Combined Theory of Time

APPROACH TO MATHEMATICS

WRITTEN BY

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COMBINED THEORY OF TIME

GENERAL MATHEMATICAL PHYSICS

INTRODUCTION

Physics is not just assuming but also predicting. Mathematics as an interpreter of physics helps us to conclude many things. Few of the most developed mathematical models in physics like the Standard model of Particle physics, string theory are very good examples of our journey in world of mathematical physics.

Every theory in physics works fine in its own domain, unless we try to unite these. Mathematical problems as well as contradictory assumptions are basic problem in unification. Some theories cannot be united. We need necessary unification of General Relativity and Quantum field theories. There are thousands of such trials. Further the discovery of dark matter and energy collapsed many theories. What interested me was the use of time by different theories and hence I proposed the CTT or combined theory of time.

This theory has its own problems, rather I feel free to tell them.

1. Representation issues
   Some of the concepts in theory were not practically represented in physics. These were though terminated had its own consequences.
2. SI units problem
   Since the theory is not conducted in a Euclidean space problems arise. Though the theory has no problem with such situations, the physics researchers and scientific community might object on such issues.

At the current education of mine I don't know how to work on DOX particle, it requires high level geometry considerations which will be discussed in some other documents. I have included all that is possible to make by a +2 level math's

DOMAIN AND THE LIMITS

The CTT uses a standard domain. This domain consists of the normal three limits as discussed passing through each point of correspondence. And thus the ACME, CME and ME existing between these.

GENERAL INTRODUCTION TO DOMAIN

The general domain can be found in many situations. This includes the Neutralization of components over the sources of neutralizer and Neutral point.

If ‘A’ and ‘B’ are the varying components of sources then the any coordinate in domain can be identified by their respective difference. This coordinate identifier is denoted by R.

$$R = A - B$$

At neutral points $R = 0$ $where\ as\ at\ sources\ R = A\ or\ R = -B$

The Domain is independent of distance between sources or even space and time unless the components are Time Varying or Space varying.

The most important part is shift of domains. If the Domain is continuous and contains many neutral spots it is significant to divide them at the line of source or neutral points.

A shift of domain to source A does not changes the working of domain.

R is shifted on A then,

$R \rightarrow R_A\ we\ get\ R_A = A - C\ and\ C \in [0, A]$ This shift is done over ½ domains i.e. only ½ path of R is traced by us. If we trace a complete path we get back to $R = A - B$. Whatever we trace we always get the same results. For traces like 3/2 or 7/2 towards A or B changes to $\pm C \in [x, y]$ respectively.

For our work on domain we are enough with this.

TIME FIRST EQUATIONS AND DOMAIN

As a General introduction to CTT, I said that the ACME and CME neutralization causes a creation of present section of time zone what called the ME or mass effect. One thing to be noted is that the Domain is not Space, i.e. it lies outside the current definitions of space. Hence we cannot have mass, temperature and motion associated with it. The Domain does not support motion as in actual space.

If $T_e\ is\ the\ emmited\ time$ from the NIL limit and also there are N DOX particles contributing a total CME of ‘NC’.

As per CTT,

If $T_A\ is\ the\ Total\ time\ between\ the\ limits$ then it is inversely proportional to the Total energy left after neutralization. If A is the remaining energy of ACME out of A_{total} the difference of energy is given by $NC - A$.

$$T_A \propto \frac{1}{NC - A}$$

Hence, (expect this equation other all equations A is the total ACME)

$$\boldsymbol{T_A = \frac{\Upsilon}{Nc - A}}$$

Similarly at NIL limit and beyond, ACME= 0 hence the eq. becomes

$$T_e = \frac{\Upsilon}{Nc}$$

At Y-limit ACME = CME i.e. T = ∞ this is the G coordinate. This T is supplied to all the space. For a universe Dimenta S= ∞, and thus for a specific space the G coordinate is defined as

$G = \phi_{R=0}$ Here R=0 is an identifier for Y-limit.

Time at the λ-limit and beyond

$$T_\lambda = \frac{\Upsilon}{-A}$$

The Total change in time while moving from NIL to λ limit.

$$T_\lambda - T_e = \Delta T = -\frac{\Upsilon(NC + A)}{NCA} = -\frac{\Upsilon(M)}{E^2}$$

Where M is mass effect, E is total energy squared or the product of total ACME and CME.

For any other Coordinate $G^!$ we say the $\phi_{R=0}$ differs by a quantity Q which is ratio of Amount of time '**a'** and the magnitude of time Experiencer.

Further we can also state $G/G^!$ is equal to Q.

Here we spilt up into two branches.

1. Water theory or Time changes (related to ΔT)
2. Dimentas and Time

WATER THEORY OF TIME

The water theory of time considers the movement of time. It considers the convectional flow of time, and is not concerned about the DOX flow, and motion gateway governing the laws of time. It shows total time that exists between or time changes.

As from above we have ΔT this tells the total change of time between the lambda and nil limits.

Apart from this, there exists a time gap or total time which exits between the limits. The time gap is the summation of all time lying between the limits. That is

$$\Upsilon\left(\frac{1}{NC_1 - A_1} + \frac{1}{NC_2 - A_2} + \frac{1}{NC_3 - A_3} + \frac{1}{NC_4 - A_4} + \cdots\cdots\cdots + \frac{1}{NC_n - A_n}\right) = \Upsilon\sum_{i}^{n}\frac{1}{NC_i - A_i}$$

$$\therefore\ \Upsilon\sum_{i}^{n}\frac{1}{NC_i - A_i} = 2Y$$

But we also know, that T_λ is the total time at a lambda limit which also intern is maximum time at the past interval, similarly $T_{emitted}$ is maximum future time, clearly we can say that, 2Y is equal to their addition. Where 2Y is total time lying between the two limits. Correspondingly we have

$$2Y = -\frac{\Upsilon(NC - A)}{NCA}$$

And we also have,

$$2Y = \Upsilon\sum_{i}^{n}\frac{1}{NC_i - A_i}$$

But there exists the Y-limit where NC=A, and the equations collapse. Thus we neglect this point, if at n= H+1 we get NC=A, also at 2H+1 we get the nil limit i.e. on 1 we get lambda limit replacing the summation by integration and summation term by F we get,

$$2Y = \Upsilon\left(\int_{1}^{H} dF + \int_{H}^{2H+1} dF\right)$$

$$\therefore -\frac{(NC - A)}{NCA} = \left(\int_{1}^{H} dF + \int_{H}^{2H+1} dF\right)$$

This can be collectively denoted by $Y_c + Y_p$, similarly for lambda and Nil limits we write λ_c and λ_p, Nil_c and NIL_p.

The respective energy values are:

$$Yc = Yp = -\frac{\Upsilon(NC - A)}{2NCA}$$

$$\lambda c = -\frac{\Upsilon(3NC - A)}{2NCA}$$

$$\lambda p = T\lambda = \frac{\Upsilon}{-A}$$

$$Nilc = \frac{\Upsilon(NC + A)}{NCA}$$

$$Nilp = T_e = \frac{\Upsilon}{Nc}$$

For which the following relations are always satisfied:

1. $\lambda p - \lambda c = Y$
2. $NILc - Nilp = Y$

The fact that $\Delta T = -NILc$ is not new to the theory. This makes up the water theory of time. By using these facts we can calculate time gaps between past present and future specifically not past but lambda limit, not future but NIL-limit. To discuss about Y-limit water theory is insufficient hence we move towards a different version of theory which combines space, to fulfill our needs we have already introduced the G-coordinate and Quantity of time.

THE G COORDINATE AND DIMENTAS

The Euclidean coordinate system is a system which defines space. Whereas the G-coordinate refers to the total time a space can have as a function. Time Domains are glued to every coordinate of space. This refers to such a level of length where the space and time work for the first time together. This length is called dis-sort length (σ). At this level of smallness all lengths smaller that the dis-sort is timeless.

Time needs a specific amount of energy to bind with space. This energy reduces the time entering at the Y-limit. This energy is similar to binding energy.

If $x\ is\ the\ Demagnification\ ratio$ then $x\sigma\ is\ the\ Demagnification$ the Binding energy E_B is directly proportional to demagnification,

$$E_B \propto x\sigma$$

$$\therefore\ \boldsymbol{E_B = Kx\sigma}$$

Here $x = L/\sigma$ and L is the length.

Thus the Magnitude of time experiencer at Y-limit gains a value which is finite. (or G-coordinate is finite)

Further we have,

$$T = \frac{\Upsilon}{-E_B}$$

$$T = \frac{\Upsilon}{-Kx\sigma}$$

Here the Ratio of Υ and K is called Dimenta Function denoted by ω.

$$\phi = T = \frac{\omega}{x\sigma}$$

This happens at all levels of Mass effect. At the NIL and lambda limits it is given by.

At NIL limit,

$$\frac{T_e \phi_e}{T_e - \phi_e} = \frac{\omega}{x\sigma}$$

At lambda limit,

$$\frac{T_\lambda \phi_\lambda}{T_\lambda + \phi_\lambda} = \frac{\omega}{x\sigma}$$

At any point between Nil limit and lambda limit:

$$\frac{T_a \phi_a}{T_a - \phi_a} = \frac{\omega}{x\sigma}$$

You might see apart from Three equation we have also found a equation for Y-limit which was our basic aim. Hence we have defined the G-coordinate and Dimenta. The Domain space varying quantities are a ratio of time experiencers as found above.

MOVING AHEAD WITH DIMENTAS: THE QUANTITIES

As defined earlier the quantities are of two types: inter domain as well as space varying. The inter domain quantities are used to compare time at two different G-coordinates. Specifically one of them is the Y-limit. These quantities are always constant for a given amount of DOX particles N.

The space varying quantities are of two types. Domain space varying and Conditional varying quantities. The Domain space varying quantities are constant. It's a ratio of the two time experiencers. The conditional varying quantity is of great importance. It gives what we experience. The amounts.

Before going to Dimentas let us specify the Quantity:

If '**a**' the amount of time then it differs by a Quantity Q given by:

$$\boldsymbol{a = Q\phi}$$

For Y-limit,

$$\phi = \frac{\omega}{x\sigma}$$

$$\boldsymbol{a = Q\frac{\omega}{x\sigma}}$$

This happens at all levels of mass effect.

DIMENTAS AND THE IMPACT

The Quantity Q must be purely calculated by using the external influencers, namely collectively called Impacts. Impacts are the direct consequences of the theory of relativity. Thus we experience a very low level of time.

The ω is a very important factor. In its true form it is just product of length and total time present in that length. If we consider the amount of time (which is gained by total time experienced in a journey according to special theory of relativity) then we get a Dimenta ω associated with it. (experience Dimentas)

$$\boldsymbol{\omega = la}$$

Also, we know l will be equal to velocity times time, hence we get

$$\boldsymbol{\omega = vat}$$

Properties of Dimenta:

1. They are stationary
2. Two Dimentas might be equal in magnitude but the distances spend and the time taken in the two is not necessarily the same.
3. They can be areal, volumetric too. For e.g. the areal Dimenta is $\omega^2 = sa^2$ and volumetric $\omega^3 = Va^3$.

DIMENSION DIMENTAL AND NON-DIMENTALS (HYPOTHETICAL)

A dimension is defined as a endless pit, but this is just to say, equation wise dimensional zones are the sets of Dimentas which acquire a dimental which is a scalar.

Correspondingly it is not necessary the Time always. For e.g. a Hypothetical Dimental say Dark Dimental which helps universe to remain sustained as a whole will produce its scalar "b" along with time.

$$\omega = l(ab)$$

The unit of Dimenta also changes it becomes Length-Time-Dark, if Dark is unit of measure of dark dimental. Whereas a non-dimension is the same as a dimension but just has got an omega internal value. For example a higher enclosure of dimension is predicted to be a non-dimension thus we write: here D is the upper bound dimental zone existing in non-dimension. The unit also changes accordingly. Ω is upper enclosure.

$$\Omega = \omega D$$

There can be infinitely many dimension enclosures as predicted by CTT. A super space is defined as a space with no dimental zones and no enclosures that is $\omega = 0$. Whereas as a non-dimental is an opposite of that of dimental zones. If η is non-dimental then: where ω is lower enclosure, D is corresponding Dimenta existing in upper enclosure and Ω is upper enclosure.

$$\eta = \Omega \cup \sim\omega$$

Correspondingly we can infinitely as,

$$\eta = \cdots \cup \sim\Omega_1 \cup \sim\Omega_2 \cup \ldots$$

MOTION DIMENTAS

Dimentas, as said are stationary, but they can be moving within in them self. Thus we introduce the motion Dimentas. As per CTT this motion is called a WAVE BACK.

In order to study Dimentas, we use Time of reference. While studying the time we use Dimentas of reference. The Dimentas of reference are such Dimentas where the time always occupies a Unity. Whereas Time of Reference are such Dimentas where size of Dimentas occupies a unity. An ideal Dimenta is where both of them make a unity.

Time reference $\omega = t$

Dimentas of Reference $\omega = l$

Ideal Dimentas $\omega = 1$

This is method is extended till DOX mechanism, Where we use Areal Dimentas to form a volumetric presence for both the types of DOX. The motion Dimentas are said to wave back

so that resultant motion is zero, whereas the change in curvature of them is due to relativity which we are not concerned about.

This motion is self-sustained, i.e. the time factor of Dimenta is itself responsible for this. For a convince we do not consider infinitely complex system, which not only have upper enclosures but also lower making it further complicated. But as per CTT the lower enclosures are equally important. The time flows through all of these making it difficult to realize the origin of our Dimenta. This is what called the Dis-sorted universe.

Let $d\omega = ldt$ here l is constant because Dimenta do not change its length. And dt is a small time in it.

We know that

$$v = \frac{dL}{dt}$$

But it follows that,

$$dt = \frac{d\omega}{l}$$

$$\therefore \boldsymbol{v = l\frac{dL}{d\omega}}$$

For the upper enclosure,

$$dt = \frac{d\Omega}{lD}$$

Hence we get,

$$\boldsymbol{v = lD\frac{dL}{d\Omega}}$$

Further differentiating w.r.t time we also get acceleration associated with it:

$$acceleration = \boldsymbol{l^2\frac{d^2L}{d\omega^2} = l^2D^2\frac{d^2L}{d\Omega^2}}$$

This equation become infinitely complex, when you start considering more higher enclosures, their respective time scalars no longer remain constants, since a creation of lower enclosure happens. Hence I shall not give the intermediate enclosures velocity terms. Also I will not go beyond this binary consideration.

As per CTT, every alternate enclosure is the dimension itself; hence the general form of equation further gets even more complicated which I have not yet derived. This process is collectively

called the Wave back phenomenon. Where the Dimension's boundaries try to coincide the internal Non-dimensional boundaries where the distance between them is L.

CONVERGENCE

Convergence is the closeness of something; here we talk about convergence of Dimentas or Dis-sort length. As said there is one and only one distort length in the complete universe, but each individual distort is considered here.

If ω_1 and ω_2 are two Dimentas then the shortest distance between their associated dis-sort is called convergence length. The convergence length *w* is always less than dis-sort; hence it is a timeless space. This length has very beautiful property the white spaces or the timeless spaces are due to these. But the name convergence is serious.

Convergence not only means close but it can also mean they can touch, or interact with each other. The Dimentas interact with each other freely. Their interaction increases as we go more and more microscopic. The smaller the length the larger the interaction.

Two Dimentas say, ω_1 and ω_2 don't significantly follow the association. Let $\omega_1 = l_1 t_1$ and $\omega_2 = l_2 t_2$ at their convergence (not specifically mixing up) then the resultant will be given as,

$$\omega = (l_1 + l_2)(t_1 + t_2)$$

In general,

$$\omega = (l_1 + l_2 + \ldots + l_n)(t_1 + t_2 + \ldots + t_n)$$

This result only occurs when size of Dimentas is very small significantly close to dis-sort. The Dimenta is not just the product of time and length but actually the Time present in that length. As there is Two DOX associated every time, there are two Dimentas. One of which is not actually Dimenta but instead just an Experience Dimenta which are not that important and fail our need to understand time. Let us consider two cases.

CASE I

Let us say I travel from A to B which is 5 meters away, and I took 3 min to do this. Then as per definition, the experience Dimenta are

$$\omega = 5 \times 3 = 15\ m\ min$$

But more importantly this is not Dimenta. Dimenta need **Total time present** and not the total time experienced. Thus we talk about **Time Experiencers** which theoretically tell total time available for experience. This will be clear from case II

CASE II

Let us say you are stationary sitting at home, still you experience a time, but the length travel is zero this is where the Experience Dimentas fail. Not only the length traveled, Dimentas talk about length available for experience, and thus Dimentas are very unique.

More accurately we relate everything by Quantity that is a factor which is decided by other factors relying outside the theory, especially which can be calculated by Theory of Relativity i.e. impact factors if we could experimentally determine the value of time Experiencer. Correspondingly a length without time is super space but a time without length is domain.

DENSITY OF TIME AND QUANTITY IN TERMS OF DIMENTAS

The density of time is total time lying over a space. It can be linear, areal or volumetric. It is given by:

$$J = \frac{t}{l}$$

In general it is given by,

$$\boldsymbol{J = \frac{t}{bl^n}}$$

Where b is a scalar factor like $\pi, 4\pi, etc$

A general Dimenta $\omega^n = l^n t^n$ and density of time are related by:

$$\boldsymbol{\omega^n = Jbt^{n-1}}$$

The Quantity of time for two Dimentas, $\omega_1 = l\phi$ and $\omega_2 = l\text{Q}\phi$ where ω_1 *is the dimenta* . And ω_2 is Experience Dimenta,

$$\omega_1 - \omega_2 = l\phi - l\text{Q}\phi$$

Solving further we get,

$$\boldsymbol{\frac{\omega_2}{\omega_1} = Q}$$

For different lengths:

$$\boldsymbol{\frac{\omega_2}{\omega_1} = \frac{l_2}{l_1} Q}$$

Here the ratio of length is Length associated quantity.

GENERAL INTERACTION THEORY

Apart from our normal theory, the BAR is given great importance in theory. BAR is hypothetical and they come under the GIT or general interaction theory. Here we have lot of undefined things, and probably separating this from CTT is beneficial. It is an attempt to know why space-time are bonded or why some things interact with each other mathematically. To be clear it's a failure to specify why some things interact. I shall not specify about BARS because of lack of mathematical support and unessential predictions.

We have two methods,

1. The Single component interaction method. (SCI)
2. Third Body interaction method. (TBI)

More convenient is TBI. I will show both of them.

There are two fundamental interactions, 1. Combination and 2.Decombination

A Function $f(x)$ is a Combination component if it interacts with a component y such that $yf(x) = F(xy)$ whereas it is a Decombination interaction if $yf(x) = yxf(\sim x)$. Thus we can write:

$$\boldsymbol{C(x) \equiv yf(x) = F(xy)}$$

$$\boldsymbol{D(x) \equiv yf(x) = yxf(\sim x)}$$

This method is good but prohibits independent nature of components. The other interaction go far more complicated and the functions increase for example, a zero approach interaction is given by

$$\boldsymbol{Z(x) \equiv C(x).D(x)}$$

The properties of each function are different for example a Zero-Combination interaction always results in a Combination component or same way to Decombination. $C(x) \equiv Z(x).C(x)$ Defining functions every time is a major problem hence we introduce the TBI or third body interaction method.

TBI sets a surface called P-surface where all interactions take place. The general p-surface is defined by product of resultant interaction component and a third body consequence called SET function. SET function only accepts numbers as effects by a particular interaction.

A combination component combines with third body taking away its essential unit. Thus SET for it is always a 1. Similarly Decombination puts up a unit and hence has a SET -1. The resultant of Combination is Zero as nothing is left unaffected, whereas the resultant of Decombination is 1 as component is unaffected.

We write:

For a combination component x, and plane of interaction p

$$\boldsymbol{P(x) = 0\ SET\ 1}$$

For a Decombination component x,

$$\boldsymbol{P(x) = 1\ SET - 1}$$

As a general component x we can write

$$\boldsymbol{P(x) = A\ SET\ B}$$

As a result we are now free to interact any components, for a better generalization there are N-combiners or N-Decombiners, which put effects as $SET\ N\ and\ SET\ -N$ respectively.

For example let us say a component x and y are combiners with SET effects as $\alpha\ and\ \beta$ then the overall interaction is given by $P(xy) = 0\ SET\ \alpha + \beta$ similar happens if both are Decombination as $P(xy) = 1\ SET - (\alpha + \beta)$.

As earlier in SCI method if we interact one α −combination and one β −decombination components then we get a zero approach component, in a TBI we can independently define a zero approach component of set effect SET B or can also show that it is a interacted form of a α −combination and one β −decombination.

$$\boldsymbol{P(z) = P\ SET\ B}$$

The P remains unaffected as in a zero approach component no third body is affected only set effects are produced. As a interaction of α −combination and one β −decombination we write

$$\boldsymbol{P(xy) = P\ SET\alpha - \beta}$$

Clearly we can see $\boldsymbol{B = \alpha - \beta}$. Whereas resultant effects can fundamentally be only P, 0 or 1.

NON FUNDAMENTAL INTERACTIONS

The non-fundamental interactions are all the interactions which are made due to interaction of a Combination or Decombination components. Even the Zero approach is a non-fundamental. More than interaction we will now focus on Non-interaction. I named them Classical and Non-classical interaction. Here we talk about multiple components instead of single hence it is a multiple component interaction

CLASSICAL AND NON-CLASSICAL INTERACTION (MULTIPLE COMPONENT)

If two or more components interact to produce only SET effects then it is called classical interaction. Also $B = sum\ of\ all\ set\ effects$.

Whereas in non-classical interaction $B \neq sum\ of\ all\ set\ effects$.

Classical interaction's example is Zero approach. And we define it as:

$$P(x_1x_2x_3 \ldots x_n) = P\ SET\ (e_1 + e_2 + \ldots + e_n)$$

Whereas if among $e_1 + e_2 + \ldots + e_n$ effects $d_1 + d_2 + \ldots + d_n$ number of effects is not seen then the Non-classical is defined as:

$$P(x_1 x_2 x_3 \ldots x_n) = P\ SET\ \{(e_1 + e_2 + \ldots + e_n) - (d_1 + d_2 + \ldots + d_n)\}$$

When number of non-set effects is equal to number of set effects then

$$P(x_1 x_2 x_3 \ldots x_n) = P\ SET\ 0$$

ANALOGY BETWEEN CONSTANTS

There is a serious analogy between planks quantum theory and the domain energy equation. It's not just analogy but the same equation. It's right now impossible to determine whether it's a same equation or not. Might be the constants value be different. Consider this

$$\boldsymbol{T_A = \frac{\Upsilon}{Nc - A}}$$

Rearranging to:

$$\boldsymbol{Nc - A = \frac{\Upsilon}{T_A}}$$

$$\boldsymbol{Nc - A = \Upsilon f}$$

Where f is frequency this is similar to:

$$\boldsymbol{E = hv}$$

But one thing is clear, the domain theory prohibits frequency. Time here is emerging and the domain is not conducted under the Euclidean space or also do not have space. This domain is independent of matter interaction. Hence the possibility of same equation is terminated.

But there is serious possibility that $\boldsymbol{\Upsilon}$ our constant might be planks constant. Or might be a constant with different value, or might be full of surprises.

We have one more constant to be discussed the K arising as a consequence to join space with time. It has a unit J/m. $\boldsymbol{(E_B = Kx\sigma)}$

A interesting factor, Dimenta suggest that it must have a constant value, that is we might divide our universe in just one size of Dimenta since it's a division of two constants, the negative value comes because that time is extracted from domain. And this also proves the reverse motion of time. Probably we don't know values of both so predicting is useless. Here we end up with our water theory of time.

The railway theory don't have equations rather it's mere addition and subtraction by considering time as frames. This helps to understand the law of time which correctly solves grandfather paradox.

We will see the DOX mechanism in some other document.

FOOTNOTES OR REFRENCES

[1] Link to Combined theory of time:

Combined theory of time or http://www.vixra.org/abs/1809.0445