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Standard Definitions of All Fundamental Quantities Exist in Universe

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***Abstract*: In this particular article I intend towards the basic physical properties of the universe and how these basic physical properties are related with each other. At first by obtaining some modification into our former fundamental understandings about basic phenomenology, I intend to justify them by some former terminologies which were continuously obtained by me in my last four papers on Bosons, Bodies, Central Systems and fundamental forces. In last phase of article I will obtain the energy with help of quantity and scalar field and action or variation principle of action. I will also obtain some universal connection diagrams in this particular article.**

***Keywords*: Action, Energy, Flow function of Scalar Field, Force, Generators of Scalar Fields, Quantity of Disturbance, Quantity of Imbalance, Quantity of Geometry, Quantity of Motion, Space Separated Action, Spin, Time Separated Action, Universal Connections, Universal Energy, Universal Force, Universal Motion.**

1. Introduction

In this particular article I am explaining how and in which manner the basic properties of our physical universe behave in different eras and epochs of the so called universe or what type of quantities are fundamental in various epochs and which quantities vary according to n-phases of universe. After this analysis the justifications of the fact by various geometrical representations would be obtained in same phase of paper and then some mathematical queries will also satisfied for the simplicity of the justifications.

Mathematical nature of the functions of the basic quantities (like scalar fields functions, quantities of bodies etc.) will be obtained in the next phase of the article and then justification of some former equations by the obtained functions will be provided by me in same phase of the particular article. So, I am starting with the former definitions of the quantity of bodies, quantity of motion and time as I promised previously.

2. Justification of Some former Physical Quantities in my Generalizations

A. Quantity in Body (Mass)-

At First I tend to explain 'Vis Inista' or the 'Quantity of Body' (ψ).

$$\psi = \psi_p + \alpha\Delta\phi$$

Newton only considered ψ_p as the quantity of body or Vis Inista in his language but the total quantity of a body include conversion also. So, here one query comes out "Is quantity of a particular body only opposes the motion of the same body?" The answer comes out no because opposition in motion comes out due to that part of body which is less coupled with universal scalar field. So, $\psi_p = \psi - \alpha\Delta\phi$ if a body is less coupled with the scalar field or there exist less ϕ-ψ transformation in body, then the body will have more opposition in motion of similar bodies with respect to universal frame of reference because ψ_p is the absolute vis Inista or quantity which opposes the motion of body.

So, the generalized definition comes out for the whole quantity of a body is "The Quantity of a particular body is not only the quantity which is perfect but it also includes transformed quantity which supports the motion of the same body also". Now I tend to justify the above definition with a geometrical representation of a body-

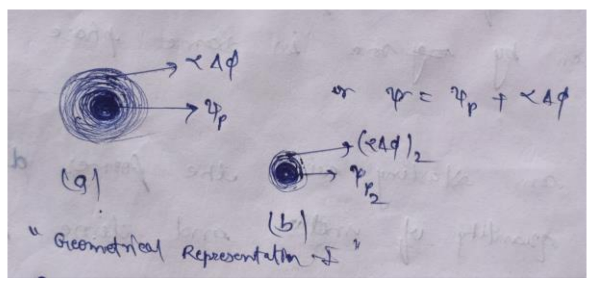

Fig. 1. Geometrical Representation of Quantity in Body

Suppose body a and b are propagating in Φ_u , then the both bodies are coupled with Φ_u in different manner like body 'a' is coupled more but body 'b' is coupled less with the universal scalar field (Φ_u). Now if we measure $\psi_{p_1} = \psi_{p_2}$ or the quantities are same but the $\alpha\Delta\phi$ parts are different for the both bodies. In this condition both bodies should oppose same by Sir Isaac Newton's definition but the bodies will propagate throw Φ_u or space-time differently because one is coupled more which propagate easily or another is coupled less with Φ_u will propagate difficultly throw Φ_u or have mare opposition in motion.

We can describe this situation as-

$$\psi_1 = \psi_p + \alpha_1\Delta\phi_1$$
$$\psi_2 = \psi_p + \alpha_2\Delta\phi_2$$

So, the whole quantity of a body only does not oppose the motion of a particular body.

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$$\psi_1 > \psi_2 \; or \; \alpha_1\Delta\phi_1 > \alpha_2\Delta\phi_2$$

From the above facts one very extreme term comes out that "The motion of a particular body is affected by the flow of universal scalar field also" because if the motion is affected by the coupling with universal scalar field then the "Flow of universal scalar field also affects the motion of body". Now I tend to explain an another fact arising from the above explanation that in terms of opposition in motion each and every quantity is measured both on the basis of ψ_p & $\alpha\Delta\phi$.

Now a query comes out from the above discussion that if the quantity is measured in the above manner then how the density of a particular quantity is measurable in terms of volume occupied by the quantity and its coupling scalar field in universal scalar field? Is perfection constant (η) the only easy and clear way to define the quantity with reference to another quantities exist in universe or there may exist other ways like by conversion constant(α)? These both quantities will be solved in the next tradition of finding the densities and conversion constants of various types of scalar fields but first in the former trend I am here giving another representation by which I tend to explain how Geometry of a particular body is related with the conversion constant?

B. Geometry-

If As we know from our former discussion that when a body goes to perfection converged quantity is more but when $\eta \to 1$ $\left(\frac{\partial\alpha}{\partial\tau}\right)_1 > \left(\frac{\partial\alpha}{\partial\tau}\right)_2$ {Here 1 is the former measurement and 2 is latest measurement} or in other words when body tend to perfection, then the rate of conversion decreases and by the above fact we can conclude that "Geometry ($G°$) of bodies shaped by decreasing or increasing rate of conversion of the particular body". We can now conclude a mathematical relation between the function of Geometry ($G°$) and Rate of Conversion as-

$$\boxed{G° \propto \frac{\partial\alpha}{\partial\tau}} \tag{1}$$

Now by removing the proportionality constant, we get-

$$\boxed{G° = \pi\frac{\partial\alpha}{\partial\tau}} \tag{2}$$

{Here π is proportionality constant}

If Rate of Conversion is negative then the Geometries for bodies are normal, but if Rate of Conversion is positive then the geometries for the bodies are hyper when bodies tend to imperfection then the geometry of the bodies will be hyper. So, we can describe it as-

$$\begin{cases} (Normal)\; G° < 0 \; for \; \dfrac{\partial\alpha}{\partial\tau} \; is \; negative \\ (Hyper)\; G° > 0 \; for \; \dfrac{\partial\alpha}{\partial\tau} \; is \; positive \end{cases}$$

Now for a body-

$$\psi = \psi_p + \alpha\Delta\phi$$

Now by differentiating the above expression with respect to universal time-

$$\frac{\partial\psi}{\partial\tau} = \frac{\partial\psi_p}{\partial\tau} + \frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha.\frac{\partial(\Delta\phi)}{\partial\tau}$$

Now by above equation we find value of $\frac{\partial\alpha}{\partial\tau}$ as-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\Delta\phi}\left\{\frac{\partial(\psi-\psi_p)}{\partial\tau} - \alpha.\frac{\partial(\Delta\phi)}{\partial\tau}\right\}$$

$$\left\{\because \alpha = \frac{(\psi-\psi_p)}{\Delta\phi}\right\}$$

Now by putting α value in above equation, we get-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\Delta\phi}\left\{\frac{\partial(\psi-\psi_p)}{\partial\tau} - \frac{(\psi-\psi_p)}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial\tau}\right\} \tag{3}$$

Now by putting the value of $\frac{\partial\alpha}{\partial\tau}$ in equation (2) from (3), we get-

$$\boxed{G° = \frac{\pi}{\Delta\phi}\left\{\frac{\partial(\psi-\psi_p)}{\partial\tau} - \frac{(\psi-\psi_p)}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial\tau}\right\}} \tag{4}$$

In this way quantities are related with their function of geometry. If we tend to find out the function of geometry for broken parts, then-

$$\psi_b = \alpha\Delta\phi$$

Or

$$\Delta\psi_b = \alpha\Delta\phi_b$$

$$\left\{\because (\psi_p)_b = 0\right\}$$

Now by differentiating above expression as did earlier, we get-

$$\frac{\partial(\Delta\psi_b)}{\partial\tau} = \frac{\partial\alpha}{\partial\tau}.\Delta\phi_b + \alpha.\frac{\partial(\Delta\phi_b)}{\partial\tau}$$

Or we can write this for above expression $\psi_b = \alpha\Delta\phi$ as-

$$\frac{\partial\psi_b}{\partial\tau} = \frac{\partial\alpha}{\partial\tau}.\Delta\phi + \alpha.\frac{\partial(\Delta\phi)}{\partial\tau}$$

So, value of $\frac{\partial\alpha}{\partial\tau}$ in terms of above expression is-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\Delta\phi}.\frac{\partial\psi_b}{\partial\tau} - \frac{\psi_b}{(\Delta\phi)^2}.\frac{\partial(\Delta\phi)}{\partial\tau}$$

So, we can write geometry function of broken part (G_b°) as-

$$\boxed{G_b^{\circ} = \frac{\pi}{\Delta\phi}\left\{\frac{\partial\psi_b}{\partial\tau} - \frac{\psi_b}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial\tau}\right\}} \tag{5}$$

Or in another form we can write it as-

$$\boxed{G_b^{\circ} = \frac{\pi}{\Delta\phi_b}\left\{\frac{\partial(\Delta\psi_b)}{\partial\tau} - \frac{(\Delta\psi_b)}{\Delta\phi_b}.\frac{\partial(\Delta\phi_b)}{\partial\tau}\right\}} \tag{6}$$

Here equations (5) and (6) are depend respectively on $\Delta\phi$ (variation in the scalar field of system by which the broken part generated) or $\Delta\phi_b$ (variation in the scalar field of broken part itself).

Now by differentiating equation (2) with respect to τ (universal time), we get-

$$\boxed{\frac{\partial G°}{\partial\tau} = \frac{\partial\pi}{\partial\tau}.\frac{\partial\alpha}{\partial\tau} + \pi.\frac{\partial^2\alpha}{\partial\tau^2}} \tag{7}$$

So, variation in geometry depends on the two time derivative of conversion constant.

Now as we know from my former article-

$$\because \eta = \frac{\psi - \alpha\phi}{\psi + \alpha\phi} = \frac{\psi_p + \alpha(\Delta\phi - \phi)}{\psi_p + \alpha(\Delta\phi + \phi)} \left\{\because \psi = \psi_p + \alpha\Delta\phi\right\}$$

So, we can write above expression as-

$$\eta\psi_p + \eta\alpha(\Delta\phi + \phi) = \psi_p + \alpha(\Delta\phi - \phi)$$

Or we can write it by putting similar terms together as-

$$\alpha\Delta\phi(\eta - 1) + \alpha\phi(\eta + 1) = \psi_p(1 - \eta)$$

Now by differentiating the above equation with respect to τ (Universal Time), we get-

$$\frac{\partial\eta}{\partial\tau}.\alpha(\Delta\phi + \phi) + \frac{\partial\alpha}{\partial\tau}.\{\Delta\phi(\eta - 1) + \phi(\eta + 1)\} + \alpha(\eta - 1)\frac{\partial(\Delta\phi)}{\partial\tau} + \alpha(\eta + 1)\frac{\partial\phi}{\partial\tau} = (1 - \eta)\frac{\partial\psi_p}{\partial\tau} - \psi_p.\frac{\partial\eta}{\partial\tau}$$

Or by rearranging the above equation-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\{\Delta\phi(\eta - 1) + \phi(\eta + 1)\}}\left\{-\frac{\partial\eta}{\partial\tau}.\alpha(\Delta\phi + \phi) + \alpha(1 - \eta)\frac{\partial(\Delta\phi)}{\partial\tau} - \alpha(\eta + 1)\frac{\partial\phi}{\partial\tau} + (1 - \eta)\frac{\partial\psi_p}{\partial\tau} - \psi_p.\frac{\partial\eta}{\partial\tau}\right\}$$

Now by rearranging above equation as-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\{\Delta\phi(\eta - 1) + \phi(\eta + 1)\}}\left\{-\frac{\partial\eta}{\partial\tau}.\{\alpha(\Delta\phi + \phi) + \psi_p\} + \alpha(1 - \eta)\frac{\partial(\Delta\phi)}{\partial\tau} - \alpha(\eta + 1)\frac{\partial\phi}{\partial\tau} + (1 - \eta)\frac{\partial\psi_p}{\partial\tau}\right\}$$

$$\left\{\because \alpha = \frac{\psi - \psi_p}{\Delta\phi}\right\}$$

So, by using the value of α in above equation, we get-

$$\frac{\partial\alpha}{\partial\tau} = \frac{1}{\{\Delta\phi(\eta - 1) + \phi(\eta + 1)\}}\left\{-\frac{\partial\eta}{\partial\tau}.\left\{\frac{(\psi - \psi_p)}{\Delta\phi}(\Delta\phi + \phi) + \psi_p\right\} + (1 - \eta)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial(\Delta\phi)}{\partial\tau} - (\eta + 1)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial\phi}{\partial\tau} + (1 - \eta)\frac{\partial\psi_p}{\partial\tau}\right\} \tag{8}$$

Now from equation (2) and (8), we get-

$$G^\circ = \frac{\pi}{\{\Delta\phi(\eta - 1) + \phi(\eta + 1)\}}\left\{-\frac{\partial\eta}{\partial\tau}.\left\{\frac{(\psi - \psi_p)}{\Delta\phi}(\Delta\phi + \phi) + \psi_p\right\} + (1 - \eta)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial(\Delta\phi)}{\partial\tau} - (\eta + 1)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial\phi}{\partial\tau} + (1 - \eta)\frac{\partial\psi_p}{\partial\tau}\right\} \tag{9}$$

So, equation (9) is in terms of perfection constant and $(\psi, \psi_p, \Delta\phi)$.

$$\{\because d\tau = kd\Phi_u = d\tau_u\}$$

So, we can write equation (2) as-

$$\boxed{G^\circ = \frac{\pi}{k}\frac{\partial\alpha}{\partial\Phi_u}} \tag{10}$$

$$\left\{\frac{\pi}{k} = \mu \ is\ another\ type\ of\ constant\right\}$$

$$\boxed{G^\circ = \mu\frac{\partial\alpha}{\partial\Phi_u}} \tag{11}$$

$$\left\{\because d\tau = kd\Phi_u \Rightarrow \frac{1}{k} = \frac{\partial\Phi_u}{\partial\tau}\right\}$$

From my paper on central systems [3]-

$$\because \frac{\partial\Phi_u}{\partial\tau} = \frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)$$

By putting $\frac{\partial\Phi_u}{\partial\tau}$ value in above expression, we get-

$$\boxed{\frac{1}{k} = \frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)} \tag{12}$$

So, the value of k can be written as-

$$k = \frac{1}{\frac{\partial}{\partial\tau}(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c)}$$

Now by putting the value of $\frac{1}{k}$ in equation (10), we get-

$$\boxed{G^\circ = \pi\left\{\frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)\right\}.\frac{\partial\alpha}{\partial\Phi_u}} \tag{13}$$

Now a beautiful fact comes out from the above expression about Geometries that in the inflations of universe conversion rate is positive but in deflations of universe conversion rate is negative. So, in inflations of universe the geometries are hyper but in deflations of universe geometries are normal. We can examine above fact in this geometrical representation-

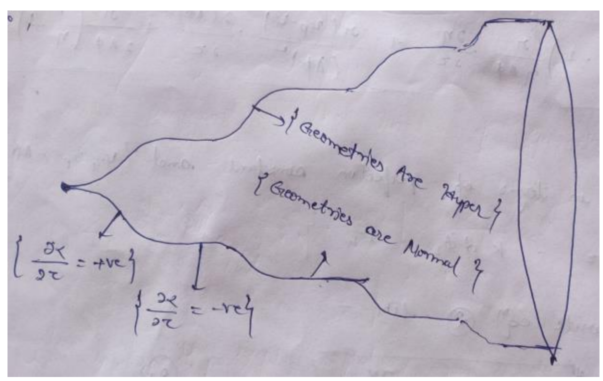

Fig. 2. Geometries during Inflations

So, for universal inflations-

$$(G^\circ)_{inf}^k = \pi_{inf}^k.\frac{\partial\alpha_{inf}^k}{\partial\tau^k}\Big|_{\ k=odd} = Positive$$

{Here k is indication of k^th inflation not the power of function}

Similar as above term for universal deflations-

$$(G^\circ)_{de}^k = \pi_{de}^k.\frac{\partial\alpha_{de}^k}{\partial\tau^k}\Big|_{\ k=even} = Negative$$

When we sum over all n- inflations, then-

$$\sum_{\substack{k\ is\ odd \\ k\le 2n}}(G^\circ)_{inf}^k = \sum_{\substack{k\ is\ odd \\ k\le 2n}}\pi_{inf}^k.\frac{\partial\alpha_{inf}^k}{\partial\tau^k}$$

Or for deflations-

$$\sum_{\substack{k\ is\ even \\ k\le 2n}} (G^\circ)^k_{de} = \sum_{\substack{k\ is\ even \\ k\le 2n}} \pi^k_{de}.\frac{\partial \alpha^k_{de}}{\partial \tau^k}\Big|_{k=even}$$

By summing over all types of Geometries ever existed in universe, than we get-

$$G^\circ_u = \sum_{\substack{k\ is\ odd \\ k\le 2n}} (G^\circ)^k_{inf} + \sum_{\substack{k\ is\ even \\ k\le 2n}} (G^\circ)^k_{de}$$

By putting the values of both summations, we get-

$$G^\circ_u = \sum_{\substack{k\ is\ odd \\ k\le 2n}} \pi^k_{inf}.\frac{\partial \alpha^k_{inf}}{\partial \tau^k} + \sum_{\substack{k\ is\ even \\ k\le 2n}} \pi^k_{de}.\frac{\partial \alpha^k_{de}}{\partial \tau^k}$$

For universe from nothing-

$$\boxed{G^\circ_u = 0} \tag{14}$$

Or we can write-

$$\boxed{\sum_{\substack{k\ is\ odd \\ k\le 2n}} \pi^k_{inf}.\frac{\partial \alpha^k_{inf}}{\partial \tau^k} = -\sum_{\substack{k\ is\ even \\ k\le 2n}} \pi^k_{de}.\frac{\partial \alpha^k_{de}}{\partial \tau^k}} \tag{15}$$

So, this is the particular relation which should hold for the confirmation of Big-Bang Theory. The equation (14) also represents the "Conservation of Geometries" in the universe. Now one query comes out from the above mathematical relations that which type of Geometry the minor singularities have? So, for minor singularities from my former paper-

$$f^p(\phi) = 0$$

As we know that at the epoch of minor singularities there is inflation. So, at the epoch of minor singularities Rate of Conversion change from negative to positive which is due to formation of new bodies from former bodies in universe or at that particular moment these bodies goes from normal to hyper geometries. As we know from my former article on bodies that black hole is also a minor singularity. So, black holes also tend to hyper geometry from normal geometry. This phenomenology can be easily understood from this diagram-

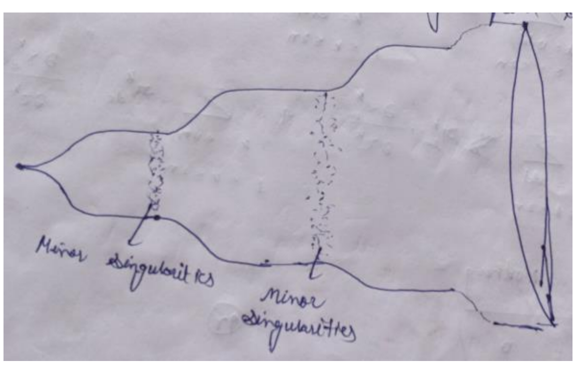

Fig. 3. Existence of Minor Singularities in N-Time Inflationary Model

For minor singularities the function of geometry (G°_m) varies from negative to positive-

$$G^\circ_m = \pi_m.\frac{\partial \alpha_m}{\partial \tau}\Big|_{\tau_1} = -ve$$

$$G^\circ_m = \pi_m.\frac{\partial \alpha_m}{\partial \tau}\Big|_{\tau_2} = +ve$$

$\Delta\tau = \tau_2 - \tau_1$ is the minimum time difference between variation in geometry. Now by some manipulation in above expression, we get-

$$G^\circ_m d\tau = \pi_m.d\alpha$$

By integrating both sides, we get-

$$\boxed{\int_{\tau_1}^{\tau_2} G^\circ_m d\tau = \int_{\alpha_1}^{\alpha_2} \pi_m.d\alpha} \tag{16}$$

If $\Delta\tau$ is minimum time between variation in geometry, then the integration will be maximum and the modulus of the integration is $\left|\int_{\tau_1}^{\tau_2} G^\circ_m d\tau\right| \to maximum$ between these two moments rater than normal time periods. From here we can define the "Time of new Formation ($\Delta\tau$) in universe as the above facts matches. We can write it as-

$$\boxed{\begin{gathered} G^\circ_m\big|_{\tau_2} - G^\circ_m\big|_{\tau_1} = \pi_m\left(\frac{\partial \alpha_m}{\partial \tau}\Big|_{\tau_2} - \frac{\partial \alpha_m}{\partial \tau}\Big|_{\tau_1}\right) \\ = Highly + ve\ than\ normal\ functions \end{gathered}} \tag{17}$$

If $\Delta\tau_f = \tau_2 - \tau_1$, then here $\Delta\tau_f$ is the age of formation of new geometries in universe. So, from the above discussion we can conclude that the function of geometry is also a fundamental quantity of measurement in universal sense.

Now I tend to explain the another fact that if the scalar field exist and varies the speed of light, then why the Michelson-Morley experiment is proving the fact that this kind of physical entity don't exist. I say in answer that the scalar field of a perfect body like earth is not coupled with the body yet much to vary the speed of light or the scalar field don't move if it is not coupled with the body. The Michelson-Morley experiment shows diffraction in slit on imperfect bodies like stars. So, Michelson-Morley Experiment will show patterns of superposition on stars or imperfect bodies (which have more conversion constant).

C. *Quantity of Disturbance-*

Now I tend to explain another physical property known as temperature. What exactly the temperature is or what are the maximum and minimum reach of the particular quantity in different epochs of universe?

Temperature depends upon distortions in scalar fields of various bodies due to each other. Mostly temperature depends upon conversion constant and affects the quantity of body. We can understand it by a diagram-

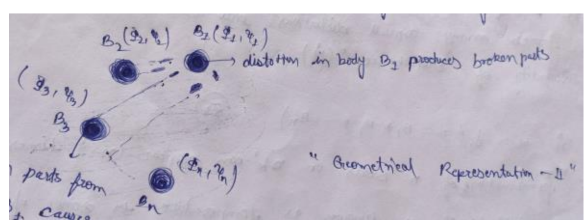

Fig. 4. Creation of Temperature like Quantities by Distortions

So, distortion in a particular scalar field causes distortion in system by exchange of some broken parts.

"If we look at (n-1)th central systems from nth central system, then there always there we will always observe distortion in (n-1)th bodies by exchange of broken parts of the same bodies".

Now I am giving explanation of the above fact by some examples like if we look at atoms from solar systems, then there exist a distortion in atoms by exchange of photons and if we look at solar systems from galactic central systems, then we also find the same distortions by exchange of asteroids. So, this type of distortion increases conversion in scalar fields of quantity and this converged scalar field cause disturbance into flow of system scalar field.

So, from "Geometrical Representation-2" we can find the connection between the distortions generated by body B_1 to all other bodies, as-

$$\delta_{B_1} = \delta_{B_1B_2} + \delta_{B_1B_3} + \cdots + \delta_{B_1B_n} \tag{18}$$

$$\begin{aligned}\delta_{B_1B_2} &= \delta_{B_1B_2B_1} + \delta_{B_1B_2B_3} + \delta_{B_1B_2B_4} + \cdots + \delta_{B_1B_2B_n}\\ \delta_{B_1B_3} &= \delta_{B_1B_3B_1} + \delta_{B_1B_3B_2} + \delta_{B_1B_3B_4} + \cdots + \delta_{B_1B_2B_n}\\ &\vdots\\ \delta_{B_1B_n} &= \delta_{B_1B_nB_1} + \delta_{B_1B_nB_3} + \delta_{B_1B_nB_4} + \cdots + \delta_{B_1B_nB_{n-1}}\end{aligned} \tag{19}$$

So, we define a unique quantity which increases conversion constants of these n-bodies and causes many small distortions into the n-bodies or system as "Quantity of Disturbance (H°)". So, we get a relation between H° and δ as-

$$H^\circ \propto \delta_i \tag{20}$$

{ i=n type of combinations of n-bodies or k can appear (n-1) times}

∵ Quantity of Disturbance is known as temperature in sense of solar system and atoms. H° is anti proportional to the perfection constant of system (η_s)-

$$H^\circ \propto \frac{1}{\eta_s} \tag{21}$$

H° is also increases α (Conversion Constant of System), so-

$$H^\circ \propto \Delta\alpha_s \tag{22}$$

Now by combination of (20), (21) and (22) we find the Quantity of Disturbance as-

$$H^\circ \propto \frac{\delta_i \Delta\alpha_s}{\eta_s} \tag{23}$$

Now by removing proportionality of relation (23) by constant (þ)-

$$\boxed{H^\circ = þ\frac{\delta_i \Delta\alpha_s}{\eta_s}} \tag{24}$$

Now by putting $\delta_i = \frac{\Delta F_i}{\Delta\phi_i}$, we get Quantity of Disturbance as-

$$\boxed{H^\circ = þ\frac{\Delta F_i . \Delta\alpha_s}{\eta_s . \Delta\phi_i}} \tag{25}$$

Here $\Delta\phi_i$ can be written as variation in the scalar field of system ($\Delta\Phi_s$)-

$$\boxed{H^\circ = þ\frac{\Delta F_i . \Delta\alpha_s}{\eta_s . \Delta\Phi_s}} \tag{26}$$

$H^\circ = T$ as we look at atoms from solar system-

$$\boxed{T = þ\frac{\Delta F_i . \Delta\alpha_s}{\eta_s . \Delta\Phi_s}} \tag{27}$$

$$\left\{\because \frac{G^\circ}{\pi} . d\tau = d\alpha\right\} \; or \; \left\{\frac{G^\circ}{\pi} . \Delta\tau = \Delta\alpha\right\}$$

Now by putting the value of $\Delta\alpha = d\alpha$ (for small variations in α) in equation (25), we get-

$$\boxed{H^\circ = þ\frac{\Delta F_i . G^\circ d\tau}{\pi . \eta_s . \Delta\phi_i}} \tag{28}$$

So, variation in quantity of disturbance also causes variation in Geometry of the bodies. Now one outstanding query comes out that if we look at atoms from galaxies, then how above quantities would behave?

Now by putting equation (9) into (28), we get-

$$\begin{aligned}H^\circ = þ\frac{\Delta F_i}{\eta_s}\frac{1}{\left(\Delta\phi_i/\Delta\tau\right)} . \frac{1}{\{\Delta\phi(\eta_s - 1) + \phi(\eta_s + 1)\}} .\\ \left\{-\frac{\partial\eta_s}{\partial\tau} . \left\{\frac{(\psi - \psi_p)}{\Delta\phi}(\Delta\phi + \phi) + \psi_p\right\}\right.\\ + (1 - \eta_s)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial(\Delta\phi)}{\partial\tau}\\ \left. - (\eta_s + 1)\frac{(\psi - \psi_p)}{\Delta\phi}\frac{\partial\phi}{\partial\tau} + (1 - \eta_s)\frac{\partial\psi_p}{\partial\tau}\right\}\end{aligned} \tag{29}$$

$$\left\{\because \; here \; \psi_p = \sum_{i=1}^{n}(\psi_p)_i \; , \psi = \sum_{i=1}^{n}(\psi)_i\right\}$$

Here n is the sum of all quantities in system.

$$\because \Delta\phi_i = \frac{\Delta F_i}{\delta_i} \; or \; \delta_i = \delta_{B_1}$$

Now by putting $\Delta\phi_i$ value in above equation and by some manipulations, we get-

$$\begin{aligned}H^\circ = þ\frac{\Delta\tau}{\eta_s}\delta_{B_1} . \frac{1}{\{\Delta\phi_i(\eta_s - 1) + \phi_i(\eta_s + 1)\}} .\\ \left\{-\frac{\partial\eta_s}{\partial\tau} . \left\{\frac{(\psi - \psi_p)}{\Delta\phi_i}(\Delta\phi_i + \phi_i) + \psi_p\right\}\right.\\ + (1 - \eta_s)\frac{(\psi - \psi_p)}{\Delta\phi_i}\frac{\partial(\Delta\phi_i)}{\partial\tau}\\ \left. - (\eta_s + 1)\frac{(\psi - \psi_p)}{\Delta\phi_i}\frac{\partial\phi_i}{\partial\tau} + (1 - \eta_s)\frac{\partial\psi_p}{\partial\tau}\right\}\end{aligned} \tag{30}$$

$$\left\{\because \Delta\phi_i = \frac{(\psi - \psi_p)}{\alpha_s}\right\}$$

Here as I described ψ & ψ_p are sum of all quantities exist in system.

So, we can write quantity of disturbance totally in terms of quantity forms, as-

$$H^\circ = þ\frac{\Delta\tau}{\eta_s}\delta_{B_1} . \frac{\alpha_s}{\{(\psi - \psi_p)(\eta_s - 1) + (\psi_i')(\eta_s + 1)\}} .$$

$$\left\{-\frac{\partial\eta_s}{\partial\tau}.\left\{\frac{(\psi-\psi_p)}{\alpha_s\Delta\phi_i}(\psi+\psi_i')\right\}+(1-\eta_s)\alpha_s\frac{\partial\left(\frac{(\psi-\psi_p)}{\alpha_s}\right)}{\partial\tau}\right.$$
$$\left.-(\eta_s+1)\alpha_s\frac{\partial\left(\frac{\psi_i'}{\alpha_s}\right)}{\partial\tau}+(1-\eta_s)\frac{\partial\psi_p}{\partial\tau}\right\}$$

Now the second and third terms becomes-

$$(1-\eta_s)\alpha_s\frac{\partial\left(\frac{(\psi-\psi_p)}{\alpha_s}\right)}{\partial\tau}$$
$$=(1-\eta_s)\frac{\alpha_s\frac{\partial(\psi-\psi_p)}{\partial\tau}-(\psi-\psi_p)\frac{\partial\alpha_s}{\partial\tau}}{\alpha_s}$$
$$=(1-\eta_s)\left(\frac{\partial(\psi-\psi_p)}{\partial\tau}-\frac{(\psi-\psi_p)}{\alpha_s}\frac{\partial\alpha_s}{\partial\tau}\right)$$

And third term-

$$(\eta_s+1)\alpha_s\frac{\partial\left(\frac{\psi_i'}{\alpha_s}\right)}{\partial\tau}=(\eta_s+1)\frac{\alpha_s\frac{\partial\psi_i'}{\partial\tau}-\psi_i'\frac{\partial\alpha_s}{\partial\tau}}{\alpha_s}$$
$$=(\eta_s+1)\left(\frac{\partial\psi_i'}{\partial\tau}-\frac{\psi_i'}{\alpha_s}\frac{\partial\alpha_s}{\partial\tau}\right)$$

Now by putting these two terms back in above equation, we get-

$$H^\circ=\text{þ}\frac{\Delta\tau}{\eta_s}\delta_{B_1}.\frac{\alpha_s}{\{(\psi-\psi_p)(\eta_s-1)+(\psi_i')(\eta_s+1)\}}.$$
$$\left\{-\frac{\partial\eta_s}{\partial\tau}.\left\{\frac{(\psi-\psi_p)}{\alpha_s\Delta\phi_i}(\psi+\psi_i')\right\}\right.$$
$$+(1-\eta_s)\left(\frac{\partial(\psi-\psi_p)}{\partial\tau}-\frac{(\psi-\psi_p)}{\alpha_s}\frac{\partial\alpha_s}{\partial\tau}\right)$$
$$-(\eta_s+1)\left(\frac{\partial\psi_i'}{\partial\tau}-\frac{\psi_i'}{\alpha_s}\frac{\partial\alpha_s}{\partial\tau}\right)$$
$$\left.+(1-\eta_s)\frac{\partial\psi_p}{\partial\tau}\right\}\tag{31}$$

Now by differentiating equation (24) with respect to universal time (τ)-

Now by removing similar terms, we get-

$$\boxed{\frac{\partial H^\circ}{\partial\tau}=\frac{1}{(\eta_s)}\left(\frac{\partial\text{þ}}{\partial\tau}\delta_i\Delta\alpha_s+\frac{\partial\delta_i}{\partial\tau}\text{þ}\Delta\alpha_s+\frac{\partial(\Delta\alpha_s)}{\partial\tau}\text{þ}\delta_i\right)-\frac{\text{þ}\delta_i\Delta\alpha_s}{(\eta_s)^2}\frac{\partial\eta_s}{\partial\tau}}\tag{32}$$

Or we can write equation (32) by using (24) as-

$$\boxed{\frac{\partial H^\circ}{\partial\tau}=\frac{1}{(\eta_s)}\left(\frac{\partial\text{þ}}{\partial\tau}\delta_i\Delta\alpha_s+\frac{\partial\delta_i}{\partial\tau}\text{þ}\Delta\alpha_s+\frac{\partial(\Delta\alpha_s)}{\partial\tau}\text{þ}\delta_i\right)-\frac{H^\circ}{\eta_s}\frac{\partial\eta_s}{\partial\tau}}\tag{33}$$

$$\because\Delta\alpha_s=\frac{G^\circ}{\pi}\Delta\tau\ or\ for\ small\ variations\ d\alpha_s=\frac{G^\circ}{\pi}d\tau$$

So, the equation (33) becomes-

$$\frac{\partial H^\circ}{\partial\tau}=\frac{1}{(\eta_s)}\left\{\frac{\partial\text{þ}}{\partial\tau}\delta_i\Delta\alpha_s+\frac{\partial\delta_i}{\partial\tau}\text{þ}\Delta\alpha_s\right.$$
$$+\frac{\text{þ}\delta_i}{\pi^2}\left(\left(\frac{\partial G^\circ}{\partial\tau}\pi d\tau+\pi G^\circ\frac{\partial(\Delta\tau)}{\partial\tau}\right)\right.$$
$$\left.\left.-G^\circ\Delta\tau.\frac{\partial\pi}{\partial\tau}\right)\right\}-\frac{H^\circ}{\eta_s}\frac{\partial\eta_s}{\partial\tau}\tag{34}$$

Now by some rearrangements into equation (34), we get-

$$\frac{\partial H^\circ}{\partial\tau}=\frac{1}{(\eta_s)}\left\{\frac{\partial\text{þ}}{\partial\tau}\delta_i\Delta\alpha_s+\frac{\partial\delta_i}{\partial\tau}\text{þ}\Delta\alpha_s\right.$$
$$\left.+\frac{\text{þ}\delta_i}{\pi}\left(\frac{\partial G^\circ}{\partial\tau}d\tau+G^\circ\frac{\partial(\Delta\tau)}{\partial\tau}\right)-\frac{G^\circ\Delta\tau}{\pi^2}.\frac{\partial\pi}{\partial\tau}\right\}$$
$$-\frac{H^\circ}{\eta_s}\frac{\partial\eta_s}{\partial\tau}$$

Now by putting $\frac{\partial G^\circ}{\partial\tau}d\tau=dG^\circ$, we get-

$$\frac{\partial H^\circ}{\partial\tau}=\frac{1}{\eta_s}\left\{\frac{G^\circ\delta_i}{\pi}d\text{þ}+\frac{G^\circ\text{þ}}{\pi}d\delta_i+\frac{\text{þ}\delta_i}{\pi}dG^\circ+\frac{G^\circ\text{þ}\delta_i}{\pi}\frac{\partial(\Delta\tau)}{\partial\tau}\right.$$
$$\left.-\frac{G^\circ}{\pi^2}.d\pi-H^\circ\frac{\partial\eta_s}{\partial\tau}\right\}\tag{35}$$

Now two conditions comes out from above equation-

I. Condition 1- If $\frac{\partial H^\circ}{\partial\tau}$ is +ve, then

$$G^\circ\delta_i d\text{þ}+G^\circ\text{þ}d\delta_i+\text{þ}\delta_i dG^\circ+G^\circ\text{þ}\delta_i.\frac{\partial(\Delta\tau)}{\partial\tau}$$
$$>\frac{G^\circ}{\pi}.d\pi+H^\circ\pi\frac{\partial\eta_s}{\partial\tau}$$

II. Condition 2- If $\frac{\partial H^\circ}{\partial\tau}$ is -ve, then

$$G^\circ\delta_i d\text{þ}+G^\circ\text{þ}d\delta_i+\text{þ}\delta_i dG^\circ+G^\circ\text{þ}\delta_i.\frac{\partial(\Delta\tau)}{\partial\tau}$$
$$<\frac{G^\circ}{\pi}.d\pi+H^\circ\pi\frac{\partial\eta_s}{\partial\tau}$$

First condition applies for the normal system which has increase in quantity of disturbance with respect to universal flow of time but the second condition applies on the systems goes to new formation.

$$\because d\tau=k.d\Phi_u$$

By putting in the fourth term of equation (35), we get-

$$\eta_s\frac{\partial H^\circ}{\partial\tau}+\frac{G^\circ}{\pi^2}.d\pi+H^\circ\frac{\partial\eta_s}{\partial\tau}$$
$$=\frac{G^\circ\delta_i}{\pi}d\text{þ}+\frac{G^\circ\text{þ}}{\pi}d\delta_i+\frac{\text{þ}\delta_i}{\pi}dG^\circ$$
$$+\frac{G^\circ\text{þ}\delta_i}{\pi}\frac{\partial(k.d\Phi_u)}{\partial\tau}$$
$$\Rightarrow\frac{\partial(k.d\Phi_u)}{\partial\tau}=\frac{\partial k}{\partial\tau}.d\Phi_u+k.\frac{\partial(d\Phi_u)}{\partial\tau}$$

Or

$$k=\frac{1}{\frac{\partial}{\partial\tau}(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c)}$$
$$\Rightarrow\frac{\partial k}{\partial\tau}=\frac{\partial}{\partial\tau}\left\{\frac{1}{\frac{\partial}{\partial\tau}(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c)}\right\}$$

Now by multiplying equation by π and putting the value of $\frac{\partial k}{\partial \tau}$, we can write equation (35) in form of universal scalar field as-

$$\pi\eta_s \frac{\partial H^{\circ}}{\partial \tau} + \frac{G^{\circ}}{\pi}.d\pi + \pi H^{\circ}\frac{\partial \eta_s}{\partial \tau}$$
$$= G^{\circ}\delta_i d\rlap{/}p + G^{\circ}\rlap{/}p d\delta_i + \rlap{/}p\delta_i dG^{\circ}$$
$$+ G^{\circ}\rlap{/}p\delta_i.d\Phi_u.\frac{\partial}{\partial \tau}\left\{\frac{1}{\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}\right\}$$
$$+ G^{\circ}\rlap{/}p\delta_i.\frac{\partial(d\Phi_u)}{\partial \tau}.\left\{\frac{1}{\frac{\partial}{\partial \tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right)}\right\} \quad (36)$$

Or we can write equation (36) in form of-

$$\boxed{d(G^{\circ}\delta_i\rlap{/}p) = \pi\frac{\partial}{\partial \tau}(\eta_s H^{\circ}) - G^{\circ}\rlap{/}p\delta_i.d\Phi_u.\frac{\partial k}{\partial \tau} - G^{\circ}\rlap{/}p\delta_i k\frac{\partial(d\Phi_u)}{\partial \tau}} \quad (37)$$

$$\Rightarrow \boxed{d(G^{\circ}\delta_i\rlap{/}p)G^{\circ}\rlap{/}p\delta_i.d\Phi_u.\frac{\partial(k.d\Phi_u)}{\partial \tau} = \pi\frac{\partial}{\partial \tau}(\eta_s H^{\circ})} \quad (38)$$

D. Spin-

Now I tend to explain another fundamental quantity which exist uniquely in universe known as spin which formerly described by me as a quantity which is also responsible for the perfection and new formation in universe by transformation. Now I this phase of article I intend to explain the definition of the particular quantity and how it behave in different eras and epochs of the universe. What are the functions generated by the so called quantity and how it affects to the formerly defined quantities like $\psi, H^{\circ}, G^{\circ}, \alpha, \eta, \phi$ etc.

As we know spin caused by the quantity which is perfect is more but quantity which is imperfect is less. Now I am representing a geometrical representation which will be helpful to understand this phenomenology-

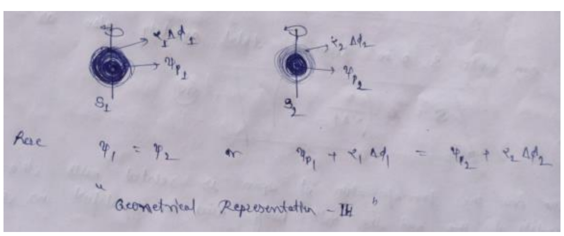

Fig. 5. Geometrical Representation of Spin

Here $\psi_1 = \psi_2$ or $\psi_{p_1} + \alpha_1\Delta\phi_1 = \psi_{p_2} + \alpha_2\Delta\phi_2$

If the spin is same at the moment of formation of both bodies (1&2), then the body 2 should have more spin because it have less converged quantity. So, from the "Geometrical Representation-III" we can conclude spin is anti proportional to the converged quantity-

$$\boxed{S \propto \frac{1}{\alpha\Delta\phi}} \quad (39)$$

Or spin is proportional to the perfection quantity-

$$\boxed{S \propto \psi_p} \quad (40)$$

Now I am representing the two bodies which have same quantity but different geometries-

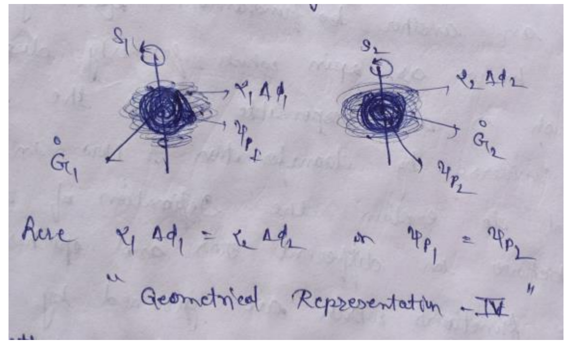

Fig. 6. Effect of Geometry on Spin

Here $\alpha_1\Delta\phi_1 = \alpha_2\Delta\phi_2 \; or \; \psi_{p_1} = \psi_{p_2}$

If both bodies have different geometries, then also spin is affected by the Geometry also.

Now by merging equation (39) and (40) and removing proportionality by constant, we get-

$$\boxed{S = s\frac{\psi_p}{\alpha\Delta\phi}} \quad (41)$$

We can write S in form of total quantity also as-

$$\boxed{S = s\left(\frac{\psi}{\alpha\Delta\phi} - 1\right)} \quad (42)$$

Now one query must be hitting your mental lexicon that how the transformation of spin is related with the quantity of the nth body? This query will be justified in the same trend.

Now by differentiating equation (41) with respect to universal time (τ), we get-

$$\frac{\partial S}{\partial \tau} = \frac{\alpha\Delta\phi\left(\psi_p\frac{\partial s}{\partial \tau} + s\frac{\partial \psi_p}{\partial \tau}\right) - s\psi_p.\left(\Delta\phi\frac{\partial \alpha}{\partial \tau} + \alpha\frac{\partial(\Delta\phi)}{\partial \tau}\right)}{(\alpha\Delta\phi)^2}$$

We know that $\frac{\partial \alpha}{\partial \tau} = \frac{G^{\circ}}{\pi}$, by simplifying above expression becomes-

$$\alpha\Delta\phi.\frac{\partial S}{\partial \tau} = \psi_p\frac{\partial s}{\partial \tau} + s\frac{\partial \psi_p}{\partial \tau} - \frac{s\psi_p G^{\circ}}{\alpha\pi} - \frac{s\psi_p}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial \tau}$$

Now by some manipulations we find-

$$\boxed{G^{\circ}.\left(\frac{s\psi_p}{\alpha\pi}\right) = \psi_p\frac{\partial s}{\partial \tau} + s\frac{\partial \psi_p}{\partial \tau} - \alpha\Delta\phi.\frac{\partial S}{\partial \tau} - \frac{s\psi_p}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial \tau}} \quad (43)$$

So, geometry is related with $\frac{\partial S}{\partial \tau}$ (variation in spin with universal time). We can write quantity of spin S in terms of perfection constant only as we know from Appendix [A]-

$$\frac{\psi_p}{\alpha\Delta\phi} = \left(\frac{1+\eta}{1-\eta}\right)\frac{\phi}{\Delta\phi} - 1$$

So, by putting the relation in equation (41), we get-

$$\boxed{S = s\left[\left(\frac{1+\eta}{1-\eta}\right)\frac{\phi}{\Delta\phi} - 1\right]} \quad (44)$$

Or we can write $1 - \eta = \eta^*$ (imperfection constant)-

$$\boxed{S = \mathcal{s}\left[\left(\frac{1+\eta}{\eta^*}\right)\frac{\phi}{\Delta\phi} - 1\right]} \tag{45}$$

So, as I considered before if the quantity is more perfect, then it will acquire more spin, but if the quantity is imperfect ($\eta \to 0$), then the spin will be less. Now I intend to find out the transformation of spin from shorter to bigger bodies as founded by me in my second article on the bodies. Firstly I am representing a geometrical representation from which we can calculate the fact that there exists the "conservation of spin" in our universe. We can justify the fact by how spin produces in universe by below Geometrical representation diagram-

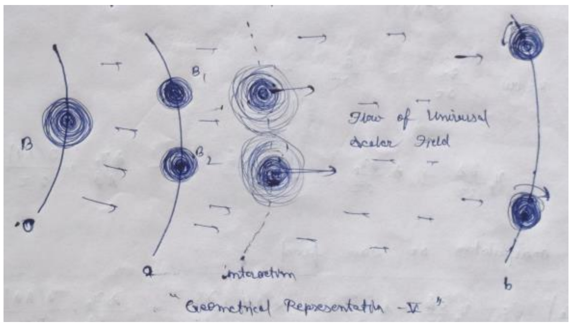

Fig. 7. Formation of Spin in Universe

We can see at the interaction point of both bodies scalar fields interact and produce spin due to their initial interaction and at point b both bodies acquire sufficient spin to be stable in the flow of universal scalar field. Normally spin produces at the point of formation of a particular kind of body because the former body from which they produced also has a particular spin. "Flow of universal scalar field is also responsible to produce spin in bodies exist in universe".

"If the universe from nothing, then there must exist conservation of spin in universe". In another terms we can say it by a mathematical representation as-

$$\boxed{S_u = \sum_{\substack{1 \le i \le n \\ k \in \mathbb{R}}} (S_k)_i}$$

The equation holds if and only if there exist i[th] type of k-bodies in universe. So, by conservation of spin can be represented by this equation as-

$$\boxed{S_u = 0 = \sum_{\substack{1 \le i \le n \\ k \in \mathbb{R}}} (S_k)_i} \tag{46}$$

Spin is also a fundamental quantity which exists in universe or in other words Spin is also an initial and final property of a particular stable body or geometry exists in universe.

$$\left\{\because S_i = \mathcal{s}_i \frac{(\psi_p)_i}{\alpha_i \Delta\phi_i}\right\}$$

Now by putting above expression in equation (46)-

$$\boxed{\sum_{\substack{1 \le i \le n \\ k_i \in \mathbb{R}}} \left(\mathcal{s}_{k_i} \frac{(\psi_p)_{k_i}}{\alpha_{k_i} \Delta\phi_{k_i}}\right)_i = 0} \tag{47}$$

Like k_1 bodies exist in 1[st] inflation, k_2 bodies exist in 2[nd] inflation and so on.

Now there exists transformation of spin from shorter to bigger bodies, then-

$$\boxed{\begin{gathered}\sum_{k_1 \in \mathbb{R}} \mathcal{s}_{k_1} \frac{(\psi_p)_{k_1}}{\alpha_{k_1} \Delta\phi_{k_1}} = \sum_{k_2 \in \mathbb{R}} \mathcal{s}_{k_2} \frac{(\psi_p)_{k_2}}{\alpha_{k_2} \Delta\phi_{k_2}} \\ + Remained\ spin\ in\ 1^{st}\ bodies\end{gathered}} \tag{48}$$

This relation holds for $k_1 >> k_2$ because with huge composition of shorter bodies a new bigger body forms. We can also write equation (48),as-

$$\boxed{\sum_{k_1 \in \mathbb{R}} \mathcal{s}_{k_1} \frac{(\psi_p)_{k_1}}{\alpha_{k_1} \Delta\phi_{k_1}} = \sum_{k_2 \in \mathbb{R}} \mathcal{s}_{k_2} \frac{(\psi_p)_{k_2}}{\alpha_{k_2} \Delta\phi_{k_2}} + \sum_{k_1^{'} \in \mathbb{R}} \mathcal{s}_{k_1^{'}} \frac{(\psi_p)_{k_1^{'}}}{\alpha_{k_1^{'}} \Delta\phi_{k_1^{'}}}} \tag{49}$$

So, here the transformed quantity is k_2 terms or quantization in system appears due to $k_1^{'}$ quantities or the spin which is not transformed. If there is a bigger quantity and which have k_1 shorter quantities, then the transformed spin in the bigger quantity is equal to this-

$$\boxed{\mathcal{s}_b \frac{(\psi_p)_b}{\alpha_b \Delta\phi_b} = \sum_{n_s \in \mathbb{R}} \mathcal{s}_{n_s} \frac{(\psi_p)_{n_s}}{\alpha_{n_s} \Delta\phi_{n_s}} - \sum_{n_s^{'} \in \mathbb{R}} \mathcal{s}_{n_s^{'}} \frac{(\psi_p)_{n_s^{'}}}{\alpha_{n_s^{'}} \Delta\phi_{n_s^{'}}}} \tag{50}$$

We can conclude n_s as spin before bigger body formation in shorter bodies and $n_s^{'}$ as spin after formation of bigger body in shorter bodies (As being component of bigger body).

Now a gorgeous facts can be proven by spin quantity which is "Transformation of spin is due to the ϕ- ψ transformation".

$$\left\{\because \Delta\phi = \frac{\Delta F}{\delta}\right\}$$

So, we can write the quantity of spin in form of variation in the quantity of motion as-

$$\boxed{S = \mathcal{s}\frac{\psi_p . \delta}{\alpha \Delta F}} \tag{51}$$

E. Universal Connections-

First I tend to explain an another phenomena that "If the bodies are created from a particular body like in geometrical representation-5, then these will be connected with each other with some basic connection because these are coupled with universal scalar field and this connection exists because these are coupled each other with some basic connection because these are coupled with universal scalar field and this connection is an outstanding property of Φ_u.

Now I am representing the above fact geometrically-

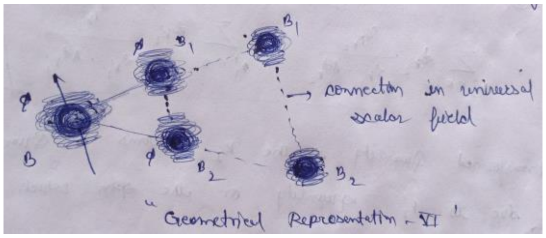

Fig. 8. Universal Connection between Bodies

The connection is due to both bodies contain same type of scalar field because they were created from same body. In similar way we can find out this connection universally as-
"If universe created from a particular point then each and every body or scalar fields are connected with each other in same manner". This universal connection of various bodies is described in a little bit manners by Quantum Entanglement. So, the universal connection is a map between each and every body exist in universe. We can also represent this particular phenomenon in the universal diagram as-

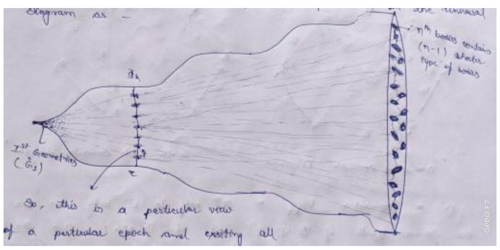

Fig. 9. Representation of Universal Connection in Universal Diagram

So, this is a particular view of a particular epoch and existing all bodies are connected with each other due to the "universal connection". We can denote the universal connection by "U_c". Universal connection (U_c) is also responsible for the dynamics of the so called universe like inflation, deflations, formation of new bodies, flow and conversions, tendency to perfection or imperfection or also for contraction of universe.

$$\psi_{n-1} \xrightarrow{U_c} \psi_n, \Phi_{n-1} \xrightarrow{U_c} \Phi_n$$
$$G_1^\circ \xrightarrow{U_c} G_2^\circ \xrightarrow{U_c} G_3^\circ \rightarrow \cdots G_{n-1}^\circ \xrightarrow{U_c} G_n^\circ$$

Or we can represent universal connection as the connected graph (K_n) of n-quantities as-

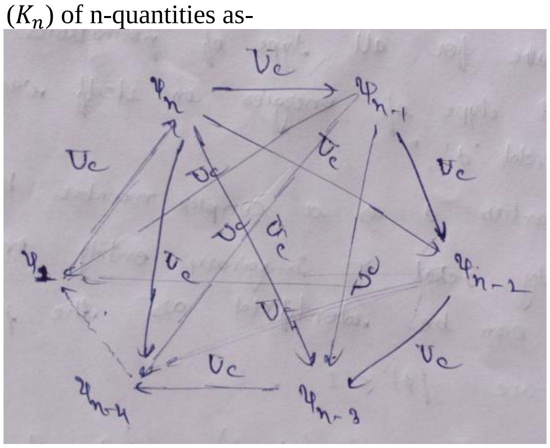

Fig. 10. Connected Graph Representation of Universal Connection between Quantities

So, each and every kind of quantities exist in universe are connected with each other with "Universal Connection (U_c)". In similar way we can figure out the geometrical and scalar fields connection diagrams as-

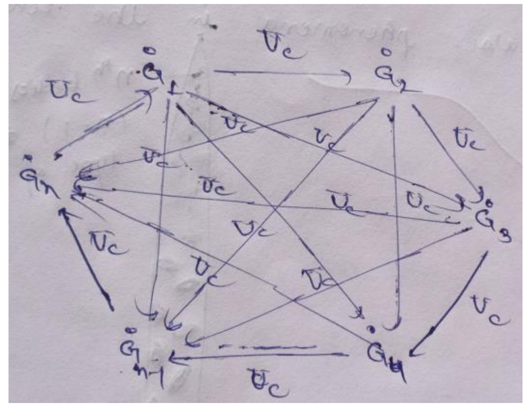

Fig. 11. Connected Graph Representation of Universal Connection between n-Geometries

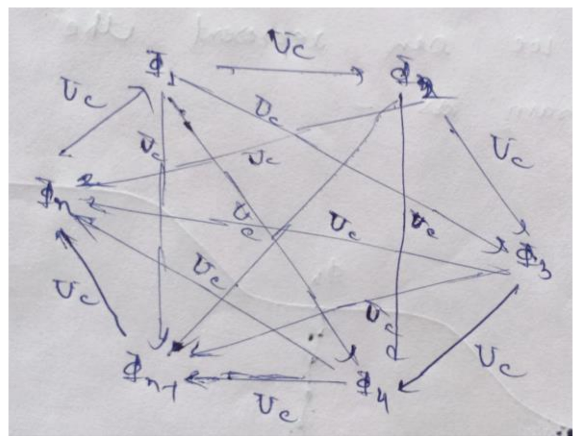

Fig. 12. Representation of Universal Connection in Scalar Fields

In a connection $(U_c)_{kr}$ or r[th] body to k[th] body then we examine our former law's of physics if and only if $|k-r| = 1$ but if $|k-r| > 1$, then the law's of physics are different and only defined by the unique quantities like $\psi, H^\circ, G^\circ, \alpha, \eta, \phi$ etc. in other words when we look at atoms from galactic level, then the dynamics of atoms seems different not as we look at atoms from solar systems. So, different universal connections have different properties.

F. Scalar Fields-

Now I am going on the scalar fields (ϕ) and how we measure its density in various eras and epochs of the universe because there is a variation in the universal scalar field or what should be the flow of scalar field. Now I in tend to explain about two more fundamental physical entities which exist in universe are "Scalar Field (ϕ) and its density (ρ_ϕ). Now I am defining scalar field as "The quantity which governs all space-time or responsible for all type of formations and motions in universe and contain all type of energies in itself can be classified as scalar field 'ϕ'. For dual nature of quantities ϕ is a complex number but for normal entities this is purely real and imaginary entity or the scalar field of any type can be identified as the partitions of itself in these ϕ which are $|\phi| < 1$. Like for a particular body-

$$\Phi = \sum_{n\in\mathbb{R}} (q;q)_n \quad here\ \{q = \phi\}$$

These are the Jacobi identities-

$$\Phi = \sum_{n\in\mathbb{R}} (-1; 1-q)_n \quad here\ \{\phi = a + ib\}$$

Or we can represent as-

$$\Phi = (a; b\phi)_n$$
$$\{here\ |\phi| < 1\}$$

Here a and b are weather complex or real numbers.
We can also write anyone as-

$$\Phi = \frac{(1;q)_\infty}{(1;-q)_\infty}$$

Or any combinations like this q-series-

$$\Phi = (-q;q)_\infty = \frac{1}{(q;q^2)_\infty}$$

Where $|q| < 1$ or $\{\ q = \phi\}$
We can represent a q-series as-

$$(a;q)_n = (1-a)(1-aq)(1-aq^2)\ldots(1-aq^{n-1})$$

We can write it in form of some fundamental functions like mock theta or theta functions. Now the query comes out that how does this type of particular functions behave while mixing of scalar fields and how these govern space-time and at various interactions how these modify?
While mixing of two scalar fields functions-

$$\boxed{\Phi_1 + \Phi_2 = \Phi_1^{'} + \Phi_2^{'} + (\Phi_1 * \Phi_2)} \tag{52}$$

Here $*$ is some algebra on $\Phi_1\ and\ \Phi_2$ or the interaction part. ϕ also include quantity of scalar field and nature of scalar field. Now if $\phi = a + ib$ or $|\phi| < 1$, then $\sqrt{a^2+b^2} < 1$ or in other form-

$$a^2 + b^2 < 1$$

We can also write ϕ as Euler Transformation-

$$\boxed{\phi = |\phi|.e^{i\theta}} \tag{53}$$

Or we can write equation (53) as-

$$\phi = \sqrt{a^2+b^2}.e^{i\theta}$$

Here $e^{i\theta}$ is nature of scalar field and $\sqrt{a^2+b^2}$ is quantity of scalar field.

$$\{\because e^{i\theta} = \cos\theta + i\sin\theta\}$$

For $\theta = 0, \frac{\pi}{2}$, then the nature of scalar field purely supports one type of body's motion and opposes another type. But $\theta \neq 0, \frac{\pi}{2}$ or $\theta \in \left(0, \frac{\pi}{2}\right)$, then the nature of scalar field supports or oppose both kind of bodies.
Now the flow of scalar fields when differentiating ϕ with respect to τ (universal time), then-

$$\boxed{\frac{\partial\phi}{\partial\tau} = i|a^2+b^2|^{1/2}.\frac{\partial\theta}{\partial\tau}.e^{i\theta}} \tag{54}$$

So, we can also write equation (54) as-

$$\boxed{\frac{\partial\phi}{\partial\tau} = i\frac{\partial\theta}{\partial\tau}.\phi} \tag{55}$$

From equation (55) this is clear that if the ϕ is real, then the flow is imaginary or if the ϕ supports one type of bodies, then it will always show a tendency towards another type of bodies. We can write equation (55) as-

$$\frac{\partial\phi}{\partial\tau}\frac{\partial\tau}{\partial\theta} = i\phi$$

Or by cancelling $\partial\tau$ term, we get-

$$\boxed{\frac{\partial\phi}{\partial\theta} = i\phi} \tag{56}$$

Now the function of scalar fields can be-

$$(c; d\phi)_n = (1-c)(1-cd\phi)(1-cd^2\phi^2)\ldots(1 - cd^{n-1}\phi^{n-1})$$

Now which type of flow these govern, this seems quite complex to determine because c or d also be complex in nature. Or the derivative of scalar field with respect to universal time is-

$$\boxed{\frac{\partial\Phi}{\partial\tau} = \frac{\partial}{\partial\tau}\{(c;d\phi)_n\}} \tag{57}$$

Usually mixed parts have this type of complex structure. Now if-

$$\Phi = (-\phi;\phi)_\infty = \frac{1}{(\phi;\phi^2)_\infty}$$

Here $\phi^2 = (a+ib)^2 = a^2 - b^2 + i(2ab)$
Now what type of function (Φ_u) should be and which type of nature it governs is quite interesting to configure mathematically and what type of composition it have in form of ϕ.
First I tend to explain the nature of ϕ by some geometrical representations-

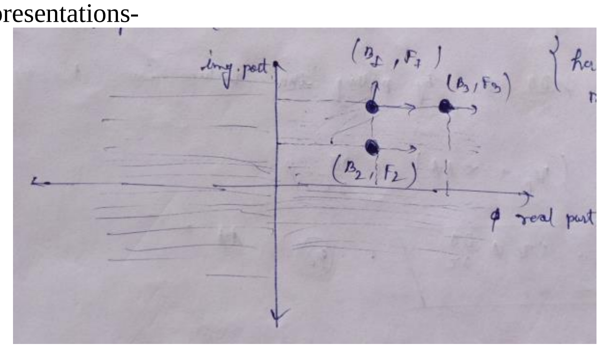

Fig. 13. Effect on Body by Nature of Scalar Field

Here F is quantity of motion of body. Here all three bodies contain initial motion same and having same nature but-

I. Condition 1:- If all three bodies are real in nature, then by comparison of B_1 with B_2, so $(F_2 > F_1)$ because B_1 have more opposition in motion or now by comparison of B_1 with B_3, then $(F_3 > F_1)$ because B_1 & B_3 having same opposition in motion because supported motion by ϕ is larger for B_3.
II. Condition 2:- If all three bodies are imaginary in nature, then the results will be opposite to condition-1. Or $(F_1 > F_2)$ or $(F_1 > F_3)$.

Now if there exist a body dual in nature, then its motion will be dependent on both parameters. If we represent a body in dual scalar field as-

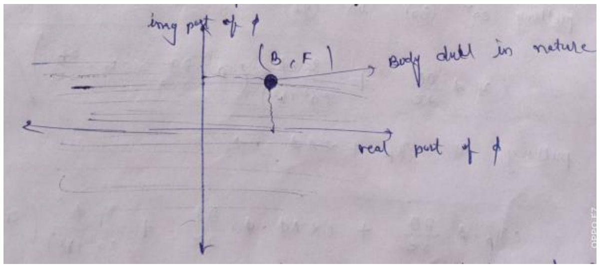

Fig. 14. Representation of Dual Nature of Scalar Field

Then support in motion depend upon multiplication real with real and imaginary with imaginary parts and opposition in motion depend upon multiplication of real part with imaginary part. If $\phi = a + ib$ or $\psi = c + id$, then-

$$\{F = \psi.\phi_{covered}\}$$

$(ac - bd)$ is suppurated part or $(ad + bc)$ is opposed part. So, we can write quantity of motion, as-

$$F = (\psi_p + \alpha\Delta\phi).\frac{\partial\phi}{\partial\tau}$$

Now by putting the value of $\frac{\partial\phi}{\partial\tau}$ from equation (55), we get-

$$F = (\psi_p + \alpha\Delta\phi).i\frac{\partial\theta}{\partial\tau}.\phi$$

Or by rearranging-

$$\boxed{F = i\psi\phi.\frac{\partial\theta}{\partial\tau}} \quad (58)$$

If a and b are also not constant for a particular body, then-

$$\frac{\partial\phi}{\partial\tau} = i|a^2 + b^2|^{1/2}.\frac{\partial\theta}{\partial\tau}.e^{i\theta} + \frac{1}{2.\sqrt{a^2 + b^2}}\left(2a\frac{\partial a}{\partial\tau} + 2b\frac{\partial b}{\partial\tau}\right).e^{i\theta}$$

Now by cancelling similar terms, we get-

$$\boxed{\frac{\partial\phi}{\partial\tau} = i|a^2 + b^2|^{1/2}.\frac{\partial\theta}{\partial\tau}.e^{i\theta} + \frac{1}{\sqrt{a^2 + b^2}}\left(a\frac{\partial a}{\partial\tau} + b\frac{\partial b}{\partial\tau}\right).e^{i\theta}} \quad (59)$$

We can also write it as-

$$\boxed{\frac{\partial\phi}{\partial\tau} = i.\frac{\partial\theta}{\partial\tau}.\phi + \frac{\phi}{(a^2 + b^2)}\left(a\frac{\partial a}{\partial\tau} + b\frac{\partial b}{\partial\tau}\right)} \quad (60)$$

This equation holds for the quantities which vary according to universal time or in other words if there is a variation in repulsion and attraction part of the scalar field. Now by putting equation (60) in (58)-

$$\boxed{F = i\psi\phi.\frac{\partial\theta}{\partial\tau} + \frac{\psi\phi}{(a^2 + b^2)}\left(a\frac{\partial a}{\partial\tau} + b\frac{\partial b}{\partial\tau}\right)} \quad (61)$$

Now by putting $\psi = \psi_p + \alpha\Delta\phi$, we get-

$$\boxed{\begin{gathered} F = i\psi_p\phi.\frac{\partial\theta}{\partial\tau} + i\alpha\Delta\phi.\phi.\frac{\partial\theta}{\partial\tau} + \\ \frac{\psi_p\phi}{(a^2 + b^2)}\left(a\frac{\partial a}{\partial\tau} + b\frac{\partial b}{\partial\tau}\right) + \frac{\alpha\Delta\phi.\phi}{(a^2 + b^2)}\left(a\frac{\partial a}{\partial\tau} + b\frac{\partial b}{\partial\tau}\right) \end{gathered}}$$

(62)

$$\left\{\Delta\phi = i|a^2 + b^2|^{1/2}.\Delta\theta.e^{i\theta} + \frac{1}{\sqrt{a^2 + b^2}}(a\Delta a + b\Delta b).e^{i\theta}\right\}$$

We can write $\left\{\frac{a}{b} = D\right\}$ or Duality Factor of scalar field. For purely repulsive or attractive scalar fields the duality factor is weather 0 or ∞.

$$D = \frac{a}{b} = \begin{cases} \infty\,; purely\ attractive \\ (1,\infty)\,; more\ attractive\ less\ repulsive \\ or\ fevourable \\ (0,1)\,; more\ repulsive\ less\ attractive \\ or\ unfevourable \\ 1\,; zero\ change\ in\ motion\ due\ to \\ coupling\ with\ scalar\ field \\ 0\,; purely\ repulsive \end{cases}$$

Quantities $\psi\ \&\ \psi_p$ also have dual nature. There exist normally four types of interactions between quantities and scalar fields. Now if $\phi = a + ib\ \&\ \psi = c + id$ then the interaction-

$$\phi * \psi = a * c + i(a * d) + i(b * c) - (b * d)$$

We can also write $a = \phi_1$ and $b = \phi_2$ for shake of simplicity.

$$D = \frac{\phi_1}{\phi_2}\ , \phi = \phi_1 + \phi_2 = |\phi_1^2 + \phi_2^2|^{1/2}.e^{i\theta}$$

$$\theta = \tan^{-1}\left(\frac{\phi_1}{\phi_2}\right)\ or\ \theta = \tan^{-1}(D)$$

Here D is Duality Factor. We can also write ϕ as-

$$\boxed{\phi = |\phi|e^{i.\tan^{-1}(D)}} \quad (63)$$

Remember in our former trend we have only used $|\phi|$, not included nature of the function.

$$\because \theta = \tan^{-1} D$$

So, $\tan\theta = D$ or $\sec^2\theta\frac{\partial\theta}{\partial\tau} = \frac{\partial D}{\partial\tau}$, we can write it as-

$$\boxed{\frac{\partial\theta}{\partial\tau} = \frac{1}{(1 + D^2)}\frac{\partial D}{\partial\tau}} \quad (64)$$

We can also write equation (60) as-

$$\frac{\partial\phi}{\partial\tau} = i|\phi_1^2 + \phi_2^2|^{1/2}\frac{1}{(1 + D^2)}\frac{\partial D}{\partial\tau}.e^{i.\tan^{-1}(D)} + \frac{\phi}{(\phi_1^2 + \phi_2^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right)$$

Or by simplification, we get-

$$\boxed{\frac{\partial\phi}{\partial\tau} = i\frac{1}{(1 + D^2)}\frac{\partial D}{\partial\tau}.\phi + \frac{\phi}{(\phi_1^2 + \phi_2^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right)} \quad (65)$$

Usually in ϕ- ψ transformation there always produces scalar field which is compatible to the body's quantity or in other words if body have a particular duality factor, then its transformed quantity in scalar field will also have same nature. The above description can be known as the compatibility of Duality factors of scalar fields and quantity or we can generalize the above fact in this form also-

$$\because \psi = \psi_p + \alpha\Delta\phi$$

$\because$ $\Delta\phi$ is transformed quantity, then-

$$|\psi|e^{i\theta} = \left|\psi_p\right|e^{i\theta} + \alpha\Delta\left|\phi e^{i\theta}\right|$$

So, we can write quantity with its nature-

$$\{|\psi|e^{i\theta} = \psi_1 + i\psi_2\}$$

So $\psi = \psi_1 + i\psi_2$ *or* $\phi = \phi_1 + i\phi_2$ and $\psi = \psi_p + \alpha\Delta\phi$, so by merging these equation together, we get-

$$\psi_1 + i\psi_2 = \psi_{p_1} + i\psi_{p_2} + \alpha(\Delta\phi_1 + i\Delta\phi_2)$$

If the scalar fields have a particular duality factor, then the quantities will also have duality factor of same order. Now I intend towards the physical interpretation of q-series in my terminology. As we know the first term in -

$$\Phi = (c; d\phi)_n = (1-c)(1-cd\phi)(1-cd^2\phi^2)\dots(1 - cd^{n-1}\phi^{n-1})$$

I-term $(1-c)$ defines the first order nature of the scalar field Φ.

II -term $(1-cd\phi)$ defines the third order nature of the scalar field Φ.

III -term $(1-cd^2\phi^2)$ defines the fifth order nature of the scalar field Φ.

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N[th] –term $(1-cd^{n-1}\phi^{n-1})$ defines the (2n-1)[th] order nature of the scalar field Φ.

$\because\ |c| < 1\ ,\ |d| < 1\ ,\ |\phi| < 1$, so the n[th] term tend to 1 because $cd^{n-1}\phi^{n-1} \to 0$. Here by this particular function we can only define odd ordered nature of the function but the even function will be-

$$\Phi_{even} = (e^2; f\phi)_n = (1-e^2)(1-e^2f\phi)(1-e^2f^2\phi^2)\dots(1 - e^2f^{n-1}\phi^{n-1})$$

So, the complete function of scalar field is like this-

$$\boxed{\Phi = (c; d\phi)_n . (e^2; f\phi)_n} \tag{66}$$

{Here e is root of some complex number, like for $k \in \mathbb{C}\ \sqrt{k} = e, e^2 = k$ }

Order of scalar field is also responsible for the n-ordered interaction of bodies like in Higgs Boson (4[th] order interaction). Interaction part usually behave opposite to the function like first $(1-e^2f^{n-1}\phi^{n-1})$ part interact then $(1 - cd^{n-1}\phi^{n-1})$ part interact. So, in this way the first part of function interact lastly to particular body. When the first part interacts, then completely new formation occurs in that epoch of universe. There may exist the scalar fields like-

$$\boxed{\Phi = (q; q^2)_n . (q^2; q^2)_n} \tag{67}$$

We can say second part as symmetric scalar fields or $n \to \infty$ for universal type of scalar fields-

$$\boxed{\Phi_{us} = (\phi; \phi^2)_\infty . (\phi^2; \phi^2)_\infty} \tag{68}$$

Φ_{us} can be called as symmetric universal kind of scalar field. There can also exist-

$$Partically\ symmetric\ scalar\ fields \begin{cases} \Phi = (c; \phi^2)_n . (e^2; \phi^2)_n \\ \Phi = (\phi; d\phi)_n . (\phi^2; f\phi)_n \\ \Phi = (c; \phi^2)_n . (\phi^2; \phi^2)_n \end{cases}$$

Now from here order of scalar field is related to n as $n = \frac{order}{2}$ *or* $Order = 2n$ or we can say order of scalar field is 2n. Normally we see I & II order interaction of bodies with scalar fields. There may also exist +ve scalar fields like–

$$\Phi = (-\phi; \phi^2)_\infty . (-\phi^2; \phi^2)_\infty = \frac{(-\phi^2; \phi^2)_\infty}{(\phi; \phi^2)_\infty}$$

$$\because\ (-\phi; \phi^2)_\infty = \frac{1}{(\phi; \phi^2)_\infty}$$

Or simple n order scalar field can be expressed as-

$$\Phi = (c; \phi)_n = (1-c)(1-c\phi)(1-c\phi^2)\dots(1-c\phi^{n-1})$$

Now $(1-c)$ is the first kind of formation or include the information about the formation of the particular scalar field. Or we can write above expression as-

$$(c; \phi)_n = \frac{(c; \phi)_\infty}{(c\phi^n; \phi)_\infty}\ \forall -\infty < n < \infty$$

These identities basically are from Ramanujana's Lost Notebook- I. Or we can write-

$$(c; \phi)_n(-c; \phi)_n = (c^2; \phi^2)_n \forall\ 0 \le n \le \infty$$

So, this is a only brief introduction to scalar fields or the various kind of scalar fields and their mixing will be obtained by me into a separate paper but now as I promised into the introduction of the article that what should be the physical entity time should behave and what should be its standard definition governed by itself in my terminology. As I discussed in my former article time depends upon the flow of universal scalar field but what should be its definition for a particular body. So, for a particular body the "time is evolution into the scalar field governed by the same". As we know the scalar fields are dual in nature then time also for that particular body is dual in nature.

So, time for a particular body also govern the duality factor. If the scalar field produces attractive quantity (ψ_{at}) then it is –ve in time according to repulsive quantity (ψ_{rp}) and vice versa. We can represent time also as-

$$\boxed{\tau_b = \tau_1 + i\tau_2} \tag{69}$$

$$D_\tau = \frac{\tau_1}{\tau_2} \to duality\ factor\ of\ time$$

So, if we define τ_1 as the time of attractive quantity, then τ_2 will definitely be the time of repulsive quantity. So, for the uniqueness of the derivatives of complex numbers with respect to complex numbers like-

$$\boxed{\frac{\partial \phi}{\partial \tau_b} = \frac{\partial(\phi_1 + i\phi_2)}{\partial(\tau_1 + i\tau_2)}} \tag{70}$$

These types of derivatives were found by Bernhard Riemann. As we know here ϕ is the basic unit of a particular scalar field. So, what kind of a derivative of a q-series or in physics we can now say as ϕ-series will be?

$$\boxed{\frac{\partial \Phi}{\partial \tau_b} = \frac{\partial(c; \phi)_n}{\partial(\tau_1 + i\tau_2)}} \tag{71}$$

Now I am justifying equation (70) by solving it by Riemann's Method [8] –

$$\because \tau = \tau_1 + i\tau_2 = |\tau|e^{i.\tan^{-1}(D_\tau)}$$

$$\frac{(\partial\phi_1 + i\partial\phi_2)}{(\partial\tau_1 + i\partial\tau_2)} = \frac{1}{2}\left(\frac{\partial\phi_1}{\partial\tau_1} + \frac{\partial\phi_2}{\partial\tau_2}\right) + \frac{i}{2}\left(\frac{\partial\phi_2}{\partial\tau_1} - \frac{\partial\phi_1}{\partial\tau_2}\right)$$
$$+ \frac{1}{2}\left[\left(\frac{\partial\phi_1}{\partial\tau_1} - \frac{\partial\phi_2}{\partial\tau_2}\right)\right.$$
$$\left. + i\left(\frac{\partial\phi_2}{\partial\tau_1} + \frac{\partial\phi_1}{\partial\tau_2}\right)\right]\frac{(\partial\tau_1 + i\partial\tau_2)}{(\partial\tau_1 + i\partial\tau_2)}$$
$$= \frac{1}{2}\left(\frac{\partial\phi_1}{\partial\tau_1} + \frac{\partial\phi_2}{\partial\tau_2}\right) + \frac{i}{2}\left(\frac{\partial\phi_2}{\partial\tau_1} - \frac{\partial\phi_1}{\partial\tau_2}\right)$$
$$+ \frac{1}{2}\left[\left(\frac{\partial\phi_1}{\partial\tau_1} - \frac{\partial\phi_2}{\partial\tau_2}\right)\right.$$
$$\left. + i\left(\frac{\partial\phi_2}{\partial\tau_1} + \frac{\partial\phi_1}{\partial\tau_2}\right)\right] e^{-2i\tan^{-1}(D_\tau)}$$

We can also write $\frac{(\partial\phi_1 + i\partial\phi_2)}{(\partial\tau_1 + i\partial\tau_2)}$ in form of-

$$\frac{\left(\frac{\partial\phi_1}{\partial\tau_1} + i\frac{\partial\phi_2}{\partial\tau_2}\right)\partial\tau_1 + \left(\frac{\partial\phi_2}{\partial\tau_1} - i\frac{\partial\phi_1}{\partial\tau_2}\right)i\partial\tau_2}{(\partial\tau_1 + i\partial\tau_2)}$$

It have the same value for any two values of $\partial\tau_1$& $i\partial\tau_2$, then-

$$\frac{\partial\phi_1}{\partial\tau_1} = \frac{\partial\phi_2}{\partial\tau_2}, \frac{\partial\phi_2}{\partial\tau_1} = -\frac{\partial\phi_1}{\partial\tau_2}$$

If the ϕ is a function of τ, then-

$$\frac{\partial^2\phi_1}{\partial\tau_1^2} + \frac{\partial^2\phi_2}{\partial\tau_2^2} = 0, \qquad \frac{\partial^2\phi_2}{\partial\tau_1^2} + \frac{\partial^2\phi_1}{\partial\tau_2^2} = 0$$

There is a geometry connected to this type of products which needed a justification in separate paper. So, leaving apart the above generalization, now I intend towards the term universal time 'τ_u' which is so simple to understand as the evolution of all bodies (N) exists in universe between two different universal epochs or in other words "the evolution of universal scalar field can be justified as universal time." As I defined earlier [4]-

$$\boxed{\tau \cong \digamma(\Phi_u)} \tag{72}$$

Here $\digamma(\Phi_u)$ is the flow function of universal scalar field. Let's have a look on the flow of universal scalar field in N-Time inflationary model of universe-

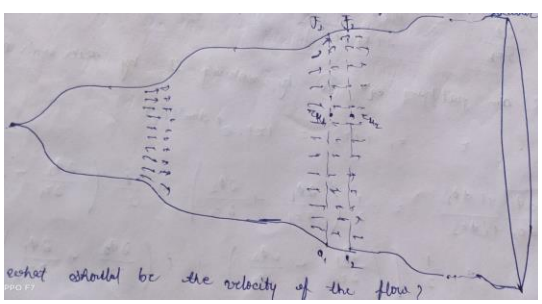

Fig. 15. Representation of Universal Flow of Scalar Field

Now one question must be hitting your mental lexicon that what should be the velocity of the flow?

$$\boxed{v_u = \frac{a_2 - a_1}{\tau_2 - \tau_1}} \tag{73}$$

Here $\digamma$ is the flow function which depends on universal scale (a) or v_u can be identified as the velocity of universal scalar field (Φ_u). For small variations we can write equation (73) as-

$$\boxed{v_u = \frac{da}{d\tau_u}} \tag{74}$$

$\{\because d\tau_u = k.d\Phi_u\}$ from my former paper [2].

$$d\tau_u = d\digamma(\Phi_u)$$
$$\frac{\partial\Phi_u}{\partial\tau} = \frac{\partial}{\partial\tau}\left(N\sum_{n\in\mathbb{R}}\eta\Phi_n^c\right) = \frac{1}{k}$$

Now the term Φ_u can be justified as-

$$\Phi_u = \sum_{n\in\mathbb{R}}\Phi_n$$

Or Φ can be written as some combination of ϕ-series as-

$$\Phi_u = \sum_{n\in\mathbb{R}}(-\phi;\phi)_n.(-\phi^2;\phi^2)_n$$

Or many different kind of ϕ-series.

Here $\{\phi = \phi_1 + i\phi_2\}$ or $\phi = \sqrt{\phi_1^2 + \phi_2^2}.e^{i.\tan^{-1}(D_\phi)}$

So, the flow of universal scalar field $\digamma(\Phi_u)$ will be described by me in a separate article because without justifying geometries and surfaces governed by the minimal scalar field function (ϕ) we can't identify $\digamma(\Phi_u)$. $\digamma(\Phi_u)$ is also closely related to the v_u (velocity of universal scalar field).

G. *Quantity of Imbalance-*

Now I intend to define the quantities like charge which is a beautiful part of the Geometry and also define how the charge attracts or repulse with each other. I am starting with a Geometrical Representation [redacted]

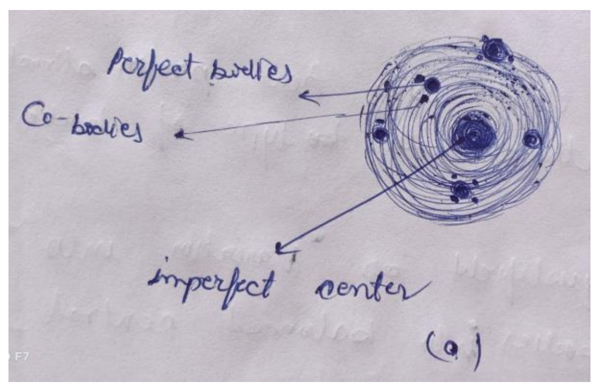

Fig. 16. Geometrical Representation of Totally Balanced Central System

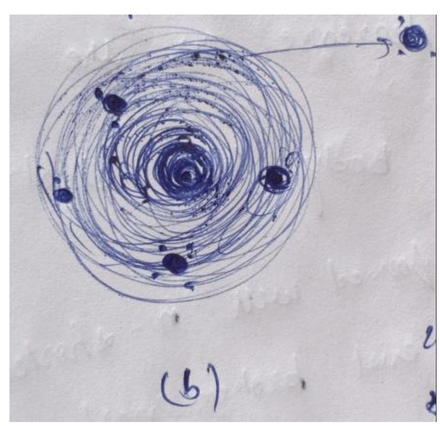

Fig.17. Representation of Imbalance in Central System by losing a Perfect Body

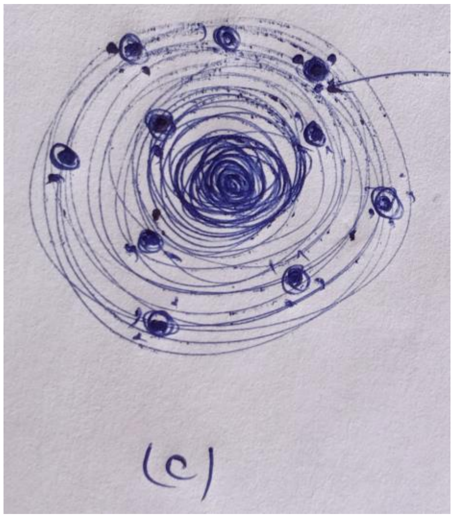

Fig. 18. Representation of Imbalance in Central System by gaining a Perfect Body

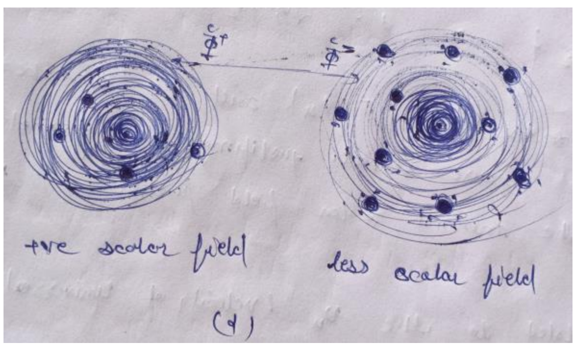

Fig. 19. Attraction between Oppositely Imbalanced Central Systems

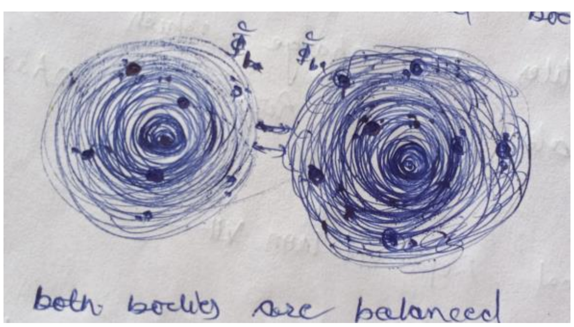

Fig. 20. Result of Imbalance in Bodies

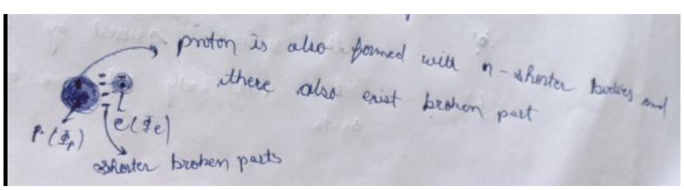

Fig. 21. Shorter Broken Parts Dynamics between Electron and Proton

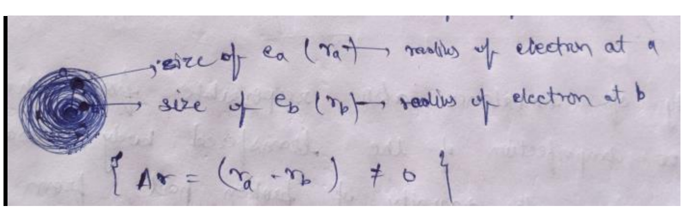

Fig. 22. Change in Sixe of Electron by Variation in Distance from Nucleus

$$\boxed{Q_c^{\circ} \propto (\Phi_c^{+} * \Phi_c^{-})} \tag{75}$$

Q_c° can be generalized as "Quantity of Imbalance". This kind of interactions exists in n- central systems. Usually the fundamental interaction between electron and proton can be justified as the interaction between perfect and imperfect body. So, the "Quantity of Imbalance" has different measurements in different type of central systems or it also depends upon the number of bodies transferred between the central systems. We can write it mathematically as-

$$Q_c^{\circ} \propto bodies\ transferred$$

Or

$$\boxed{Q_c^{\circ} \propto t_b} \tag{76}$$

{t_b=Number of transferred bodies}

Quantity of imbalance also deforms the Geometry of the system. So, it also depends upon dG° (deformation or variation in Geometry) as-

$$\boxed{Q_c^{\circ} \propto dG^{\circ}} \tag{77}$$

So, by combining equation (75), (76) and (77) or by taking the proportionality constant as ϖ, we get-

$$\boxed{Q_c^{\circ} = \varpi t_b dG^{\circ}(\Phi_c^{+} * \Phi_c^{-})} \tag{78}$$

Here $*$ is some algebra between Φ_c^{+} and Φ_c^{-}.

So, the quantity of imbalance in solar systems or galactic clusters also exists but take a gradual evolution due to different kind of time evolution in their scalar fields. We can also measure the Quantity of Imbalance (Q_c°) in only one body or central system but the variation will be taken as only one type-

$$\boxed{Q_c^{\circ\pm} = \varpi t_b dG^{\circ}\Phi_c^{\pm}} \tag{79}$$

Quantity of Imbalance also responsible for the variation of perfection or imperfection of the transferred body because the transferred body also face the scarcity of broken part from first center (from which it was transferred) and variation in the intensity of broken parts released from the second center (in which it is transferred) or as we know from my former paper that variation in the number of broken parts (β) cause variation into the $\left(\frac{\partial \eta}{\partial \tau}\right)$ of perfect bodies.

We can also find the Quantity of Imbalance per unit transferred bodies as-

$$\boxed{\frac{Q_c^{\circ\pm}}{t_b} = \varpi dG^{\circ}\Phi_c^{\pm}} \tag{80}$$

ϖ is the proportionality constant which depends upon the distance of the body moving around the center of central system.

From our former analysis we know that proton and electrons also formed out from the shorter type of central systems like stars and planets formed out from atomic central systems and these also release or capture broken parts from themselves. These also govern the physical rules and have some geometry (G°), spin (S), quantity (ψ), scalar field (ϕ), quantity of disturbance (H°) etc.

H. Proof of the Fact "Planck Constant is Not a Universal Constant"-

As I mentioned in my first article [1] now I intend to prove the variation in the quanta of spin ($\hbar$) or Planck constant.

$$\because S = s\frac{\psi_p}{\alpha\Delta\phi}$$

And the transformation of spin of shorter bodies into bigger bodies by the tendency to perfection or by equation-

$$S = s\left[\left(\frac{1+\eta}{\eta^*}\right)\frac{\phi}{\Delta\phi} - 1\right]$$

Now if the spin is in some form of $\hbar$ for atomic central systems, then-

$$k\Delta\hbar = s\Delta\left[\left(\frac{1+\eta}{\eta^*}\right)\frac{\phi}{\Delta\phi}\right]$$

If the body tends towards perfection, then there is variation in $\hbar$ also happen by this variation in η. Now by putting $S = k\hbar$ in equation (42) and by some manipulation, we get-

$$k\alpha\Delta\phi\frac{\partial\hbar}{\partial\tau} = \psi_p\frac{\partial s}{\partial\tau} + s\frac{\partial\psi_p}{\partial\tau} - \frac{s\psi_p G^\circ}{\alpha\pi} - \frac{s\psi_p}{\Delta\phi}.\frac{\partial(\Delta\phi)}{\partial\tau}$$

Here if only one quantity is not zero, then there is a variation in spin quanta according to time. Or we can say-

$$\boxed{\frac{\partial\hbar}{\partial\tau} \neq 0} \tag{81}$$

Quantity of spin is also affected by the nature of scalar field.

$$\because S = s\frac{\psi_p}{\alpha\Delta\phi} \;\&\; \phi = |\phi|e^{i.\tan^{-1}(D)}$$

So, we can write spin as-

$$S = s\frac{\psi_p}{\alpha\Delta|\phi|}e^{-i.\tan^{-1}(D)}$$

Now by including the nature of quantity the above equation also can be written as-

$$\boxed{S = s\frac{|\psi_p|}{\alpha\Delta|\phi|}e^{i\,(\tan^{-1}(D_\psi)-\tan^{-1}(D_\phi))}} \tag{82}$$

I. Quantity of Motion-

Now I intend towards the quantity of motion (F) and what should be the definition of quantity of motion in my terminology? As we know from my pervious paper on fundamental forces [4] the quantity of motion described by me as the quantity (ψ) of a body $\times$ covered scalar field $\left(\frac{\partial\phi}{\partial\tau}\right)$. So, from paper 4 we have-

$$F = \psi.\frac{\partial\phi}{\partial\tau}$$

$$\left\{\because \frac{\partial\phi}{\partial\tau}\ is\ a\ different\ kind\ of\ derivative\right\}$$

$$\{\because \phi = \phi_1 + i\phi_2\,, \tau = \tau_1 + i\tau_2\,\}$$

As we draw the geometric configuration of a body which have motion (F)-

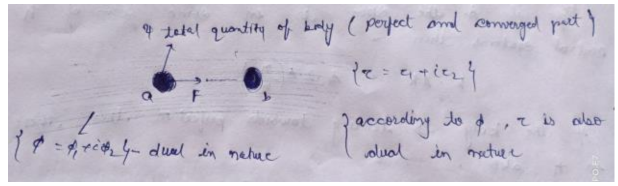

Fig.23. Effect on Quantity of Motion by Dual Nature of Scalar Field

$$F_a = \psi_a.\frac{\partial\phi_a}{\partial\tau_a}\;\{\because \phi_a = \phi_{1a} + i\phi_{2a}\}$$

$$F_b = \psi_b.\frac{\partial\phi_b}{\partial\tau_b}\;\{\because \phi_b = \phi_{1b} + i\phi_{2b}\}$$

If we determine the quantity of motion of a particular body, then by adding that-

$$\{\because \phi\ also\ include\ the\ universal\ scalar\ field\}$$

If we apart universal scalar field from ϕ, then-

$$\boxed{F = \psi.\frac{\partial\phi'}{\partial\tau} + \psi.\frac{\partial\Phi_u}{\partial\tau}} \tag{83}$$

Here first term in equation (83) is actual motion governed by a body and second term is motion in that particular body by the motion in universe. Here ϕ' is the scalar field which formed out by some transformation like ϕ-ψ transformation. So, we can define quantity of motion (F) in terms of the universal frame of reference as-

$$\boxed{F = (\psi_p + \alpha'\Delta\phi).\frac{\partial\phi'}{\partial\tau} + (\psi_p + \alpha_u\Delta\phi).\frac{\partial\Phi_u}{\partial\tau}} \tag{84}$$

Here- α' →coupling of body with the transformed or remaining scalar field

α_u → Coupling of body with the universal scalar field

If we define δa in change in point infinitesimally small, then the next point of observation of motion we define as $\{a + \delta a\}$ or by writing $a + \delta a = b$, we have the quantity of motion in vector form as-

$$\boxed{\vec{F}_{ab} = \psi_{ab}.\frac{\partial\phi_{ab}}{\partial\tau_{ab}}.\widehat{ab}} \tag{85}$$

Here $\widehat{ab}$ is the direction of motion of quantity.

We can also define nature of motion by some manipulation in this equation. $\because$ Direction of motion of universe can be different from the direction of motion (actual) of body, then-

$$\boxed{\vec{F} = (\psi_p + \alpha'\Delta\phi).\frac{\partial\phi'}{\partial\tau}\hat{F}_{act.} + (\psi_p + \alpha_u\Delta\phi).\frac{\partial\Phi_u}{\partial\tau}\hat{F}_{uni.}} \tag{86}$$

$$\because \boxed{\hat{F} = \hat{F}_{act.} + \hat{F}_{uni.}}$$

So, "Direction of motion of a particular body also determined by the flow of universal scalar field or in other words every single motion in universe is affected by the dynamics of universe itself". In this way we can generalize the fact that every shape or geometry in universe also affected by the dynamics of universe and by the way of formation of geometries we can define the dynamics of universe. Or in more detail we can identify the flow of universal scalar field and dynamics of a particular universal epoch by the geometrical formation of the k[th] bodies (formed at that particular epoch).

Now by differentiating equation (86) with respect to universal time, we get-

$$\frac{\partial \vec{F}}{\partial \tau} = \left\{\left(\frac{\partial \psi_p}{\partial \tau} + \frac{\partial \alpha'}{\partial \tau}.\Delta\phi + \alpha'\frac{\partial(\Delta\phi)}{\partial \tau}\right)\frac{\partial \phi'}{\partial \tau} + (\psi_p + \alpha'\Delta\phi).\frac{\partial^2\phi'}{\partial\tau^2}\right\}\hat{F}_{act.} + \left\{\left(\frac{\partial \psi_p}{\partial \tau} + \frac{\partial \alpha_u}{\partial \tau}.\Delta\phi + \alpha_u\frac{\partial(\Delta\phi)}{\partial\tau}\right)\frac{\partial \Phi_u}{\partial\tau} + (\psi_p+\alpha_u\Delta\phi).\frac{\partial^2\Phi_u}{\partial\tau^2}\right\}\hat{F}_{uni.} \tag{87}$$

$$\left\{\because \frac{G^\circ}{\pi} = \frac{\partial\alpha}{\partial\tau}\right\} so \left\{\because \frac{G^{\circ\prime}}{\pi'} = \frac{\partial\alpha'}{\partial\tau}\right\} \& \left\{\because \frac{G_u^\circ}{\pi_u} = \frac{\partial\alpha_u}{\partial\tau}\right\}$$

Here $G^{\circ\prime}$ is the geometry of body and G_u° is geometrical feature of universe.

Now by some manipulations in equation (87), we get-

$$\frac{\partial \vec{F}}{\partial \tau} = \left\{\left(\frac{\partial \psi_p}{\partial \tau} + \frac{G^{\circ\prime}}{\pi'}.\Delta\phi + \alpha'\frac{\partial(\Delta\phi)}{\partial \tau}\right)\frac{\partial \phi'}{\partial \tau} + (\psi_p + \alpha'\Delta\phi).\frac{\partial^2\phi'}{\partial\tau^2}\right\}\hat{F}_{act.} + \left\{\left(\frac{\partial \psi_p}{\partial \tau} + \frac{G_u^\circ}{\pi_u}.\Delta\phi + \alpha_u\frac{\partial(\Delta\phi)}{\partial\tau}\right)\frac{\partial \Phi_u}{\partial\tau} + (\psi_p+\alpha_u\Delta\phi).\frac{\partial^2\Phi_u}{\partial\tau^2}\right\}\hat{F}_{uni.} \tag{88}$$

J. Force-

As we know from my former article, that total variation in F can be written as-

$$\delta\vec{F} = \frac{\partial\vec{F}}{\partial\tau}d\tau + \frac{\partial\vec{F}}{\partial\phi}d\phi$$

The first term is the Newton's definition of force but the whole term refers to the total implementation of force on a particular quantity or body. So, we can write total force as-

$$\boxed{Force(\delta) = \frac{\partial\vec{F}(\tau,\phi)}{\partial\tau} + \frac{\partial\vec{F}(\tau,\phi)}{\partial\phi}} \tag{89}$$

The second term (δ_D) also includes the ϕ-ψ transformation.

Now as we know the value of $\frac{\partial\vec{F}(\tau,\phi)}{\partial\tau}$ from equation (88) and by equation (62), we get-

$$\{\phi = \phi_1 + i\phi_2\}\ and\ \{\vec{F} = \vec{F}_{act.} + \vec{F}_{uni.}\}$$

$$\{\phi = \phi' + \Phi_u\ \ or\ \ \phi' = \phi_1' + i\phi_2'\}$$

$$\frac{\partial\vec{F}(\tau,\phi)}{\partial\phi} = \left\{\left(\frac{\partial \psi_p}{\partial \phi} + \frac{\partial \alpha'}{\partial \phi}.\Delta\phi + \alpha'\frac{\partial(\Delta\phi)}{\partial \phi}\right)\frac{\partial \phi'}{\partial \phi} + (\psi_p + \alpha'\Delta\phi).\frac{\partial^2\phi'}{\partial\phi^2}\right\}\hat{F}_{act.} + \left\{\left(\frac{\partial \psi_p}{\partial \phi} + \frac{\partial \alpha_u}{\partial \phi}.\Delta\phi + \alpha_u\frac{\partial(\Delta\phi)}{\partial\phi}\right)\frac{\partial \Phi_u}{\partial\phi} + (\psi_p+\alpha_u\Delta\phi).\frac{\partial^2\Phi_u}{\partial\phi^2}\right\}\hat{F}_{uni.} \tag{90}$$

Now by using the duality equation (62) for $\overrightarrow{F}$, we get-

$$F = i\psi_p\phi.\frac{\partial\theta}{\partial\tau} + i\alpha\Delta\phi.\phi.\frac{\partial\theta}{\partial\tau} + \frac{\psi_p\phi}{(\phi_1^2+\phi_2^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right) + \frac{\alpha\Delta\phi.\phi}{(\phi_1^2+\phi_2^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right)$$

$$\because \{\vec{F} = \vec{F}_{act.} + \vec{F}_{uni.}\}\ \&\ \phi = \phi' + \Phi_u$$

Now by perturbing scalar field in two parts, we get above equation as-

$$F = \left\{i\psi_p\phi'.\frac{\partial\theta}{\partial\tau} + i\alpha\Delta\phi.\phi'.\frac{\partial\theta}{\partial\tau}\right\}\vec{F}_{act.} + \left\{\frac{\psi_p\phi'}{(\phi_1^2+\phi_2^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right) + \frac{\alpha\Delta\phi.\phi'}{(\phi_1^2+\phi_2'^2)}\left(\phi_1\frac{\partial\phi_1}{\partial\tau} + \phi_2\frac{\partial\phi_2}{\partial\tau}\right)\right\}\vec{F}_{act.} + (\psi_p + \alpha_u\Delta\phi).\frac{\partial\Phi_u}{\partial\tau}.\vec{F}_{uni.}$$

Here we can't do derivative $\frac{\partial\Phi_u}{\partial\tau}$ as $\frac{\partial\phi'}{\partial\tau}$ because Φ_u is a special function and will be generalized in my next article on scalar fields.

So, the definitions of force can be justified from the equation (89) and the equation for total force (δ) can be obtained in dual form also. Now if we calculate δ in form of whole quantity, then we get-

$$\boxed{\vec{\delta} = \left\{\frac{\partial\psi}{\partial\tau}\frac{\partial\phi'}{\partial\tau} + \psi\frac{\partial^2\phi'}{\partial\tau^2} + \frac{\partial\psi}{\partial\phi}\frac{\partial\phi'}{\partial\tau} + \psi\frac{\partial}{\partial\phi}\left(\frac{\partial\phi'}{\partial\tau}\right)\right\}\hat{F}_{act.} + \left\{\frac{\partial\psi}{\partial\tau}\frac{\partial\Phi_u}{\partial\tau} + \psi\frac{\partial^2\Phi_u}{\partial\tau^2} + \frac{\partial\psi}{\partial\phi}\frac{\partial\Phi_u}{\partial\tau} + \psi\frac{\partial}{\partial\phi}\left(\frac{\partial\Phi_u}{\partial\tau}\right)\right\}\hat{F}_{uni.}} \tag{91}$$

Now by putting the quantities $\psi, \phi\ \&\ \tau$ into dual form we can exactly find the repulsed or attracted parts of the force working on a particular body.

So, we can examine the fact from equation (91) that there is always a force executed on a body by universe or this can be generalized as "Force by Flow of universal scalar field". But if we are not on the origin of universal frame of reference, then we cannot examine the exact value of universal force on a particular body. Let's examine the above fact by universal frame of reference diagram-

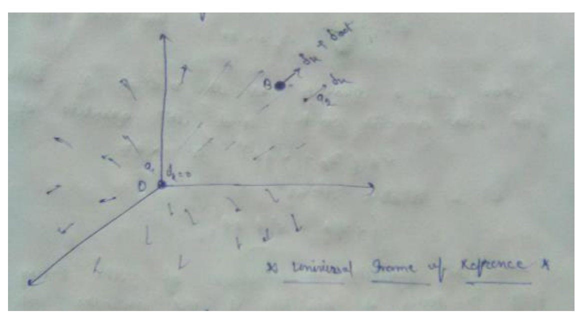

Fig.24. Force Exerted on a Body by Flow of Universal Scalar Field

So, $\delta = \delta_{act.} + \delta_{uni.}$

Now in the above universal frame of reference if we are at position a_2, then we will also have universal force but at position a_1 (at Origin) we are not feeling any force because there does not exist motion in a particular direction at origin. So, we can analyze the universal force exactly from a_1 on body B. so, it is the universal force which varies the motion of all bodies and the same is responsible for the inflations of universe.

Now one query comes out that how the universal force depend or behave in inflations and deflations of universe? The answer lies in below universal diagram-

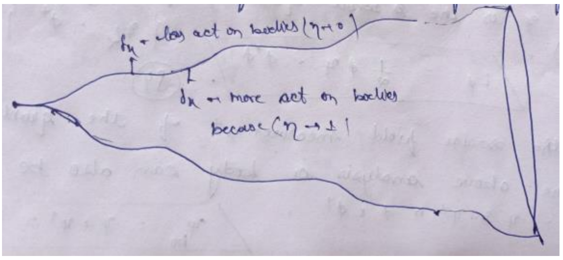

Fig.25. Action of Universal Force on Bodies During Inflations and Deflations

It is the universal force which provides the new formations in universe.

K. *Energy-*

Now I intend toward the action, work done and energy of bodies and how these quantities are interrelated with each other. First I am representing a geometrical configuration of a particular perfect body as-

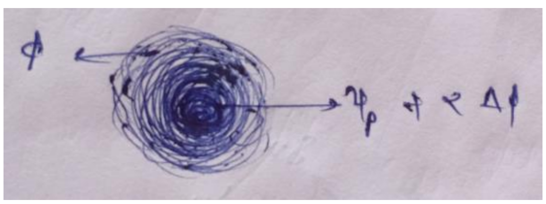

Fig.26. Representation of a Perfect Body

There exists a quantity as the multiple of both scalar field with conversion constant and quantity of body $(\psi_p + \alpha\Delta\phi)$ as-

$$\alpha\phi(\psi_p + \alpha\Delta\phi) \; or \; \alpha\phi\psi$$

Or in other terms-

$$\left(\alpha\phi\psi_p + \alpha^2\phi\Delta\phi\right)$$

So, the quantity is measure of Energy of the body in terms of quantity of that body. We can write it as-

$$\boxed{E_\psi = \alpha\phi\psi_p + \alpha^2\phi\Delta\phi} \tag{92}$$

Now by dividing E_ψ by α^2 we get measure of energy of the body in terms of scalar field as-

$$\boxed{E_\phi = \frac{E_\psi}{\alpha^2} = \frac{\psi_p}{\alpha}\phi + \phi\Delta\phi} \tag{93}$$

In other terms we can write equation (92) as-

$$\boxed{E_\psi = \alpha\phi\psi = \psi'\psi} \tag{94}$$

Here $\psi' = \alpha\phi$ is the quantity measurement of the outer scalar field of body. Here ψ is the whole quantity of body with conversable part $(\alpha\Delta\phi)$. So, we can write equation (93) in other terms as-

$$\boxed{E_\phi = \frac{1}{\alpha}\phi\psi = \phi'\phi} \tag{95}$$

$$\left\{\phi' = \frac{\psi}{\alpha}\right\}$$

Here ϕ' is the scalar field measurement of the quantity of body. So, from the above analysis a body can also be measured by the sum of ψ'& ψ or ϕ'& ϕ. We can also write total possible quantity of a body as-

$$\boxed{\Psi_{po} = \psi' + \psi = \psi_p + \alpha\Delta\phi + \psi'}$$

A different view of energy comes out from the former analysis, which is-

$$\boxed{E = \sqrt{E_\psi E_\phi}} \tag{96}$$

$$\{\because E_\psi = \alpha^2 E_\phi\}$$

So, we can also write equation (96) as-

$$E = \sqrt{\alpha^2 E_\phi^2}$$

$$\boxed{E = \pm\alpha E_\phi} \tag{97}$$

Or also as-

$$E = \sqrt{\frac{E_\psi^2}{\alpha^2}}$$

$$\boxed{E = \pm\frac{E_\psi}{\alpha}} \tag{98}$$

Or as-

$$\boxed{E = \psi_p\phi + \alpha\phi\Delta\phi} \tag{99}$$

Equation (99) can be written in terms of whole quantity as-

$$\boxed{E = \pm\psi\phi} \tag{100}$$

For broken parts the energy is $\{\because \psi_p = 0\}$-

$$\boxed{E_b = \alpha\phi\Delta\phi} \tag{101}$$

$$\{\because \psi_b = \alpha\Delta\phi\} \,\&\, \phi = \phi_b \; for \; broken \; parts$$

So, we can write equation (101) as-

$$\boxed{E_b = \psi_b.\phi_b} \tag{102}$$

This seems like the energy for a regular body as in equation (100).

Now by differentiating equation (100) with respect to universal time (τ), we get-

$$\boxed{\frac{\partial E}{\partial\tau} = \phi\frac{\partial\psi}{\partial\tau} + \psi\frac{\partial\phi}{\partial\tau}} \tag{103}$$

And equation (101) as-

$$\left\{\frac{\partial E_b}{\partial\tau} = \phi\Delta\phi\frac{\partial\alpha}{\partial\tau} + \alpha\Delta\phi\frac{\partial\phi}{\partial\tau} + \alpha\phi\frac{\partial(\Delta\phi)}{\partial\tau}\right\}$$

We can also generalize the energy in equation by making $\alpha\phi\Delta\phi$ as the sum of all generated broken parts from the body by ϕ-ψ transformation as-

$$\boxed{E \cong \psi_p\phi + \sum_{n\in\mathbb{R}}(E_b)_n} \tag{104}$$

Now by writing $\psi_p\phi$ as the perfect or static energy of body which only changes by the dynamics of universe, we get equation (104) as-

$$\boxed{E \cong E_p + \sum_{n\in\mathbb{R}} (E_b)_n} \tag{105}$$

Or $\alpha\phi\Delta\phi$ can also be generalized as the transformed energy by ϕ-ψ transformation.

$$\boxed{E = E_p + E_t} \tag{106}$$

This is similar like the dispersion relation in special relativity but it is more unique than it. We can also write equation (106) as-

$$\boxed{E - E_p = E_t} \tag{107}$$

So, there always exist a transformed energy (E_t) in a body. Now by equation (103) and (83), we get-

$$\boxed{\frac{\partial E}{\partial \tau} = \phi\frac{\partial \psi}{\partial \tau} + F} \tag{106}$$

Now by some manipulation in above equation, we get-

$$dE = \phi\frac{\partial \psi}{\partial \tau}d\tau + Fd\tau$$

So, quantity of motion by transformation can be defined as-

$$\boxed{F = \frac{\partial E}{\partial \tau} - \phi\frac{\partial \psi}{\partial \tau}} \tag{109}$$

Now by differentiating E_ψ & E_ϕ with respect to ϕ, we get-

$$\frac{\partial E_\psi}{\partial \phi} = \alpha\psi + \phi\psi\frac{\partial \alpha}{\partial \phi} + \alpha\phi\frac{\partial \psi}{\partial \phi} \tag{110}$$

Now by putting $\phi\psi = E$ & $\alpha\phi = \psi'$, we get equation (110) as-

$$\boxed{\frac{\partial E_\psi}{\partial \phi} = \alpha\psi + E\frac{\partial \alpha}{\partial \phi} + \psi'\frac{\partial \psi}{\partial \phi}} \tag{111}$$

And-

$$\boxed{\frac{\partial E_\phi}{\partial \phi} = \frac{\psi}{\alpha} - \frac{\phi\psi}{\alpha^2}\frac{\partial \alpha}{\partial \phi} + \frac{\phi}{\alpha}\frac{\partial \psi}{\partial \phi}} \tag{112}$$

$$\frac{\partial E_\phi}{\partial \phi} = \frac{\psi}{\alpha} - \frac{E}{\alpha^2}\frac{\partial \alpha}{\partial \phi} + \frac{\psi'}{\alpha^2}\frac{\partial \psi}{\partial \phi} \tag{113}$$

$$\left\{\because \frac{\phi}{\alpha} = \frac{\psi'}{\alpha^2}\right\}$$

Now by multiplying equation (113) by α^2, we get-

$$\boxed{\alpha^2\frac{\partial E_\phi}{\partial \phi} = \alpha\psi - E\frac{\partial \alpha}{\partial \phi} + \psi'\frac{\partial \psi}{\partial \phi}} \tag{114}$$

Now two equations comes out by substitutions (111)-(114) and (111) + (114), we get-

$$\boxed{\frac{\partial E_\psi}{\partial \phi} - \alpha^2\frac{\partial E_\phi}{\partial \phi} = 2E\frac{\partial \alpha}{\partial \phi}} \tag{115}$$

And-

$$\boxed{\frac{\partial E_\psi}{\partial \phi} + \alpha^2\frac{\partial E_\phi}{\partial \phi} = 2\left(\alpha\psi + \psi'\frac{\partial \psi}{\partial \phi}\right)} \tag{116}$$

From equation (115) we also get the variation in conversion constant with respect to scalar field as-

$$\boxed{\frac{\partial \alpha}{\partial \phi} = \frac{1}{2E}\left\{\frac{\partial E_\psi}{\partial \phi} - \alpha^2\frac{\partial E_\phi}{\partial \phi}\right\}} \tag{117}$$

Now by differentiating E with respect to ϕ, we get-

$$\boxed{\frac{\partial E}{\partial \phi} = \phi\frac{\partial \psi}{\partial \phi} + \psi} \tag{118}$$

Now by multiplying both sides with α, we get-

$$\alpha\frac{\partial E}{\partial \phi} = \alpha\phi\frac{\partial \psi}{\partial \phi} + \alpha\psi \tag{119}$$

Or we can write (119) as-

$$\alpha\frac{\partial E}{\partial \phi} = \alpha\psi + \psi'\frac{\partial \psi}{\partial \phi} \tag{120}$$

Now by putting equation (120) in (116), we get-

$$\frac{\partial E_\psi}{\partial \phi} + \alpha^2\frac{\partial E_\phi}{\partial \phi} = 2\alpha\frac{\partial E}{\partial \phi} \tag{121}$$

Or we can write equation (121) as-

$$\boxed{\frac{\partial E_\psi}{\partial \phi} + \alpha^2\frac{\partial E_\phi}{\partial \phi} - 2\alpha\frac{\partial E}{\partial \phi} = 0} \tag{122}$$

i.e. by equation (97) and (98), we get-

$$2E = \alpha E_\phi + \frac{E_\psi}{\alpha}$$

Or by multiplying with (α) to above equation, we get-

$$\boxed{\alpha^2 E_\phi + E_\psi - 2\alpha E = 0} \tag{123}$$

Now by differentiating equation (123) with respect to ϕ, we get-

$$2\alpha E_\phi\frac{\partial \alpha}{\partial \phi} + \left(\frac{\partial E_\psi}{\partial \phi} + \alpha^2\frac{\partial E_\phi}{\partial \phi} - 2\alpha\frac{\partial E}{\partial \phi}\right) - 2E\frac{\partial \alpha}{\partial \phi} = 0 \tag{124}$$

By solving further and putting the bracket terms equals to zero in above equation, we get-

$$\alpha E_\phi\frac{\partial \alpha}{\partial \phi} - E\frac{\partial \alpha}{\partial \phi} = 0 \tag{125}$$

Or by taking similar terms together, we get-

$$\boxed{\left(E - \alpha E_\phi\right)\frac{\partial \alpha}{\partial \phi} = 0} \tag{126}$$

$$\{\because E = \alpha E_\phi\}$$

If $\frac{\partial \alpha}{\partial \phi} = 0$ or conversion constant is not varying with scalar field, then by equation (117), we get-

$$\frac{\partial E_\psi}{\partial \phi} - \alpha^2\frac{\partial E_\phi}{\partial \phi} = 2E\frac{\partial \alpha}{\partial \phi} = 0\ for\ \frac{\partial \alpha}{\partial \phi} = 0$$

$$\boxed{\frac{\partial E_\psi}{\partial \phi} - \alpha^2 \frac{\partial E_\phi}{\partial \phi} = 0} \quad (128)$$

Or

$$\boxed{\frac{\partial E_\psi}{\partial \phi} = \alpha^2 \frac{\partial E_\phi}{\partial \phi}} \quad (129)$$

$$\{\because E_\psi = \alpha^2 E_\phi\}$$

Now equation (122) becomes-

$$2\frac{\partial E_\psi}{\partial \phi} - 2\alpha \frac{\partial E}{\partial \phi} = 0$$

Or we get-

$$\boxed{\frac{\partial E_\psi}{\partial \phi} = \alpha \frac{\partial E}{\partial \phi}} \quad (130)$$

And

$$\alpha^2 \frac{\partial E_\phi}{\partial \phi} - \alpha \frac{\partial E}{\partial \phi} = 0$$

$$\Rightarrow \boxed{\frac{\partial E_\phi}{\partial \phi} = \frac{1}{\alpha}\frac{\partial E}{\partial \phi}} \quad (131)$$

Now if we want to calculate universal energy, then by summing over all energies, we get-

$$E_u = \sum_{i \in \mathbb{R}} \left(\frac{E_\psi}{\alpha}\right)_i = \sum_{i \in \mathbb{R}} (\alpha E_\phi)_i = \sum_{i \in \mathbb{R}} E_i$$

$$\boxed{E_u = \Phi_u \Psi_u} \quad (132)$$

We are familiar with the universal functions Φ_u & Ψ_u as described by me in my former papers. Now by differentiating equation (132) with respect to universal time, we get-

$$\boxed{\frac{\partial E_u}{\partial \tau} = \Phi_u \frac{\partial \Psi_u}{\partial \tau} + \Psi_u \frac{\partial \Phi_u}{\partial \tau}} \quad (133)$$

$$\left\{\because \Psi_u \frac{\partial \Phi_u}{\partial \tau} = F_u = motion\ of\ universe\right\}$$

So, we can write equation (133) as-

$$\boxed{\frac{\partial E_u}{\partial \tau} = \Phi_u \frac{\partial \Psi_u}{\partial \tau} + F_u} \quad (134)$$

If the total energy of universe do not vary with the flow of universal scalar field (time), then-

$$\frac{\partial E_u}{\partial \tau} = 0 = \Phi_u \frac{\partial \Psi_u}{\partial \tau} + F_u$$

So, we get universal motion from above equation as-

$$\boxed{F_u = -\Phi_u \frac{\partial \Psi_u}{\partial \tau}} \quad (135)$$

As I claimed before that universal motion is affected by the new formations in universe.

L. Action-

Now I intend to describe action and the mathematical representation of this particular quantity. At first I am representing a geometrical configuration of two bodies in universal frame of reference as-

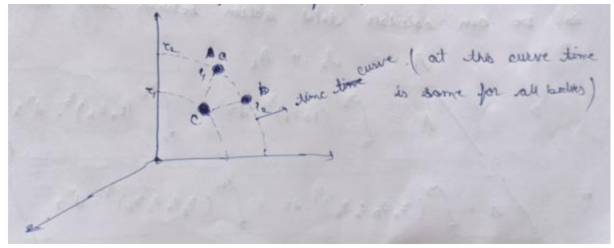

Fig. 27. Action between Bodies Separated by Space in Universal Frame of Ref.

From the representation we can see both bodies (a & b) formed out from same body (c) or in other words when bodies were at timeline (τ_1), then these were not separated by any scalar field but at timeline (τ_2) bodies (a & b) are separated by some scalar field distance (x). Let x be the distance of separation of both bodies, then the action ($\boldsymbol{\mathcal{A}}$) between both bodies must be-

$$\boldsymbol{\mathcal{A}_s} = \int_{\boldsymbol{x_1}}^{\boldsymbol{x_2}} (E_a E_b)^{1/2} . d^n x$$

Here n is the dimension of universe at that timeline and $\boldsymbol{\mathcal{A}_s}$ is the space separated action. We can also write above expression as-

$$\boxed{\boldsymbol{\mathcal{A}_s} = \int_{\boldsymbol{x_1}}^{\boldsymbol{x_2}} \sqrt{\psi_a \phi_a . \psi_b \phi_b} . d^n x} \quad (136)$$

Now I am representing another kind of geometrical configuration as-

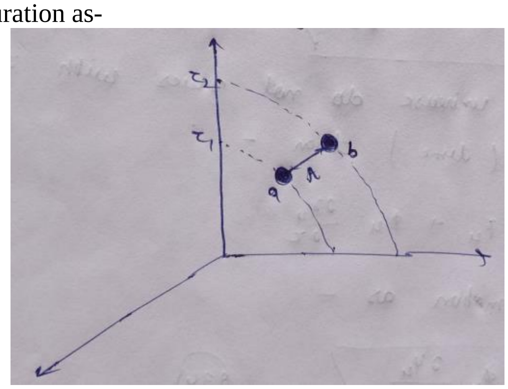

Fig. 28. Representation of Action between Time Separated Bodies

In this situation the action can be recognized as time separated and can be defined as-

$$\boldsymbol{\mathcal{A}_t} = \int_{\tau_1}^{\tau_2} (E_a E_b)^{1/2} . d\tau$$

We can write above expression as-

$$\boxed{\boldsymbol{\mathcal{A}_t} = \int_{\tau_1}^{\tau_2} \sqrt{\psi_a \phi_a . \psi_b \phi_b} . d\tau} \quad (137)$$

So, we can calculate total action between two bodies as-

$$\boldsymbol{\mathcal{A}} = \boldsymbol{\mathcal{A}_t} + \boldsymbol{\mathcal{A}_s}$$

$$\Rightarrow \boxed{\boldsymbol{\mathcal{A}} = \int_{\tau_1}^{\tau_2} (E_a E_b)^{1/2}.\, d\tau + \int_{x_1}^{x_2} (E_a E_b)^{1/2}.\, d^n x} \tag{138}$$

Or in another form we can write equation (138) as-

$$\boxed{\boldsymbol{\mathcal{A}} = \int_{\tau_1}^{\tau_2} (\psi_a \phi_a \psi_b \phi_b)^{1/2}.\, d\tau + \int_{x_1}^{x_2} (\psi_a \phi_a \psi_b \phi_b)^{1/2}.\, d^n x} \tag{139}$$

Now the representation comes out as-

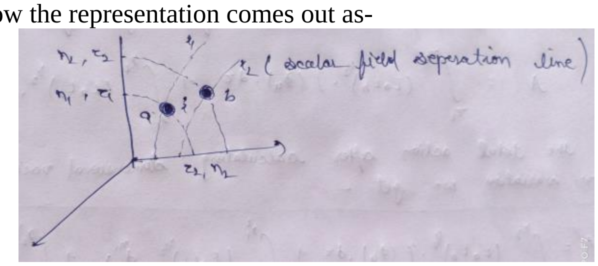

Fig. 29. Representation of Space and Time Separated Bodies

If the dimensions also vary between two timelines and two bodies a & b, then the action $\boldsymbol{\mathcal{A}}$ behave like-

$$\boldsymbol{\mathcal{A}_s} = \int_{x_1}^{x_2} (E_a E_b)^{1/2}.\, d^{n_1} x + \int_{x_1}^{x_2} (E_a E_b)^{1/2}.\, d^{n_2} x \tag{140}$$

Here x is the point of dimensional variation. This can be generalized as discrete dimensional variation, but what if dimensional variation is continuous between the points x_1 and x_2? For this we need Riemannian Integration method where space is separated as $x_i^{'}$ points with each variation in dimension. So, we can write the action as-

$$\begin{aligned}\boldsymbol{\mathcal{A}_s} = \int_{x_1}^{x_1^{'}} (E_a E_b)^{1/2}.\, d^{n_1} x + \int_{x_1^{'}}^{x_2^{'}} (E_a E_b)^{1/2}.\, d^{n_1+1} x \\ + \int_{x_2^{'}}^{x_3^{'}} (E_a E_b)^{1/2}.\, d^{n_1+2} x + \cdots \\ + \int_{x_{i-1}^{'}}^{x_i^{'}} (E_a E_b)^{1/2}.\, d^{n_1+i-1} x \\ + \int_{x_i^{'}}^{x_2} (E_a E_b)^{1/2}.\, d^{n_2} x\end{aligned} \tag{141}$$

Here $\{n_2 - n_1 = i\}$.

We can also find the action of universe on a particular body as-

$$\boldsymbol{\mathcal{A}_u} = \int_{\tau_1}^{\tau_2} (E_u E_b)^{1/2}.\, d\tau + \int_{x_1}^{x_2} (E_u E_b)^{1/2}.\, d^n x \tag{142}$$

Now one query must be hitting your mental lexicon that what if the flow of universal scalar field vary between the two action points and according to the flow time vary differently then we should use a function to calculate the exact value of Integration which is formerly described as flow of time ($\text{Ƒ}(\Phi_u)$). So, we can write action as-

$$\boldsymbol{\mathcal{A}} = \int_{\tau_1}^{\tau_2} (E_a E_b)^{1/2}.\, \text{Ƒ}(\Phi_u).\, d\tau + \int_{x_1}^{x_2} (E_a E_b)^{1/2}.\, d^n x \tag{143}$$

So, we get the total action after calculating dimensional variation and time flow variation, as-

$$\boxed{\begin{aligned}\boldsymbol{\mathcal{A}} = \int_{\tau_1}^{\tau_2} (E_a E_b)^{1/2}.\, \text{Ƒ}(\Phi_u).\, d\tau + \int_{x_1}^{x_1^{'}} (E_a E_b)^{1/2}.\, d^{n_1} x \\ + \int_{x_1^{'}}^{x_2^{'}} (E_a E_b)^{1/2}.\, d^{n_1+1} x + \cdots + \int_{x_i^{'}}^{x_2} (E_a E_b)^{1/2}.\, d^{n_2} x\end{aligned}} \tag{144}$$

As we know from the least action principle by Pierre' D Fermat that variation into action must be zero.

$$\boxed{\delta \boldsymbol{\mathcal{A}} = 0} \tag{145}$$

This implies that-

$$\begin{aligned}\delta \boldsymbol{\mathcal{A}} = \delta \int_{\tau_1}^{\tau_2} (E_a E_b)^{1/2}.\, \text{Ƒ}(\Phi_u).\, d\tau + \delta \int_{x_1}^{x_1^{'}} (E_a E_b)^{1/2}.\, d^{n_1} x \\ + \delta \int_{x_1^{'}}^{x_2^{'}} (E_a E_b)^{1/2}.\, d^{n_1+1} x + \cdots \\ + \delta \int_{x_i^{'}}^{x_2} (E_a E_b)^{1/2}.\, d^{n_2} x = 0\end{aligned} \tag{146}$$

So, each integral is constant in action or the whole action is also constant and do not vary with any parameter.

M. Universal Energy-

As we know the universal energy can be written as-

$$E_u = \Phi_u \Psi_u$$

Now the variation in above expression can be written as-

$$dE_u = \Phi_u d\Psi_u + \Psi_u d\Phi_u \tag{147}$$

$$\left\{\because d\tau_u = k.\, d\Phi_u = \frac{1}{k'}.\, d\Phi_u\right\}$$

Now by putting the variation in equation (147), we get-

$$dE_u = \Psi_u k^{'}.\, d\tau + \Phi_u d\Psi_u \tag{148}$$

Now by some manipulations in equation (148), we get-

$$\frac{dE_u}{d\tau} = k^{'}\Psi_u + \Phi_u \frac{d\Psi_u}{d\tau} \tag{149}$$

Now by putting $\frac{dE_u}{d\tau} = 0$ in above equation, we get-

$$k^{'}\Psi_u = -\Phi_u \frac{d\Psi_u}{d\tau}$$

$$\{\because kk^{'} = 1\}$$

$$\boxed{\Psi_u = -k\Phi_u \frac{d\Psi_u}{d\tau}} \tag{150}$$

Now by multiplying equation (147) with $d\tau$, we get-

$$dE_u.d\tau = \Phi_u d\Psi_u d\tau + \Psi_u d\Phi_u d\tau$$

$$\{\because d\tau_u = k.d\Phi_u\}$$

$$dE_u.d\tau = k\{\Phi_u d\Psi_u d\Phi_u + \Psi_u (d\Phi_u)^2\} \tag{151}$$

This relation will be generalized by me as an important aspect of energy time uncertainty in my generalization of uncertainty principle in a separated paper.

Now by equation (135) and (149), we get-

$$\left\{\frac{\partial\Psi_u}{\partial\tau} = -\frac{F_u}{\Phi_u}\right\}$$

$$\Psi_u = k\Phi_u \frac{F_u}{\Phi_u} \tag{152}$$

By removing similar terms in equation (152), we get-

$$\boxed{\Psi_u = kF_u} \tag{153}$$

We can also write above equation as-

$$\boxed{\frac{\Psi_u}{F_u} = k} \tag{154}$$

Or

$$\boxed{F_u = \frac{\Psi_u}{k}} \tag{155}$$

$$\left\{\because \frac{1}{k} = \frac{d\Phi_u}{d\tau}\right\}$$

So, these are some unique relations between three universal quantities.

$$\because E_u = \Phi_u \Psi_u \tag{156}$$

So, we can write it as by using equation (153) as-

$$\boxed{E_u = k\Phi_u F_u} \tag{157}$$

As we know the motion of universe is-

$$F_u = \Psi_u.\frac{d\Phi_u}{d\tau} \tag{158}$$

As we know-

$$E_{\Phi_u} = \frac{\Phi_u \Psi_u}{\alpha_u} \tag{159}$$

Or

$$E_{\Psi_u} = \alpha_u \Phi_u \Psi_u \tag{160}$$

We can also write both equations, as-

$$E_{\Phi_u} = \Phi_u \Phi_u' \tag{161}$$

Or

$$E_{\Psi_u} = \Psi_u \Psi_u' \tag{162}$$

N. Covered Scalar Field and Flow of Scalar Field-

Now leaving behind the former analysis about universal energy I am describing another justification about the $\phi_{covered}$ or covered scalar field in terms of variation in distance. I am representing the diagram of flows of scalar fields as-

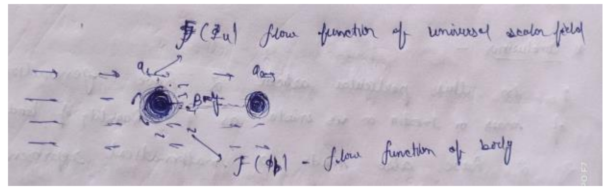

Fig.30. Flow of Scalar Field around a Body

So, $\text{Ƒ}(\phi)$ is total flow which affects the dynamics of body or we can also define $\text{Ƒ}(\phi_b)$ as disturbance into the universal flow $\text{Ƒ}(\Phi_u)$ by body. We can write above fact mathematically as-

$$\text{Ƒ}(\phi) = F(\Phi_u) - \text{Ƒ}(\phi_b) \tag{163}$$

Now the scalar field covered by the body can be defined as-

$$\phi_{covered} = \frac{(a_2 - a_1)}{\tau_2 - \tau_1} \pm F(\phi) \tag{164}$$

From equation (73) the first quantity is neither than velocity (v) and $\phi_{covered}$ depends on these directions as-

$$\vec{\phi}_{covered} = \vec{v} + \vec{\text{Ƒ}}(\phi) = \vec{v} + \vec{\text{Ƒ}}(\Phi_u) + \vec{\text{Ƒ}}(\phi_b) \tag{165}$$

So, quantity of motion in terms of the velocity and flow function can be determined as-

$$\boxed{\vec{F} = \psi\left(\vec{v} + \vec{\text{Ƒ}}(\phi)\right)} \tag{166}$$

Or we can write it as-

$$\vec{F} = \psi\left(\vec{v} + \vec{\text{Ƒ}}(\Phi_u) + \vec{\text{Ƒ}}(\phi_b)\right) \tag{167}$$

We can also write above equation in form of perfection quantity as-

$$\vec{F} = (\psi_p + \alpha\Delta\phi)\left(\vec{v} + \vec{\text{Ƒ}}(\Phi_u) + \vec{\text{Ƒ}}(\phi_b)\right) \tag{168}$$

$$\vec{F} = \left(\psi\vec{v} + \psi\vec{\text{Ƒ}}(\Phi_u) + \psi\vec{\text{Ƒ}}(\phi_b)\right) \tag{169}$$

Now by solving (168) further, we get-

$$\vec{F} = \psi_p\vec{v} + \psi_p\vec{\text{Ƒ}}(\Phi_u) + \psi_p\vec{\text{Ƒ}}(\phi_b) + \alpha\Delta\phi\vec{v} + \alpha\Delta\phi\vec{\text{Ƒ}}(\Phi_u) + \alpha\Delta\phi\vec{\text{Ƒ}}(\phi_b) \tag{170}$$

Formerly $\psi_p\vec{v}$ is known as quantity of motion or momentum by Sir Isaac Newton. $\vec{P} = \psi_p\vec{v} = m\vec{v}$ is the former kind of momentum. The nature and mathematical representation of the Flow functions ($\vec{\text{Ƒ}}(\phi)$) will be described by me in a separated article and now I am giving a break to this paper by concluding some facts from above discussion.

3. Conclusion

So, as I promised in the introduction of this article, I have been obtained some basic or fundamental quantities in universal sense. So, the quantities are $\psi, \phi, G°, H°, S, F, \delta, E, E_{\psi}, E_{\phi}, Q_c^{\circ}, \vec{\mathrm{F}}(\Phi_u), \ \phi_{covered}, v_u, E_u, \Psi_u, \boldsymbol{\mathcal{A}}$ etc. So, the concluded facts from this paper are-

- In this particular article I have generalized the definition of mass or inertia or Vis Inista as ψ(quantity of body).
- I have also made a mathematical representation of Geometry in various forms.
- In inflations Geometries are Hyper but in deflations Geometries are Normal.
- In this particular article I identified a unique quantity of disturbance ($H°$) which is a wide explanation of Temperature like quantities in sense of N-time inflationary model of universe.
- I have defined some unique relations between the quantity of disturbance and geometry.
- I have also defined spin in terms of converged and perfection quantity.
- The relation between geometry and spin is also identified in this particular article.
- Some universal connection also defined as connected graphs.
- I claimed conservation of spin in the whole universe by formation of geometries in universe.
- Some dualities also obtained in this particular paper like $D_{\psi}, D_{\phi}, D_{\tau}$ etc.
- The nature of scalar field and its definition in my terminology also expressed in next phase of this paper.
- A basic natural quantity which exists in n-central systems of universe is also identified mathematically as "Quantity of Imbalance" (Q_c°) which is a unique natural quantity formerly known as charge in atomic central systems only.
- Planck constant ($\hbar$) is not a universal constant.
- Quantity of motion ($\vec{F}$) is also defined and measured as actual or universal motion.
- Force also identified in new way to proceed in universal sense.
- Three type of energies also calculated in terms of $E, E_{\psi}\ and\ E_{\phi}$and the interaction between them.
- Action also calculated in two lines sense (time line and space line).
- Universal Energy and quantity of motion also defined.
- Quantity of motion in terms of flow function ($\mathcal{F}$) also defined and compared with the former measurement of itself.

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