *Heartmath Research Center, Institute Of Heartmath*.

100. McCraty, R., & Tomasino, D. (2006). Emotional stress, positive emotions, and psychophysiological coherence, in *Stress in Health and Disease*, B.B. Arnetz and R. Ekman, Editors. 2006, Wiley-VCH: Weinheim, Germany. pp. 342-365.
101. McIntyre, D. H. (2022). *Quantum Mechanics*. (1st ed.). Cambridge University Press.
102. Meijer, D. K. F. (2012). The Information Universe: On the Missing Link in Concepts of the Architecture of Reality. *Syntropy Journal*, 1, pp 1–64. <http://www.sintropia.it/english/2012-eng-1-1.pdf>
103. Meijer, D. K. F. (2018). Processes of Science and Art Modeled as a Holoflux of Information Using Toroidal Geometry. *Open Journal of Philosophy*, 8, pp. 365–400. <https://doi.org/10.4236/ojpp.2018.84026>
104. Merleau-Ponty, M. 1945/1962. *Phenomenology of Perception (Phénoménologie de l'ye Perception)*, Translated by Colin Smith. London: Routledge and Kegan Paul.
105. Merriam-Webster (2023) “Existence.” <https://www.merriam-webster.com/dictionary/existence> Accessed 15 Dec. 2023.
106. Merriam-Webster (2023a) “Life.” <https://www.merriam-webster.com/dictionary/life> Accessed 15 Dec. 2023.
107. Merriam-Webster. (2023) *Consciousness*, [Online], <https://www.merriam-webster.com/dictionary/consciousness> [20 Jan 2023].
108. Merriam-Webster. (2023). *Definition of entanglement*. <https://www.merriam-webster.com/dictionary/entanglement>
109. Merriam-Webster. (2023a). *Definition of coherence*. <https://www.merriam-webster.com/dictionary/coherence>
110. Merriam-Webster. (2023b). *Definition of Objectivity*. <https://www.merriam-webster.com/dictionary/objectivity#>
111. Merriam-Webster. (2023c). *Definition of Subjectivity*. <https://www.merriam-webster.com/dictionary/subjectivity>
112. Merriam-Webster. (2023d). *Definition of Observation*. <https://www.merriam-webster.com/dictionary/observation>
113. Merriam-Webster. (2023e). *Definition of Measurement*. <https://www.merriam-webster.com/dictionary/measurement>
114. Miguel-Tomé, S., & Llinás, R. R. (2021). Broadening the definition of a nervous system to better understand the evolution of plants and animals. *Plant Signaling & Behavior*, 1927562. <https://doi.org/10.1080/15592324.2021.1927562>

115. Millstein, R. L. (2017). *Evolution*. Stanford Encyclopedia of Philosophy. Stanford.edu. <https://plato.stanford.edu/entries/evolution/>
116. Mira, H., & Morante, J. (2020). Neurogenesis From Embryo to Adult – Lessons From Flies and Mice. *Frontiers in Cell and Developmental Biology*, 8. <https://doi.org/10.3389/fcell.2020.00533>
117. Mocombe, P. C. (2019). Consciousness in the Universe According to Phenomenological Structuralism. *Journal of Cultural and Social Anthropology*, 1(1), pp. 1–9.
118. Mocombe, P. C. (2019a). *The Theory of Phenomenological Structuralism*. United Kingdom: Cambridge Scholars Publishing.
119. Mocombe, P. C. (2021). The origins, Nature, and Constitution of Consciousness in Material Worlds. *Journal of Medical Research and Case Reports*, 3(2).
120. Mocombe, P. C. (2021a). Consciousness Field Theory. *Archives in Neurology & Neuroscience*, 9 (4), pp. 1–6. <https://doi.org/10.33552/ann.2020.09.000718>
121. Mocombe, P.C. (2016) *The Vodou Ethic and the Spirit of Communism: The Practical Consciousness of the African People of Haiti*, Maryland: University Press of America.
122. Mocombe, P.C. (2021b). The consciousness field, *Advances in Bioengineering & Biomedical Science Research*, 5 (1), pp. 11–16.
123. Mocombe, P.C. (2023) Empirical Evidence for the Consciousness Field: The Garyian Equation, Psychic Wave, and Life after Life, *Research Journal of Library and Information Science*, 6 (1), pp. 1–11. <https://doi.org/10.22259/2637-5915.0601001>
124. Monahan, T., & Fisher, J. A. (2010). Benefits of "Observer Effects": Lessons from the Field. *Qual Res.*, 10(3), pp. 357–376. DOI: 10.1177/1468794110362874.
125. Monin, A. S. (1992). On the definition of the concepts thinking, consciousness, and conscience. *Proc. Nati. Acad. Sci. USA*, 89, pp. 5774–5778. <https://doi.org/10.1073/pnas.89.13.5774>
126. Muller, A. (2022). What is quantum entanglement? A physicist explains Einstein’s “spooky action at a distance.” *Astronomy Magazine*. <https://www.astronomy.com/science/what-is-quantum-entanglement-a-physicist-explains-einsteins-spooky-action-at-a-distance/>
127. Mutz, J., & Javadi, A. (2017). "Exploring the neural correlates of dream phenomenology and altered states of consciousness during sleep". *Neuroscience of Consciousness*, (1). <https://doi.org/10.1093%2Fnc%2Fnx009>

128. Mythologian.net (nd) *Etymology of Ouroboros, the Infinity Symbol*, [Online], <https://mythologian.net/ouroboros-symbol-of-infinity/> [04 Jan 2023].
129. Nagel, T. (1974) What is it like to be a bat? *Philosophical Review*, **83** (4), pp. 435–456. <https://doi.org/10.2307/2183914>
130. Nair, V. P. (2023). *Thermodynamics and Statistical Mechanics*. LibreTexts.
131. Nakaya, N. (2014). Effect of psychosocial factors on cancer risk and survival. *J. Epidemiol.*, *24*, pp. 1–6. DOI: 10.2188/jea.je20130124.
132. National Aeronautics and Space Administration (NASA). (2006). Then vs. Now: The Age of the Universe. https://imagine.gsfc.nasa.gov/science/featured_science/tenyear/age.html#
133. National Aeronautics and Space Administration (NASA). (2010). Introduction to the Electromagnetic Spectrum. Retrieved [insert date - e.g. August 10, 2016], from NASA Science website: http://science.nasa.gov/ems/01_intro
134. National Aeronautics and Space Administration (NASA). (2013). *Electromagnetic Spectrum - Introduction*. <https://imagine.gsfc.nasa.gov/science/toolbox/emspectrum1.html#>
135. National Aeronautics and Space Administration (NASA). (2013). *Schumann Resonance*. https://www.nasa.gov/mission_pages/sunearth/news/gallery/schumann-resonance.html
136. National Aeronautics and Space Administration (NASA). (2020). The Nearest Superclusters. https://imagine.gsfc.nasa.gov/features/cosmic/nearest_superclusters_info.html
137. National Aeronautics and Space Administration (NASA). (nd) <https://www.nasa.gov/>
138. New World Encyclopedia (nd) Logos. <https://www.newworldencyclopedia.org/entry/Logos>
139. Nield, D. (2022). Quantum Entanglement Has Now Been Directly Observed at The Macroscopic Scale. *ScienceAlert*. <https://www.sciencealert.com/quantum-entanglement-has-now-been-directly-observed-at-the-macroscopic-scale>
140. nLab (2023). Cayley-Dickson construction. <https://ncatlab.org/nlab/show/Cayley-Dickson+construction#>
141. Online Learning College. (2022). *The electromagnetic spectrum*. <https://online-learning-college.com/knowledge-hub/gcses/gcse-physics-help/electromagnetic-spectrum/>

142. Oxford Learner's Dictionary. (nd). <https://www.oxfordlearnersdictionaries.com/>
143. P. A. M. Dirac (1939). A new notation for quantum mechanics. *Mathematical Proceedings of the Cambridge Philosophical Society*, 35, pp 416-418
doi:10.1017/S0305004100021162
144. Pahl, P. J. & Damrath, R. (2001). "§7.5.5 Automorphisms". *Mathematical foundations of computational engineering* (Felix Pahl translation ed.). Springer. p. 376. ISBN 3-540-67995-2.
145. Pahl, P. J., & Damrath, R. (2001). "§7.5.5 Automorphisms". *Mathematical foundations of computational engineering* (Felix Pahl translation ed.). Springer. p. 376. ISBN 3-540-67995-2.
146. Paolo C., Li, Y., Treutlein, P, & Zibold, T. (2023). Einstein-Podolsky-Rosen Experiment with Two Bose-Einstein Condensates. *Physical Review X*, 13(2).
<https://doi.org/10.1103/physrevx.13.021031>
147. Peskin, M. E. (2019). *Concepts of elementary particle physics*. Oxford University Press.
148. Planck Collaboration. (2020). Planck 2018 results. VI. Cosmological parameters. *Astronomy & Astrophysics*, 641, p. A6. <https://doi.org/10.1051%2F0004-6361%2F201833910>
149. Pressman, S. D., & Cohen, S. (2005). Does positive affect influence health? *Psychological Bulletin*, 131, pp. 925–971. DOI: 10.1037/0033-2909.131.6.925.
150. PWC (2020) Megatrends. <https://www.pwc.com/gx/en/issues/assets/pdf/pwc-megatrends-october-2022.pdf>
151. Reemes, D. M. (2015). *The Egyptian Ouroboros: An Iconological and Theological Study*. eScholarship.
https://escholarship.org/content/qt6c0153p7/qt6c0153p7_noSplash_2837f3e4ba79f787a9c7eac6081ff863.pdf [04 Jan 2023].
152. Reemes, D.M. (2015) The Egyptian Ouroboros: An Iconological and Theological Study, eScholarship.
https://escholarship.org/content/qt6c0153p7/qt6c0153p7_noSplash_2837f3e4ba79f787a9c7eac6081ff863.pdf [04 Jan 2023].
153. Ridpath, I. (2012). *A Dictionary of Astronomy*. Oxford: Oxford University Press.

154. Riganello F., Larroque S. K., Di Perri, C., Prada, V., Sannita, W. G., & Laureys, S. (2019). Measures of CNS-Autonomic Interaction and Responsiveness in Disorder of Consciousness. *Front Neurosci.*, *13*, p. 530. DOI: 10.3389/fnins.2019.00530.
155. Robinson, A. (2018). Did Einstein really say that? *Nature*, *557*(7703), 30–30. <https://doi.org/10.1038/d41586-018-05004-4>
156. Romano, J. D., & Cornish, N. J. (2017). Detection methods for stochastic gravitational-wave backgrounds: a unified treatment. *Living Rev Relativ.* *20*(1), p. 2. <https://doi.org/10.1007%2Fs41114-017-0004-1>
157. Rovelli, C. (2021). *General Relativity: The Essentials*. Cambridge University Press.
158. Sadeghi, S., Wittmann, M., De Rosa, E., & Anderson, A. K. (2023). Wrinkles in subsecond time perception are synchronized to the heart. *Psychophysiology*. <https://doi.org/10.1111/psyp.14270>
159. Sahoo, J. (2016) *The Nature of Consciousness*, Germany: Lambert Academic Publishing.
160. Sakurai, J. J., & Napolitano, J. (2021). *Modern Quantum Mechanics*. (3rd ed.). Independently Published.
161. Sather, Eric. "The Mystery of the Matter Asymmetry" (PDF). Vanderbilt University. Retrieved April 3, 2018. <https://www.vanderbilt.edu/AnS/physics/panvini/babar/sakharov.pdf>
162. Saunders, D. T., Roe, C. A., Smith, G., & Clegg, H. (2016). Lucid dreaming incidence: A quality effects meta-analysis of 50 years of research. *Consciousness and Cognition*, *43*, pp. 197–215. <https://doi.org/10.1016/j.concog.2016.06.002>
163. Schetzer, A. (2017). Plants Have Feelings Too. *Science Matters*. <https://pursuit.unimelb.edu.au/articles/plants-have-feelings-too>
164. Schleifer, S. J., Keller, S. E., Bartlett, J. A., Eckholdt, H. M., & Delaney, B. R. (1996). Immunity in young adults with major depressive disorder. *Am. J. Psychiatry*, *153*, pp. 477–482. DOI: 10.1176/ajp.153.4.477.
165. Schwichtenberg, J. (2019). *No-Nonsense Classical Mechanics: A Student-Friendly Introduction*. No-Nonsense Books.
166. Searle, J. (2005) Consciousness, in Honderich, T. (ed.) *The Oxford companion to philosophy*, Oxford: Oxford University Press.

167. Sexton, C. (2022) *Earth, humans, and all living creatures are made from stars*, [Online], earth.com. <https://www.earth.com/video/earth-humans-and-all-living-creatures-are-made-from-stars/> [04 Jan 2023].
168. Shankar, R. (2019). *Fundamentals of Physics I: Mechanics, Relativity, and Thermodynamics*. Expanded Edition. Yale University Press.
169. Shu, F. H. (2023). Cosmic microwave background | electromagnetic radiation. *Encyclopædia Britannica*. <https://www.britannica.com/science/cosmic-microwave-background>
170. Singh, S. (2005) *The Big Bang: The origin of the Universe*, London: HarperCollins.
171. Sipfle K. (2021) The Primary Pitfalls on the Road to Understanding Consciousness, *J Neurol Neurobiol*, 7 (1). <http://dx.doi.org/10.16966/2379-7150.173>
172. Sipfle, K. (2018) *The Nature of Consciousness*, New York: Barnes & Noble Press.
173. Sipfle, K. (2018a) The Nature of Fundamental Consciousness, *RG*.
174. Sipfle, K. (2021). The Primary Pitfalls on the Road to Understanding Consciousness, *J Neurol Neurobiol*, 7(1). <http://dx.doi.org/10.16966/2379-7150.173>
175. Sipfle, K. (2022). Consciousness, the Full Stack: Four-Layer Architecture=Language on Mind on STFC: Part 1 of 4. *J Neurol Neurobiol*, 8(2). <http://dx.doi.org/10.16966/2379-7150.188>
176. Starr, M. (2023). Physicists Conduct The Most Massive Test Ever of The Einstein-Podolsky-Rosen Paradox. *ScienceAlert*. <https://www.sciencealert.com/physicists-conduct-the-most-massive-test-ever-of-the-einstein-podolsky-rosen-paradox>
177. Steptoe, A. (2019). Happiness and Health. *Annual Review of Public Health*, 40(1), pp. 339–359. <https://doi.org/10.1146/annurev-publhealth-040218-044150>
178. Steven, W. E. (2018). *Electromagnetics, Volume 1 (BETA)*. Virginia Tech University Libraries.
179. Sue, H. (1996). Identity and Experience. *LUZAC Oriental*, pp. 105–106.
180. Sujatha, B. K., Mayurnath, T. R., & Pooja, P. (2019). Camouflage in research – the hawthorne effect. *International Journal of Development Research*, 9(4), 26996-26999. <https://www.journalijdr.com/sites/default/files/issue-pdf/15710.pdf>
181. Sunyaev, R. A. (1974). The thermal history of the universe and the spectrum of relic radiation. In Longair, M. S. (ed.). *Confrontation of Cosmological Theories with Observational Data*. IAUS. 63. Dordrecht: Springer. pp. 167–173. DOI: 10.1007/978-94-010-2220-0_14.

182. Sutter, P. (2021, May 26). What is quantum entanglement? *Livescience.com*.
<https://www.livescience.com/what-is-quantum-entanglement.html>
183. Svensberg, K., Kalleberg, B. G., Mathiesen, L., Andersson, Y., Rognan, S. E., & Sporrang, S. K. (2021). The observer effect in a hospital setting - Experiences from the observed and the observers. *Research in Social and Administrative Pharmacy*, 17(12).
<https://doi.org/10.1016/j.sapharm.2021.07.011>
184. Tektronix. (2013). *ABCs of Probes Primer*.
https://web.mit.edu/6.101/www/reference/ABCprobes_s.pdf
185. The European Organization for Nuclear Research (CERN). (2019). The matter-antimatter asymmetry problem | CERN. Home.cern.
<https://home.cern/science/physics/matter-antimatter-asymmetry-problem>
186. The European Space Agency (ESA). (2023). Gravitational Lensing.
<https://esahubble.org/wordbank/gravitational-lensing>
187. The European Space Agency (ESA). (nd). *Planck and the cosmic microwave background*.
https://www.esa.int/Science_Exploration/Space_Science/Planck/Planck_and_the_cosmic_microwave_background#
188. The European Space Agency (ESA). (nd1). Cosmic Microwave Background (CMB) radiation.
https://www.esa.int/Science_Exploration/Space_Science/Herschel/Cosmic_Microwave_Background_CMB_radiation#
189. The Jargon File. (nd). heisenbug. Catb.org.
<http://catb.org/jargon/html/H/heisenbug.html>
190. The National Aeronautics and Space Administration (NASA). (2022) *You Are Made of Stardust*, [Online], <https://nasa.tumblr.com/post/688583969233682432/you-are-made-of-stardust> [04 Jan 2023].
191. Thomas, R. A., Parniak, M., Østfeldt, C. Møller, C. B., Bærentsen, C., Tsaturyan, Y., Schliesser, A., Appel, J., Zeuthen, E., & Polzik, E. S. (2021). Entanglement between Distant Macroscopic Mechanical and Spin Systems. *Nat. Phys.*, 17, 228.
192. Tijani, M. A. (2023). Consciousness Travels in Waves — The Conwave Model. *Journal of Harmonized Research in Applied Science*. **Under review**. (OSF Preprint: <https://doi.org/10.31219/osf.io/mc8u6>).

193. Tijani, M. A. (2023a). The Origin of Consciousness: The TEMIC Framework of Reality. *International Journal of Modern Theoretical Physics*. **Under review**. (OSF Preprint: <https://doi.org/10.31219/osf.io/7cgkj>).
194. Tijani, M. A. (2023b). Astrogenesis and Consciousness: The Role of Consciousness in the Evolution of Life. *OSF*. <https://doi.org/10.31219/osf.io/34wge>
195. Tijani, M. A. (2023b). Astrogenesis and Consciousness: The Role of Consciousness in the Evolution of Life. *Science Advances*. **Under review**. (OSF Preprint: <https://doi.org/10.31219/osf.io/34wge>).
196. Tijani, M. A. (2023c). Consciousness Physics: A Unified Theory, Working Papers. *Bulletin of the National Research Centre*. **Under review**. (OSF Preprint: <https://doi.org/10.31219/osf.io/cnbzp>).
197. Tijani, M. A. (2023d). Consciousness Physics: A Unified Theory, Working Papers II. OSF Preprint. <https://doi.org/10.31219/osf.io/nra7e>
198. Tkačik, G. & Bialek, W. (2016) Information Processing in Living Systems, *Annual Review of Condensed Matter Physics*, **7** (1), pp. 89–117. <http://dx.doi.org/10.1146/annurev-conmatphys-031214-014803>
199. Tresidder, J. (2012). *Heart*. The Watkins Dictionary of Symbols.
200. Trewavas, A., Baluška, F., Mancuso, S., & Calvo, P. (2020). Consciousness Facilitates Plant Behavior. *Trends in Plant Science*, **25**(3), 216–217. <https://doi.org/10.1016/j.tplants.2019.12.015>
201. Tukey, J. W. (1991). The philosophy of multiple comparisons. *Statistical Science*, **6**, pp. 100–116.
202. Tully, R. B. et al. (2014). The Laniakea supercluster of galaxies. *Nature*, **513**(7516), pp. 71–73. <https://doi.org/10.1038/nature13674>
203. University of Sydney Online Museum. (2016). Anatomy of the Heart. https://web.archive.org/web/20160818202606/https://sydney.edu.au/medicine/museum/museum/index.php/Anatomy_of_the_Heart
204. University of Tennessee (nd). Heat. <http://labman.phys.utk.edu/phys136core/modules/m2/heat.html>
205. Van Gulick, R. Consciousness. *The Stanford Encyclopedia of Philosophy*, [Online], (Winter 2022 ed.), Edward, N.Z. & Uri, Nodelman (eds.) <https://plato.stanford.edu/archives/win2022/entries/consciousness/> [20 Jan 2023].
206. Van Lommel, P. (2010) *Consciousness Beyond Life: The Science of the Near-Death Experience*, New York: HarperCollins Publishers.

207. Veenhoven, R. (2008). Healthy happiness: Effects of happiness on physical health and the consequences for preventive health care. *Journal of Happiness Studies*, 9, pp. 449–469. DOI: 10.1007/s10902-006-9042-1.
208. Vinberg, È. B. (2003). *A Course in Algebra*. American Mathematical Society.
209. von Helmholtz, H. (1897/1924) *Treatise on Physiological Optics*, Translated by Soothly, J. New York: Optical Society of America.
210. Wakayama, S., Ito, D., Kamada, Y., et al. (2021). Evaluating the long-term effect of space radiation on the reproductive normality of mammalian sperm preserved on the International Space Station. *Science Advances*, 7(24). <https://doi.org/10.1126/sciadv.abg5554>
211. Wakayama, S., Ito, D., Kamada, Y., et al. (2021). Evaluating the long-term effect of space radiation on the reproductive normality of mammalian sperm preserved on the International Space Station. *Science Advances*, 7(24). <https://doi.org/10.1126/sciadv.abg5554>
212. Ward, L. P. (2021). *The Ozone Depletion Theory of Global Warming: What is Electromagnetic Radiation?* Ozonedepletiontheory. <https://ozonedepletiontheory.info/what-is-radiation/>
213. Webb, R. (2023). What is gravity? *New Scientist*. <https://www.newscientist.com/definition/gravity/>
214. Weinberg, S. (1977) *The First Three Minutes. A modern view of the origin of the universe*, London: Bantam.
215. Weinberg, S. (1977). *The First Three Minutes. A modern view of the origin of the universe*. London: Bantam.
216. Weisstein, E. W. (2023). Isomorphism. MathWorld. <https://mathworld.wolfram.com/Isomorphism.html>
217. Williams, M. (2018). What is the Cosmic Microwave Background? *Universe Today*. <https://www.universetoday.com/135288/what-is-the-cosmic-microwave-background/>
218. Wollack, E. J. (2010). *Cosmology: The Study of the Universe. Universe 101: Big Bang Theory*. NASA. <http://map.gsfc.nasa.gov/universe/>
219. Wood, C. (2023). What Is Gravity? *Space.com*. <https://www.space.com/classical-gravity.html>

220. Woolfson, M. M. (1979). Cosmogony Today. *Quarterly Journal of the Royal Astronomical Society*, 20(2), pp. 97–114. <https://articles.adsabs.harvard.edu/pdf/1979QJRAS..20...97W>
221. Yadin, B. Fadel, M., & Gessner, M. (2021). Metrological Complementarity Reveals the Einstein-Podolsky-Rosen Paradox. *Nat. Commun.*, 12, 2410.
222. Yaffe, G. (2009) Thomas Reid on Consciousness and Attention, *Canadian Journal of Philosophy*, 39 (2), pp. 165–194. <http://dx.doi.org/10.1353/cjp.0.0044>
223. Yasgur, B. S. (2023). Heart Rate, Cardiac Phase Influence Perception of Time. *Medscape*. <https://www.medscape.com/viewarticle/990358>



Consciousness Physics is an emerging field of Theoretical Physics that involves studying electromagnetic (EM) waves, which have frequencies lying around and beyond the radio wave segment of the EM spectrum with a focus on consciousness waves (conwaves) possessed by complex systems (living organisms). In animals, including human beings, these conwaves are brain waves because the brain is the seat or organ of consciousness in these complex systems (i.e., hosts). As Quantum Mechanics is the branch of mechanics, which provides the mathematical description of motions and interactions at the scale of atoms and subatomic particles, Consciousness Mechanics is the branch of mechanics that deals with the mathematical description of motions and interactions at the deepest level of reality – consciousness-energy (CEN). Simply put, Consciousness Physics is the Physics of Everything and the Physics of Nothing, while Consciousness Mechanics is the Mathematics of Consciousness Physics.

Tijani Mustapha Adedeji is a graduate of Physics from the University of Ibadan, Oyo State, Nigeria. A native of Ijebu Imushin, Ogun State, Nigeria, he is doing studies in Physics at the post-graduate level. His research interests include Theoretical Physics, Astrophysics, Cosmology, Consciousness, Dark Matter, Dark Energy, and related areas of Physics. Tijani has a knack for spotting connections between different fields of Physics. He is keen about developing a single theoretical framework that unifies all the fundamental forces of nature together, which is called the Grand Unified Theory (GUT) or the Theory of Everything (TOE).