Chapter 10

Quantum Intentionality and Determination of Realities in the Space-Time Through Path Integrals and Their Integral Transforms

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Additional information is available at the end of the chapter

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1. Introduction

In the universe three fundamental realities exist inside our perception, which share messages and quantum processes: the physical, energy and mental reality. These realities happen at all times and they are around us like part of our existence spending one to other one across *organised transformations* which realise a linking field - energy-matter across the concept of conscience of a field on the interpretation of the matter and space to create a reality non-temporal that only depends on the nature of the field, for example, the gravitational field is a reality in the space - time that generates a curved space for the presence of masses. At macroscopic level and according to the Einsteinian models the time is a flexible band that acts in form parallel to the space. Nevertheless, studying the field at microscopic level dominated by particles that produce gravity, the time is an intrinsic part of the space (*there is no distinction between one and other*), since the particles contain a rotation concept (*called spin*) that is intrinsic to the same particles that produce gravity from quantum level [1].Then the gravitational field between such particles is an always present reality and therefore non-temporal. The time at quantum level is the distance between cause and effect, but the effect (*gravitational spin*) is contained in the proper particle that is their cause on having been interrelated with other particles and vice versa the effect contains the cause since the particle changed their direction [1].

Then the action of any field that is wished transforms their surrounding reality which must spill through the component particles of the space - time, their nature and to transmit it in organised form, which is legal, because the field is invariant under movements of the proper space, and in every particle there sublies a part of the field through their *spinor*.

Three fundamental realities perceived by our anthropometric development of the universe; field - energy- matter between three different but indistinguishable realities are realised at macroscopic level: one is the *material reality* which is determined by their atomic linkage between material particles (*atoms constituted by protons, neutrons and electrons*), an energy reality, called also quantum reality, since the information in this reality area exchanges the matter happen through sub-particles (*bosons, fermions, gluons, etc*) and finally a virtual reality that sublies like *fundamental field* and that is an origin of the changes of spin of the sub-particles and their support doing that they transform these into others and that they transform everything around him (*Higgs field*). The integration of these three realities will be called by us a *hyper-reality* by us. The hyper-reality contains to the *quantum reality* and to the reality perceived by our senses (material reality).

Consider $\mathbb{R}^d \times I_t$, like the space - time where happens the transitions of energy states into space - time, and let u, v, elements of this space, the integral of all the continuous possible paths to particle $x(s)$, that transit from energy state in u, to an energy state in v, in $\mathbb{R}^d \times I_t$, is

$$\mathrm{I}(L, x(t)) = \int_{C^{u,v}[0,t]} \exp\left\{\frac{i}{h}\Im(x)\right\}dx, \tag{1}$$

where h, is the constant of Max Planck, and the action $\Im$, is the one realised by their *Lagrangian L*.

Since we have mentioned, the action of a field is realised being a cause and effect, for which it must be a cause and effect in each of the component particles, "waking up" the particle conscience to particle being transmitted this way without any exception. This action must infiltrate to the field itself that it sublies in the space and that it is shaped by the proper particles that compose it creating a certain co-action that is major than their algebraic sum [2].The configuration space $C_{n,\,m} = \{\gamma_t \in \Omega(\Gamma)\ |\gamma t \rightarrow \Gamma \rightarrow \Gamma/\gamma\}$ [3], is the model created by the due action to each corresponding trajectory to the different splits it. Is clear here we must have in mind all the paths in the space-time $\mathbb{M}$, that contribute to interference amplitude in this space, remaining the path of major statistical weight. The intention takes implicitly a space $C_{n,\,m}$. Any transformation that wants to realise of a space, has as constant the same energy that comes from the permanent field of the matter and which is determined by the quantum field of the particles $x(s)$, constituents of the space and matter. If we want to define a conscience in the above mentioned field, that is to say, an action that involves an intention is necessary to establish it inside the argument of the action. Likewise, if $x(s)\in\Omega$, and $\Im(x(s))$, there is their action due to a field of particles X, and there is spilled an intention defined by (1) the length and breadth of the space $\mathbb{M}$, such that satisfies the property of synergy [2], for all the possible trajectories that they fill Ω, we have that

$$\Im_{\mathrm{TOTAL}} \geq \int_{E^-}^{E^+} \left\{\sum_j \int_{\Upsilon_t} \Im_j(x(s))d(x(s))\right\}d\mu, \tag{2}$$

where the entire action (2) is an intentional action (*for the whole infinity of paths* γ_t, that defines Γ, and that are trajectories of the space - time $\Omega \subset \mathbb{R}^3 \times I_t$), if and only if $O_c(x, \dot{x}(s)) = L(\phi(x), \partial\phi(x))d\phi$, where then

$$\Im_{TOTAL} = \int_{\Gamma} \left\{ \Im \left[\int_{\Omega(\Gamma)} O_c(\phi(x))d(\phi(x)) \right] \right\} \mu_x = (E^+ - E^-) \int_{-\infty}^{+\infty} \left\{ \int_{\Omega(\Gamma)} \Im(x(s))\mathrm{d}x(s) \right\} \mu_s, \qquad (3)$$

where the energy factor $E^+ - E^-$, represents the energy needed by the always present force to realise the action and O_c, is the conscience operator which defines the value or record of the field X (direction), on every particle of the space $\Omega(\Gamma)$, which along their set of trajectories Γ, realizes the action of permanent field $\Im_{O_c}$, it being fulfilled that

$$\Im_{O_c}(\phi(x)) = \int_{X(M)} O_c(\phi(x))d\phi(x), \qquad (4)$$

where the operator $\Im_{O_c}$, invests an energy quasi-infinite, encapsulated in a microscopic region of the space (*quantum space* $\mathcal{M}$), and with applications and influence in an unlimited space of the sub-particles (*boson space*). Likewise a photon of certain class $\phi(x)$, will be generated by the quantum field (*if it manages to change its field spin*) and will be moved for the intention on a trajectory Γ, by the path integral

$$\mathrm{I}(\Im_{O_c}(\phi(x))) = \int_{\Gamma} \left[\int_{X(\Omega(\Gamma))} O_c(\phi(x))d(\phi(x)) \right] \mu_{\Gamma}, \qquad (5)$$

Interesting applications of the formula (3) to nano-sciences will happen at the end of the present chapter. Also it will be demonstrated that (3) is a quantum integral transform of bundles or distortions of energy in the space - time if it involves a *special kernel*. The bundle stops existing if there is applied certain intention (*path integral transform*). The operator O_c, involves a *connection* of the tangent bundle of the space of trajectories $\Omega(\Gamma)$.

The operator O_c, include a connection of the tangent bundle of the space of trajectories $\Omega(\Gamma)$. The integral (5) will determine on certain hypotheses the interdependence between the material, quantum and virtual realities in $\mathbb{M}$.

Def. **2. 1** (*intentional action of the* X). Let X, be a field acting on the particles $x_1(s)$, $x_2(s)$, …, $\in \mathbb{M}$, and let $\Im$, be their action on the above mentioned particles under an operator who recognizes the "target" in $\mathbb{M}$, (*conscience operator*). We say that $\Im$, is an conscientious intentional action (*or simply intention*) of the field X, if and only if:

a. $\Im$, is the determination of the field X, to realise or execute, (their force $F(x)$),
b. $\Im$, recognizes well their target, it is known what the field X wants to do (their direction $\Leftrightarrow$ she follows a configuration patron)

Consider a particle system p_1, p_2,… in a space - time $\mathbb{M} \cong \mathbb{R}^4$. Let $x(t) \in \Omega(\Gamma) \subset \mathbb{R}^3 \times I_t$, be a trajectory which predetermines a position $x \in \mathbb{R}^3$, for all time $t \in I_t$. A field X, that infiltrates its action to the whole space of points predetermined by all the trajectories $x_1(t)$, $x_2(t)$, $x_3(t)$, …,$\in \Omega(\Gamma)$, is the field that predetermines the points $\phi_i(x_i(t))$, which are fields whose determination is given by the action of the field X, and evaluated in the position of every particle. Every point have a defined force by the action $\Im$, of X, along the geodesic γ_t, and determined direction by their tangent bundle given for $T\times^1(\Omega(\Gamma))$, that is the cotangent space $T^*(\Omega(\Gamma))$ [4], which give the images of the states under Lagrangian, that is to say, the field provides of direction to every point ϕ_i, because their tangent bundle has a subjacent spinor bundle $\mathbb{S}$ [5], where the field X, comes given as $X = \sum_{\mathrm{i}} \phi^i \frac{\partial}{\partial \phi^i}\Big|_{(x^{\mathrm{i}}, \phi^{\mathrm{i}})}$, $\forall\ \phi_1, \phi_2, \phi_3, \ldots \in \times^1$, on every particle $p_{\mathrm{i}} = x_{\mathrm{i}}(t)$ (i = 1, 2, …). Then *to direct an intention* is the map or connection:

$$O_c : T\Omega(\Gamma) \to T\times^1(\Omega(\Gamma)) \ (\cong T^*(\Omega(\Gamma)), \tag{6}$$

with rule of correspondence

$$(x^i, \partial_t x^i) I \to (\phi^i, \partial_m \phi^i) \tag{7}$$

which produces one to us i*th*- state of field energy ϕ^i [6], where the action $\Im$, of the field X, infiltrates and transmits from particle to particle in the whole space $\Omega(\Gamma)$, using a configuration given by their Lagrangian L (*conscience operator*), along all the trajectories of $\Omega(\Gamma)$. Then of a sum of trajectories $\int D_F(x(t))$, one has the sum $\int d(\phi(x))$, on all the possible field configurations $C_{n,\,m}$. Extending these intentions to whole space $\Omega(\Gamma) \subset \mathbb{M}$, on all the elections of possible paths whose statistical weight corresponds to the determined one by the intention of the field, and realising the integration in paths for an infinity of particles - fields in $T\Omega(\Gamma)$, it is had that

$$\mathrm{I}(\phi^i(x)) = \int_{T\Omega(\Gamma)} \omega(\phi(x)) = \lim_{\substack{N\to\infty \\ \delta s \to 0}} \frac{1}{B} \int_{-\infty}^{+\infty} \frac{d\phi^1}{B} \cdots \int_{-\infty}^{+\infty} \frac{d\phi^{\mathrm{n}}}{B} \cdots = \prod_{i=1}^{\infty} \int_{-\infty}^{+\infty} \mathrm{e}^{\mathrm{i}\Im[\phi^i, \partial_\mu \phi^i]} d\phi^i(x(s)), \tag{8}$$

where $B = \left[\frac{m}{2\pi\hbar i \delta s}\right]^{1/2}$, is the amplitude of their propagator and in the second integral of (8), we have expressed the Feynman integral using the form of volume $\omega(\phi(x))$, of the space of all the paths that add in $T\Omega(\Gamma)$, to obtain the real path of the particle (*where we have chosen quantized trajectories,* that is to say, $\int d(\phi(x))$). Remember that the sum of all these paths is the interference amplitude between paths that is established under an action whose Lagrangian is $\omega(\phi(x)) = \Im_{\mathcal{G}}(x) d\phi(x)$, where, if $\Omega(\mathbb{M})$, is a complex with $\mathbb{M}$, the space-time, and $C(\mathbb{M})$, is a complex or configuration space on $\mathbb{M}$, (*interfered paths in the experiment given by multiple split* [7]), endowed with a pairing

$$\int : C(\mathbb{M}) \times \Omega^*(\mathbb{M}) \to \mathbb{R}, \tag{9}$$

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where $\Omega^*(\mathbb{M})$, is some dual complex ("*forms on configuration spaces*"), i.e. such that "Stokes theorem" holds:

$$\int_{\Omega\times C} \omega = <\Im, \mathrm{d}\omega>, \tag{10}$$

then the integrals given by (8) can be written (to *m*-border points and *n*-inner points (see **figure 1a**))) as:

$$\begin{aligned}\int_{T\Omega(\Gamma)} \Im(\phi(x))d\phi &= \int_{\Omega(\Gamma_{t1})\times\ldots\times\Omega(\Gamma_{tm})\times\ldots} \Im_q \mathrm{d}\phi_1^{m_1}\ldots\mathrm{d}\phi_n^{m_n}\ldots \\ &= \int_{\Omega(\Gamma_{t1})}(\int_{\Omega(\Gamma_{t2})\ldots}(\int_{\Omega(\Gamma_{tm})} \Im \mathrm{d}\phi_1^{m_n})\ldots\mathrm{d}\phi_n^{m_1})\ldots,\end{aligned} \tag{11}$$

This is an *infiltration* in the space-time by the direct action $\Im$ [2, 3], that happens in the space $\Omega \times C$, to each component of the space $\Omega(\Gamma)$, through the expressed Lagrangian in this case by ω, de (10). In (11), the integration of the space realises with the infiltration of the time, integrating only energy state elements of the field.

The design of some possible spintronic devices that show the functioning of this process of transformation in the space M, will be included in this chapter.

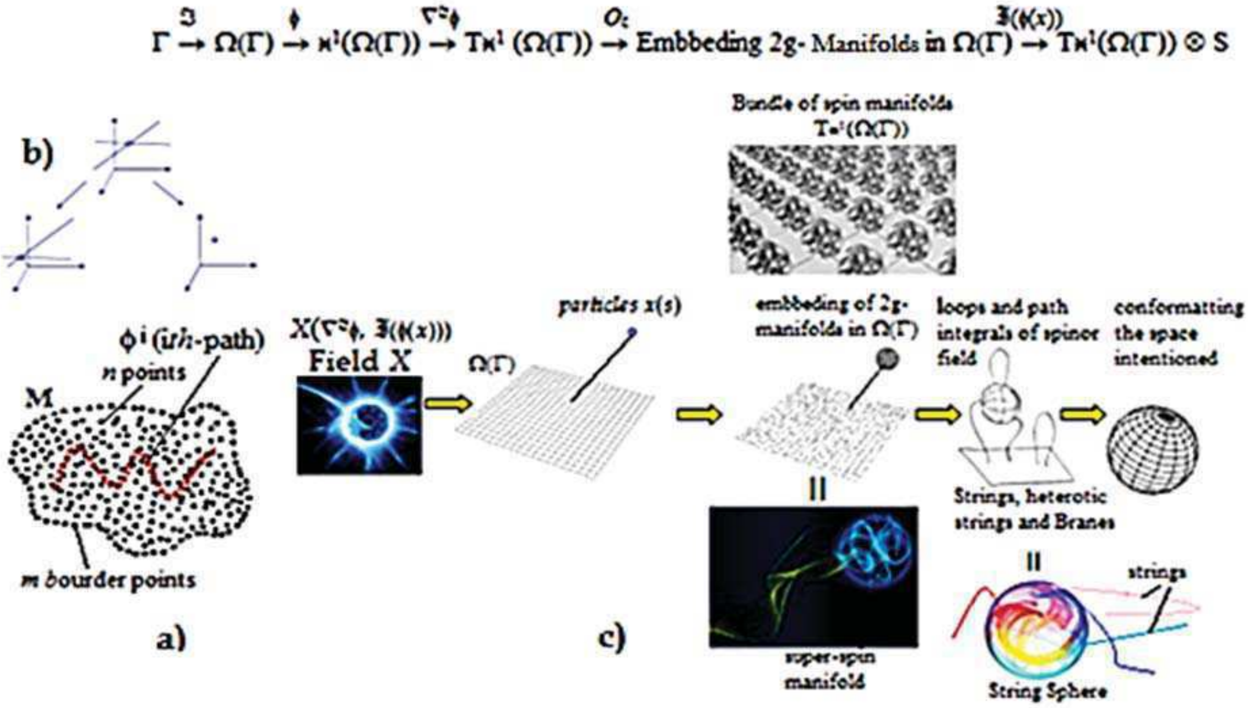

Figure 1. In a) The configuration space $C_{n,m}$, is the model created by the due action to each corresponding trajectory to the different splits. b) Example of a doble fibration to explain the relation between two realities of a space of particles: the bundle of lines *L*, and the ordinary space $\mathbb{R}^3$. c) Way in as a quantum field *X*, which acts on a space - time to change its reality, that is to say, to spill their intention.

2. Conscience operators and configuration spaces

We consider $\mathbb{M} \cong \mathbb{R}^3 \times I_t$, the space-time of certain particles $x(s)$, in movement, and let L, be an operator that explains certain law of movement that governs the movement of the set of particles in $\mathbb{M}$, in such a way that the energy conservation law is applied for the total action of each one of their particles. The movement of all the particles of the space $\mathbb{M}$, is given geometrically for their tangent vector bundle $T\mathbb{M}$. Then the action due to L, on $\mathbb{M}$, is defined like [8]:

$$\Im_L : T\mathbb{M} \rightarrow \mathbb{R}, \tag{12}$$

with rule of correspondence

$$\Im\big(x(s)\big) = FluxL\big(x(s)\big)x(s), \tag{13}$$

and whose energy due to the movement is

$$E = \Im - L, \tag{14}$$

But this energy is due from their Lagrangian $L \in C^{\infty}(T\mathbb{M}, \mathbb{R})$, defined like [9]

$$L(x(s), \dot{x}(s), s) = T(x(s), \dot{x}(s), s) - V(x(s), \dot{x}(s), s), \tag{15}$$

If we want to calculate the action defined in (7) and (8), along a given path $\Gamma = x(s)$, we have that the action is

$$\Im_\Gamma = \int_\Gamma L(x(s), x(s), s)ds, \tag{16}$$

If this action involves an intention (that is to say, it is an intentional action) then the action is translated in all the possible field configurations, considering all the variations of the action along the fiber derivative defined by the Lagrangian L. Of this way, the conscience operator is the map

$$O_c : T\mathbb{M} \rightarrow T^*\mathbb{M}, \tag{17}$$

with corresponding rule

$$O_c(v)w = \frac{d}{dt} L(v + tw)\Big|_{t=0}, \tag{18}$$

That is, $O_c(v)w$, is the derivative of L, along the fiber in direction w. In the case of $v = x'(s)$, and $q = x(s)$, $\forall\ q \in M$, $L(q, v) = E - V = \frac{1}{2}\langle v, v\rangle - V(q)$, we see that $O_c(v)w = \langle v, w\rangle$, so we recover the usual map $\mathbf{s}^b : T\mathbb{M} \rightarrow T^*\mathbb{M}$, (with ^{b} Euclidean in $\mathbb{R}^3$) associated with the bilinear form $\langle\ ,\ \rangle$. Is here where the spin structure subjacent appears in the momentum of the particle $x(s)$.

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As we can see, T*𝕄, carries a canonical symplectic form, which we call ω. Using O_c, we obtain a closed two-form ωL, on T𝕄, by setting

$$\omega_L = \left(O_c\right)^* \omega, \tag{19}$$

Considering the local coordinates $(\phi^i, \partial_\mu\phi^i)$, to ω_L, modeling the space-time 𝕄, through $\mathcal{H}$-spaces, we have that (19) is

$$\omega_L = \frac{\partial^2 L}{\partial\phi^i\partial\partial_\mu\phi^j}\mathrm{d}\phi^i \wedge \mathrm{d}\phi^j + \frac{\partial^2 L}{\partial\phi^i\partial\partial_\mu\phi^j}\mathrm{d}\phi^i \wedge \mathrm{d}\partial_\mu\phi^j, \tag{20}$$

Likewise, the variation of the action from the operator $O_c = d\Im(\phi) = L(\phi, \partial_\mu\phi)d\phi$, is translated in the differential

$$\mathrm{d}\Im(\phi)h = \int_\Gamma \left(\frac{\partial L}{\partial\phi} - \frac{d}{dt}\frac{\partial L}{\partial\dot{\phi}}\right)(\phi(s),\dot{\phi}(s))h(s)ds, \tag{21}$$

where $h(s)$: $\Gamma \to TM$, and is such that τ_M o $h = \Gamma$ and $h(x_1) = h(x_2) = 0$, to extreme points of Γ, $x(s_1) = p$ y $x(s_2) = q$. The total differential (21) is the symplectic form ω_L, that constructs the application of the field intention expanding $2n$-coordinates in (20). The space $\varkappa^1(\Omega(\Gamma))$, is the space of differentiable vector fields on $\Omega(\Gamma)$, and $\Omega(\Gamma)$, is the manifold of trajectories (space-time of curves) that satisfies the variation principle given by the Lagrange equation that expresses the force $F(x(s)^j)$, (j = 1, 2, …, n) generated by a field that generates one "conscience" of order given by their Lagrangian (to see the figure 2).

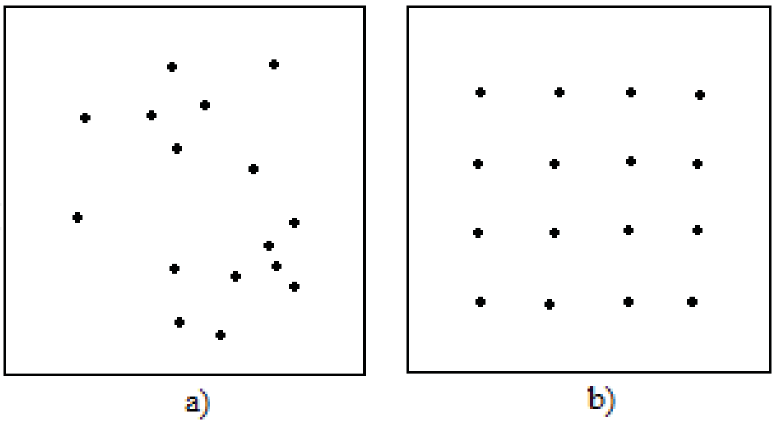

Figure 2. a) The particles act in free form in the space - time without the action of a quantum field that spills a force that generates an order conscience. b) A force $F(x(s)^j)$, is spilled, generated by a field that generates a "conscience" of order given by their Lagrangian. For it, there is not to forget the principle of conservation energy re-interpreted in the Lagrange equations and given for this force like $\frac{d}{dt}\left(\frac{\partial T}{\partial \dot{x}^j}\right) - \frac{\partial T}{\partial x^j} = F^j(x(s))$, (also acquaintances as "*living forces*") transmitting their momentum in every *ith*-particle of the space E, creating a infiltred region by path integrals of trajectories $\Omega(\Gamma)$, where the actions have effect. Here T, is their kinetic energy.

How does it influence the above mentioned intention in the space - time? what is the handling of the force $F^j(x(s))$? What is the quantum mechanism that makes possible the transformation of a body or space dictated by this intention?

It is necessary to have two aspects clear: the influence grade on the space, and a property that the field itself "wakes up" in the space or body to be transformed though the quantum information $\phi(x)$, their particles. Consider the integral (8) and their Green function for n, states $\phi(x_j)$ ($j = 1, 2, \ldots, n$):

$$G^{(n)}(x_1, x_2, \ldots, x_n) = \frac{\prod_{i=1}^{n} \int_{-\infty}^{+\infty} e^{i\Im[\phi^i, \partial_\mu \phi^i]} d\phi^i(x(s))}{\int_{-\infty}^{+\infty} e^{i\Im[\phi^i, \partial_\mu \phi^i]} d\phi^i(x(s))}, \tag{22}$$

These Green's functions can most straightforwardly be evaluated by use of generating functional where we are using an external force $F^j(x(s))$, given by the intention

$$W[F^j(x(s))] = N \int_{-\infty}^{+\infty} \exp\left\{ i\Im(\phi^j, \partial_\mu \phi^j) + i \int_{\Omega(\Gamma)} F^j(x(s))\phi^j(x) \right\} d(x(s)), \tag{23}$$

This operator is the operator of execution $\mathfrak{exe}_{\Im(\phi)}$, which establishes in general form (5) that has been studied and applied in other developed research (see [2, 10, 11] as an example).

Then the influence realised on the space $\Omega(\Gamma) \subset \mathbb{M}$, that there bears the functional one (23) that involves the force of the intention given by the field (observe that the second addend of the argument of *exp*, is the action which is realised from the exterior on the space $\Omega(\Gamma)$) can go according to the functional derivative:

$$G^{(n)}(x_1, x_2, \ldots, x_n) = (-i)^n \frac{1}{W[0]} \frac{\delta^n}{\delta F^j(x_1) \cdots \delta F^j(x_n)} W[F^j(x(s))]\Big|_{F^j = 0}, \tag{24}$$

where $\frac{\delta^n}{\delta F^j(x_1) \cdots \delta F^j(x_n)}$, describe the functional differentiation of nth-order, defined by the formula [6]

$$\frac{\delta^n (F^j(x))}{\delta F^j(x_1) \cdots \delta F^j(x_n)} = \frac{\delta^n}{\delta F^j(x_1) \cdots \delta F^j(x_n)} \int_{\Omega(\Gamma) \subset E^n} \delta\ (x - x_1) F^j(x_1) \delta(x - x_2) F^j(x_2) \cdots$$
$$\cdots \delta(x - x_n) F^j(x_n) dx_1 \cdots dx_n = \delta(x - x_1) \cdots \delta(x - x_n), \tag{25}$$

where these derivatives express impulses (force) of every particle placed in the positions x_1, …, x_n. In case of receiving the influence of the field X, these impulses will be directed by the derivative of their Lagrangian density $\mathcal{L}^{(0)}$, that is a consequence of the differential (21), (whereas, by the application of their conscience operator O_c) know

$$\partial_\mu \frac{\delta L^{(0)}}{\delta \partial_\mu \phi(x)} - \frac{\delta L^{(0)}}{\delta \phi(x)} = 0, \tag{26}$$

But the equation (26) is the quantum wave equation (bearer of the information (*configuration and momentum* of the intention)) due to O_c, to the time s. Then the generating functional takes the form (23), considering the property of the operator O_c, given through the operator $\mathcal{O}(x - x_j)$[1]:

$$\begin{aligned} W[F^j(x(s))] &= N\int_{-\infty}^{+\infty} \exp\left\{-\frac{i}{2}\int_{\Omega(\Gamma)} \phi(x)\mathrm{o}(x-x_j)\phi(x_j) - i\int_{\Omega(\Gamma)} F^j(x(s))\mathrm{o}^{-1}(x-x_j)F^j(x_j(s))\right\} d(\phi(x)) \\ &= N\int_{-\infty}^{+\infty} \exp\left\{-\frac{i}{2}\int_{\Omega(\Gamma)} \phi'(x)\mathrm{o}(x-x_j)\phi'(x_j) - i\int_{\Omega(\Gamma)} F^j(x(s))\mathrm{o}^{-1}(x-x_j)F^j(x_j(s))\right\} d(\phi' x)), \end{aligned} \tag{27}$$

Where we have used $[d\phi(x)] = [d\phi'(x)]$.

The intention infiltrated by the conscience given for O_c, establishes that the differential of the action $d\Im(\phi)h$, given by (21) (using the energy (*amplitude*) that their propagator contributes D_F) can be visualised inside the configuration space through their boarder points ("targets" of the intention of the field X, and that happen in $\partial\mathbb{M}$ [12]),being also the interior points of the space $\mathbb{M}$, $int\mathbb{M}$, are *the proper sources* of the field (particles of the space $\mathbb{M}$, that generate the field X). Then the intention of the field X, is the total action

$$\Im_T = \Im_{\partial\mathbb{M}}(\Im_{int\mathbb{M}}), \tag{28}$$

where this is a composition of the actions $\Im_{int\mathbb{M}}$, and $\Im_{\partial\mathbb{M}}$. These actions have codimensions strata k, and $n - k$, respectively, when we want to form the space $\mathbb{M}$, using path integrals [].

To extract the intrinsic properties of integrals over configurating spaces, we will follow the proof of the formality theorem [13], and record the relevant facts in our homological-physical interpretation: admissible graphs are "cobordisms" $\omega(\gamma) \to [m]$, when Un is thought as a state-sum model [14]. The graphs are also interpreted as "extensions" $\gamma \to \Gamma \to \gamma'$, when considering the associated Hopf algebra structure. The implementations of these tools were done in the [3]. Remember that using the Stokes theorem (10) a Lagrangian on the class $\mathcal{G}$, of Feynman graphs is a k-linear map $\omega : H \to \Omega^\bullet(\mathbb{M})$, associating to any Feynman graph Γ, a

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[1] The operator $\mathcal{O}(x - x_j) = (\Box_x + m^2 - i\varepsilon)\delta^n(x - x_j)$, and such that to their inverse $\mathcal{O}^{-1}(x - x_j)$, the functional property is had:

$$\int_{\Omega(\Gamma)} \mathrm{o}^{-1}(x - x_j)\mathrm{o}(x_j - y)d^n x_j = \delta^n(x - y),$$

closed volume form on $\Im(\Gamma)$, vanishing on the boundaries, i.e. for any subgraph $\gamma \to \Gamma$ (viewed as a sub-object) meeting the boundary of $\Gamma : [s] \to [t]$ (viewed as a cobordism), $\omega(\gamma) = 0$. Then an action given by $\Im_{int_{\mathbb{M}}}$, is defined through their interior as:

Def. **2. 1.** An action on $\mathcal{G}$ ("$\Im_{\text{int}}$"), is a character $W : H \to \mathbb{R}$, which is a cocycle in the associated D$\mathcal{G}$-coalgebra (T(H^*), D), where $\mathcal{G}$, is a class of Feynman graph.

Let $C_{n,m}$, be the configuration space of n, interior points and m, boundary points in the manifold $\mathbb{M}$, with boundary $\partial\mathbb{M}$ (that is to say. [13], upper half-plane H). Its elements will be thought as (geometric) "representations of cobordisms" (enabling degrees of freedom with constraints). Then the action in (28) takes the form

$$\left\{\{\omega(\gamma)=0\}\xrightarrow{[n]}[m]\right\}\xrightarrow{x(s)}\left\{\{\omega(\Gamma)=0\}\xrightarrow{[m]}\partial\mathrm{M}\right\}, \tag{29}$$

Let H, be the Hopf algebra (*associative algebra used to the quantised action in the space-time*), of a class of Feynman graphs $\mathcal{G}$ [12]. If Γ, is such a graph, then configurations are attached to their vertices, while momentum are attached to edges in the two dual representations (Feynman rules in position and momentum spaces). This duality is represented by a pairing between a "configuration functor" (typically C_Γ, (configuration space of subgraphs and strings [15], and a "*Lagrangian*" (e.g. ω, determined by its value on an edge, i.e. by a propagator D_F). Together with the pairing (typically integration) representing the action, they are thought as part of the Feynman model of the state space of a quantum system. The differential (21) considering the D$\mathcal{G}$-structure [12], in the class of Feynman graphs $\mathcal{G}$, can be defined as one graph homology differential:

$$d\Gamma = \sum_{e\in E_\Gamma} \pm\Gamma / \gamma_e, \tag{30}$$

where the sum is over the edges of Γ, γ_e is the one-edge graph, and Γ/γ_e, is the quotient (forget about the signs for now).

We can give a major generalisation of this graphical homological version of the differential establishing the graduated derivation that comes from considering H = T($\mathfrak{g}$), the tensor algebra with reduced co-product

$$\Delta\Gamma = \sum_{\gamma\to\Gamma\to\gamma'} \gamma\otimes\gamma', \tag{31}$$

Consider the following basic properties of the operators O_c. Let $\mathcal{O}(x - x')$, defined in the footnote 1, and $\phi(x)\in\mathcal{H}$, where the space is the set of points $\mathcal{H} = \{\phi(x)\in[\mathrm{m}] \mid [\mathrm{m}] \subset \mathrm{T}^*\mathbb{M}\}$[2] [8].

[2] The corresponding cotangent space to vector fields is:
$\mathrm{T}^*\mathfrak{X}^1(\mathbb{M}) = \{(\phi, \partial_\mu\phi)\in\mathcal{H}\times \mathrm{T}\mathfrak{X}^1(\mathbb{M}) \mid \partial_\mu\phi = \nabla_\mu\xi,\ \forall\ \xi\in\mathfrak{X}^1(\mathbb{M})\}$.
Here $[\mathrm{m}] = \mathrm{T}^*C_{n,m}$.

Points of phase space are called states of the particle system acting in the cotangent space of $\mathbb{M}$. Thus, to give the state of a system, one must specify their *configuration and momentum*.

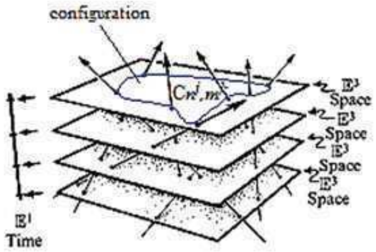
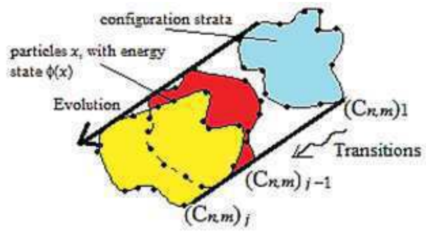
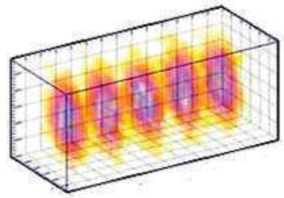
a)  b)  c) 

Figure 3. a) In every plane there is a particle configuration for a given time. b) The evolution of the particles along everything t, happens for a succession of configurations through which the particles system spends different strata codimension one. The causal structure of the space - time is invariant for every particle along the transformation process. d) Strata Evolution strata of the configuration space $C_{n,m}$, in the space-time $\mathbb{E}^4$. The translation obeys to evolution of Lagrangian system given by $L(\phi_1, \ldots, \phi_n)$.

Example **1.** Let $\pi : T^*\mathbb{M} \to \mathbb{M}$, be and $\gamma : \mathbb{R} \to TC_{n,m}$, then $\pi \circ \gamma : \mathbb{R} \to \mathbb{M}$, describes the curve in the configuration space which describes the sequence of configurations through which the particles system passes to different strata of co-dimension one (see figure 2). Every strata correspond to a phase space of *m*, particles that are moved by curve γ and directed from their energy states $d\phi(x)$, by π, to *n*, particles $\phi(x)$.

This defines our intentional conscience. Then are true the following properties:

i. $O(x - x')\phi(x) = \delta(x - x')\phi(x)$, $\forall$ x, x′ $\in$M,
ii. $Oc(x(s))\phi(x'(s)) = O(x - x')$, $\forall$ x, x′$\in$M, and $s \leq t$,
iii. $\int Oc(\phi(s))d\phi = \Im Oc$; $d\Im Oc(\phi(s))/d\phi = Oc(x(s))$, in the unlimited space H,
iv. $Oc = \delta(s - s')$, if and only if $\delta x(s)/\delta x(s') = \delta(s - s')$, $\forall\ s \leq t$, then $F(x(s)) = x(s)$,
v. $O^{-1}(x - x')Oc(x(s)) = -\Delta F(x - x')\delta(x - x')$, $\forall$ x, x′$\in$M, and $s \leq t$,
vi. $\int H\ Oc(\phi(s))d\phi = \int \Omega O(x - x')x(s)d(x(s))$.

On the one hand, $\int_{\mathcal{H}} O_c(\phi(s))\phi(x)dx = \int_{\mathcal{H}} O_c(\phi(s))d\phi = \Sigma_j \int_\Gamma \mathcal{O}(x - x')x(s)ds$. Also

$$\int_{\Omega(\Gamma)} O_c(\phi(s))x(s)ds = \int_{H} \mathrm{O}(x - x')\phi(x)dx,$$

then *i*, is satisfied. To the property *ii*. is necessary consider $\mathcal{O}(x - x') = (\Box_x + m^2 - i\varepsilon)\phi(x - x')$ [6]. But the operator O_c, is the defined as

$$O_c(x(s))\phi(x') = \left(\frac{d\Im_{O_c}}{d\phi}\right)\phi(x'),$$

Considering the operator $\mathcal{O}(x - x')$, we have

$$\mathrm{O}(x - x')d\phi = d\Im_{O_c}\phi(x'),$$

Integrating both members on unlimited space $\mathcal{H} \times \Omega(\Gamma)$, (applying the principle of Stokes integration given by (10)) we have that integral identity is valid for whole space. Then is verifying *ii*. The property *iii*., is directly consequence of (19), (20) and (21), considering the Stokes theorem given in (10), therefore $O_c(x(s))$, is such that $\omega_L = (O_c)^*\omega$, considering $\omega = d\phi$. Then

$$O_c = \int_{\Omega(\Gamma)\times H} \omega_L = \int_{\Omega(\Gamma)} (O_c)^* \omega, \tag{32}$$

which is a integral of type (10). Indeed,

$$\Im_{O_c} = \int_{H\times\Omega(\Gamma)} \omega_L = \int_H O_c(x(s))^* \omega = \int_H O_c(x(s)) d\phi = \int_H d\Im_{O_c}(\phi), \tag{33}$$

The derivative in the last integral from (33) is the total differential given by (21) from where we have the derivative formula in the context of the unlimited space $\mathcal{H}$.

The property *iv*., require demonstrate two implication where both implications are reciprocates. If $O_c(x(s')) = \delta(s - s')$, then all intention on trajectory defined Γ, its had that

$$\int_\Gamma O_c(x(s))x(s)\mathrm{d}s = \int_\Gamma \delta(s - s')x(s)ds, \tag{34}$$

But for the differential (21) and the second member of the integral (34) we have

$$\delta\Im_{O_c}(x(s')) = \delta(\int_\Gamma \delta(s - s')x(s')ds'),$$

since $\frac{\delta}{\delta x(s')}(\int_\Gamma \delta(s - s')x(s')ds') = \delta(s - s')$, then $\delta(\int_\Gamma \delta(s - s')x(s')ds' = \delta x(s)$, and for other side

$$\delta(\int_\Gamma \delta(s - s')x(s')ds') = \delta(s - s')\delta x(s'),$$

from where $\frac{\delta x(s)}{\delta x(s')} = \delta(s - s'), s \leq t$ [3]. But this implies directly $F(x(s)) = x(s)$. This property tell us that we can have influence on the space M, considering only a curve any of the space where the influence of the field exists like the force $\delta(s - s')$, since the space is infiltrated by

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[3]In the general sense the functional derivative $\frac{\delta\phi_a(y)}{\delta\phi_b(x)} = \delta_{ba}\delta^n(y - x)$, implies

$$\delta\phi_b(y) = \sum_a \int \delta^n(y - x)\delta\phi_a(x)\delta_{ba}dx,$$

but does not imply

$$\delta\phi_b(y) = \delta_{ba}\delta^n(y - x)\delta\phi_a(x).$$

the force F, and this produces the permanent state of energy generated by every component of the space. On the other side, if $\frac{\delta x(s)}{\delta x(s')} = \delta(s - s'), s \le t$ which is equivalent to $\frac{\delta}{\delta x(s')}(\int_\Gamma \delta(s - s')x(s')ds') = \delta(s - s'),$. But integrating (21) we have

$$\int_\Gamma \delta\Im_{O_c}(x(s')) = \int_\Gamma \delta(s - s')x(s')ds',$$

which for before implication is $\delta(s - s')\delta x(s')$. But

$$\int_\Gamma \{O_c(x(s'))x(s') + \delta(s - s')x(s')\}ds' = 0,$$

This integral is valid $\forall\ \Gamma \subset \mathbb{M}$. Thus $O_c(x(s')) = \delta(s - s')$. With this, the demostration of *iv.*, is completed. The identity in *v*, happens because $\mathcal{O}^{-1}(x - x') = -\Delta_F(x - x')$, considering the before property (simple conaequence of the property *iv*) [6].

The identity in *vi.*, happens in the phase space created by the cotangent space due to the image of the differential (21). Therefore, both members of integral identity will have to coincide in the intention given by $\Im_{Oc}$. Indeed, consider the integral

$$\int_H O_c(\phi(x))d\phi = \int_{\Omega(\Gamma)} (O_c) * \omega = \int_H d\Im_{Oc} = \Im_{Oc}, \tag{35}$$

On the other side, inside the quantum wave equation:

$$\begin{aligned} &\int_{\Omega(\Gamma)} O(x - x')dx(s) = \int_{\Omega(\Gamma)} (\Box_x + m^2 - i\varepsilon)\omega = \int_\Omega (\Box_x + m^2 - i\varepsilon)\phi(x)dx \\ &= \int_H (\Box_x + m^2 - i\varepsilon)d\phi = \int_H d\Im_{Oc}(\phi), \end{aligned} \tag{36}$$

Joining (35) with (36) we have *vi*.

3. Quantum intentionality and organized transformations

Considering the quantizations of our Lagrangian system describe in (11), (18) and (19) on $\mathbb{R}^n$, $n \ge 2$, coordinated by $\{x^j\}$, we describe terms of a graded commutative $C^\infty(\mathbb{M})$-algebra H, with generating elements

$$\{\partial_m x^a, \partial_m x^a{}_l, \partial_m x^a{}_{l1l2}, \ldots, \partial_m x^a{}_{l1\cdots lk}, \ldots\}, \tag{37}$$

and the bi-graded differential algebra H^*, of differential forms (the Chevalley–Eilenberg differential calculus) over H^0, as an $\mathbb{R}$-algebra [1-3]. One can think of generating elements (37) of H, as being *sui generis* coordinates of even and odd fields and their partial derivatives.

The graded commutative $\mathbb{R}$-algebra H^0, is provided with the even graded derivations (called total derivatives)

$$d_\lambda = \partial_\lambda + \sum_{0\leq|\Lambda|} \partial^a_{\lambda+\Lambda}\partial^\Lambda_a, \; \mathrm{d}_\Lambda = \mathrm{d}_{\lambda_1}\cdots\mathrm{d}_{\lambda_k} \tag{38}$$

where $\Lambda = (\lambda_1 ... \lambda_k)$, $|\Lambda| = k$, and $\lambda+\Lambda = (\lambda, \lambda_1, \ldots, \lambda_k)$ are symmetric multi-indices. One can think of even elements

$$L = (x^l, \partial_\mu x^a)d^n x, \quad \delta L = d\partial_\mu x^a \wedge E_a d^n x = \sum\nolimits_{0\leq|\Lambda|}(-1)^{|\Lambda|} d\partial_\mu x^a \wedge d_\Lambda(\partial_a{}^\Lambda L)d^n x, \tag{39}$$

where we observe that δL, is the 2-form given by ω_L, in the formula (20) with $n = 2$, and $\Lambda = \lambda_1\lambda_2$.

Now we consider the dual part of the space $(H, \Omega(\Gamma))$, that is to say, the space (H^*, L), be

We consider quantize this Lagrangian system in the framework of perturbative Euclidean QFT. We suppose that L, is a Lagrangian of Euclidean fields on $\Omega(\Gamma) \subseteq \mathbb{R}^n$. The key point is that the algebra of Euclidean quantum fields B_Φ, as like as H^0, is graded commutative. It is generated by elements $\phi^{\lambda\Lambda}{}_a$, $x \in \Omega(\Gamma)$. For any $x \in \Omega(\Gamma)$, there is a homomorphism belonging to space $H \to Hom(\mathrm{T}(H), D)$ (with homomorphisms $Hom(\mathrm{T}(H), D)$ given for $D\mathcal{G}$-algebra of cycles)

$$\Upsilon_x : \mathrm{I}^{\Lambda_1\cdots\Lambda_r}_{a_1\cdots a_r}\partial x^{a_1}_{\Lambda_1}\cdots\partial x^{a_r}_{\Lambda_r} \mapsto \mathrm{I}^{\Lambda_1\cdots\Lambda_r}_{a_1\cdots a_r}(x)\phi^{a_1}_{x\Lambda_1}\cdots\phi^{a_r}_{x\Lambda_r}, \qquad \mathrm{I}^{\Lambda_1\cdots\Lambda_r}_{a_1\cdots a_r} \in \mathrm{C}^\infty(\Omega(\Gamma)) \tag{40}$$

Of the algebra H^0, of classical fields to the algebra B_Φ, which sends the basic elements $\partial x^a{}_\Lambda \in H^0$ to the elements $\phi^{\lambda\Lambda}{}_a \in B_\Phi$, and replaces coefficient functions $\mathfrak{I}$, of elements of H^0, with their values $\mathfrak{I}(x)$ (executions) at a point x. Then a state <, > of B_Φ, is given by symbolic functional integrals

$$<\phi^{a_1}_{x_1}\cdots\phi^{a_k}_{x_k}> \frac{1}{\mathrm{N}}\int_{\mathrm{H}}\phi^{a_1}_{x_1}\cdots\phi^{a_k}_{x_k}\,\exp\left\{-\int_{\Omega(\Gamma)} O_{\mathrm{c}}(\phi^a_{x\Lambda})d^n x\right\}\prod_x[d\phi^a_x], \tag{41}$$

where this is an integral of type $\int\limits_{\mathrm{H}\times\Omega(\Gamma)} O_{\mathrm{c}}(x(s))\mathrm{d}\phi$, as give by the properties. When the intention expands to the whole space, infiltrating their information on the tangent spaces images of the cotangent bundle $\mathrm{T}^*\mathbb{M}$, (given by the imagen of $\phi(x)$, under $d\mathfrak{I}_{O_c}$).Then their intentionality will be the property of the field to spill or infiltrate their intention from a nano level of strings inside the quantum particles. Then from the energy states of the particles, and considering the intention spilled in them given by $O_c(\phi)$, we have the homomorphism (40) that establishes the action from $\mathbb{M}$ ($\cong \Omega(\Gamma)$), to $\partial\mathbb{M}$, for their transformation through the action $\Im_T$, defined in (28) to any derivation given through their conscience operator (fiber (18)), like the graded derivation $\tilde{\partial}$, (considering the derivatives $O_c(x) = (O_c)^*\omega$, $D_F = d\phi$):

$$\tilde{\partial}: \phi^a_{x\Lambda} \mapsto (x, \partial^a_\mu x) \mapsto (O_c(x), \omega) \mapsto (O^*_c(x), \omega_L) = O^*_c(\phi^a_{x\Lambda})\omega, \tag{42}$$

of the algebra of quantum fields B_Φ. With an odd parameter α, let us consider the automorphism

$$\hat{U} = \exp\{\alpha\tilde{\partial}\} = \mathrm{Id} + \alpha\tilde{\partial},$$

Of the algebra B_Φ. This automorphism yields a new state < , >, of B_Φ, given by the equality

$$< \phi^{a_1}_{x_1} \cdots \phi^{a_k}_{x_k} > \frac{1}{N'} \int_H \hat{U}(\phi^{a_1}_{x_1}) \cdots \hat{U}(\phi^{a_k}_{x_k}) \exp \tag{43}$$

where the energy state has survived, since $d\hat{U}(\phi^a_x) = d\varphi^a_x$. That because the intention is the same. The intention has not changed.

What happens towards the interior of every particle? what is the field intention mechanism inside every particle?

To answer these questions we have to internalise the actions of field X, on the particles of the space $\mathbb{M}$, and consider their spin. But for it, it is necessary to do the immersion of the Lagrangian ω, defined as the map

$$w : \mathrm{L} \to \mathrm{M}^{2n},$$ [4]

with rule of correspondence

$$Z_i \mapsto w(Z_i),$$

where the image of the 1-form ω, that the Lagrangian defines, $\omega(Z_i)$, is a symplectic form [8], and the variable Z_i, is constructed through the algebraic equations $W^a(Z_i) = 0$ [16].They describe the k-dimensional hypersurfaces denoted by S, such that $S \subset \mathcal{H}$, where $\mathcal{H}$, is the phase space defined in the section 2. The index $a = 1, \ldots, q$ runs over the number of polynomials $W^a(Z_i)$, in the variables Zi and i runs over the dimension of the ambient manifold which is assumed to be $\mathbb{C}^N$. If the space is a complete intersection, the constraints

[4] Having chosen $\mathbb{M}^{2n}$, is to consider the two components of any point in the space $\mathbb{C}^N$, (that we are considering isomorfo to the ambient space of any quantum particle $x(s)$, in the space-time) to have the two components that characterise any quantum particle x(s), that is their spin (direction) and their energy state (density of energy or "living force of the particle"). $\mathbb{L}$, is the corresponding Lagrangian submanifold of the symplectic structure given by ($\mathbb{M}2n$, ω).

$W^a(Z_i)$ (there is exact solution to $W^a(Z_i) = 0$), are linearly independent and the differential form

$$\Theta^{(n-k)} = \in_{a_1 \cdots a_{N-k}} dW^{a_1} \wedge \cdots \wedge dW^{a_{N-K}}, \tag{44}$$

is not vanishing. In this case, q = N − *k* and the dimension of the surface is easily determined. For example, if the hypersurface is described by a single algebraic equation W(Z) = 0, the form (44) is given by $\Theta^{(1)} = dW$. On the other hand, if the hypersurface is not a complete intersection, then there exists a differential form

$$\Theta^{(n-k)} = \mathrm{T}_{A[a_1 \cdots a_{N-k}]} dW^{a_1} \wedge \cdots \wedge dW^{a_{N-K}} \wedge \eta^{A,(N-k-q)}, \tag{45}$$

where $\eta^{A,(N-k-q)}$, is a set of $N - k - q$, forms defined such that $\Theta^{(N-k)}$, is non-vanishing on the constraints $W^a(Z_i) = 0$, and $T_{A,[a1 \ldots aN-k]}$, is a numerical tensor which is antisymmetric in the indices $a_1 \ldots a_q$. The construction of $\eta^{A,(N-k-q)}$, depends upon the precise form of the algebraic manifold (variety of the equations $W^a(Z_i) = 0$). In some cases a general form can be given, but in general it is not easy to find it and we did not find a general procedure for that computation.

To construct a global form on the space *S*, one can use a modification of the Griffiths residue method [16], by observing that given the global holomorphic form on the ambient space $\Omega^{(N)} = \in^{i_1 \cdots i_N} dZ_{i_1} \wedge \cdots \wedge dZ_{i_N}$, we can decompose the $\{Z_i\}$'s, into a set of coordinates $Y^a = W^a(Z)$, and the rest. By using the contraction with respect to *q*, vectors $\{\underline{Z}^a{}_i\}$, the top form for *S*, can be written as

$$\Omega^{(k)} = \frac{\iota_{\underline{Z}_1^a} \cdots \iota_{\underline{Z}_\theta^a} \Omega^{(N)}}{\iota_{\underline{Z}_1^a} \cdots \iota_{\underline{Z}_\theta^a} \Theta^{(N-k)}}, \tag{46}$$

which is independent from $\{\underline{Z}^a{}_i\}$, as can be easily proved by using the constraints $W^a(Z_i) = 0$. Notice that this form is nowhere-vanishing and non singular only the case of CY-space (Calabi-Yau manifold). The calabi-Yau manifols is a spin manifold and their existence in the our space $\mathbb{M}^{2n}$, like product of this construction is the first evidence that a spin manifold is the spin of our space-time due to their holomorphicity [17]. The vectors $\{\underline{Z}^a{}_i\}$, play the role of gauge fixing parameters needed to choose a polarisation of the space *S*, into the ambient space.

For example, in the case of pure spinor we have: the ambient form $\Omega^{(16)} = \in_{\alpha_1 \cdots \alpha} d\lambda_{i_1} \wedge \cdots \wedge d\lambda_{i_6}$, and $\Theta^{(5)} = \lambda\gamma^m d\lambda\, \lambda\gamma^m d\lambda\lambda\gamma^m d\lambda d\lambda\gamma_{mnp} d\lambda$. From these data, we can get the holomorphic top form $\Omega^{(11)}$, by introducing 5, independent parameters $\underline{\lambda}$, and by using the formula (46).

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The latter is independent from the choice of parameters $\underline{\lambda}$, (however, some care has to be devoted to the choice of the contour of integration and of the integrand: in the minimal formalism, the presence of delta function $\delta(\lambda)$, might introduce some singularities which prevent from proving the independence from $\underline{\lambda}$, as was pointed out in [18], [19]). Using $\Omega^{(k)} \wedge \Omega^{(k)}$, one can compute the correlation functions by integrating globally defined functions. When the space is Calabi-Yau, it also exists a globally-defined nowhere vanishing holomorphic form $\Omega_{hol}{}^{(k|0)}$, such that $\Omega_{hol}{}^{(k|0)} \wedge \Omega_{\underline{hol}}{}^{(\underline{k}|0)}$, is proportional to $\Omega^{(k)} \wedge \Omega^{(\underline{k})}$. The ratio of the two top forms is a globally defined function on the CY-space. In the case of the holomorphic measure $\Omega_{hol}{}^{(k|0)}$, the integration of holomorphic functions is related to the definition of a contour $\gamma \in S$, in the complex space

$$< \prod_{\mathrm{A}} \mathrm{O}(Z_i, p_A) > \int_{\gamma \in \mathrm{S}} \Omega^{(k,0)} \prod_{A} \mathrm{O}_0(Z_i, p_A), \tag{47}$$

where $\mathcal{O}(Z_i, p_A)$, are the vertex operators of the theory localized at the points p_A, of the Riemann surface and $\mathcal{O}_0(Z_i, p_A)$, is the zero-mode component of the vertex operators. Newly our conscience operator come given by the form $\Omega^{(k,0)}$.

Example **2.** All Calabi-Yau manifolds are *spin*. In hypothetical quantum process (from point of view QFT), to obtain a Calabi-Yau manifold is necessary add (*or sum*) strings in all directions. In the inverse imaginary process, all these strings define a direction or spin. The strings themselves are Lagrangian submanifolds whose Lagrangian action is a path integral.

In mathematics, an isotropic manifold is a manifold in which the geometry doesn't depend on directions. A simple example is the surface of a sphere. This directional independence grants us freedom to generate a quantum dimension process, since it does not import what direction falls ill through a string, the space is the same way affected and it presents the same aspect in any direction that is observed creating this way their isotropy.

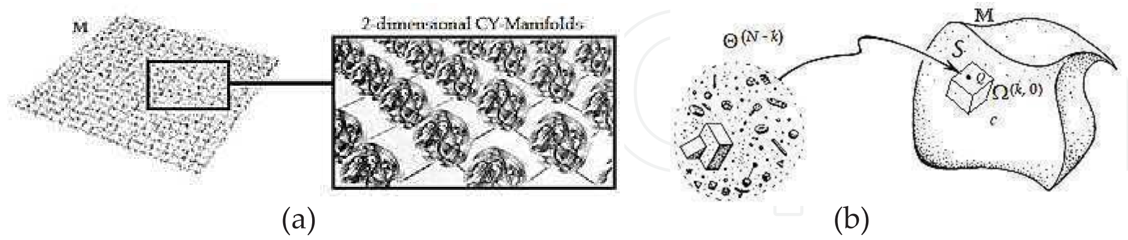


Figure 4. a) For instance, let us consider the hypersurface $S : \Sigma_i Z_i^2 = 0$, in $\mathbb{C}^N$. This equation can be put in the form using generalized coordinates $S(u_i) = wz$, where i, runs over $i = 1, 2, \ldots, N\text{-}2$, coordinates and w, z, are two combinations of the Z's. $S(u_i)$, is a polynomial of the coordinates u_i. For a given N, they are local CY-manifolds (*spin manifolds*) and there exist a globally-defined a organized transformation inside space $\mathbb{M}$ [20]. b) Intention inside particle Q.

The importance of this isotropy property in our spin manifold, helps us to establish that the transformations applied to the space that are directed to use (awakening) their nano-structure do it through an organized transformation that introduces the time as isotropic variable, creating a momentary timelessness in the space where the above mentioned transformation is created. Then the intentionality like a organized transformation is a co-action compose by field that act to realise the transformation of space and the field of the proper space that is transformed. Then the symplectic structure subjacent in $\mathbb{M}$, receives sense.

A transformation T, it is said organized if in whole stage of execution of the transformation, isotropic images are obtained of the original manifold (object space of the transformation), under a finite number of endomorphisms of the underlying group to the manifold that co-acts with this transformation.

Likewise, if $\mathcal{T}$, is a transformation on the space $\mathbb{M}$, whose subjacent group G, have endomorphisms $\sigma_1, \ldots, \sigma_n$, such that $\sigma_1\mathcal{T}(\mathbb{M}), \ldots, \sigma_n\mathcal{T}(\mathbb{M})$, are isotropic then the infinite tensor product of isotropic submanifolds is a isotropic manifold, and is a organized transform equivalent to tensor product of spin representations $\sigma_1\mathcal{T}(\mathbb{M}) \otimes \ldots \otimes \sigma_n\mathcal{T}(\mathbb{M}) \otimes \ldots$[2, 5].

4. Quantum integral transforms: Elimination of distortions and quantum singularities

One of the quantum phenomena that can form or provoke the conditions of formation of singularities at this level is the propensity of a quantum system to develop scattering phenomena for the appearance of the anomalous states of energy, as antimatter energy or energy of particles of matter in the free state [21], which crowds (a big number of particles overlaps) due to the accumulation of the states of energy of the past or future (to see table 1) [21, 22],which on have different existence time and to having met their corresponding pairs of particles (particle/anti-particle pair) provoke bundles of energy that there form in the space time $M \times I_t$, singularities of certain weight (for mechanisms that can be explained inside the actions in $SU(3)$ and $SU(2)$ [11, 21]) due to its energy charge [21].

Studies in astrophysics and experiments in the CERN (Organisation Européenne pour la Recherche Nucléaire) establish that a similar mechanism although with substantial differences (known also like Schwinger mechanism) can explain the formation of a singularity such as the fundamental singularity (big-bang). This one establishes that the gravitational field turns into virtual pairs of particle- antiparticle of an environment of quantum gap in authentic pair's particle-antiparticle. If the black hole (singularity of the Universe) is done of matter (antimatter), it might repel violently to thousands of million antiparticles (particles), expelling them to the space in a second fraction, creating an event of ejection very similar to a Big-Bang. Nevertheless, in case of a singularity in the region of space - time of the particles in a quantum ambience is different in that aspect, since the small mass of a singularity $\ast(s)$, might perform the order of the Planck mass, which is approximately 2×10^{-8} kg or $1{,}1 \times 10^{19}$ GeV. To this scale, the formulation of the thermodynamic theory of singularities of the space macroscopic time predicts that the quantum singularity ✷(s), could have an entropy of only 4πnats; and a Hawking temperature of needing quantum thermal energy comparable approximately to the mass of the finished singularity; and a Compton wavelength equivalent within a radius of Schwarzschild of the singularity in the Universe (this distance being equivalent to the Planck length). This is the point where the classic gravitational description of the object is not valid, being probably very important the quantum effects of the gravity. But there exists another mechanism or thermodynamic limit that is fundamental in the theory of the quantum dispersion and of the formation of quantum singularities.

The past and future in the quantum scattering phenomena

Z^+/Z^-	Particle $\phi(1)$	Anti-particle $\phi(-1)$
Input	$\bullet\longrightarrow\circ$ $\phi(1)$ Positive Future	$\bullet\longleftarrow\circ$ $-\phi(1)$ Negative Future
Output	$\circ\longrightarrow\bullet$ $\phi(1)$ Positive Past	$\circ\longleftarrow\bullet$ $-\phi(1)$ Negative Past

Table 1.

Proposition **1.** The energy of the singularity is born of the proper state of altered energy of the quantum space-time, although without a clear distinction of a suitable path of the particles (*without a normal sequence of superposition of (past and future) particles* (*a path does not exist*)). Then in this absence of paths, the singularity arises.

Proof. It is necessary to demonstrate that the past and present particles overlap without a normal sequential order in the causality, passing to the unconscious one ($O_c = 0$, since ${}^L\mathfrak{I}_0 = 0$ or $\omega_L = 0$) for fluctuations of energy that have a property of adherence to the transition of energy states forming energy bundles ([23]) that alter the normal behavior of the particles in the atoms. In effect, this happens when the quantum energy fragments and the photons exchange at electromagnetic level do not take in finished form (there is no exchange in the virtual field of the $SO(3)$). For which there is no path that the execution operator $\mathfrak{I}$, (see the section 2) could resolve through of a path integral between two photons (*virtual particles*). In this case the path integral does not exist. For the adherent effect, the virtual particles that do not manage to be exchanged accumulate forming the altered energy states (an excess very nearby of particles of the certain class (inclusive anti-particles of certain class) they add to themselves to the adherent space of photon (in this case the adherent photon is an excited photon $int\mathcal{E} \cup \delta(\mathcal{E})$, (where $\mathcal{E}$, is the influence of the singularity) with the infinitesimal nearby of points given by δ($\mathcal{E}$) [24])) which are the bundles of energy that defines the singularities. ■

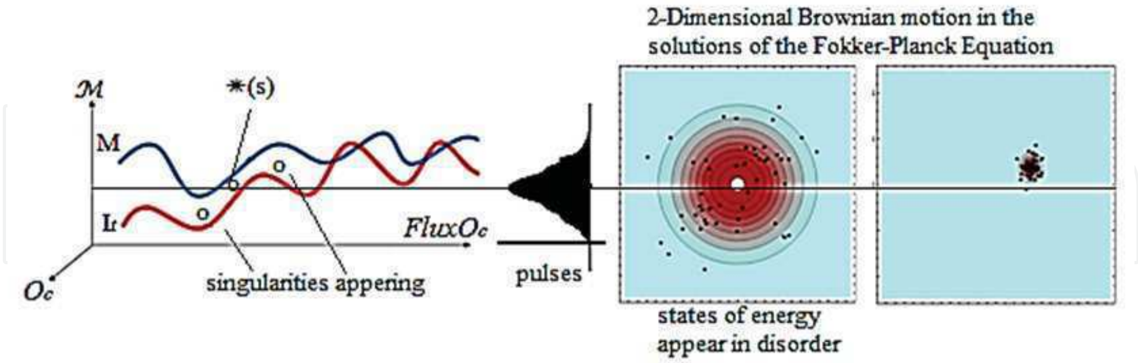


Figure 5. In a). is the elastic band of the space-time $\mathbb{M}$, and b), result the pulse solutions of the Fokker-Planck Equation. In c), the singularity is being perturbed by states of different particles interacting and creating big scattering (*the red circles are perturbations created by the states of different particles creating scattering with a big level of particles pair annihilating. This produce defecting evolution in every sub-particles and increase of inflation in quantum level of the space-time*). In d), the singularity is formed.

Let $\hat{U}_0(t,s)$, the operator of evolution [6], of a particle $x(t)$, in the space of transition of the levels of conscience operator O_c, to all time $t \geq s$. Whose operator limits of s (*that is to say, coming to the process of understanding of a concept,* (border conditions of $\hat{U}_0(t,s)$)), satisfy

$$\lim_{t \to s^+} \hat{U}_0(t,s) = 1, [31] \tag{48}$$

But there are waves of certain level (*Table 1*), that act like moderators of wave length to the operator of evolution defined by ψ(s), satisfying that

$$\hat{U}_0(t,s)|\psi(s)>= \begin{cases} |\psi(s)>, & t \geq s \\ 0, & t < 0 \end{cases}, \tag{49}$$

having then that the singularity ✷(s), that is object of quantum transformation to along of the time, is that product obtained by the integral transform

$$*(s) = \int_{X(C)} O_c(x(t))w(s,t)dt = (\mathrm{E}^+ - \mathrm{E}^-)\sqrt{\frac{m}{2\pi i n}} \int_{-\infty}^{\infty} \left\{ \int_{\mathrm{C}} \mathrm{e}^{\frac{im(x-x')^2}{2\pi}} \hat{U}_0(s,t)dx \right\} dt, \tag{50}$$

where the singularity changes the time $t \geq s$, for the evolution operator $\hat{U}_0(t,s)$, [11], due to the evolution of the quantum system in the space-time. But by evolution operator [6, 21], this evolution comes given by the anomalous energy ($\mathrm{E}^- - \mathrm{E}^+$) [6] (*see figure 3*) , which establishes the energy load functions $w^+(s, t) - w^-(s, t)$, that define the energy load function $w(s, t)$, at time $t \geq s$, where $w(s, t) = (\mathrm{E}^- - \mathrm{E}^+)U_0(s, t)$ E^- and E^+, are amplitudes of the curves M = I$tx(s)$, It = M$x^{-1}(s)$, ∀ and M, I_t, functions of evolution curves of space-time *see figure 3*).

Then a corrective action is the inverse transform that transform the energy load function in energy useful to the process of re-establishment on the quantum space (*remember that it is necessary to release the bundle of energy captive*). How this inverse transformation realise?

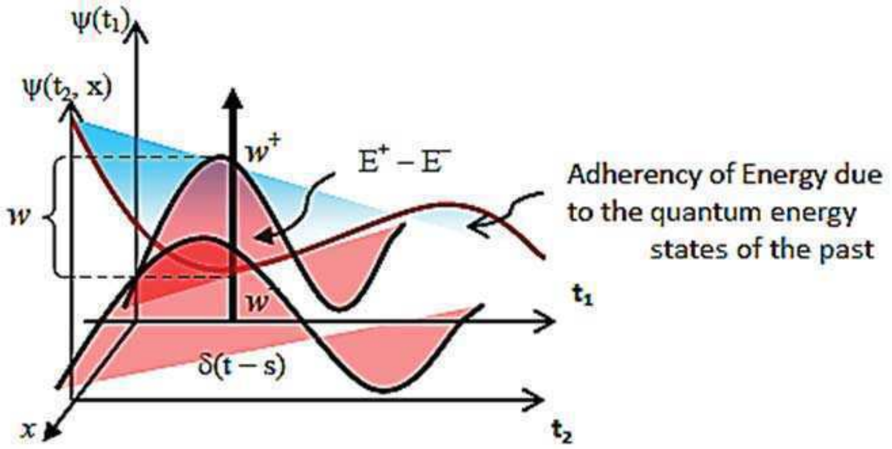


Figure 6. a). This is the graph that shows the formation of singularities of quantum type by the energy load (positives and negatives), rational amplitudes (extremes and defects), and bundle energy created and defined by $E^{-} - E^{+}$. The load is pre-determined by the impulse $\delta(t - s)$, which focalize the field action. The adherence zones are propitious to the formation of singularities with all conditions described. The wave function ψ, stays under constant regime in space evolution, which is $\psi = \psi(x, 0)$. In the second wave, the corresponding wave function is for other transition time (other evolution space), under the same conditions.

Lemma **1.** Let $\mathcal{M} = M \times I_t$, the unlimited space of the quantum space (Fock space [24]). A particle $x(t)$, that is focalized by a bad evolution given for the energy load function $w(t, s)$, comes given for

$$x(s) = \oint x(t)dx(t) = \int_{-\infty}^{+\infty} \delta(t-s)x(t)dt, \tag{51}$$

Then to time $t = s$, begin the singularity.

Proof. We consider the function $w(t, s)$, like a Green function on the interval $t \geq s$. Given that this function is focalised for the emotional interpretation which is fed by the proper energy of the deep quantum energy (*since it produce an auto-disipant effect that deviates the evolution of every particles* [23]), then $O_c(x(t), x'(t))x(t) = \nabla^2 w(t, s) = \delta(t - s)$ [25]. By the nature of Green function of the weight function $w(t, s)$, we have

$$\int_M \phi(x')x(t)dx(t) = \int_{I_t}\left[\int_M \phi(x)\delta(x - x')dx(t)\right]x(t)\mu_t = \int_{-\infty}^{+\infty} O_c(x(t))x(t)\mu_t$$
$$= \int_{-\infty}^{+\infty} \nabla^2 w(s,t)x(t)\mu_t = \int_{-\infty}^{+\infty} \delta(t-s)x(t)dt,$$

Then all particle $x(t)$, in the space-time $M \times I_t$, affected by this regime to time $t = s$, and after, take the form (that is to say, to past and future particles)

$$\int_{-\infty}^{s} O_c(x(t))x(t)dt + \int_{s}^{+\infty} O_c(x(t))x(t)dt = 0 + \int_{s}^{+\infty} \delta(t-s)x(t)dt,$$

where the first integral is equal to cero, because there is no singularity before s, (the evolution happens after the time $t \geq s$ (see (49)). But this evolution is anomalous, since to all $t < s$, includes a captive energy not assimilated to $t = s$ (*this because it does not have a conscience operator at this moment* (*part of* (28) *defined by* O^0_c)). Then

$$\int_{t}^{+\infty} O_c(x)x(t)dt = \int_{t}^{+\infty} \delta(t-s)x(t)dt.$$

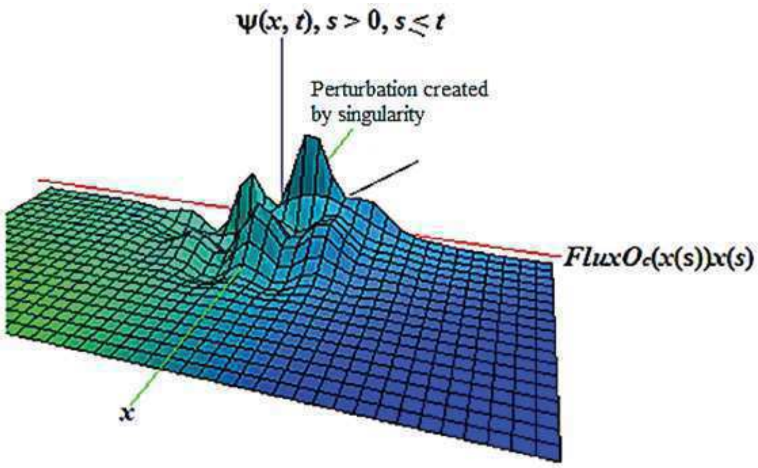


Figure 7. The surface represents the perturbation given by the existence of a singularity in the space-time of the quantum zone. The *computational model* obeys the solution of Planck-Fokker partial differential equation. The waves of perturbed state begins to $s \leq t$, such as it was predicted in the lemma 1. The surface include the waves established in figure 3, given by z = *Plot3D(exp(-1/2(x^2 + y^2))(cos(4x) + sin(2x) + 3sin(1/3y) + cos(5y)ln(2x)))*, through the *space-time 4.0 program*. Observe that is present a kernel of transformation for normal distribution given by $exp(-1/2(x^2 + y^2))$ that will appear in the transform that defines the singularity when a particle is not appropriately assimilate. The normal distribution kernel is the statistical weight that establishes the appearance of an abnormal evolution created by the existence of the singularity. That is to say, the singularity is detected by the anomalous effects that are glimpsed in the flux of the operator O_c, and that are observed in the surface bundle.

Theorem. **1. (F. Bulnes**). Let consider a conscience operator with singularity $O_c(\ast)$, for the presence of an energy load $w(s, t)$. Then the *elimination* of the singularity $\ast(s)$, comes given for

$$x(t) = correction + restoring = \int_{X(C)} O_c(\ast(s))w(t,s)dt = dim\Lambda \int_C \left\{ \frac{1}{A} \prod_{j=1}^{\infty} \left\{ \int_{-\infty}^{+\infty} \phi(n_j)F(n_j) \right\} dx(t) \right\}, \quad (52)$$

where $dim\Lambda(\alpha)$, is the *Neumann dimension* corresponding to the *Weyl camera* of the roots α_j, [26, 27], used in the rotation process to eliminate the deviation [11], created by the singularity.

Proof. Consider an arbitrary irreducible diagram with nodes with w-parts (parts of diagrams with nodes of weight $w(t, s)$). Suppose that this points "nodes" with weight w, determines the singularity given by (50). In fact, by the theory of Van Hove on the singularities in the thermodynamic limit [23], each transition matrix of energy states has a correspondence with the product of Hermitian matrices of the corresponding evolution operators that to this case on a node en $t = s$, are given by $\upsilon_\alpha(s') = e^{is'h0}\upsilon_\alpha e^{-is'h^0}$, where we have used the *lemma 1*, to the arising of the quantum impurity in the space-time $\mathbb{M}$ (*quantum singularity*) in the image space of the conscience operator $T\mathbb{M}^*$, located in $\mathbb{R}^3 \times I_t$, in the point or node ($\cong \mathcal{G}$ [12, 23] (w-diagram)) $t = s$, corresponding of root space Φ_α. Then considering a irreducible diagram containing a $w(t, s)$-part, their contribution will be contained in $\mathbf{r} - \mathbf{R}$-space (which is the $E^+ - E^-$-space (see figure 2)) [23] by the function $\delta(t - s)$:

$$x(t) = \int_C \left\{ \prod_{j=1}^{\infty} \delta^{(3)}(\mathbf{r}^j) e^{-iH_0 t} \hat{U}(t,s) \right\} d^3 r^j d^3 R^j e^{iH_0 s} n_{\mathbf{r}}(\mathbf{R}, s^j), \tag{53}$$

to j*th*-particle in the interaction of a j*th*-thought to time s. The diagrams drawn here (figure 3) may be interpreted to represent the evolution of particles contributing the position density matrix $n_r(\mathbf{R}, t)$ at $t = t$, in the corresponding path integral of correction. The true correction comes given by the evolution created in the quantum process of transformation of the functional $O_c(✷(s))$, where the information $✷(s)$, must be changed when $\lim_{t \to s} \pm iw(t,s) = \overline{n(s)}$ (is to say, when $M = I_t$). If we call $t_j = s$, (*j-th-time of evolution* in the thought process) then the integral (53), takes the form

$$e^{-i(t-t_j)H_0} \left\{ 1 + \sum_1^{\infty} (-i)\lambda \int_0^{j\,t_1} dt_1 \int_0^{t_2} dt_2 \cdots \int_0^{t_{j-1}} dt_j \upsilon(t_1)\upsilon(t_2)\cdots\upsilon(t_j) \right\} = \prod_{j=1}^{\infty} \left\{ \int_{-\infty}^{+\infty} \phi(n_j) F(n_j) \} dx(t) \right\}, \tag{54}$$

where the states ϕ_j, are established in the density matrix $\underline{n}(0)$, that to a vertex of $\mathcal{G}$, (w - diagram), arrange, those perturbations B (see figure 3), that they gave origin to the singularity, with the corresponding arrange of those positive perturbations A, that will realises the corrective action to transform the singularity signal $✷(s)$, of an adequate thought given by $x(t)$. Due to that, the information given by the product $A\underline{n}(0)B$, must be changed when $\lim_{t \to s} \pm iw(t,s) = \overline{n(s)}$, then a w-diagram must be change for $\Phi\alpha$–diagram [27]. But this live in the quantum field of the space-time $T\mathbb{M}^*$, that is to say, in the corresponding zone of the executive operator $\mathfrak{I}$. Then in the material space-time (*Einstein universe*), the displacement of energy needs inside this transformation the application of an invariant given in the quantum space that guarantee that the new particle (*boson*) obtained let that correct. This is given by number $dim\Lambda(\alpha)$, since it depends on the roots system to the representation of the corresponding action group [27], that recover the recognition action. By the integral (4), the transformation due to the new conscience operator created in $T\mathbb{M}^*$-zone obtained on whole the space-time is,

$$\int_{X(C)} O_c \left(\frac{x(t)}{dim\Lambda} \right) dx(t) = \int_{X(C)} \left\{ \frac{1}{A} \prod_{j=1}^{\infty} \left\{ \int_{-\infty}^{+\infty} \phi(n_j) F(n_j) \right\} dx(t) \right\},$$

that is the result wanted. ■

5. Re-composition and determination of the realities

We consider the space-time $\mathbb{M}$, like space where $\mathbb{R}^d \times I_t$, is the macroscopic component of the space-time and we called $\mathbb{F}$, the microscopic component of the space-time of ratio $10^{-33}cm$ (*length of a string* [21]). For previously described the quantum zone of the space-time $\mathcal{M}$, is connected with $\mathcal{N}$, which will called virtual zone of the space-time (zone of the space-time where the process and transformation of the virtual particles happen) are connected by possibilities causal space generated by certain class of photons and by the material particles interacting in the material space time, with permanent energy and the material particles re-combining their states they become in waves on having moved in $\mathbb{R}^d \times I_t$, on any path of Feynman. Likewise we can define the space of this double fibration of quantum processing as:

$$\mathcal{L} = \left\{ O_c\left(\phi,\partial_\mu\phi,x\left(t\right),t\right) \in C^2\left(\mathrm{R}^d \times I_t\right) \middle| \frac{\partial^2}{\partial t^2} - \nabla^2\left(O_c(\phi,\partial_\mu\phi,x(t),t)\right) = 0 \right\}, \tag{55}$$

with the states ϕ, of quantum field are in the quantum zone $\mathcal{M}$. Let $\mathcal{N}$, the ambi-space (*set of connection and field*) defined as:

$$\mathcal{N} = \left\{(X,\nabla) \in M \times L \mid \nabla^{XY}_{X'Y'}\Psi + \Phi\left(X\right) = 0\right\}, \tag{56}$$

where ∇, is the connection of virtual field X, with the quantum field Y, and Ψ, is the field whose action is always present to create perceptions in the quantum zone connected with Φ (2-form)[28]. Then we can create the correspondence given by the double fibration [29]:

$$\begin{tikzcd} & \text{(space of processing of quantum particles)} \\ & \mathcal{L} \arrow[dl, "\pi"'] \arrow[dr, "\theta"] & \\ \text{(virtual zone of the space-time)}\,\mathcal{N} & & \mathcal{M}\,\text{(quantum zone of the space-time)} \end{tikzcd} \tag{57}$$

This double fibration conformed the interrelation between $\mathcal{M}$, and $\mathcal{N}$. $\forall\ x(t) \in \mathcal{M}$, give beginning to a complex submanifold (that represents the spaces where are the quantum hologram) that includes all these quantum images given by quantum holograms, why? Because this complex submanifolds, considering the causal structure given in the space-time by the light cones (see figure 6 a)) [26], of all trajectories that follow a particle in the space-time [29], they can write using (57) as:

$$\Theta_x = \theta\left[\pi^{-1}\left(x\right)\right], \tag{58}$$

of $\mathcal{N}$, such that $\Theta_x \cong \mathbb{P}^1 \times \mathbb{P}^1$, which by space-time properties to quantum level represent the space of all light rays that transit through x, conforming a hypersurface (projective surface) that is a light surface. This surface is called the sky x [30]. A sky in this context represents the set of light rays through x (*bosons*) that it comes of the virtual field.

If $\mathcal{M} \cong \mathbb{C}^4$, then $\mathbb{M} = \mathcal{M} \times \mathrm{Q}_x$, is the complete universe (include the cosmogonist perception by the super-symmetry specialist [31]). But, what is there of our quantum universe with regard to our real universe (included the material part given by the atoms)?

The answer is the same, we have an universe of ten dimensions and $\mathbb{M} = \mathcal{N} \times \mathcal{M}$, where the quantum representation of the object $x(s)$, is the quantum space-time $\mathcal{M} = \mathbb{R}^3 \times \mathrm{I}t$, (*which is the Einstein cosmogonist perception*) then the cosmo-vision of the virtual particles is $\mathbb{C}^2 \times \mathrm{Q}_x$, [21], then the execution operator $\mathfrak{I}$, that proceeds to connect virtual particles through the paths which have path integrals on double fibration, establishing the *material-quantum-virtual* connection required to a total reality:

$$\begin{tikzcd} & \mathcal{L} \arrow[dl, "\pi"'] \arrow[dr, "\theta"] & & \cup & & \mathscr{X} \arrow[dl, "\rho"'] \arrow[dr, "\sigma"] & \\ \mathcal{N} & & \mathcal{M} & & \mathcal{M} & & C \end{tikzcd} \tag{59}$$

where C, is the material part connected with the quantum zone of the space-time (space taken by atoms) $\mathcal{M}$. The corresponding path integral that connects virtual particles in the whole fibration is the integral of line type (5) defining feedback connection:

$$\mathrm{I}(\mathfrak{I}_{\mathrm{Q}_x}(x(s))) = \oint_{\Gamma} O_c(\theta(\pi^{-1}(\sigma(\rho^{-1}(x)))) \mu_s, \tag{60}$$

always with the space $\{x(s) \in \mathcal{M} \mid \Theta_x \subset \mathcal{N}\}$, to the permanent field actions. Then the *reality state* is the obtained through the *integral of perception* (60), considering the fibre of the corresponding reality in the argument of the operator O_c, of the integrating from (60).

6. Applications to the nanosciences

6.1. Nanomedicine

The integral medicine into of the class of alternative medicine, fundament their methods of cure in to health and reactive the vital field X, of the human body B, the *regeneration* of the centers of energy of B, and the *corrections and restoration* of the flux of energy *Flux*, in and in each organ $\mathbf{B}$, of the human body B, taking constant of gradient of their electromagnetic current, voltage and resistance, obtaining of this manner, the balance of each organ in sunstone with the other organs to characterize to B, like complete synergic system in equilibrium and harmony [10].

Now, the cure that is realized to nano-metric scale must be executed with a synergic action of constant field [33], equal to effect in each atom of our body to unison of *real conscience of cure* (*duality mind-body* [11]). Of this way, the conscience of B, is the obtained synergy by the atoms in this sense and that will come reflected in the reconstitution of the vital field X.

Then under this reinterpretation, the sickness is only an effect of the fragmentation of this *real conscience of cure* of *B*, that is deduced by disconnections and disparity of atoms [11]. The integral medicine helps to recover the *continuity of this conscience* through of the electronic memory of health of the proper body [11, 22] (see the figure 6 c)).

6.2. Quantology and neurosciences

Let $\mathfrak{M}$, the mind space and their organic component (material component) the brain space C. Also we consider the quantum component of the mind given by the space-time $\mathcal{M}$. Studies realised in statistical mechanics have revealed that the *Bose-Einstein statistics* stretches to accentuate the low energy levels. This reflects his closeness to the emission of a *virtual field*, where the virtual particles are not detected in a *virtual energy sea*. This allows to surmise that the radiation that takes place from the virtual field to the quantum field of $\mathfrak{M}$, is composed by *photons type bosons* (that is to say it obeys this Bose-Einstein statistics), since the quantum field interacts with the material particles that contains the material field of the mind which is anchored in the brain C, like material organ.

Theorem **(F. Bulnes).** [21] The *total Lagrangian of mental field* comes given by the superior action whose total conscience is

$$\mathrm{O}_{\mathrm{total}} = \mathrm{O}_{\mathrm{QCD}}\left(\mathrm{O}_{\mathrm{EM}}\right), \tag{61}$$

to one total action defined by the groups *SU*(3), (*quantum and virtual field*) and *SU*(2), (*material field*).

Proof. The Lagrangian of the theory is an invariant of Lorentz and invariant under local transformations of phase of the group *SU*(3), (*for the charge of color*) and has the following form [31]:

$$\mathrm{L}_{\mathrm{TOTAL}} = \left\{ \bar{q} \mathrm{i} \gamma^{\mu} \partial_{\mu} q - \bar{q} m q - b \bar{q} \gamma^{\mu} \mathrm{T}_{a} q \mathfrak{b}_{\mu\nu}^{a} - \frac{1}{4} \mathfrak{b}_{\mu\nu}^{a} \mathfrak{b}_{a}^{\mu\nu} \right\}, \tag{62}$$

This corresponds to the space of the mind $\mathfrak{M} = \mathcal{M} + \mathrm{C}$, where O_{EM}, put in C, (*neurological studies have proved that the process of thought in the level at least visible is of electromagnetic type*) signals through charges in the synapses and neurons of C. Nevertheless these charges produce in one level deeper. The tensor $\mathfrak{b}^{a}{}_{\mu\nu}$, is anti-symmetric and represent a *bosonic field* created by the interaction of quarks q, $p = \bar{q}$, and $[p, q] = \bar{q}\,\mathrm{q} - \mathrm{q}\,\bar{q}$. Whose bosonic field has all the particles of spin 0, and the trace of tensor $\mathfrak{b}^{a}{}_{\mu\nu}$, has electromagnetic components conformed by the photons that are stable on the limit of the transformation $\mathrm{q}(x(s)) \mapsto e^{-\mathrm{i}\alpha_{a}(x(s))Ta}\mathfrak{b}(x(s))$, of the thought $x(s)$, where some $\alpha_{a}(x(s))\mathrm{T}_{a}$, is the electromagnetic frequency k_{a}, of the term $ik_{\mathrm{a}}v$ [7, 10 26], where in these cases the last term in the second member of (62), is $\frac{1}{4}\, F_{\mu\nu}F^{\mu\nu}$. Then the *SU*(2)-actions are included in the *SU*(3), actions and their points are electromagnetic particles transformed by these rules like photons (= thoughts in $\mathfrak{M}$) [28].■

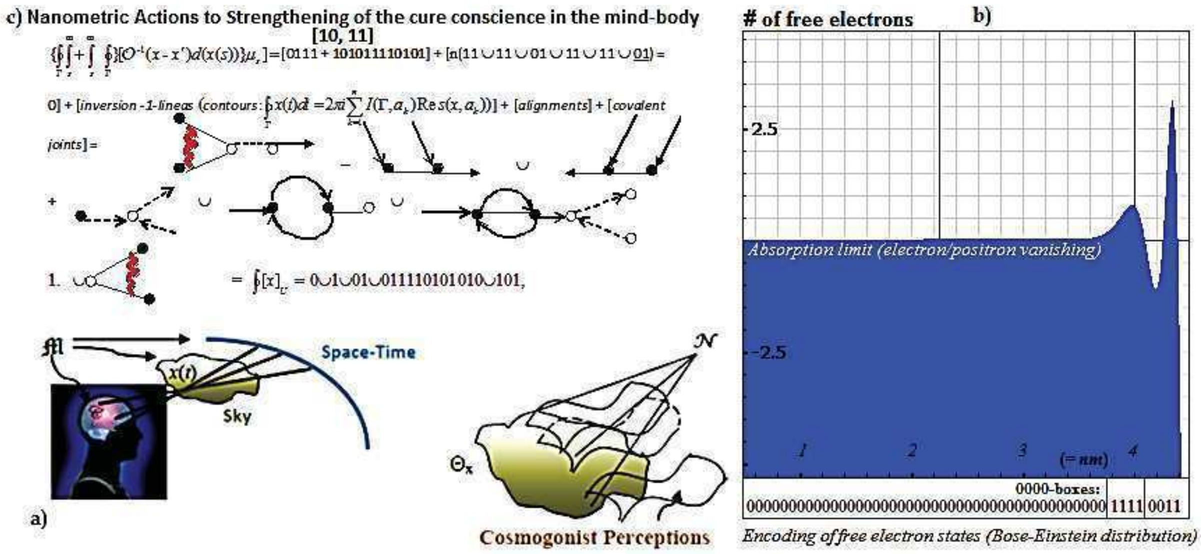


Figure 8. a). Concept of the topological space (*sky* [21, 30]) and the cosmogonist perceptions of the mind. The conscience operator of the different realities is given by (60). b) Modelling from boson-shape distribution in localizing of symptoms in the mind by cerebral signals with low interchange electrons [24, 25, 32, 33]. Bose-Einstein distribution was published in [22]. c) Total Action due Gelsem including the action de Bervul and *Ignamara*. The corresponding quantum intelligence code of this total action is given by 011110**101101101101**10111110, [7]. The corresponding code given in black include de codes of *Gelsem* and *Bervul*. The code in orange is the code of *Gelsemium* equal to code of *Gelsem*. This quantum code was used to cure a patient with a digestive illness [11, 21, 22].

6.3. Electromagnetic vehicle with levitation magnetic conscience

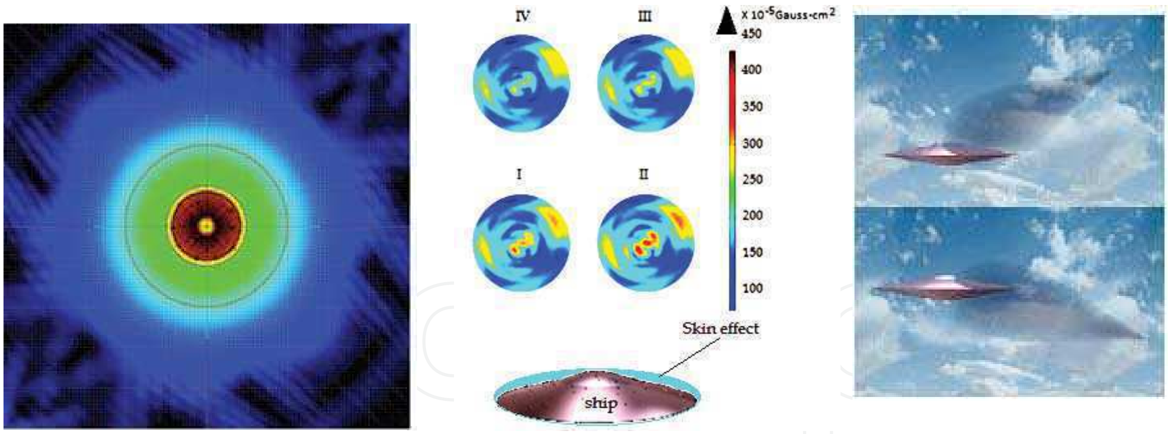
Considering some applications of quantum electrodynamics in the design of flaying vehicles self-supported and their magnetic levitation, we find the magnetic conscience operator is defined for the transmitting of the diamagnetic property every particle of the ship structure.

This vehicle is controlled by one microchip that is programmed by conscience operators algebra of electromagnetic type that leads to the flow of Eddy currents, the iso-rotations and suspension of the special geometrical characteristics vehicle, generating also on the vehicle structure certain "magnetic conscience" that provokes all movements like succeeding the sidereal objects in the universe [26, 34]. This magnetic conscience is generating by the proper particles of the ship structure transmitted for the interaction of superconductor inside the reactor with the magnetic field generated by the rotating rings under the ship. By so doing, the Eddy's currents in the "skin effect" around the structure of the ship are given by the actions [35]

$$\mathfrak{I}_{\text{ship}} = \mathfrak{I}_{\text{M}} + \mathfrak{I}_{\text{rot}}, \tag{63}$$

and using the quantum $\mathfrak{E} \otimes \mathfrak{H}$-fields to create (magnetic conscious operator given by the integrals [36])

$$H(A, \mathfrak{I}_M) = \int_{ship} \left\{ L_M - \mathrm{H}^2 / 8\pi \right\} d\mathrm{V}, \tag{64}$$



(a) (b) (c)

Figure 9. a). The green color represents the state of quantum particles in transition to obtain the anti-gravity states through the interaction of the $\mathfrak{E} \otimes \mathfrak{H}$-fields used on the structure of the vehicle. The blue flux represents Eddy's currents that interact with the lines of magnetic field to produce an diamagnetic effect in the top part of the vehicle. The red central ring is the magnetic field that generates the twistor surface (this computational simulation is published in [35, 36]). b) Top part of the flying plate showing the generation of the effect skin obtained in the interaction superconductor - magnetic field. The regions in light and obscure blue represent the flow of Eddy's currents, in this top part of the vehicle. The Skin effect is derived by the quantum interaction by the actions of $\mathfrak{E} \otimes \mathfrak{H}$ [26, 37]. c) The microscopic effects of the electromagnetic fields (quantum densities of field) created inside the algebra $\mathfrak{E} \otimes \mathfrak{H}$, create an effect of macro-particle of the vehicle [36] (the vehicle and their electromagnetic revetment behaves like a particle) where their displacement is realized in instantaneous form and their direction it is a macro-spin projected from the *magnetic conscious operator* (from $\Im_M$, from (63)) of the ship which defines their angular moment [35, 36].

Apendix

Technical notation

O_c – Is an operator that involves the Lagrangian but directing this Lagrangian in one specific fiber (direction) *prefixing tha Lagrangian action in one direction*. This is defined as the map: $O_c : T\mathbb{M} \to T\mathbb{M}^*$, with rule of correspondence $w \mapsto O_c(v)w$, where $w = L(v)$, with L, the classic Lagrangian. *This defines the quantum conscience*. If we locally restrict to O_c, that is to say, on the tangent space $T_x\mathbb{M} \times T_x\mathbb{M}$, $\forall\, x \in \mathbb{M}\ (\cong \Omega(\Gamma))$, we have that

$$O_c : T_x\mathbb{M} \times T_x\mathbb{M}\ (\underset{locally}{\cong}\ T\mathbb{M}) \longrightarrow T\mathbb{M}^*,$$

with rule of correspondence

$$(v, w) \longrightarrow O_c(v)w,$$

$O_c(v)w$, generalise the means of $O_c(v)v = L(v)$, $\forall\ v \in T_x\mathbb{M}$, $\forall\ x \in \Omega(\Gamma)$. Likewise, if $\Im: T\mathbb{M} \to \mathbb{R}$, with rule of correspondence $L(v) \mapsto \Im(L(v)) = O_c(v)v$, then the total action along the trajectory Γ, will be

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$$\Im_{\Gamma} = \int_{\Omega(\Gamma)} O_{\mathrm{c}}(v)v = \int_{\Omega(\Gamma)} L(v),$$

In the forms language, the conscience operator comes given by the map $\omega_L : T\mathbb{M} \to T\mathbb{M}^*$, with rule of correspondence given by (19). The quantum conscience shape a continuous flux of energy with an intention, involving a smooth map π (defined in the *example 1*). Then the conscience operator is related with the action $\Im$, and the trajectories γ_t, through of the following diagram:

$$\begin{array}{ccc} TM & \xrightarrow{O_C} & TM^* \\ \Im\downarrow & & \downarrow\pi \\ R & \xrightarrow[\gamma_t]{} & M \end{array}$$

$O_c(\ast)$ – Conscience Operator in the singularity $\ast$. This is a kernel of the quantum inverse transfom of path integrals to eliminate singularities. Their direct transform use the kernel $O_c(x(t))$.

$\mathcal{O}_0(Z_i, p_A)$ – Vertex operator of the theory given by the equations $W^a(Z_i) = 0$, localized at the points p_A, of the Riemann surface S.

$\mathcal{O}(x - x')$ – Is the functional operator $\mathcal{O}(x - x_j) = (\Box_x + m^2 - i\varepsilon)\delta^n(x - x_j)$. This operator involves to electronic propagator in a pulse impulse.

O_{QCD} – Quantum chromodynamics conscience operator. Their Lagrangian density using the quantum chromodynamics is $\mathcal{L}_{EM} = \Sigma_n (ihc\psi_n \not{D}\psi_n - m_n c^2 \psi_n\psi_n) - 1/4\, G^{\alpha}{}_{\mu\nu} G_{\alpha}{}^{\mu\nu}$, Where $\not{D}$, is the QCD gauge covariant derivative (in Feynman notation $\xi^{\sigma}D\sigma$), $n = 1, 2, \ldots 6$ counts the quark types, and is the gluon field strength tensor.

O_{EM} – Conscience operator defined through of the Lagrangian to quantum electromagnetic field (these like gauge fields). Their Lagrangian density is $\mathcal{L}_{EM} = ihc\psi\not{D}\psi - mc^2\psi\psi - (1/4\mu_0)F_{\mu\nu}F^{\mu\nu}$. where $F^{\mu\nu}$, is the electromagnetic tensor, D, is the gauge covariant derivative, and $\not{D}$, is Feynman notation for $\xi^{\sigma}D\sigma$.

O_{total} – Total quantum conscience operator. This is the composition of operators O_{EM} followed O_{QCD}.

$\Im_{Oc}$ – Action that involves a conscience operator O_c.

$\Omega^{(k,\,0)}$ – Differential form to complex hypersurfaces of dimension k. This form is analogous to the form ω_L, and involves the conscience operator $(O_c)^*$.

Θ_x – Fibers of the topological space Q_x, called *sky* conformed by the light rays through x (*bosons*) that it comes of the virtual field. This is a conscience operator when realises the reality transformation by the double fibration.

$\Im_{\partial\mathbb{M}}$- Action that have codimension strata $n-k$. This action is due to the differential $d\Im(\phi)h$.

$\Im_{int_{\mathbb{M}}}$- Action that have codimension strata k. This action is due by $\Im(\phi)$.

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