Abstract: The workings of Universal Topology unfolds a duality of our natural world at the following remarks:

a. Dual complex manifolds and the interactive world planes beyond a single non-complex spacetime manifold,

b. Two pairs of the scalar potentials for field entanglements complementarily, reciprocally and interdependently,

c. A mathematical framework of the dual variances to clone the event operations as an inevitable feature of reality,

d. Law of Event Evolutions carry out World Equations, Motion Operations, Geodesic routing and Horizon hierarchy,

e. A set of the holistic Universal Field Equations, foundational and general to all dynamic fields of natural evolutions.

Upon this foundation, our Universal Topology and Framework are ready to give rise to the unified classical and contemporary physics ...

INTRODUCTION

The classic theories, based on the observation at many observable collapsed states, have resulted in their theoretical models toward the decoherence interpretations or physical existence only [1,2]. After an observation is made, each element of the superset becomes the combined subject–object and any object with the two “relative states” is “collapsed” at its state with the same collapsed outcome. Before many-worlds, reality had always been viewed as a single unfolding history. Many-worlds, however, views historical reality as a many-branched tree, wherein every possible quantum outcome is realized or arising from horizons. To extend our fundamental physics into a duality of a oneness nature of Universal Topology, many-worlds interpretation [3,4], multiverse [12], and dark energy [5], become the main mainstream philosophical interpretation. Although these models describes indirectly to the observable states, they are developed as the most accepted hypothesis today. These theories or interpretations have the common ideas that, at minimum, there exists a pair of the fields: one for our physical world and the other for its reciprocal other world or virtual world [6].

More precisely in principle, an object possesses a pair of the fields and requires a duality of manifolds for their life entanglement. Because each object possesses a pair of the virtual and physical fields, an interruption between two objects involves two pairs of the fields, which constitute cross-entangling simultaneously and reciprocally [7,8,11]. In mathematics, this means that, instead of a single manifold, a oneness of the real world of our universe must be modeled by a duality of the World Planes, or the Dual Manifolds of Universal Topology.

Therefore, it provides the context for our main philosophical interpretation to extend our fundamental physics into a duality of a oneness of natural world [13]. In our universe, a duality of the two-sidedness lies at the heart of all events as they are interrelated, opposite or contrary to one another, each dissolving into the other in alternating streams that operates a life of creation, generation, or actions complementarily, reciprocally and interdependently. The nature consistently emerges as or entangle with a set of the fields that communicates and projects their interoperable values to its surrounding environment, alternatively arisen by or acting on its opponent through the reciprocal interactions.

I. DUAL MANIFOLDS OF UNIVERSAL TOPOLOGY

As the nature duality, our world always manifests a mirrored pair in the imaginary part or a conjugate pair of the complex manifolds, such that the physical nature of P functions is associated with its virtual nature of V functions to constitute a duality of the real world functions. Among them, the most fundamental dynamics are our dark resources of the universal energies, known as Yin “−” and Yang “+” dark objects, with neutral balance “0” that appears as if there were nothing. Each type of the dark objects (−,+ ,0) appearing as energy fields has their own domain of the relational manifolds such that one defines a Y (Yin) manifold while the other the Y+ (Yang) manifold, respectively. They jointly present the two-sidedness of any events, operations, transportations, and entanglements, each dissolving into the other in the alternating streams that generates the life of entanglements, conceals the inanimacy of resources, and appears the event actions.

Because each manifold has unique representations, worlds do not exactly coincide and require transportations to pass from one to the other through commonly shared natural foundations. Therefore, our universe manifests as an associative framework of objects, crossing neighboring worlds of manifolds, illustrated as the three dimensions as the mutually orthogonal units: a coordinate manifold of physical world P(r, λ), a coordinate manifold of virtual world V(k, λ), and a coordinate manifold of global function G(λ), of Word Events 2, shown in figure 1.1.

\[ P(r, \lambda) \]
\[ V(k, \lambda) \]
\[ G(\lambda) \]

Figure 1.1 Worlds of Universe Topology

where P(r, λ) is parameterized by the coordinates of spatial vector \( r(\lambda) = (x_1, x_2, x_3) \), and \( V(k, \lambda) \) is parameterized by the coordinates of timestate vector \( k(\lambda) = (x_1, x_2, x_3, \ldots) \). The global functions in \( G(\lambda) \) axis is a collection of common objects and states of events \( \lambda \), with unique functions applicable to both the virtual and physical spaces of the world W. In other words, a universe manifold is visualized as a transitional region among the associated manifolds of the worlds, which globally forms the topological hierarchy of a universe. A curve in this three-dimensional manifold \( [r, k, G(\lambda)] \) is called a Universe Line, corresponding to intersection of world planes from the two-dimensions of virtual and physical regimes of YinYang (Y+Y−) manifolds.

As a two-dimensional plane, the virtual positions of \( \pm i k \) naturally form a duality of the conjugate manifolds: \( Y^+ [r + i k] \) and \( Y^− [r − i k] \). Each of the system constitutes its world plane \( W^\pm \) distinctively, forms a duality of the universal topology \( W^\pm = P \pm i V \) cohesively, and maintains its own sub-coordinate system \( [r] \) or \( [k] \) respectively. Because of the two dimensions of the world planes \( [r \pm i k] \), each transends its event operations further down to its sub-coordinate system with extra degrees of freedoms for either physical dimensions \( r(\lambda) \) or virtual dimensions \( k(\lambda) \). For example, in the scope of space and time duality, the compound dimensions become the tetrad-coordinates, known as the following spacetime manifolds:

\[ x_m \in \lambda \{x_0, x_1, x_2, x_3\} \subset Y^− [r + i k] \quad : x_0 = ict \quad (1.1) \]

\[ x^b \in \bar{\lambda} \{x^0, x^1, x^2, x^3\} \subset Y^+ [r − i k] \quad : x^0 = −x_0 \quad (1.2) \]
where \( \pm i k = x_0 = - \lambda^2 \). As a consequence, a manifold appears as or is combined into the higher dimensional coordinates, which results in the spacetime manifolds in the four-dimensional spaces.

In complex analysis, events of world planes \( W^2 \) are holomorphic functions, representing a duality of complex-conjugate functions \( W^2 \) of one or more complex variables \( \lambda \) and \( \tilde{\lambda} \) in neighborhood spaces of every point in its universe regime of an open set \( \mathbb{O} \).

\[
W^2(\lambda, \tilde{\lambda}) = P(r, \lambda) - i V(k, \lambda) \quad : W^2 \in Y^4, \lambda \in \mathbb{C} \quad (1.3)
\]

\[
W^2(\lambda, \tilde{\lambda}) = P(r, \lambda) + i V(k, \lambda) \quad : W^2 \in Y^4, \lambda \in \mathbb{C} \quad (1.4)
\]

These two formulae are called the \( Y^4 \) Topology of Universe. Composed into a \( Y^4 \) component, the world \( W^2 \) is in the manifold of yin supremacy which dominates the processes of reproductions or animations. Likewise, composed into a \( Y^4 \) component, the world \( W^2 \) is in the manifold of yang supremacy which dominates the processes of creations or annihilations.

Together, the two world planes \( r \pm i k \) compose the two-dimensional dynamics of \textit{Boost}, an inertial for generators, and \textit{Spiral}, a rotational contortions for stresses, which function as a reciprocal or conjugate dual transformation and transporting global events among sub-coordinates. Consequently, for any type of the events, the \( Y^4 \) functions are always connected, coupled, and conjugated between each other, a duality of which defines entanglements as the virtually isomorphic and physically reciprocal pairs of all natural functions.

For the conceptual simplicity, this manuscripts limits further only to the physical observations. Therefore, we simply refer the states, events, and operations of “physical” functions to the yin supremacy, implying the \textit{Spacetime} manifold parallel to its global domain with the spatial relativistic dynamics, symmetry characteristics, and of “virtual” functions to the yang supremacy, implying the \textit{Timespace} manifold transformational to its reciprocal domain for physical observations with the general commutative dynamics and asymmetry characteristics, respectively. A world plane of the universe manifold is a global duality of virtual and physical worlds or yin and yang manifolds.

II. DUALITY OF POTENTIAL FIELDS

Governed by a global event \( \lambda \) under the universal topology, an operational environment is initiated by the scalar fields \( \phi(k) \) of a rank-0 tensor, a differentiable function of a complex variable in its domain at its zero derivative, where a scalar function \( \phi(k) \subset Y^4 \) or \( \phi(k) \subset Y^4 \) is characterized as a single magnitude with variable components of the respective coordinate sets \( \tilde{\lambda} \) or \( \tilde{\lambda} \). Because a field is incepted or operated under either virtual or physical primacy of an \( Y^4 \) or \( Y^4 \) manifold respectively and simultaneously, each point of the fields is entangled with and appears as a conjugate function of the scalar field \( \phi^* \) or \( \phi^* \) in its omnipotent manifold. A field can be classified as a scalar field, a vector field, or a tensor field according to whether the represented physical horizon is at a scope of scalar, vector, or tensor potentials, respectively.

Therefore, the effects are stationary projected to and communicated from their reciprocal opponent, shown as the following conjugate pairs:

\[
\phi^*(\lambda, \tilde{\lambda}) \to \phi^*(\lambda^*, \tilde{\lambda}^*) \quad (2.1)
\]

where * denotes a complex conjugate. A conjugate field \( \phi^* = (\phi^*)^* \) of the \( Y^4 \) scalar is mapped to a field in the \( Y^4 \) manifold, and vice versa that a conjugate field \( \phi^* = (\phi^*)^* \) of the \( Y^4 \) scalar is mapped to a field in the \( Y^4 \) manifold. In mathematics, if \( f(z) \) is a holomorphic function restricted to the \textit{Real Numbers}, it has the complex conjugate properties of \( f(z) = f^{*}(z^*) \), which leads to the above equation when \( \lambda^* = \bar{\lambda} \) is satisfied.

III. MATHEMATICAL FRAMEWORK

Both time and space are the functional spectra of the events \( \lambda \), operated by and associated with their virtual and physical structure, and generated by supernatural \( Y^4 \) events associated with their virtual and physical framework. The event states of spatial-time planes are open sets and can either rise as subspaces transformed from the other worlds or confined as independent existence within their own domain, as in the settings of spatial and time geometry for physical or virtual world. For a global parameter \( G(\lambda) \) of event \( \lambda \), a world plane is complex differentiable not only at \( W^2(\lambda) \), but also everywhere within neighborhood of \( W^2 \) in the complex plane or there exists a complex derivative in a neighborhood. By a major theorem in complex analysis, this implies that any holomorphic function is infinitely differentiable as an expansion of a function into an infinite sum of terms.

As a part of the natural architecture, the mathematical regulation of terminology not only includes symbol notation, operators, and indices of vectors and tensors, but also classifies the mathematical tools and their interpretations under the universal topology. In order to describe the nature precisely, it is essential to define a duality of the contravariant \( Y^4 = Y(r - i k) \) manifold and the covariance \( Y^4 = Y(r + i k) \) manifold, respectively by the following regulations.

1) Covariance (\( \delta \cdot \)) - One set of the symbols with the upper indices \( (\lambda \nu, \bar{u}^\nu, A^\mu) \), as contravariant forms, are the numbers for the \( Y(\lambda) \) basis of the \( Y^4 \) manifold labelled by its identity symbols \( \{\cdot, \cdot\} \). “Contravariance” is a formalism in which the nature laws of dynamics operates the event actions \( \delta \cdot \), maintains its virtual supremacy of the \( Y^4 \) dynamics, and dominates the virtual characteristics under the manifold basis \( \lambda \).

Either contravariance or covariance has the same form under a specified set of transformations to the lateral observers within the same or boost basis as a common or parallel set of references for the operational event.

The communications between the manifolds are related through the tangent space of the world planes, regulated as the following operations:

3) Communications (\( \delta \cdot \) and \( \delta^\cdot \)) - Lowering the operational indices \( \delta \cdot \) is a formalism in which the quantitative effects of an event \( \lambda \) under the contravariant \( Y^4 \) manifold are projected into, transformed to, or acted on its conjugate \( \delta^\cdot \) manifold. Rising the operational indexes \( \delta^\cdot \), in parallel fashion, is a formalism in which the quantitative effects of an event \( \lambda \) under the covariance \( Y^4 \) manifold are projected into, transformed to, or recorded at its reciprocal \( \delta^\cdot \) manifold.

The dual variances are isomorphic to each other regardless if they are isomorphic to the underlying manifold itself, and form the norm (inner product) of the manifolds or world lines. Because of the reciprocal and contingent nature, the dual manifolds conserve their invariant quantities under a change of transform commutations and transport continuities with the expessional freedom of its underlying basis.

As a part of the universal topology, these mathematical regulations of the dual variances architecturally defines further framework of the event characteristics and its operational structures. In the \( Y^4 \) manifolds, a potential field can be characterized by a scalar function of \( w \in \{\phi^*, \phi^*, \phi^*, \phi^* \} \), named as First Horizon Fields, to serve as a state environment of entanglements. The derivative to the scalar fields are event operations of their motion dynamics, which generates a tangent space, named as Second Horizon Fields.

1. In order to operate the local actions, an event \( \lambda \) exerts its effects of the virtual supremacy within its \( Y^4 \) manifold or physical supremacy within its \( Y^4 \) manifold, giving rise to the second horizon:

\[
\delta^\cdot \lambda = \int \delta \lambda w \quad : \delta \lambda = \partial_t \lambda = \partial_\lambda \lambda, \lambda^* \in \mathbb{C} \quad (3.1)
\]

\[
\delta^\cdot \lambda = \int \delta \lambda w \quad : \delta \lambda = \partial_t \lambda = \partial_\lambda \lambda, \lambda^* \in \mathbb{C} \quad (3.2)
\]

\[
\delta^\cdot \lambda = \int \delta \lambda w \quad : \delta \lambda = \partial_t \lambda = \partial_\lambda \lambda, \lambda^* \in \mathbb{C} \quad (3.3)
\]

The speed \( \lambda^* = [-i c, u^*] \) or \( \lambda^* = [i c, u^*] \) is the contravariant or covariant velocity, observed from an inertial frame without effects of
rotations and transformation. Applying to a point object, it represents a field at each point “External” to itself.

2. By lowering the index, the virtual $Y'$ actions manifest the first tangent potential $\partial \tilde{\lambda}$ projecting into its opponent basis of the $Y'$ manifold. Because of the motion, the derivative to the vector $x^\nu$ has the changes of both magnitude quantity $i_x \frac{\partial x^\nu}{\partial x^\lambda}$ and basis direction $(i_x V^b)_x^\nu = \tilde{x}^\lambda \Gamma^\nu_{\lambda b} x^b$ transforming from one world plane $W^\nu [r - i k]$ to the other $W^\nu [r + i k]$. This action redesigns the $Y'$ event quantities of relativity and creates the event rotations and transformation. Applying to a point object, it represents a flow diagram of Figure 4.1, operate the potential entanglements that consist of the $Y'$ supremacy (white background) at a top-half of the cycle and the $Y'$ supremacy (black background) at a bottom-half of the cycle. Each part is dissolving into the other to form an alternating stream of dynamic flows. Their transformations in between are bi-directional antisymmetric and transported crossing the dark tunnel through a pair of the end-to-end circlets on the center line. Both of the top-half and bottom-half share the common global environment of the state density $\rho_{0n}$ that mathematically represents the $\rho_{0n}^\nu$ for the $Y'$ manifold and its equivalent $\rho_{0n}^\nu$ for the $Y'$ manifold, respectively.

Besides, the left-side diagram presents the event flow acted from the inception of $\partial \omega$ through $\partial \lambda^1 \partial \lambda^2 \partial \lambda^3$ to intact a cycle process for the $Y'$ supremacy. In parallel, the right-side diagram depicts the event flow initiated from the event $\partial \omega$ through $\partial \lambda^1 \partial \lambda^2 \partial \lambda^3$ to complete a cycle process for the $Y'$ supremacy. The details are described as the following loops:

$$\partial \omega : (\partial \lambda^1 \rightarrow \partial \lambda^2, \partial \lambda^2 \rightarrow \partial \lambda^3, \partial \lambda^3 \rightarrow \partial \lambda^1)$$

$$W^\nu : (\partial \lambda^1 \rightarrow \partial \lambda^2, \partial \lambda^2 \rightarrow \partial \lambda^3, \partial \lambda^3 \rightarrow \partial \lambda^1)$$

Figure 4.1: Event Flows of $Y'$ Evolutionary Processes

1) Visualized in the left-side of Figure 4.1, the transitional event process between virtual and physical manifolds involves a cyclic sequence throughout the dual manifolds of the environment: inceptioned at $\lambda_{0\nu}$, the event actor produces the virtual operation $\partial \lambda^1$ in $Y[1^\nu]$ manifold (the left-hand blue curvature) projecting $\partial \lambda^2$ to and transforming into its physical opponent $\partial \lambda^3$ (the tin curvature transforming from the left-hand into right-hand), traveling through $Y[1^\nu]$ manifold (the right-hand green curvature), and reacting the event $\partial \lambda^1$ back to the actor.

2) As a duality in the parallel reaction, exhibited in the right-side of Figure 4.1, initiated at $\lambda_{0\nu}$, the event actor generates the physical operation $\partial \lambda^1$ in $Y[1^\nu]$ manifold (the right-hand green curvature) projecting $\partial \lambda^2$ to and transforming into its virtual opponent $\partial \lambda^3$ (the tin curvature transforming from right-hand into left-hand), traveling through $Y[1^\nu]$ manifold (the right-hand green curvature), and reacting the event $\partial \lambda^1$ back to the actor.

With respect to one another, the two sets of the Universal Event processes, cycling at the opposite direction simultaneously, formulate the flow charts in the following mathematical expressions:

$$W^\nu : (\partial \lambda^1 \rightarrow \partial \lambda^2, \partial \lambda^2 \rightarrow \partial \lambda^3, \partial \lambda^3 \rightarrow \partial \lambda^1)$$

$$W^\nu : (\partial \lambda^1 \rightarrow \partial \lambda^2, \partial \lambda^2 \rightarrow \partial \lambda^3)$$

This pair of the intertwaving system pictures an outline of the internal commutation of dark energy and continuum density of the entanglements. It demonstrates that the two-sidedness of any event flows, each dissolving into the other in alternating streams, operate a life of situations, movements, or actions through continuous helix-circulations aligned with the universe topology, which lay behind the context of the main philosophical interpretation of World Equations.

Artfact 4.1: Motion Operations. As a natural principle of motion dynamics, one of the flow processes dominates the intrinsic order, or development, of virtual into physical regime, while, at the same time, its opponent dominates the intrinsic annihilation or physical resources into virtual domain. Applicable to world expressions of (4.1)-(4.2), the principle of least-actions derives a set of the Motion Operations:

$$\partial (\frac{\partial W}{\partial (\partial \nu + \phi^\nu)}) - \frac{\partial W}{\partial \phi^\nu} = 0 \quad : \phi^\nu \in \{\phi^\nu_1, \phi^\nu_2\}$$

IV.

LAW OF EVENT EVOLUTIONS

Following Universal Topology, world events, illustrated in the $Y'$ $Y'$ flow diagram of Figure 4.1, operate the potential entanglements that
\[ \hat{\mathbf{p}} + i \mathbf{W} \frac{\partial}{\partial \hat{\mathbf{q}}} \hat{\mathbf{r}} = 0 \quad \hat{\mathbf{r}} = \{ \hat{\mathbf{q}} , \hat{\mathbf{p}} \}, \hat{\mathbf{p}} = \{ \phi_n, \phi_q \} \]  

This set of dual formulae extends the philosophical meaning to the Euler-Lagrange [9] Motion Equation for the actions of any dynamic system, introduced in the 1750s. The new sets of the variables of \( \phi_n \) and the event operators of \( \hat{\mathbf{p}} \) and \( \hat{\mathbf{q}} \) signify that both manifolds maintain a holomorphic operation and is complex differentiable in a neighborhood of every point in its domain, such that an operational process can be represented as an infinite sum of terms:

\[ f(\lambda) = f(\lambda_0) + f'(\lambda_0)(\lambda - \lambda_0) + \cdots + f^n(\lambda_0)(\lambda - \lambda_0)^n/n! \]  

(5.1)

known as the Taylor and Maclaurin series [8], introduced in 1715. Normally, a global event generates a series of sequential actions, each of which is associated with its opponent reactions, respectively and reciprocally. For any event operation as the functional derivatives, the sum of terms are calculated at an initial state \( \lambda_0 \) and explicitly reflected by the Event Operations \( \lambda \rightarrow \lambda_0 \) in the dual variant forms:

\[ f(\lambda) = f_0 + \sum_{k_0} f_{1} \hat{a}_1 + \sum_{k_0} f_{2} \hat{a}_2 + \sum_{k_0} f_{3} \hat{a}_3 + \cdots + \sum_{k_0} f_{n} \hat{a}_n \]  

(5.2)

where \( f_{\lambda_0} \) is the coefficient of each order \( n \). The event states of world planes are open sets and can either rise as subspaces transformed from the other horizon or remain confined as independent existences within their own domain, as in the settings of \( Y^+ \) manifolds of the world planes.

The operational function \( f(\lambda) \) for an event \( \lambda \) involves the state densities \( \rho_0 \) and spacetime exposition \( I \) of a system with \( N \) objects or particles. Assuming each of the particles is in one of three possible densities \( k_0, k_1, k_2 \) and \( \phi_n \) particles at non-zero charges with their state functions of \( \phi_k \) or \( \phi_q \) confined to the respective manifold \( Y^+ \). Therefore, the horizon functions of the system can be expressed by:

\[ W_0 = k_0 \int W_0 d \Gamma, \quad W_0 = \sum_{h_0} h_0 W_0, \quad W_0 = f(\lambda_0) \]  

(5.4)

where \( \rho_0 = \rho^2(\xi, \lambda, \phi, \psi) \) and \( \psi_0 \in \{ \phi, \psi \} \), \( h_0 = N^2/N \) is the horizon factor, \( N^2/N \) are percentages of the \( Y^+ \) particles, and \( \lambda_0 \) is defined as a world constant. During space and time dynamics, the density \( \psi_0 \) is incremented at \( \lambda = \lambda_0 \) and followed by a sequence of the evolutions \( \lambda_0 \rightarrow \lambda_1 \). This process engages and applies a series of the event operations of equations (5.2) to the equations of (5.4) in the forms of the following expressions, named as World Equations:

\[ W^+ = k_0 \int dI \sum_{h_0} h_0 \left[ W^+ \phi_0 \frac{1}{\gamma_0} \right] \]  

(5.5)

where \( W^+ \equiv W(\xi, \lambda, \phi) \) is the \( Y^+ \) or \( Y^0 \) ground environment or an initial potential flow of a system, respectively. Because an event process \( \lambda_0 \) is operated in complex composition of the virtual and physical coordinates, it yields a linear function in a form of operational addition:

\[ f(\lambda_0 + \delta_1) = f(\lambda_0) + f(\delta_1), \]  

where the \( [\mathbf{r}, \mathbf{k}] \) vectors of each manifold \( Y^+ \mathbf{r} = A \mathbf{k} \) constitute their orthogonal coordinate system \( \mathbf{r} = \mathbf{k} = 0 \).

As the topological framework, various horizons are defined as, but not limited to, instantaneous, microscopic and macroscopic regimes, each of which is in a separate zone, emerges with its own fields, and aggregates or dissolves into each other as the interoperative neighborhoods, systematically and simultaneously. Through the \( Y^+ \) communications, the expression of the tangent vectors defines and gives rise to each of the horizons.

**Artfact 5.1: First Horizon**

The field behaviors of individual objects or particles have their potentials of the timestate functions in the form of, but not limited to, the dual densities:

\[ \rho_0^0 = \rho(\xi, \lambda), \quad \psi_0^- \equiv \rho(\xi, \lambda), \quad \psi_0^+ \equiv \rho(\xi, \lambda) \]  

(5.8)

This horizon is confined by its neighborhoods of the ground fields and second horizons, which is characterizeable by the scalar objects of \( \phi^2 \) and \( \phi^2 \) fields of the ground horizon, individually, and reciprocally.

**Artfact 5.2: Second Horizon**

The effects of aggregated objects have their commutative entanglements of the microscopic functions in forms of

\[ \Gamma_{\phi} = \frac{\hbar c}{E_{\phi}} \left( \phi \phi^{\dagger} \phi^{\dagger} \phi - \phi^{\dagger} \phi \phi^{\dagger} \phi \right) \]  

(5.10)

\[ \Gamma_2 = \frac{\hbar c}{E_{\phi}} \left( \phi \phi^{\dagger} \phi^{\dagger} \phi - \phi^{\dagger} \phi \phi^{\dagger} \phi \right) \]  

(5.11)

defined as Fluxion Fields. This horizon summarizes the timestate functions \( \Gamma^2 = \sum \Gamma_{\phi} \), confined between the first and third horizons.

**Artfact 5.3: Third Horizon**

The integrity of massive objects characterizes their global motion dynamics of the macroscopic matrices and tensors through an integration of, but not limited to, the derivative to microscopic fields of densities and fluxions, defined as Force Fields:

\[ \mathbf{F} = \kappa_0 \int \mathbf{r}_0 \mathbf{d} \Gamma^0 \rightarrow W^0 \]  

(5.12)

where \( \kappa_0 \) or \( \kappa_0 \) is a coefficient. This horizon is confined by its neighborhoods of the second and fourth horizons and characterizable by the tensor fields of \( \mathbf{d} \) and \( \mathbf{d} \).

The horizon ladder continuously accumulates and gives a rise to the next objects in form of a ladder hierarchy:

\[ \mathbf{W} = \sum_{\mathbf{r}_0} \mathbf{r}_0 \mathbf{d} \mathbf{F}^{\mathbf{r}_0} \mathbf{d} \mathbf{I} \rightarrow W^0 \]  

(5.13)

They are orchestrated into groups, organs, globes or galaxies.

**VI. UNIVERSAL FIELD EQUATIONS**

The potential entanglements is a fundamental principle of the real-life streaming such that one constituent cannot be fully described without considering the other. As a consequence, the state of a composite system is always expressible as a sum of products of states of each constituents. Under the law of event operations, they are fully describable by the mathematical framework of the dual manifolds.

During the events of the virtual supremacy, a chain of the event actors in the loop flows of Figure 4.1 and equation (4.1) can be shown by and underlined in the sequence of the following processes:

\[ W^+ : \left( \hat{\mathbf{d}}^1 \rightarrow \hat{\mathbf{d}}^2 \right), \left( \hat{\mathbf{d}}^2 \rightarrow \hat{\mathbf{d}}^3 \right), \left( \hat{\mathbf{d}}^3 \rightarrow \hat{\mathbf{d}}^4 \right) \]  

(6.1)

From the event actors \( \hat{\mathbf{d}}^1 \) and \( \hat{\mathbf{d}}^2 \), the World Equations (5.4) becomes:

\[ W^+ = \left( W^+ + k_1 \hat{\mathbf{d}}^1 \right) \phi_n \phi_q^2 + k_2 \hat{\mathbf{d}}^2 \phi_n \phi_q^2 + \phi_n \phi_q^2 \phi_q^2 \]  

(6.2)

Meanwhile the event actors \( \hat{\mathbf{d}}^1 \) and \( \hat{\mathbf{d}}^2 \) turn World Equations into:

\[ (W^+)^2 = \left( W^+ + k_1 \hat{\mathbf{d}}^1 \right) \phi_n \phi_q^2 + k_2 \hat{\mathbf{d}}^2 \left( \phi_n \phi_q^2 \phi_q^2 + \phi_n \phi_q^2 \phi_q^2 \right) \]  

(6.3)
Universal Topology $W = P \pm iV$, has revealed a set of the following discoveries or groundbreakings:

1) To align closely with life-streams of our natural world, the Dual complex manifolds are established that overcomes the limitations of a single spacetime manifold.

2) Two pairs of the potential fields lies at the heart of the field theory for the fundamental interactions among the virtual dark energies and physical motion dynamics.

3) Mathematical Framework is imperatively regulated on a new theoretical foundation by the dual variances to intimately mimic event actions of transform and transport processes.

4) Law of Event Evolutions lies at the heart of the field entanglements reciprocally and consistently as the fundamental flows of loop interactions of dark energies for the field entanglements.

5) Motion Operations are further regulated on and performed with a new theoretical foundation of the dual events intimately mimetic operational actions on the geodesic coverties, extend the meanings to the Euler-Lagrange Motion Equation.

6) World Equations align a series of the infinite sequential actions concisely with potential-streams of the natural dynamics (4.3, 4.4) that overcome the limitations of classic Lagrangian representations.

7) First Universal Field Equations of (6.7, 6.8) and (6.12, 6.13) are discovered as a set of general formulae, which lies at the heart of and is grounded for all horizon fields of Universal and Unified Physics.

As a result, it has laid out a ground foundation towards a unified physics that give rise to the fields of quantum, photon, electromagnetism, graviton, gravitation, thermodynamics, cosmology, and beyond...

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