$8\ Theory$ – $COMPLETE\ OVERVIEW$

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***Table of content*:**

$\underline{\boldsymbol{Fermions, Manifolds\ and\ Arbitrary\ Variations}}$

Define a Lorentz manifold

$$\boldsymbol{s} = (\boldsymbol{M}, \boldsymbol{g})$$

Use it to assemble an Euler Lagrange Equation:

$$L = (s, s', t)$$

$$\boldsymbol{\frac{\partial L}{\partial s} - \frac{\partial L}{\partial s'} * \frac{d}{dt} = 0}$$

Develop the last equation:

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

If the Lorenztion manifold to be stationary and no data is attainable from the first three terms, we can require the manifold to those two conditions

:

$$\frac{\partial g}{\partial t} = 0 \quad and \qquad - \frac{\partial \partial g'}{\partial \partial t} = 0$$

If these two are hold to be true, we have areas of extremum curvature on the manifold and negative time invariant acceleration. The demand of extrunum curvature to stay as they are overtime means the acceleration cannot affect them – if so, directed away from them. This in agreement with what we speculate as "dark energy".

$$\left[\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\right]\frac{\partial g}{\partial t}\delta g - \left[\frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\right]\frac{\partial \partial g'}{\partial \partial t}\delta g' = 0$$

δg *As amount of arbitrary variations, which by demands of stationarity we require to vanish*:

$\delta g1 + \delta g2 \ldots = \delta g$

$\delta g = 0$

$$\delta g1 + \delta g2 > 0$$

$$\delta g3 + \delta g4 < 0$$

If

$$\delta g1 + \delta g2 + \delta g3 + \delta g4 \neq 0$$

Than the overall series cannot vanish, by that logic we need equal amounts of plus and minuses. The overall amount must be even and summed as zero.

Suppose that we had three distinct elements, two pluses and minus:

$\delta g1 + \delta g2 + \delta g3 \ > 0$

or

$\delta g1 + \delta g2 + \delta g3 < 0$

Demanding the series to vanish this will defy the result, and so there could not be three distinct elements in the series, else the overall series will not vanish.

As a result of those sceneries, we require the series to have an even amount of variation elements, manifesting as two distinct elements in the series, which differ in sign.

If we allow those sub elements in the series to vary as well, and by the above reasoning, there are only two elements in the series, they are varying in a discrete way, or forming a group.

Let it be only four elements in the series and one of the pluses just changed its nature

$\boldsymbol{O}: \delta g1 \to \delta g2$

$\delta g1 + \delta g1 + \delta g2 + \delta g2 = 0$

To:

$\delta g1 + \delta g2 + \delta g2 + \delta g2 \neq 0$

There must be a way to bring it back to where it was, so the overall series can vanish, it takes another map, on the varying element to bring it back to where it was.

Y: $\delta g2 \to \delta g1$

Therefore, to bring an element to itself given only two varying elements in the series we need two distinct maps, which attach a varying element to itself, by a threefold combination. $\delta g1(O)\delta g2(Y)\delta g1$ *For example.*

Even though the sub elements in the series are varying, the overall series can vanish.

Now, count all the ways of possible combinations of those elements. We are going to analyze by the integral signs. Since it is a group, there is a natural map, which change an element to itself. One built his analysis firstly on those natural maps.

So:

$$(1(e)1(e)1)$$

$$2(e)2(e)2$$

$$(221)$$

$$(112)$$

$$(211)$$

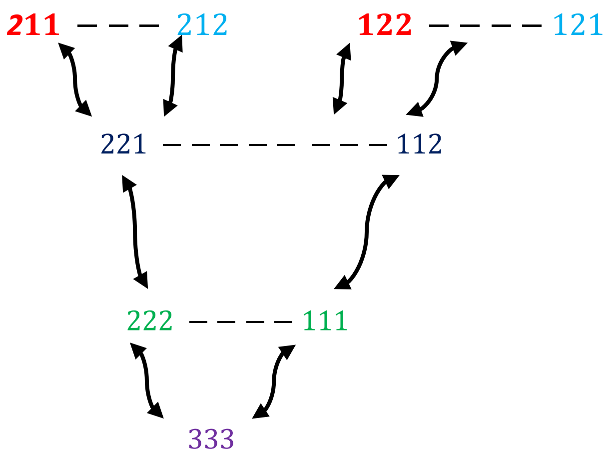
$$(122)$$

$$(212)$$

$$(121)$$

The first two combinations are by the natural maps and one used them to build the other combinations. Overall, there are eight such combinations and additional one arrow combination, which yield (333).

Here is how one built it, starting from those two natural maps. (Arrows to variations, colors to pairings):



Therefore, we have Lorenztion manifold with arbitrary variations, which turn into matter based on that idea.

One does not know whether these are the actually variations, as the mathematics does not entail any details about that. Therefore, the graph could be inaccurate in elements order. The colors meant to elements pairing.

***Reader does not have to agree with what one did,** but as one will calculate the ratios of all the forces known, one kindly asks the reader to keep reading as some truth seem to obey the reasoning line one is building.*

Deriving the Grand Coupling Constant Equation

***Theorem** (1) – nature will not allow a prime amount of variation to appear by itself. Define prime to be (2n+1) variations not divisible by minimal primes {2, 3}.*

1.1) Prime amounts appear in pairs.

***Theorem** (2): Nature will generate force if a **prime net amount of arbitrary variation will appear**. Net variations will appear when combine two amounts of prime variations.*

Two does not appear, as it is an even amount of variations, which vanish.

$Define\ N(V) as\ the\ series\ of\ prime\ net\ variations\ and\ the\ number\ one.$

$$N\,(V) = \ 2V + 1 \qquad\qquad V \geq 0$$

$Count\ all\ the\ prime\ pairs\ of\ \ variations,$

$$(3,3)\ \ (3,5)\ \ \ (3,7)\ \ (3,11), (3,13) \ldots$$

$$(5,3)\ \ (5,5)\ \ (5,7)\ \ (5,11)\ \ (5,13)\ \ \ldots$$

$$(7,3)\ \ \ (7,5)\ \ \ \ (7,7)\ \ (7,11)\ \ \ (7,13)\ \ \ldots$$

$$\ldots.$$

$$(29,19)(29,23), (29,29), (29,31) \ldots$$

*That is a hard work, but here is the great part. **We only need to do it twice** to find what nature does repeatedly.*

*Since we have only two varying elements in the series, we can eliminate almost all the options, as we require obtaining **a sum that is divisible by two <u>and then</u> yields an odd number divisible by three.** By The following reasoning:*

Two as we have only two varying elements. Three as these elements create a certain amount of threefold combinations.

The sums satisfying the condition is $(5,13)\ or\ (7,11)\ and\ (29,31)$.

Of course, there are more as $N\ (V)$ *has no limit, but as one mentioned, it took two pairs to understand the principle:*

$\boldsymbol{Theorem}\ (\mathbf{3})\ -$
$each\ prime\ pair\ should\ have\ a\ net\ variation\ element\ of\ N(V)\ proportional$

$to\ Total\ Varitations\ value\ divided\ by\ two.$

$This\ will\ be\ vivid\ with\ actual\ examples$:

$\boldsymbol{Analyze\ the}\ (\mathbf{7}, \mathbf{11})\ \boldsymbol{Total\ variations\ pair\ with\ net\ variation}\ (+\mathbf{1})$:

$Total\ variations\ sum\ is\ divisible\ by\ two$:

$18/2\ =\ 9$

$And\ than\ by\ three$

$9/3 = 3$

$We\ know\ that\ we\ have\ net\ variations\ of\ (+1)\ so\ it\ can\ be\ extracted\ to\ yield$:

$$F(1) = 8\ +\ 1$$

$However, even\ amounts\ of\ variations\ vanish\ so\ we\ can\ ignore\ the\ element\ 8\ and\ write$:

$$F(1) =\ 1$$

$\boldsymbol{Analyze\ the\ next\ pair\ of\ Total\ Variation}\ (\mathbf{29}\ , \mathbf{31})\ \boldsymbol{with\ net\ variation}: (+\mathbf{3})$

$$29\ +\ 31\ =\ 60$$

$$60/2\ =\ 30$$

$In\ addition, three\ divisible. We\ know\ we\ have\ three\ net\ variations\ so\ extract$:

$$27 +\ 3$$

$\boldsymbol{Now\ that\ is\ all}$ $you\ need\ to\ complete\ the\ series\ and\ calculate\ the$ $\boldsymbol{next\ element}$:

$Notice\ her\ ingenuity$:

$$27 = 24 + (3)$$

$$(8 * 3) = 24$$

$obtain\ the\ ratio$:

$$[8 + 1]: [27 + 3] = [8 + 1]: [24 + (3)] + 3$$

$$[8 + 1]: [27 + 3] = [8 + 1]: [(\mathbf{8} * \mathbf{3}) + (\mathbf{3})] + 3$$

Next element $\mathrm{V} = 2$ and $\mathrm{N(V)} = +5$ **so if the overall idea to be correct**

We take this element, multiply by the even sum of the previous element,

Add extra invariant $(\mathbf{3})$, and we know we need add the extracted $\mathrm{N(V)}$.

$$[(\mathbf{24} * \mathbf{5}) + (\mathbf{3})] + \mathbf{5} = \mathbf{128}.$$

$Stunning.\ \ Without\ any\ need\ for\ searching\ for\ prime\ pair. We\ found\ the\ spell.$

N$ext\ in\ line$:

$$[(120 * 7) + (3)] + 7 = 850$$

$$[(840 * 11) + (3)] + 11 = 9254$$

$Nature\ is\ than\ the$ $\boldsymbol{interplay\ between\ total\ arbitrary\ variations\ to\ net\ variation}.$

$To\ calculte\ the\ \ magnitude$ of an $element\ R$:

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254..$$

$\underline{\textbf{\textit{Overview of reasoning}}}$:

Axiom *– prime amount of arbitrary variations pair to each other*

Their overall sum must be dividable by two and three

Two distinct elements, which create threefold combinations

Define generated force as prime net variation in which we associate $N(V)$ *elementt*

$\frac{total\ variations}{2} \propto\ to\ N(V)\ element\ by\ the\ relative\ size\ of\ total\ pairing$

Net variation function cannot contain an even, as it will vanish

We searched $for\ the\ first\ two\ prime\ pairs\ and\ derived\ 8+(1)\ and\ \ 27+(3)$

We saw that nature multiply the even sum by the next element of N(V)

We found the invariant (3) element.

We obtained a number to which we add the extracted net variation

We calculated the next element to be exactly 128 and the two next

$$8+(1):(24+(3))+3:(120+(3))+5:(840+(3))+7\ldots$$

$$(1):(30):(128):(850):(9254)\ldots$$

Important note: we can move from one element to another in the series of N (V)by assuming that nature took care of all prime variations by their order. So by analyzing the second pair we assume no more net prime variations of $(+1)$.

Predictions and Conclusions

There are infinite variaty of forces, *one to each prime number of* $N(V)$.

The clusters of total variations grow much more rapidly than the net variations.

The larger the cluster, the weaker the force.

The magnitude of forces manifested an in infinite series of ratios

1: 30: 128: 850: 9254 … *by the expression*:

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\ 30{:}\ 128{:}\ 850{:}\ 9254.$$

The element of (3) *makes the difference and preventing arbitary variations to turn into Matter.*

Gravity is just another force, must be extremely weak, as many elements are varying.

All the forces *are of the same hand, nature is governed by incredibile beauty and reason.*

Possible meanings of the Majestic (3)

Option 1

The ***Invariant three (3) as a cause***. *Notice that all the element within the closed term* $(8*..)$ *are two and three divisible to vanish into matter. The invariant* (3) *prevents it completely and than as a result a net variation will appear. The net variation is proportional to the right element in the bracket* $(8*3) \propto 3$ *and* $(24*5) \propto 5$.

Option 2

The ***Invariant three (3) as a result*** – *There are perfect clusters of variations such as* $(8*3), (24*5)$ *which experience additional net variation causing them to destabilize. The result is manifested in the invariant* (3). *The additional variation could effect them could be external. Less likeable option.*

It is less likeable as we can them create mixutres $(8 * 3)$ *to destabilize by* $+5$ *net variations, and yield invariant* (3) *and all the beauty in which we attained than will be lost.*

<u>Option 3</u>

The ***Invariant three (3) and net variation as duals*** *– both appear at the same time and they are related to each other by more fundamental relation, which is not attainable nor explainable. Even though we found a jewl, many quesions still stand unanswered.*

Why the invariant (3) appear as it is and do not change ?

Of course that the real answer to that question is that one does not know. However, one can guess and say that (3) *is the smallest odd prime.*

If we assume that nature is lagranigan oriented, it might be the minimal way to destabilize the cluster of potential matter. Why add (37) *additional variations when only* (3) *is needed* ?

Its a logical arguement not a proof, and therefore rightfully argued by reader.
One was trying to argue that (3) *is a Prime minima, that's why it is invariant in the series.*
Remember that even variations vanish, so two is not an option.

$\boldsymbol{Correlating\ The\ Majestic\ (3)\ To\ Spin\ \left(\frac{1}{2}\right)\ and\ Matter}$

$In\ the\ paper\ about\ primes, we\ have\ shown\ that\ they\ create\ a\ non\ abelian\ group\ with$ $\frac{1}{2}\ as\ generator, by\ using\ the\ anti-commution\ relation\ and\ vanishing\ of\ even$ $amounts\ of\ variation.\ It\ recently\ become\ evident\ to\ one\ that\ we\ can\ represent$ $each\ element\ in\ the\ series\ in\ the\ following\ way:$

$$[(8*3)+(3)] \to \left[2\mathrm{N}1+\frac{1}{2}\right]$$

$$[(24*5)+(3)] \to \left[2\mathrm{N}2+\frac{1}{2}\right]$$

$$[(120*7)+(3)] \to \left[2\mathrm{N}3+\frac{1}{2}\right]$$

$Since\ (3)\ is\ a\ prime, and\ aligned\ on\ the\ prime\ ring\ located\ on\ critical\ line\ of\ \frac{1}{2}.\ The$ $sums\ along\ side\ of\ it\ are\ even\ sums\ such\ as\ 8, 24, 120\ and\ so\ on.\ These\ expressions$ $are\ interesting\ as\ one\ believes\ they\ represent\ the\ notion\ of\ matter\ or\ fermions.$

$Notice\ that\ we\ omitted\ the\ additional\ net\ Variation\ which\ is\ also\ prime.$ $meaning\ its\ also\ on\ the\ Prime\ Ring\ Located\ on\ \frac{1}{2}\ .Overall:$

$$[(8*3)+(3)]+3 \to \left[2\mathrm{N}1+\frac{1}{2}\right]+\frac{1}{2}$$

$$[(24*5)+(3)]+5 \to \left[2\mathrm{N}2+\frac{1}{2}\right]+\frac{1}{2}$$

$$[(120*7)+(3)]+7 \to \left[2\mathrm{N}3+\frac{1}{2}\right]+\frac{1}{2}$$

So the construction within the parenthsis is prime but the oveall additional net is changing it, and making it: $\left(\frac{1}{2}+\frac{1}{2}\right)=1$. *So the overall* $1:30:128$ *will have to do with certain elements that have element* $\rightarrow 1$.

We alraedy knows these are bosons, as we found the coupling constants series. If so, than the rest of the terms are fermions, As only $\left(\frac{1}{2}\right)$ *is there.*

so Its the Majestic $(3) \rightarrow$ *in this paper:* $\left(\frac{1}{2}\right)$ *element To destabilize Perfect clusters of variations and causing a net variation to appear. Notice that one chose the first option in regards to the meaning of the invariant* (3), *As we had in part* (2) *three elements to it's meaning.*

We have proved that the Majestic (3) *is Spin. We also proved, that bosons will propage within variation clusters destabilized by* $\left(\frac{1}{2}\right)$, *or matter. These are Non trivial statements. We only use one equation, not experiment nor inherited knowleadge.* ***Using that frmework we can see why bosons will propagate within fermions. It has to be that way.***

Since Its invariant, all matter must have the same spin $\rightarrow \frac{\mathbf{1}}{\mathbf{2}}$.

So $(2N)$ *are variartion clusters, the Majestic* (3) *is really a destabilizing facotr which is spin* $\left(\frac{1}{2}\right)$ *yielding matter. As a result of that process a boson will propagate from within the fermion. The nature of the boson is correlated to right element of the term:* $(8*3)\rightarrow 3$ *(weak particle),* $(24*5)\rightarrow 5$ *or a photon, so on.*

$If\ we\ assosicate\ a\ fermion\ with\ \left[2n+\frac{1}{2}\right] than\ to\ turn\ a\ boson\ into\ a\ fermion$

$\left[2n+\frac{1}{2}\right]+\frac{1}{2}\rightarrow\ \left[2n+\frac{1}{2}\right], we\ will\ need\ to\ eliminate\ the\ net\ variation\ alone, but\ the$

$net\ variation\ is\ the\ result\ of\ the\ destabilizing\ factor\ \left(\frac{1}{2}\right) within\ the\ parenthsis.$

$Can\ we\ trap\ a\ boson, revrese\ its\ momenta\ direction\ and\ make\ it\ propagte\ inversly$
$into\ The\ fermion\ ?\ Is\ it\ possible\ to\ know\ where\ the\ boson\ even\ is\ ?$
$Suppose\ it\ was\ done.\ We\ only\ eliminated\ the\ N(V)\ and\ not\ the\ destabilizing\ facor\ \left(\frac{1}{2}\right).$
$so\ it\ will\ propagte\ an\ additional\ photon, since\ they\ are\ all\ the\ same, we\ can\ say$
nature 'bounced the photon back'.

This framwork, SUSY is impossible *but* for a different reason, compared to one's previous $arguements\ that\ both\ \big(Invariant\ 3\ and\ the\ added\ N(V)\big)\ are\ needed\ to\ be\ eliminated.$

$Thus, the\ destabilizing\ facor\ \left(\frac{1}{2}\right)\ or\ the$ "Majestic (3)" $Allow\ us\ to\ construct\ the\ following$ $framewrok\ about\ nature$:

$(2N\ variations)\rightarrow Spin\ 0$

$(2N\ variations+3)\rightarrow Matter\ with\ spin\ (\frac{1}{2})$

$(2N\ variations+3)+N(V)\rightarrow Bosons\ with\ spin\ (1)$

$(2N\ variations+3)+N(V1)+\ N(V2)\ +\cdots\ \rightarrow boson\ with\ higher\ spin\ integers$

$\underline{\boldsymbol{Majestic\ (3)\ as\ The\ Electron}}$

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\ 30{:}\ 128{:}\ 850{:}\ 9254\ \ldots$$

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

.....

$$[(8 * 3) + (3)] \rightarrow \left[2\text{N}1 + \frac{1}{2}\right]$$

$$[(24 * 5) + (3)] \rightarrow \left[2\text{N}2 + \frac{1}{2}\right]$$

$$[(120 * 7) + (3)] \rightarrow \left[2\text{N}3 + \frac{1}{2}\right]$$

$$[(8 * 3) + (3)] + 3 \rightarrow \left[2\text{N}1 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(24 * 5) + (3)] + 5 \rightarrow \left[2\text{N}2 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(120 * 7) + (3)] + 7 \rightarrow \left[2\text{N}3 + \frac{1}{2}\right] + \frac{1}{2}$$

In previous paper, (part three) we called the $\left(\frac{1}{2}\right)$ *an element To destabilize Perfect clusters of variations and causing a net variation to appear.* *In this paper we can* ***call it the electron***.

$$[(24 * 5) + (3)] + 5 \rightarrow \left[2\text{N}2 + \mathbf{\frac{1}{2}}\right] + \frac{1}{2}$$

$2N2 \rightarrow Fermions. \quad perfect\ variations\ to\ vanish\ into\ matter$

$\mathbf{\frac{1}{2}} \rightarrow$ $electron\ to$ $destabilize\ the\ perfect\ 2N2\ and\ prevent\ it\ from\ vanishing\ into\ matter$

$\frac{1}{2} \rightarrow the\ result\ is\ the\ net\ variation\ which\ is\ also\ on\ the\ critical\ line\ of\ the\ primes.$

$\left[2\text{N}2 + \mathbf{\frac{1}{2}}\right] + \frac{1}{2} = \mathbf{2N2 + 1} \rightarrow Probability\ of\ boson\ emittion, in\ that\ case\ the\ photon.$

$When\ we\ first\ discover\ the\ coupling\ constant\ equation, we\ only\ saw\ the\ analytical$
$aspect, by\ N(V)\ and\ the\ ratio\ between\ the\ total\ variations\ to\ net\ variations.$

$However, by\ setting\ the\ equation\ on\ the\ geometrical\ relam\ and\ examining\ the\ critical$
$line\ of\ the\ primes, we\ can\ get\ a\ deeper\ insight\ to\ what's\ going\ on.$

We are able to analyze the trait of spin, we can understand why bosons have spin 1 and the Invariant (3) spin (1/2). Therefore, it is the electron, which causes the boson propagation from clusters Of Potential matter.

$Sure, we\ knew\ that, but\ we\ did\ not\ have\ the\ Mathemtical\ equation\ to\ describe\ it.$
$The\ coupling\ constant\ equation\ has\ than\ another\ powerful\ use;\ it\ describes\ what\ it$
$going\ on\ in\ elementary\ \ level, not\ just\ the\ magnitude\ of\ the\ interactions.$
$It\ was\ only\ available\ to\ us\ when\ we\ examined\ the\ geometrical\ realm.$

Please notice that the electron is inside potential cluster $\left[2\text{N}2 + \mathbf{\frac{1}{2}}\right]$ $so\ it\ we\ would\ not\ be$
$.\ able\ to\ know\ where\ it\ is\ within\ the\ cluser, it\ blends\ in\ to\ it\ [120 + 3] = 123$

$Therefore, that\ is\ in\ agreement\ with\ what\ we\ know\ in\ QM\ as\ the\ "Uncertainty\ principle".$

$Which\ comes\ to\ an\ agreement\ with\ the\ entire\ QM\ framework.$

$The\ Complete\ Picure$:

$Perfect\ clusters\ of\ variations \rightarrow 2N$

$destabilize$ $the\ perfect\ 2N$ is the majestic $(3) \rightarrow \left(\frac{1}{2}\right) \rightarrow electron.\ blends\ in$

$the\ potential\ cluster\ to\ yield\ in\ that\ case \rightarrow 123.$

$The\ result\ is\ the\ net\ variation\ which\ is\ also\ Prime\ \ N(V) \rightarrow \left(\frac{1}{2}\right) \rightarrow\ +(5)$

$\left[2N + \left(\frac{1}{2}\right)\right] + \left(\frac{1}{2}\right) \rightarrow\ probability\ to\ an\ emission\ of\ a\ boson.The\ overall\ result\ yields$

$123 + 5 = 128.$

$We\ have\ taken\ the\ third\ element\ in\ the\ series, as\ we\ are\ familiar\ with\ the\ nature$

$Of\ the\ electrons\ due\ to\ the\ great\ minds\ of\ the\ past\ century, but\ the\ following\ result\ would$

$Apply\ to\ each\ element\ in\ the\ series\ from\ the\ second\ and\ above.$

$\underline{\textbf{\textit{Weak Interaction Negative Left orientation}}}$

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254 \ldots$$

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

$$\ldots.$$

$$[(8 * 3) + (3)] \rightarrow \left[2\mathrm{N}1 + \frac{1}{2}\right]$$

$$[(24 * 5) + (3)] \rightarrow \left[2\mathrm{N}2 + \frac{1}{2}\right]$$

$$[(120 * 7) + (3)] \rightarrow \left[2\mathrm{N}3 + \frac{1}{2}\right]$$

$$[(8 * 3) + (3)] + 3 \rightarrow \left[2\mathrm{N}1 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(24 * 5) + (3)] + 5 \rightarrow \left[2\mathrm{N}2 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(120 * 7) + (3)] + 7 \rightarrow \left[2\mathrm{N}3 + \frac{1}{2}\right] + \frac{1}{2}$$

notice that each term in the series within the Parenthesis is prime → 123, 843,9243…
as one did not calculate the entire series he is going to assume that is will be true in regard to each higher element in the series. we are leaving out the net variation $N(V)$, *in this paper, it's not a significant to our matter.*

$notice\ that\ the\ only\ term\ which\ is\ not\ a\ prime\ after\ added\ the\ Majestic\ (3)\ or\ spin\ \left(\frac{1}{2}\right)$

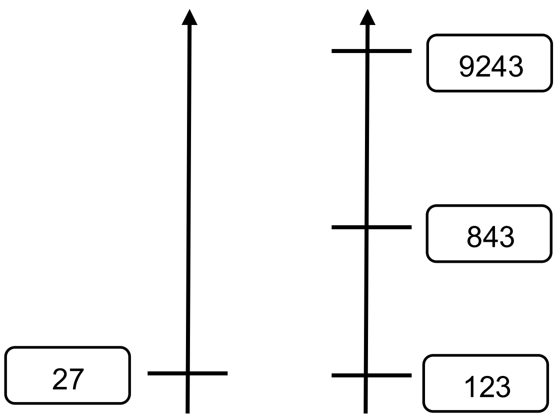
$is\ the\ second\ element\ in\ the\ series, in\ which\ we\ associate\ with\ the\ weak\ interaction.$

$[(8 * 3) + (3)] = 27$

As the series is ever increasing and each term inside the parenthesis is creating an higher prime Than the previous element, in order to the weak interaction to be of the same nature of the rest Of the forces, we would need that the sum of the parenthesis to be a prime, we look for the closest higher prime:

$[(8 * 3) + (3)] \rightarrow 29$

So in order to be like the rest of the forces. Meaning to have a prime inside a parenthesis, it lacks a Certain amount of variation. If we associate each interaction to be invariant to direction – and the Cause of such a trait to be the prime term inside the parenthesis, than the weak interaction would Differ by its nature.



The fact that the term inside the parenthesis is not on the critical line of the primes, but left To it, can explain why the weak interaction is left oriented and differ by its nature by the rest In terms of its spin.

We have proved that the majestic (3) is really a different representation of Spin, which destabilizes Clusters of perfect variations causing the N (V) to appear, which overall yield a propagation of a Boson from the fermion, and therefore gives us the beautiful series of coupling constants.

$$If\ all\ the\ Terms\ on\ the\ critical\ line\ of\ primes\ are\ fermions\ with\ spin\ \left(\frac{1}{2}\right)\ than\ the\ term\ of\ the\ weak\ interaction\ would\ be\ \left(-\frac{1}{2}\right)\ or\ \left(-\frac{3}{2}\right), It's\ really\ a\ mathmatical\ prediction, as\ we\ did\ not\ use\ any\ data\ from\ experiment\ nor\ the\ names\ of\ the\ particles\ we\ know\ to\ participate\ in\ the\ weak\ interaction.$$

$$27 - 29 = -2$$

$$\left(\frac{1}{2} - 2\right) = -\frac{3}{2}$$

$\underline{\boldsymbol{Mathmatical}\ \mathbf{Duality}\ \boldsymbol{Of\ Forces - Virtual\ Variations}}$

$we\ will\ take\ the\ equation\ built\ and\ first\ three\ developments$:

$8 + (1): [(8 * 3) + (3)] + 3: [(24 * 5) + (3)] + 5$

The idea: we will allow the net variations to vary, and when they have the

same value, than the expressions inside the parentheses will become scalar multiple:

this will be done by using the idea of virtual variations:

$[(24 * 5) + (3)] + 5 \rightarrow\ [(24 * 5) + (3)] + 3$

$notice\ that\ now\ the\ third\ is\ a\ scalar\ multiple\ of\ the\ second\ by\ a\ factor\ of$ 5:

$[(24 * 5) + (3)] + 3$

$[(8 * 3) + (3)] + 3$

$so\ the\ weak\ and\ the\ electric\ are\ differing\ now\ by\ a\ scalar, that's\ simply\ beautiful.$

$but\ the\ strong\ force\ just\ accepted\ that\ extra\ two\ variations\ so\ its\ just\ become$:

$8 + (1) + 2 \rightarrow 8 + (1).\ As\ even\ amounts\ of\ variations\ vanish.\ It\ does\ not\ effect\ it.$

$it\ will\ be\ permited.$

$we\ can\ try\ something\ more\ intresting, and\ that's\ the\ real\ purpuse\ of\ the\ part$:

$[(24 * 5) + (3)] + 5 \rightarrow\ [(24 * 5) + (3)] + \mathbf{2}$

$8 + (1) + 3$

$now\ this\ will\ ruin\ the\ duality\ and\ the\ series, the\ weak\ and\ the\ electric\ are\ not$

$isomorphic, and\ the\ strong\ just\ got\ a\ prime\ amount\ of\ variations\ which\ can\ not$

$vanish.$

$To\ solve\ that\ we\ can\ define\ a\ Virtual\ exchange\ of\ varitation \rightarrow (1v).$

$[8 + (1)] + 3 - (\mathbf{1v}){:}\ [(24 * 5) + (3)] + \mathbf{3}$

The real variations are (+3) but to ensure the nature of the strong force, there is A virtual exchange of one variation, marked in color. For a very short period Of time, the strong is now a scalar multiple of the other two. Overall, they have $the\ same\ prime\ amount\ of\ variations\ N(V) = +(3).$

$$[8 + (1)] + 3 - (\mathbf{1v}): \quad [(8 * 3) + (3)] + 3 : \quad [(24 * 5) + (3)] + \mathbf{3}$$

We can say that there are three real exchanges and one virtual, so overall four exchanges, Which causes all the forces to align on the $N(V) = +(3)$. Taking the average of the Sum: $\frac{4}{2} = 2\ net.$

The converging value of the those exchanges will modify the middle element:

Since we want to keep the prime net variation $N(V) = +3[(8 * 3) + (3)] + 3.$

As it is, to ensure duality, and we can't touch the "invariant" (3), we add this (+2), to $the\ ((8 * 3) + 2) = 26.$

The point where they three aligned will be $24 + 2$ variations. certain agreement with this Number exist, as far as one knows.

$\underline{\boldsymbol{Proof: The\ Pauli\ Exclusion\ Principle}}$

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254\ \ldots$$

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

$$[(8 * 3) + (3)] + 3 \rightarrow \left[2\mathrm{N}1 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(24 * 5) + (3)] + 5 \rightarrow \left[2\mathrm{N}2 + \frac{1}{2}\right] + \frac{1}{2}$$

$$[(120 * 7) + (3)] + 7 \rightarrow \left[2\mathrm{N}3 + \frac{1}{2}\right] + \frac{1}{2}$$

We have seen that we can change the term outside the parenthesis, and so we can reach Duality between the forces. When we did it in the first three terms, we saw that their duality Is exactly on 24+2 variations, which is in agreement with what we know in other theories of GUT.

We briefly mention in that paper, that we cannot touch the invariant (3). This will be the subject Of this paper. If we for example combine:

$$[(24 * 5) + (3)] + 5 \pm \text{INTEGER} \ldots$$

We can switch and change the terms outside the parenthesis, as those are net variations and they Do not seem to obey to any strict rules. However, we could not touch the invariant (3) and now we Will examine deeply the reason.

$$[(24 * 5) + (3) + (3)] + 5 = [(24 * 5) + Even)] + 5$$

$$Even = 0$$

$$[(24 * 5) + 0)] + 5 \rightarrow \text{Impossible}$$

As even amount of variations vanish. Remember that the invariant (3) is the cause, It is the destabilizing factor yielding a net variation. In the case of the third element it's the Electron. So using that framework, we can see why we cannot combine two electrons or invariant (3) Elements together.

The term than becomes meaningless, a photon cannot propagate from nowhere and the coupling Constant series does not makes sense anymore. So the invariant (3) cannot be combined, it will Repel each other. The net variation however can be changed and switched, which makes the Flexibility and duality of the forces.

The equation is with complete agreement with our understanding, we are just examining additional Meaning of it. It allows us to examine it from a deeper, more profound view. Now we can understand Why fermions do not commute – because even variations vanish and so bosons will not be Propagated.

Remember that in part four we gave the following:

$2N2 \rightarrow Fermions. \quad perfect\ variations\ to\ vanish\ into\ matter$

$\mathbf{\frac{1}{2}} \rightarrow \ electron\ to\ destabilize\ the\ perfect\ 2N2\ and\ prevent\ it\ from\ vanishing\ into\ matter$

$\frac{1}{2} \rightarrow the\ result\ is\ the\ net\ variation\ which\ is\ also\ on\ the\ critical\ line\ of\ the\ primes.$

$\left[2\mathrm{N}2 + \mathbf{\frac{1}{2}}\right] + \frac{1}{2} = \mathbf{2N2 + 1} \rightarrow Probability\ of\ boson\ emittion, in\ that\ case\ the\ photon.$

If we eliminate the electron, than no boson will be propagate at all. However, consider the following:

$$[(24 * 5) + (3)] + 5 + [(24 * 5) + (3)] + 5 + .. =$$

$$[(24 * 5) + (3)] + 7 + [(24 * 5) + (3)] + 3 + .. =$$

While we cannot touch the terms inside the parenthesis, we can change and combine the net Variation, there seems to be no limitation in regards to that operation, we have done it before, and Showed that the forces can be scalar multiples.

We can cluster the net variations, which means that many electrons can emit net variations together, That is bosons, which agrees to what we know as laser, or what we know as bosons Commutation Relation in QFT. However, using the 8-theory framework we can get a new and fresh insight On why those things are the way they are using the coupling constant equation.

As we mentioned in part four of the paper series on coupling constants, the invariant (3) blends In the total cluster of the fermions, so we cannot know where he is. That is in agreement with the Heisenberg principle of uncertainty.

Strikingly Beautiful Relation of Three generations Masses

The idea, which is followed by the last paper, is that if $8 + (1)$ to generate force,
And force is extended outward, (short or long ranged) than $8 - (1)$ would be
To generate mass, or arbitrary **variations converging inward**. Equipped with this
Idea we can search for a mathematical pattern.

First, take all the masses, accurate as they can and combine them according to
Generation:

$$[1.9] \qquad [1320] \qquad [172{,}770]$$

$$[4.4] \qquad [87] \qquad [4240]$$

1. $1.9 + 4.4 = 6\frac{1}{3}$
2. $1320 + 87 = 1407$
3. $172{,}770 + 4240 = 177010$

Seemingly nothing in common, we can change it. Soon one will reason why the following
Exactly, multiple equation one by factor of 9 and divide (3) by a factor of 9.

$$1\ .\ 6\frac{1}{3} * 9 = 57 = 50 + 7$$

$$2.\ \ 1320 + 87 = 1407 = 1400 + 7$$

$$3.\ \ \frac{177010}{9} = 19{,}667 = 19{,}660 + 7$$

Also, notice that

$$50 * 28 = 1400$$

$$1400 * 14 = 19{,}660$$

but

$$28 = 7 * 4$$

$$14 = 7 * 2$$

$so\ to\ go\ from\ first\ to\ second$:

$$(7 * 4) * 50 + (7)$$

$And\ from\ second\ to\ third$

$$(7 * 2) * 1400 + (7)$$

One has said it once, if allowed, to say again, she is truly beautiful. It's incredible.

Notice that it's a decreasing by an even factor of 2. And if we go from low to high

It does not make sense physically, it should be Lagrangian oriented, nature is devising by

Increasing amount to minimize the arbitrary variations, so if correct we should go from

Three to one by devising:

$$4.\ \ \frac{19{,}660 + (7)}{7 * 2} = 1400 + (7)$$

$$5.\ \ \frac{1400 + (7)}{7 * 4} = 50 + (7) * \frac{1}{9}$$

*Next, we can predict that **total mass** for fourth to sixth families:*

$$6.\ \frac{50+(7)}{7*8}*\frac{1}{9}=\ 0.113\ \text{mev}$$

$$7.\ \frac{0.113}{7*16*9}=\ 0.000113\ mev\quad \boldsymbol{or}\quad \frac{0.113}{7*16}=\ \ 0.00100\ mev$$

$$8.\ \frac{0.000113}{7*32*9}=5.95*10^{-8}\ mev\quad \boldsymbol{or}\quad \frac{0.00100}{7*32}=0.0000045\ mev$$

Summing 4-6 families: 0.113113 or 0.1140 Mev. We can see a converging to

The value of the forth which is 55.25-55.69 lighter than first family:

$$9.\ \frac{6.3}{0.1131130595}=55.696\qquad or\qquad \frac{6.3}{0.1140}=55.26$$

Note that we needed to readjust the scale by the factor of $8+(1)$ *as we Manipulated the data, in a search for a pattern. Adjust it in the third family, by Multiplication and in the first and by division.*

The following reason, T-B family has much more mass, thus much more arbitrary Variation converging inward, that might by the reason it has $8+(1)$ *factor in the Nominator, and in the first, the arbitrary variations are so small, we need to Adjust it in the opposite direction, to increase by* $8+(1)$.

Whether in the fifth family and below, additional rescales are needed Is unknown, we do include two options, with the $8+(1)$ *or without it.*

So according to the above reasoning and mathematical notion, one will predict infinite Family is forming below the masses of the U-D masses, converging to total value Of ≈ 0.113113 Mev as family's below the six are neglected due to little Contribution the total sum.

So overall, we can write:

$$10. \qquad \mathrm{M}\ (\mathrm{N}+1) = \frac{\mathrm{M(N)} + (7)}{7 * \prod_{I=1}^{r} N(E)} * \frac{1}{9}$$

Or

$$\mathrm{M}\ (\mathrm{N}+1) = \frac{\mathrm{M(N)} + (7)}{7 * \prod_{I=1}^{r} N(E)}$$

Is to a function for two multiple of variations. $N(E)$

Overview of ideas

Mass is a variation of the manifold converging inward. Just like force but opposite In direction. Nature is eliminating the arbitrary amount of variations by devising in Increasing amounts. That prediction is the rule of dark matter in our theory. It suits The fact that very quickly the families total is converging to zero. The rate in which The conserving to zero is made is unknown.

The theory provides two options. First, with the rescaling factor to each family and second Option without it. Rescaling only Once. Both options agree on the value of the total mass of The fourth which is about 56 Times lighter than first.

$$10.\ \mathrm{M}\,(\mathrm{N}+1) = \frac{\mathrm{M(N)}}{7 * \prod_{I=1}^{r} N(E)} * \frac{1}{9} \quad or \quad \frac{\mathrm{M(N)}}{7 * \prod_{I=1}^{r} N(E)}$$

As we combined the net masses of the two elements, the value should be again, Decomposed to the two separate elements.

There are an infinite variety of families *whose mass is decreasing, thus* ***below First generation of quarks, this could agree with so-called, dark matter.***

Cosmologists to decide whether the mass values predicted agree with the data.

Mathmatical Attempt at Reasoning Universel Flatness

Quarks are arbritary *amounts of* ***curvature on the Lorentz manifold***.

So the eight combinations we counted are really the way of nature to eliminate The curvature. The atoms than, must appear flat, and any additional, higher level interaction must be flat as well.

That could come in agreement with the fact that electricity is linear, and so does Gravity, well almost.

Remember we concluded in previous papers, now instead of saying "variations" we switch to "curvature".

Remember, when we calculated the coupling constants values and realized that the magnitude of the force is an interplay between total variations to net variations? We saw that the total variations grow much faster than the net, and we dealt with small numbers $n \leq 31$.

Imagine dealing with an amount of varying elements of 10^7 *Quarks or any amount of Quarks contained in the star. If no rules nor order, then there could be a net curvature, which must be eliminted. The net is very small compare to total , if so the amount of net curvature is quite insagnificant as well.*

So the net amount is causing another net amounts to get closer, to eliminate the problem, and ensure no net variations. Thus, despite the manifold is somewhat curved, "gravity" has to be linear and so called, 'efficent'.

One would like to suggest, after few Intresting results found in previous papers, that the underling principle, taken from this point of view, is to ***eliminate the arbitary amounts of curvature****. The whole Sequence we found:*

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9:30:128:850:9254 \ldots$$

Was goveren by the idea that each time a net curvature will appear, force will By manifsted. We just called it 'variation'*. we saw that net curvature is of prime Amount.* ***Force is net curvature extended owtward → to pull****.*

So we can expect that the curvature to be extremely strong at start and Weaker and weaker as we develop the series.

So the forces Strong, weak, Electric … should be curvutre extensions. The Stronger the net The closer the balancing element should be and just equally strong but revese in direction. Nature would not allow curvings to appear, she will attampt to eliminate it.

So arbitrary amounts of curvature appear as quarks, and paired immedatly, as That is the point in a EL framework, Protons are created, subject to certain amount Of net curvature themselves, than atoms and cheimstry, than stars, than galaxies, Than clusters of galaxies, than life.

$But\ we\ also\ showed\ that\ the\ Lagrangian\ could\ be\ represented\ as:$

$$\frac{\partial L}{\partial s1} - \frac{\partial L}{\partial s2} = 0$$

$Taken\ from\ that\ point\ of\ view, the\ flatness\ of\ the\ manifold\ is\ due\ to\ other\ manifolds\ interacting\ with\ it.$

$But\ we\ don't\ see\ any, so\ its\ quite\ peculiar.\ One\ would\ like\ to\ suggest\ that\ it\ could\ be\ interaction\ from\ outside\ , manifold\ packing\ or\ wrapping, opinion\ like.\ Each\ liar\ is\ a\ manifold\ itself.$

$So\ if\ certain\ manifold\ is\ experiencing\ wild, strong\ variations\ this\ will\ be\ eliminated\ by\ the\ interaction\ with\ additional\ manifolds.$

$Two\ different\ ways\ to\ reason\ for\ flatness; Both\ lead\ to\ one\ conclusion\ she\ is\ not\ a\ fan\ of\ differential\ geomtry\ nor\ curvature.$

$We\ also\ showed\ that\ mass\ in\ a\ variation\ converging\ inward \rightarrow 8-(1);$ $\boldsymbol{Mass\ is\ curvature\ extending\ Inward\ to\ pull.\ Force\ and\ mass\ than\ are\ the\ same}$ $just\ reverse\ in\ direction.$

$$\sum_{n\to 1}^{n\to\infty} M + \sum_{n\to 1}^{n\to\infty} F = 0$$

$$8-(1)+\ 8+(1) =\ 16 \rightarrow 0$$

$Interactions\ between\ forces\ and\ mass\ will\ yield\ no\ curvature, Linear.$

$Even\ amount\ \ of\ Variations\ taken\ to\ vanish.$

$$8-(1)+\ 8+(1)=\ 16\rightarrow 0$$

$Also\ imply\ that\ forces\ will\ try\ to\ meet\ the\ masses\ if\ \ given\ at\ the\ same\ space. As$
$Arbitrary\ curving\ must\ vanish, they\ are\ perfectly\ suited\ to\ eliminate, same\ but\ opposite$
$In\ direction.$

$Thus, Theortical\ proof\ \ of\ masses\ and\ forces\ relationship.\ \ Mass\ will\ attract\ force,$
$\ and\ Force\ will\ attract\ Mass.\ \ No\ Physics\ needed.$

$Curvature\ converging\rightarrow generate\ mass\rightarrow 8-(1)\ \ curvings\rightarrow familys$
$\ Curvature\ diverging\rightarrow generate\ force\rightarrow 8+(1)\ \ curvings\rightarrow coupling\ constants$

$There\ are\ infinite\ values\ of\ net\ curvings, In\ agreement\ with\ finding$
$infinite\ sequence\ of\ coupling\ constants\ given\ by$:

$$F(R)=\left(8*\prod_{i=1}^{i=R}N(V)+(3)\right)+N(V)=\ 9:30:128:850:9254\ldots$$

$Also\ infinite\ number\ of\ curving\ converging\ , aspiring\ to\ zero\ over\ time, as$
$it\ has\ to\ be\ eliminted.\ \ In\ agreement\ with\ infinite\ familys\ forming\ below$
$the\ first\ family.$ $\boldsymbol{Possibly\ given\ by}$:

$$\mathrm{M}\ (\mathrm{N}+1)=\frac{\mathrm{M(N)}+7}{7*\prod_{I=1}^{r}N(E)}*\frac{1}{9}\ \ \boldsymbol{or}\ \mathrm{M}\ (\mathrm{N}+1)=\frac{\mathrm{M(N)}+(7)}{7*\prod_{I=1}^{r}N(E)}$$

$By\ following\ reasoning - We\ can\ analyze\ entire$ 8 theory $framework$:

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t}\omega g - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t}\omega g' = 0$$

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254$$

$$\mathrm{M}\ (\mathrm{N}+1) = \frac{\mathrm{M(N1)}}{7 * \prod_{l=1}^{r} N(E)} * \frac{1}{9} \quad or \quad \mathrm{M}\ (\mathrm{N}+1) = \frac{\mathrm{M(N1)}}{7 * \prod_{l=1}^{r} N(E)}$$

$And\ put\ it\ in\ one\ word$:

Flat.

The Rise of The Arrow of Time

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254 \ldots$$

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

In our framework we have a Lorentz manifold inside an Euler- Lagrange equation. The manifold Experience arbitrary variations, which vanish into, matter, we proved it in previous papers. Each time net variation appear on the manifold, a boson is manifested into our matric. That was The idea, which derived the coupling constant equation. Net variations are prime, and for each prime There is a boson, unique boson:

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

However, how does that relate to the arrow of time? Remember that the coupling constant equation Is really a built upon a ratio between total variations divided by two and net variations which are Prime. We saw that the total variations grew much more rapidly than the net, and we required a Sequence, that it will go from low to high.

So the arrow of time should go from low to high as well. There could not be a photon propagation Without electron which propagate from the nuclei, or cluster of so-called quarks. The sequence of The coupling constant equation is the sequence of time it allows us to build from the elementary to The massive, first arbitrary variations eliminate and vary themselves, create protons and neutrons Which vary as well, propagate electrons, which vary as well, yielding photons and electromagnetism. Moreover, the series go on and on.

Interplay of total variations to net variations, which grow in number and gets weaker from one Element to another, explain why the forces at a large scale are much weaker than those at Smaller scale, here are much more total variations and the net is divided across the whole cluster. So starts and galaxies must appear only after the strong, weak and electromagnetic.

Nature is going from high to low, from small amount or strong variations to weak amounts of Net variations over bigger clusters of total variations. Keep in mind that when we say variation We mean curvature as we built the 8- theory upon a Lorentz manifold.

But if we look at each element in itself, like electromagnetism for example we won't see any clues For the arrow of time, as it's not telling anything about the arrow. It's only when we find the series of Coupling constants and the intimate relation of the boson to primes and we put them in a row, than and only than we can see the rise of the arrow of time.

In other words, we can reason why galaxies and cluster of galaxies can form only After the strong, weak and the electric. We are also able to reason the weakness Of gravity and the interactions in higher terms in the series.

$$1 > \frac{1}{30} > \frac{1}{128} > \frac{1}{850} \quad \dots$$

$$\longrightarrow$$

$$1 > \frac{1}{30} > \frac{1}{128} > \frac{1}{850} \quad \dots$$

The Almost homogenous Universe

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254\ \ldots$$

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

The reason the universe is not completely homogenous based on the framework is that the manifold Experience arbitrary variations – which than vanish into fermions. Marked in green.

$$\left[\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\right]\frac{\partial g}{\partial t}\delta g - \left[\frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\right]\frac{\partial \partial g'}{\partial \partial t}\delta g' = 0$$

Those variations are arbitrary amount of curvature of a manifold, and they are subject to net variations Which yielded the coupling constant equation. We saw that nature is really the interplay between total Arbitrary variations to net variations. Net variations are prime in their nature, and so in the 8- theory Framework for each prime number there exist a boson.

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

The series gives rise to the arrow of time; we should see more interactions as time goes on and so, Bigger and bigger structures which makes the manifold less and less homogenous. The bigger the Cluster of total variations the weaker the force, as it is divided across the whole cluster.

By looking at those two equations we can see exactly why the universe or the Lorentz manifold in The 8-theory framework is not homogenous, because of those arbitrary variations and the additional Net variations. The first accounts for fermions, known as quarks, the other known as bosons.

Using that framework, we can see why the manifold cannot be homogenous, it is almost obvious. Of course, the question of the homogenous structure is a question in which we cannot really Answer, as it has no numerical data, it's a question revolving around a theory in which the lack of Homogeny is a feature of the main axioms and equations.

We can see it in the framework of the 8-theory, or any Lagrangian oriented theory, which includes Arbitrary variations, which must vanish at border. The beauty and innovative part in the 8-theory Is that, all life forms, galaxies, clusters of galaxies **are** those arbitrary variations.

$\underline{8 - \boldsymbol{Theory\ on\ Universe\ Expansion - Collapse}}$

$$1.\ \frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

$$\frac{\partial g}{\partial t} = 0 \text{ and } -\frac{\partial \partial g'}{\partial \partial t} = 0$$

This equation describes dark energy, or time invariant acceleration from areas of extremum Curvature on the Lorenz manifold. We assume no data is available from the first three terms, Which describe a varying matric in spatial dimensions.

To ensure universe collapse, we need to revert the signs so we will get:

$$+\frac{\partial g}{\partial t} \to -\frac{\partial g}{\partial t}$$

$$-\frac{\partial \partial g'}{\partial \partial t} \to +\frac{\partial \partial g'}{\partial \partial t}$$

In other words, the acceleration is now directed inwards, and the new equation is:

$$2.\ \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} - \frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} = 0$$

Therefore, we have an inward acceleration and areas of negative curving on the Manifold, which agrees with the description of a compressed Lorentz manifold. However, Is it reasonable physically to make such a transformation from (1) to (2)?

Suppose it is reasonable to change the direction of the acceleration. By looking at The second term:

$$+\frac{\partial g}{\partial t} \rightarrow -\frac{\partial g}{\partial t}$$

Meaning, all the galaxies, clusters of galaxies, which represent extremum curvature On the manifold, must be eliminated and revert their direction inward, toward the manifold. Such shift will be along an inward acceleration and a process of manifold compression. The Process than is synonymous to going from a lower energy state, colder state, to a much Higher state of energy.

It is a higher state of energy as it is a process of immense masses compressing inward, Toward a converging Lorenz manifold, such process will be encompassed by friction, heat And high entropy. It is not Lagrangian oriented and not likeable scenario in our framework. There is no need for calculation of hydrogen atoms per unit space when we have the Mathematical equation.

We can also analyze the subject of expansion or collapse by using the coupling constant Equation in its third representation, the arrow of time.

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254..$$

$$1 > \frac{1}{30} > \frac{1}{128} > \frac{1}{850} \ \ldots$$

$$\overrightarrow{1 > \frac{1}{30} > \frac{1}{128} > \frac{1}{850} \ \ldots}$$

A universal collapse would be to revert the side of the arrow. From weaker And weaker interactions at mega scales, to go for smaller interactions much stronger:

$$\overleftarrow{1 > \frac{1}{30} > \frac{1}{128} > \frac{1}{850} \ \ldots}$$

The physical meaning would be than, stars, galaxies and clusters of galaxies to deform And in an endless succession until we reach quarks and gluons. Such process would require Immense amount of energy and it has to happen across all the spectra of the foreseeable Universe. In our framework, it means less manifold net variations (positive curving) over Time. Physically it does not make sense, it's not Lagrangian oriented. To go from low State of energy and aspire the highest level.

There is no indication that such process could accrue in nature, without artificial Intervene. As far as one knows, it comes to an agreement with the laws of Thermodynamics. Nevertheless, more importantly, in our framework, there Is no reason For such unnatural thing to happen.

The Coupling Constant Equation and Gauge Fields

The coupling constant equation:

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254$$

Each term individually:

$$8 + (1)$$

$$[(8 * 3) + (3)] + 3$$

$$[(24 * 5) + (3)] + 5$$

$$[(120 * 7) + (3)] + 7$$

Let us look at the first term:

$$8 + (1)$$

Remember back in the day, when we concluded that we could ignore the eight, since Even amount of variations vanish, and just write that the first element is one.

$$8 + (1){:}\,\big(24 + (3)\big) + 3{:}\,\big(120 + (3)\big) + 5{:}\,\big(840 + (3)\big) + 7 \ldots$$

$$(1){:}\,(30){:}\,(128){:}\,(850){:}\,(9254) \ldots$$

We also know that there are eight gluon fields. These are meditating the strong Interaction and color charge. However, this could be just a coincidence. Let us Examine the next Term in the series:

$$[(8 * 3) + (3)] + 3$$

This term describe the nature of the weak interaction. Notice the right inside the Parenthesis:

$$(8 * \mathbf{3})$$

We also know that there are three gauge fields meditating the weak interaction. Which we correlate to $SU(2)$ $and\ Isospin.\ the\ massive\ W\ \ the\ Z\ bosons$.

If the right term inside the parenthesis is a reflection on the number of fields Meditating an interaction than we can examine the next term on the series, Electromagnetism:

$$[(24 * \mathbf{5}) + (3)] + 5$$

That is a daring statement to make, but if the assumption to hold true, There Should be five gauge fields meditating the electric interaction. Five distinct Kinds of photons.

It is really an absurd statement to make, given the fact that there are no indication That there is an agreement with experiment regarding that idea. But sometimes in Theoretical physics, bold risks must be taken, and so the author of this paper Will allow his belief regarding the great power of the equation to guide him and State:

The 8-theory predicts five gauge fields meditating electromagnetism.

Whether such thing could be correct, only time and experiment will tell. It is Very exciting as the 8-Theory was on point up until now regarding questions No other theory could answer.

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8 *Theory On Quark Mass Mixing And Mixing Angles*

Take the masses of all the generations and combine them:

$$[1.9] \qquad [1320] \qquad [172{,}760]$$

$$[4.4] \qquad [87] \qquad [4240]$$

1. $1.9 + 4.4 = 6.3$
2. $1320 + 87 = 1407$
3. $172{,}760 + 4240 = 177000$

<u>The idea</u> by Quark mixture we mean multiplication of masses of the first and second to Yield the total mass of third, times a scalar. So a total mass of the first family multiplied by The total mass of the second family, both multiplied by a scalar, will yield the total mass of The Third.

We can proof that is the almost case exactly for the values of the masses above:

$$6.3 * 1407 = 8864.1$$

$$\frac{177{,}000}{8864.1} = 19.96$$

If we can allow a slight variation of the first masses to be 6.29 Mev and not 6.3, it will be

$$6.29 * 1407 = 8850$$

$$\mathbf{\frac{177{,}000}{8850} = 20}$$

Therefore, just a slight variation of 0.01 Mev and we have a beautiful integer, a scalar. But, More importantly, a way to combine the total mass of the first and the second, mix them And multiply by the scalar, to reach the total mass of the third.

Reader should argue that it could be just a coincidence, a choice of certain values to yield The scalar and he might be right as the masses are not measured or known as exact, they Could divert.

Assuming the mixing will accrue at scalar numbers only, we can build correction angles To ensure the scalar number will hold. So if the masses of the first divert or measured At a higher value that 6.29, there will be a correction angle to retain the same scalar we Obtained. The correction angles could have more than one value and they can be Positive or negative.

Take the mass of the up quark to be average between 1.9 to 2.2 Mev, which is 2.05 Mev.

$$\frac{1.9 + 2.2}{2} = 2.05\ Mev$$

$$2.05 + 4.4 = 6.45\ Mev$$

$$6.45 * 1407 = 9075.15$$

$$\frac{177{,}000}{9075.15} = 19.503$$

The correction angle to reach desired scalar would be than

$$\mathbf{19.503 + \cos\ (11.5)\ \approx\ 20}$$

Now that is truly beautiful. Now it is less likeably a mere luck. We started with an idea, we Varied the mass according to an average and by using the correction angles we again reach The same scalar. The correction angle is with agreement with quark mixing angle.

There could be many more, the correction angles are not limited in number and depend Upon the masses values taken of the first, second, and the third as well. The idea behind Stay the same. The correction angle will be added to yield a scalar multiple.

$$20 * \left(TotalMass(1) * TotalMass(2)\right) = TotalMass(3)$$

Among all the achievements of the 8-theory, and there has been many, the question of Quark mixing seems to be among the hardest ones. This paper is not a proof of any sort But a mathematical idea, the reader should rightfully argue and doubt it.

One was trying to reason in the simplest and most elegant way, the weird phenomenon Of Quark mixing. Whether it makes sense or not, readers should decide after analyzing the Paper.

The Coupling Constant Equation and Higgs Mechanism

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9:30:128:850:9254..$$

$$8 + (1):(24 + (3)) + 3:(120 + (3)) + 5:(840 + (3)) + 7 \ldots$$

$$(1):(30):(128):(850):(9254) \ldots$$

Let us look at the first term describing the strong. We saw that the eight vanish since its An Even in our framework.

$$8 + (1) \to (1)$$

We also know that from physics the gluons are massless. Let us examine the second term.

$$\big(24 + (3)\big) + 3$$

We know that the bosons that meditate the weak interaction do carry mass. And we Know that the symmetry of $\mathrm{SU}(2)$ *forbids mass terms in the Lagrangian, and the solution Which allows us to include mass terms without ruining the symmetry is the Higgs idea. This idea works by including extra terms.*

In our framework, the ***extra term is the Majestic (3).*** *Therefore, the Higgs field is Responsible for the lack of order in our series, which could have been a beautiful Series of eight multiples. In a sense of the standard model, we can say it is "breaking The symmetry" by inserting the invariant (3).*

So overall, we move from spin 0 – perfect clusters of variations. With the Majestic (3) *Inserted by the Higgs Field we move to a matter with Spin one-half, we did so by setting The equation on the critical line of the primes. This* (3) *is really a destabilizing factor than Yields a net variation, which is prime as well.*

<u>For example – Electromagnetism:</u>

$Perfect\ clusters\ of\ variations \rightarrow 2N$

$destabilize\ the\ perfect\ 2N$ is the Majestic $(3) \rightarrow \left(\frac{1}{2}\right) \rightarrow electron.$

$Blends\ in\ the\ potential\ cluster\ to\ yield\ in\ that\ case \rightarrow 123.$

$The\ result\ is\ the\ net\ variation\ which\ is\ also\ Prime\text{:}\ N(V) \rightarrow \left(\frac{1}{2}\right) \rightarrow\ +(5)$

$The\ overall\ frame\ yields\text{:}$

$\left[2N + \left(\frac{1}{2}\right)\right] + \left(\frac{1}{2}\right) \rightarrow\ \mathbf{123 + 5 = 128}.\ Probability\ \ of\ Boson\ emission.$

The main point of the paper is that the Majestic (3) is a result of the Higgs field. It's the Reason the majestic (3) appears. So overall, our framework does not contradict the Higgs Idea but support it and allow us an additional view on how the mechanism work.

As the Higgs is responsible for additional terms in the Lagrangian, and in the 8-theory We see that the first elements in the series of coupling constant differ by an additional Term, the Majestic (3) *or* $in\ (\frac{1}{2})$ *.*

$\underline{\boldsymbol{Anti\ Matter}\ \&\ \boldsymbol{Dirac\ Delta\ Function}}$

$$\boldsymbol{s = (M, g)}$$

$$L = (s, s', t)$$

$$\boldsymbol{\frac{\partial L}{\partial s} - \frac{\partial L}{\partial s'} * \frac{d}{dt} = 0}$$

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

$$\frac{\partial g}{\partial t} = \ 0 \ \text{and} \ - \frac{\partial \partial g'}{\partial \partial t} = \ 0$$

$$\left[\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\right]\frac{\partial g}{\partial t}\delta g - \left[\frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\right]\frac{\partial \partial g'}{\partial \partial t}\delta g' = 0$$

$$\delta g1 + \delta g2 \ldots = \delta g$$
$$\delta g = 0$$

Reader should be familiar with the procedure. Now we have seen that we can derive The nature of fermions and the quark model by allowing the series, which contain two Distinct elements to vary. So overall we obtain eight threefold combinations of those Elements.

Therefore, even though the elements are varying the series could vanish. That is in Agreement with A stationary Lorentz manifold.
There could be however, another way to ensure a stationary Lorenz manifold.

$$\delta g1 + \delta g2 \ldots = \delta g$$
$$\delta g = 0$$

Which will match each element in the series its mirrored element. That is

$$\delta g1 + \delta \exists g1 = 0$$
$$\delta g2 + \delta \exists g2 = 0$$

By mirror, it means the same but opposite in sign. So the overall sum of the Series will hold as zero. In the 8- theory framework quarks are regarded as Arbitrary amount of curvature on a manifold. Based on this view, anti-quarks And anti-matter is arbitrary curvature with opposite direction. Same magnitude Just different direction.

So overall, that framework would allow the existence of anti-matter. That Is in agreement With quantum field theory and with the Dirac equation for spinors. In fact, the moment of Singularity could be a result of the series not equal to zero.

$$\boldsymbol{\delta g \neq 0}$$

The moment the series is not equal to zero than means that we have net curvature, or Maximal curvature on the manifold, which will yield a negative extremum time invariant Acceleration from it.

$$\left[\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\right]\frac{\partial g}{\partial t}\delta g - \left[\frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\right]\frac{\partial \partial g'}{\partial \partial t}\delta g' = 0$$

In other words, the moment of asymmetry in the series yielding net curvature on the Manifold could be the reason for singularity and so called among the masses "big bang". It is just an idea of course, but up until now the 8- theory was on point in regards to Issues on other theory could explain.

Dirac Delta Function

Our two main equations in the framework:

$$1.\ \frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

$$2.\ F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254..$$

The Dirac delta in our framework is an interference on the Lorenztion manifold. An arbitrary Amount of curvature δg on the manifold. Since it is not allowed and must vanish, we require , as we did previously in this framework. $\delta g = 0$

$$\delta g \neq 0 \qquad at \qquad t = 0$$
$$\delta g = 0 \qquad at \qquad t > 0$$

So the Dirac delta in our framework describe the process in which arbitrary amount of Curvature appear, and vanish into matter. However, there is no restriction with regard to Time. Arbitrary amount of Curvature can appear at any time, so we must modify the idea Of the Dirac in our framework.

$$\delta g \neq 0 \qquad at \qquad t = Q(t)$$
$$\delta g = 0 \qquad at \qquad t = Q(t) + \Delta t$$

We also require that $\Delta t \rightarrow 0$ as just after the arbitrary amount or interference will appear, It will immediately vanish into matter. So in this framework is rich in delta functions. The difference is that the delta can appear at time that is not null. In a sense, we have more Flexibility with the delta.

After the delta appeared and as a result fermions were manifested into the metric. Those Fermions could still vary, and experience a net curvature or net variation as was analyzed In the thesis. Those net curvatures were taken to be prime numbers and that was the reasoning Behind the construction of the coupling constant equation.

Those net variations of the manifold are another interference, but and interference which Propagate from fermions, and is prime number. So in that sense it cannot turn into fermions. **Fermions vanish in even amount of variations.** The result is a propagation across the manifold Ripples on the metric all across.

$$\delta g = 0 \qquad at \qquad t1 = Q(t) + \Delta t$$

At later continuation of time:

$$t2 > t1$$

This condition is satisfied:

$$\delta g \neq 0 \qquad at \qquad t2 = Q(t) + \Delta t + \Delta t$$

And the amount of variations is either prime or one.

$$\delta g = 2\left(n + \frac{1}{2}\right) \, for \; n > 1$$

$$\delta g = 1$$

In addition, a condition that must be satisfied is that the odd $2\left(n+\frac{1}{2}\right)$ will not be divisible by Three and not a scalar multiple of **even** lower primes.

Than we have a ripple on the manifold which propagate all across, toward all directions. The Laplacian operator than is vital to description for a mathematical description of the Manifold ripples, or bosonic fields.

Important point to take, is that the **underlining reason for the boson propagation All across the metric is their prime number feature**. They could not vanish into matter. And based on this framework we cannot associate a morphism between a boson ripple Fields and fermions interferences, super symmetry is not possible in this framework.

Define a bosonic ripple across the Lorentzian Metric:

$$\boldsymbol{\nabla}^2=\frac{\boldsymbol{\partial}^2\boldsymbol{M}(\boldsymbol{x})}{\boldsymbol{\partial}^2\boldsymbol{g}}+\frac{\boldsymbol{\partial}^2\boldsymbol{M}(\boldsymbol{y})}{\boldsymbol{\partial}^2\boldsymbol{g}}+\frac{\boldsymbol{\partial}^2\boldsymbol{M}(\boldsymbol{z})}{\boldsymbol{\partial}^2\boldsymbol{g}}$$

That is curvature propagation across all metric spatial dimensions as:

$$M(x,y,z)\ \in S$$

$$S=(M,g)$$

Reasoning for Spiral Structures of Galaxies

$$\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\frac{\partial g}{\partial t} - \frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\frac{\partial \partial g'}{\partial \partial t} = 0$$

$$\frac{\partial g}{\partial t} = 0 \quad and \quad - \frac{\partial \partial g'}{\partial \partial t} = 0$$

$$\left[\frac{\partial L}{\partial s}\frac{\partial s}{\partial M}\frac{\partial M}{\partial g}\right]\frac{\partial g}{\partial t}\delta g - \left[\frac{\partial L}{\partial s'}\frac{\partial s'}{\partial M}\frac{\partial M}{\partial g'}\right]\frac{\partial \partial g'}{\partial \partial t}\delta g' = 0$$

$$\delta g = 0$$

$$\delta g1 + \delta g2 \ldots = \delta g$$

Notice the first requirement:

$$\frac{\partial g}{\partial t} = 0$$

In addition, the second requirement:

$$\delta g = 0$$

Those two simple requirements combined together can allow us to a deep

Insight into the structure of galaxies.

In the 8-theory framework, we have a Lorenz manifold, the manifold has areas of Extremum curvature that stay as they are over time. That is given by the first requirement. The manifold also experience arbitrary variations, the second requirement. Those arbitrary Variations vanish into matter in agreement with a stationary Lorentz manifold.

The combination of both condition than implies that in order for the areas of extremum Curvature to stay as they are, the arbitrary variations cannot appear inside them. That is By the combination of the two requirements.

However, those arbitrary variations still appear in the framework. And the areas of Extremum curvature are also a vital part of this theory. The combination of both Requirement is than resulting in areas of extremum curvatures surrounded by Arbitrary variations that could not affect them.

The following model of the 8-theory is than intersecting with the large scale Geometrical shape of galaxies. However, it is known that so called, black holes in The center of galaxies are absorbing matter and nothing can escape them. So in a Second glance the first requirement will not hold in such case.

However, that is not a real problem if we assume that those black holes, which We regard as areas of extrunum curvature inside galaxies also omit matter. We Know it is the case, as we call it the hawking radiation $-\delta g(H)$.

$$\frac{\partial g}{\partial t} + \delta g + (-\delta g(H)) = 0$$

So overall those two simple requirements in our framework provide an
Interesting indication to structure of large-scale matter formations in the universe.
The hawking radiation is a vital part of making the two conditions hold true.

For each unit of fermions absorbed or manifested inside the area of extremum curvature
We require a hawking radiation Particle emitted from the area, so the first requirement will
Hold true.

Another interesting viewpoint, $\frac{\partial g}{\partial t} = 0$ implies a constant rate, which means
A radial dependency variation, the demand that the matter cannot enter it but still
Effected by the curvature flow, means a circular motion. That is in agreement with
Outward sink structure of water for example.

The Principle Of Least Variation

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254..$$

$$8 + (1){:}\,\big(24 + (3)\big) + 3{:}\,\big(120 + (3)\big) + 5{:}\,\big(840 + (3)\big) + 7 \ldots$$

$$(1){:}\,(30){:}\,(128){:}\,(850){:}\,(9254) \ldots$$

We derived the coupling constant as a ration between total arbitrary Variations to the net variations, $N\ (V)$, which are outside the parenthesis. Those net Variations are a different representation of curvature on the Lorenztion manifold. Notice The numerical relations between the total to net:

$$\frac{1}{9} = 0.111$$

$$\frac{3}{30} \quad = 0.1$$

$$\frac{5}{128} = 0.039$$

$$\frac{7}{850} = 0.008$$

…

$$0.111 > 0.1 > 0.039 > 0.008 \dots$$

The reasoning was clear, as the coupling constant equation is multiplies each Even sum of the previous element in the next prime, and the net variations are The prime numbers sequence itself.

In means that each element the net curvature is a smaller and smaller portion Of the whole variation cluster, which reason why the sequence is getting weaker And weaker.

Based on this equation we can vividly derive and predict the weakness of gravity. We can say that nature is aspiring to minimize the ratio of net to total. All the possible Amount of curvature can and will appear and nature, but the most common and Noticeable ones are those with the bigger ratio, or least amount of net variation:

$$0.111 > 0.1 > 0.039 > 0.008 \dots \to 0$$

The bosons in which we are already know of. The interactions associated with The number one, three and five. The two lowest primes and one. The 8 – theory Principle, which is derived by this analysis, is the $\boldsymbol{Principle\ of\ Least\ Variation}$ Or curvature as we are dealing with a Lorenz manifold.

Just as Feynman did in quantum path integrations, all is taken into account. However, the most significant routes are the simplest ones. In this framework The most significant Interactions are those with the largest ratios between the net Variations to the total Variations The largest ratios are those with the least curvature or Smallest prime numbers and the number one, and primes are representing manifold variations.

Gravitational Coupling Constant as a Combination of Couplings

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 9{:}\,30{:}\,128{:}\,850{:}\,9254..$$

We can also represent the equation in the form:

$$F(R) = \left(8 * \prod_{i=1}^{i=R} N(V) + (3)\right) + N(V) = 1{:}\frac{1}{30}{:}\frac{1}{128}{:}\frac{1}{850}{:}\frac{1}{9254}\ \dots$$

Let us analyze the third element – Electromagnetism:

$$[(24 * 5) + (3)] + 5$$

$$[(24 * 5) + (3)] + 5 \rightarrow \left[2\mathrm{N}2 + \frac{1}{2}\right] + \frac{1}{2}$$

$(2N\ variations) \rightarrow Spin\ 0$

$(2N\ variations + 3) \rightarrow Matter\ with\ spin\ (\frac{1}{2})$

$(2N\ variations + 3) + N(V) \rightarrow Bosons\ with\ spin\ (1)$

$(2N\ variations + 3) + N(V1) +\ N(V2)\ + \cdots\ \rightarrow Boson\ with\ higher\ spin\ integers$

Given that framework, we can vividly see that gravity is belonging to the bosons with Higher spin integers, as modern theories predict the gravitational interaction to have Spin two. In the 8-theory framework, what does it mean? In the context of the coupling Constant equation what does it mean?

Since it has spin 2, we can associate gravity to the category:

$$(2N\ variations + 3) + N(V1) + \ N(V2)\ + \cdots\ \rightarrow Boson\ with\ higher\ spin\ integers$$

Which could relate to a certain combination of elements in the coupling constant Series, as the elements are getting weaker and weaker, if the gravitational coupling will Not be found by keeping developing to infinity it could mean **gravitational will be found As a combination of elements in the series**. Since it is spin 2 there should be three net Variations outside:

Gravitation as a combination of elements, using the fact it has a boson with spin 2.

$$\left[\left(2N(g)\right) + (3)\right] + \mathrm{N(V)} + \mathrm{N(V')} + \mathrm{N(V'')} \rightarrow \left[2\mathrm{N}2 + \frac{1}{2}\right] + \frac{1}{2} + \frac{1}{2} + \frac{1}{2} = [2N(g) + 2]$$

Using the second representation of the coupling constant equation, meaning spin. It also Means that the gravitational is a lot more rare as it is requiring a combination of Elements in the series to be emitted and not just a singular element.

Certain analogy comes to mind, putting a combination of numbers in a lottery ticket. The more required the less chances to get it right. That might come to an agreement with The reason we were not able to detect the graviton up to this day.

Summing up

In this paper, one suggested an additional option to nature of gravity using the feature Of its spin. In this framework, spin 2 means a certain combination of elements in the Coupling constant series. Such combination is making the graviton a lot more rare and Hard to detect. The analysis was done via the second representation of the coupling Constant equation, the prime critical line.