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Atomic Genetics and Origin of the Universe- Volume-3

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Abstract-

The most talked hypothesis in physics is unification physics. It is being believed that before origin of the universe , four natural forces which are mediated by four different particles (gluons, vector bosons , gravitons and photons) are created from one type of particle. It is called super unification or Einstein's dream. According to participatory science these natural forces which are mediated by four different particles are created from two types of particles. It is called VMD hypothesis or two particles hypothesis. As super unification is not proven yet, Electro-nuclear force (GUT) and gravity force are still un-unified. In graph (ToE) , electroweak unification occurs at around 100 GeV, grand unification is predicted to occur at 10^{16} GeV, and unification of the GUT force with gravity is expected at the *Planck energy*, roughly 10^{19} GeV. It does mean that $E=mc^2$ is not confirmed yet. Super unification is the confirmatory test of $E=mc^2$ because during origin of the universe the energy (bosons) particles transformed into matter (fermions) particles. As super unification is not proven yet, it does mean that these four natural force particles are not bosons or their basic constituents are not same or they are not made up of one types of B.B.Bs. Observation that proves that gluons, Vector bosons and photons are made up of one type of B. B. Bs. is all the coupling constants coverage to a common value at the unification energy of 10^{15} GeV . On the basis of inertial properties of the matter, we define again inertia (classical definition) at the level of B.B.Bs. i.e. when nature is having its fundamental structure. Firstly, the mass property of B.B.Bs by virtue of which fundamental particles (B. B. Bs.) occupy space. Absolute rest or Uniform motion property of B.B.Bs by virtue of which these two types masses of B.B.Bs are opposite in nature, that is why these two B.B.Bs (nature) do not behave identical or belonging to the same family. This is the reason we can never achieve super unification i.e. all the four natural force particles behave identical or belonging to the same family. Absolute rest is the property of pure m or matter B. B. Bs. ,while motion is the property of energy B. B. Bs.

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Thus energy (energy B. B. Bs.) and matter (matter B. B. Bs.) should only be defined at B.B. B. level and this is true stage of nature where we can realize their eternal properties. Mind or intelligence particles or atomic genes or memory system are found on B.B.Bs. by virtue of which B.B.Bs. have power to transmute to form different properties and laws (genesis of laws) in the universe that are studied in different branches of science. These B.B.Bs. have power to transmute to form any bigger units of the universe. By virtue of these atomic genes, B.B.Bs are divine that they can talk with each other. Messages are formed on one B.B.B. by phenomenon called atomic transcription and translation. Atomic genes carry messages from one B.B.B. to other B.B.B. and finally messages are realized and recognized and finally other B.B.B. reacts in similar way. These properties of B.B.Bs are the eternal properties . By virtue of these properties (properties due to mass and mind or memory system) B.B.Bs. are called conscious or divine fundamental particles. By virtue of these properties of B.B.Bs, we get different particles, atoms, molecules, individuals, satellites, planets, solar system, galaxies, super galaxies and dark matter. Existence of these bigger units is due to synchronized working of mind and mass. Bigger units get shape due to mass property of B.B.Bs. while appearance of new properties and laws are due to atomic genes property of B.B.Bs. Atomic genes are the basis of genesis of different physical as well as life sciences laws. To understand the properties and complete working of B.B.Bs., one has to read about all the spiritual books on the earth. All spiritual books have guided us not only in recognizing these B.B.Bs. but also to understand about working of entire universe. Without their knowledge, one cannot make a complete realization as regard to the models as well as working of B.B.Bs and universe. Spiritualism not only evokes realization of God in our self but also they teach us to understand “unknown” i.e. what are God particles and how do they work ? As these B.B.Bs. are divine and they are present everywhere in the universe, therefore they are *omnipresent*. The omnipresent is defined as God in all spiritual books

Key words: coupling constant; Mind and mass; God particles; fundamental particles and fundamental interaction; Omnipresent.

1. Introduction

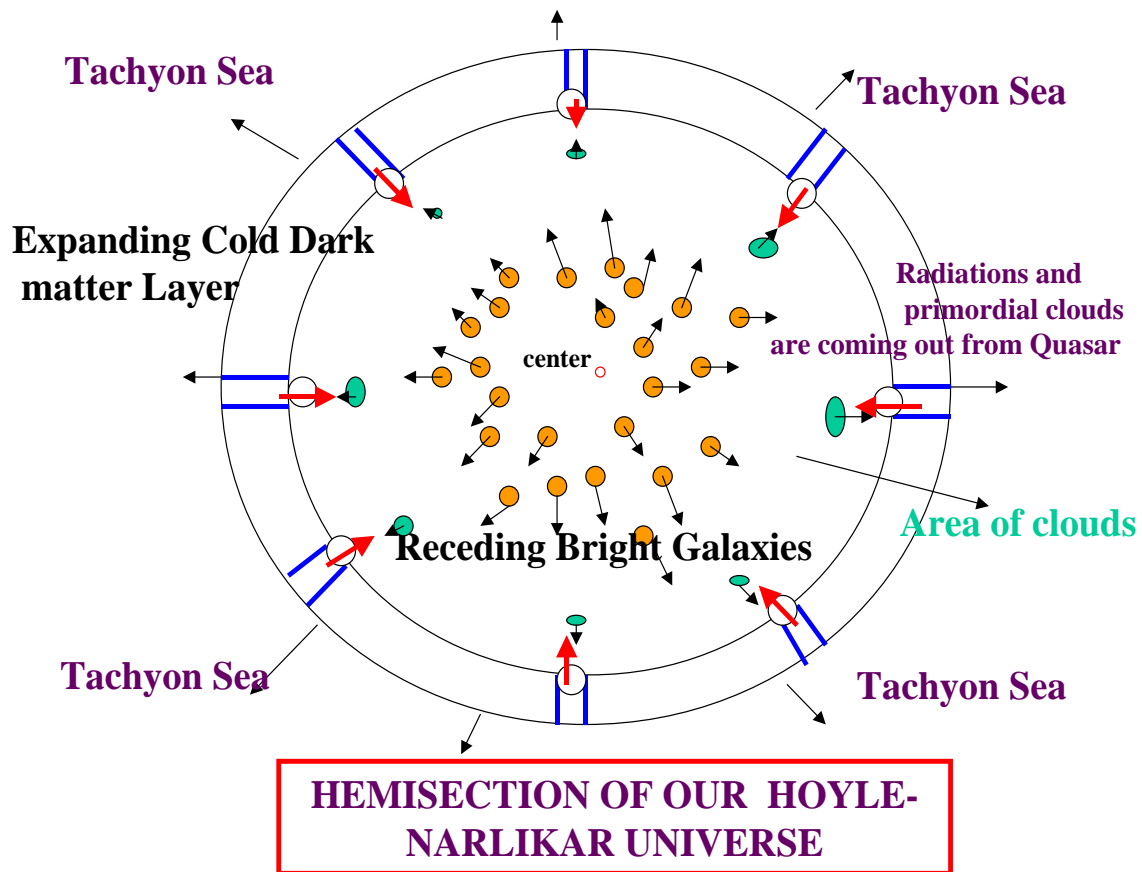
No attempt has been done to investigate ultimate physical atom or Basic Building Blocks (B.B.Bs) and mind. In this volume the most talked hypothesis i.e. unification physics is further explored. It is found that GUT force particles are made up of one type of B.B.Bs, while gravitons are made up of two types of B.B.Bs . Hence super unification could never be achieved. These B.B.Bs are made of mind and mass.

2. Structure

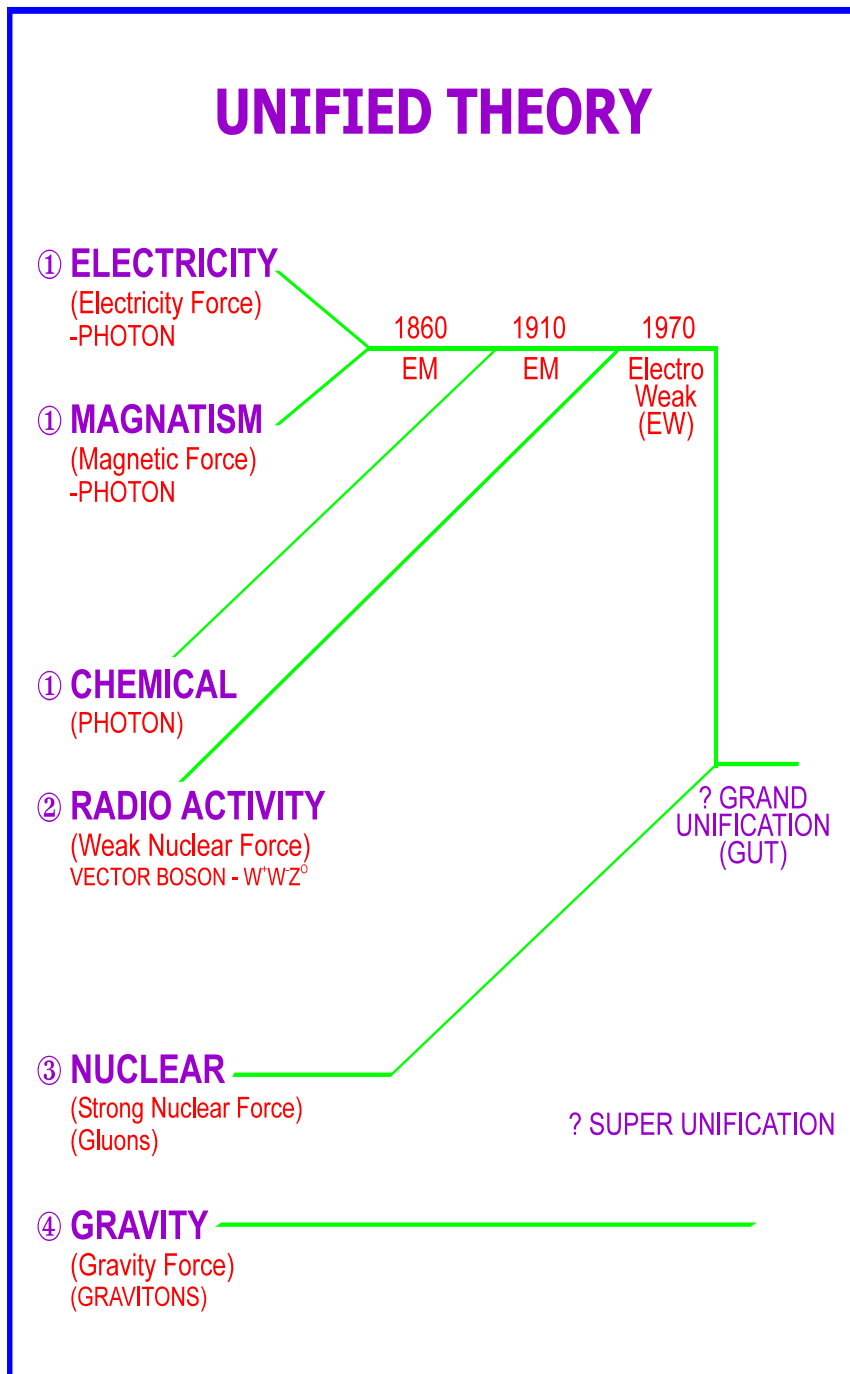
2.1 One Particle Hypothesis (Super unification) Einstein's Dream Vs Two Particles Hypothesis V.M.D. Hypothesis

The knowledge of unification of the forces (figure 2) is very important for the search of basic building blocks (B.B.Bs) or ultimate physical atom (UPA). Before we discuss importance of unification physics in the search of B.B.Bs, I would like to give a line diagram as regard to the structure of matter (figure 4) and creation events (figure 5 and figure 6) as proposed by Big Bang supporters. Viewing these diagrams, it looks that before lepto -

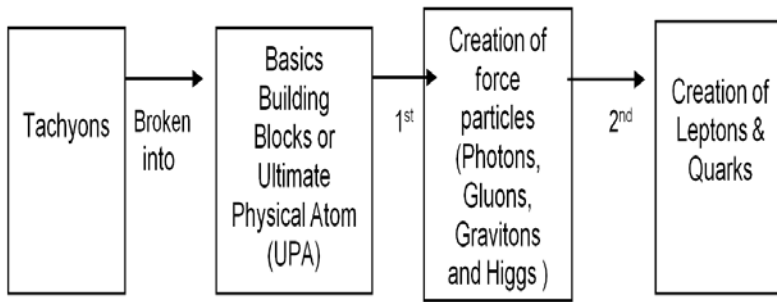
quark creation, only forces were there in early universe. These forces (gravitons, gluons and photons) were created during symmetry breaking phase and before that, there was a time when all fundamental forces were unified and nature was existing in its symmetry form or simplest form. It does mean that leptons and quarks must be made up of only these force particles or these force particles (small units) were joined to form leptons and quarks particles (big units). Finally charged proton (More big unit) formed by joining quarks and gluons and hydrogen atom (most big unit) formed by joining charged proton and charged electron. It can be shown like this, (figure-7, figure 8). According to the new model of origin of the universe (figure 1) [1], these force particles were created from breaking of tachyons (please see predicted steps of creation figure 3). Tachyons were not directly transformed into force particles rather they first broken into their B.B.Bs. and then these B.B.Bs. (smallest unit of universe) were joined to form three fundamental force particles. The steps can be shown like this (figure 7). Weak nuclear force was not there and it comes into play only in beta decay of radioactivity.



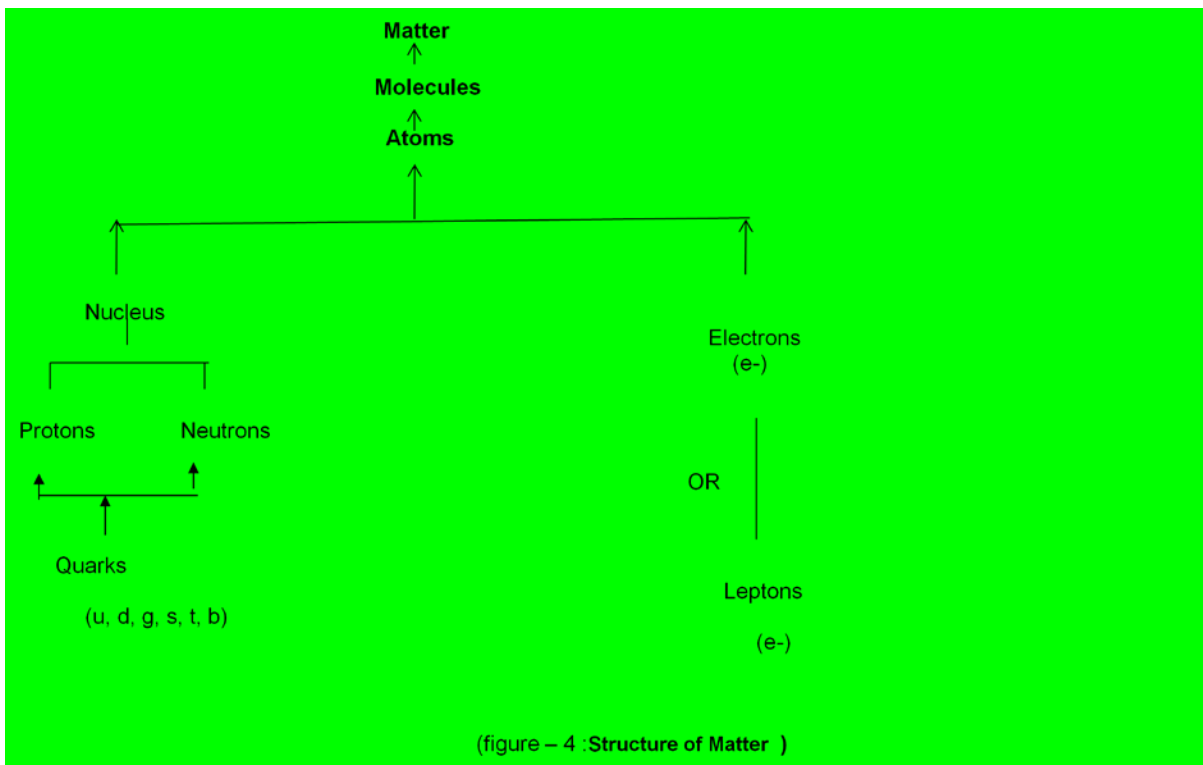
(figure- 1 , New model of the universe made by participatory science---[1])



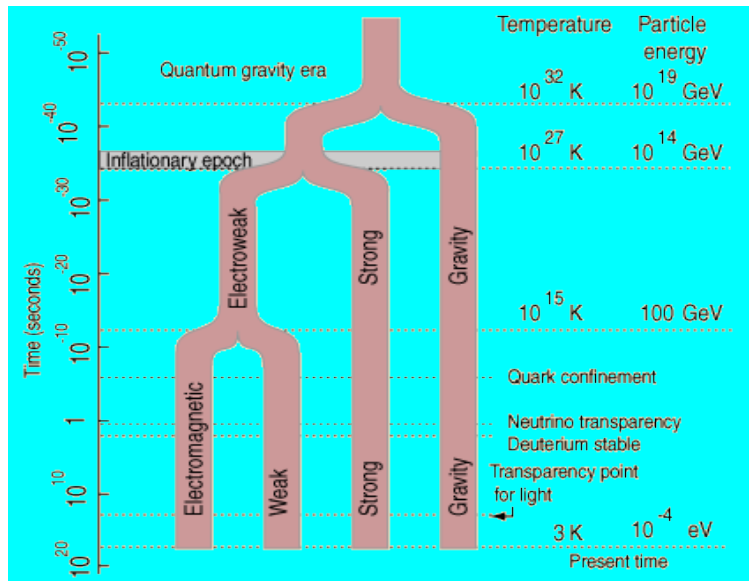
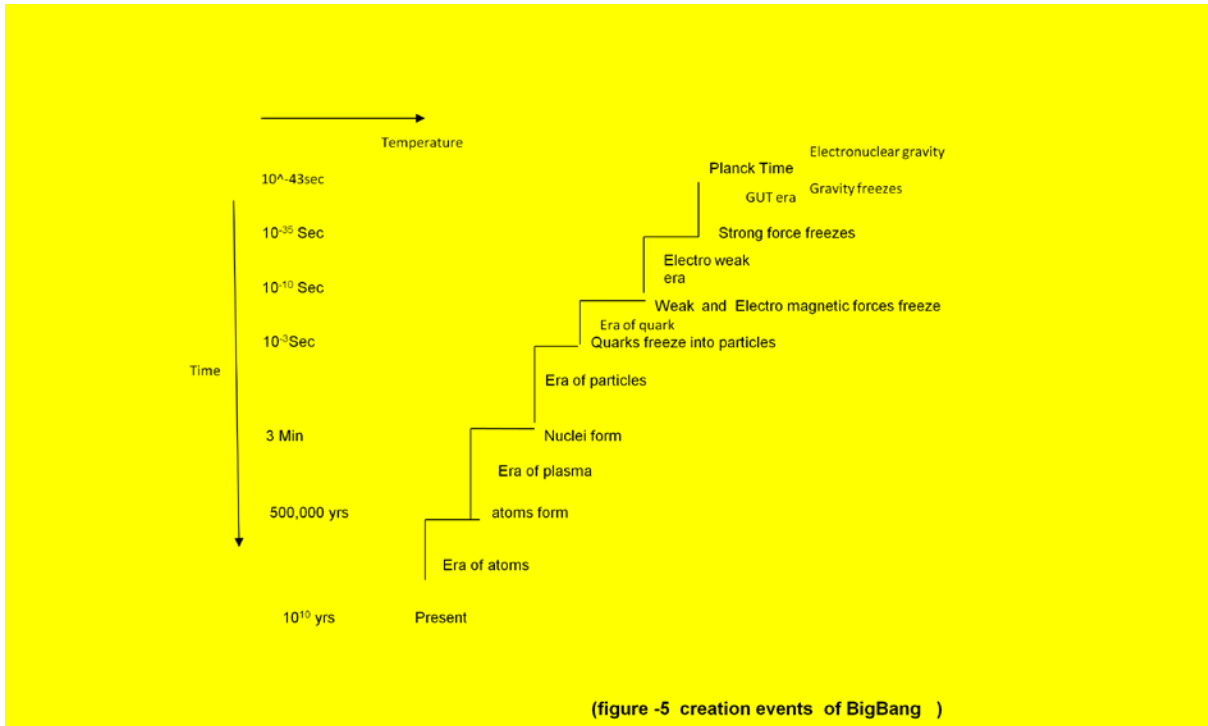
(Figure – 2: Unification Physics)

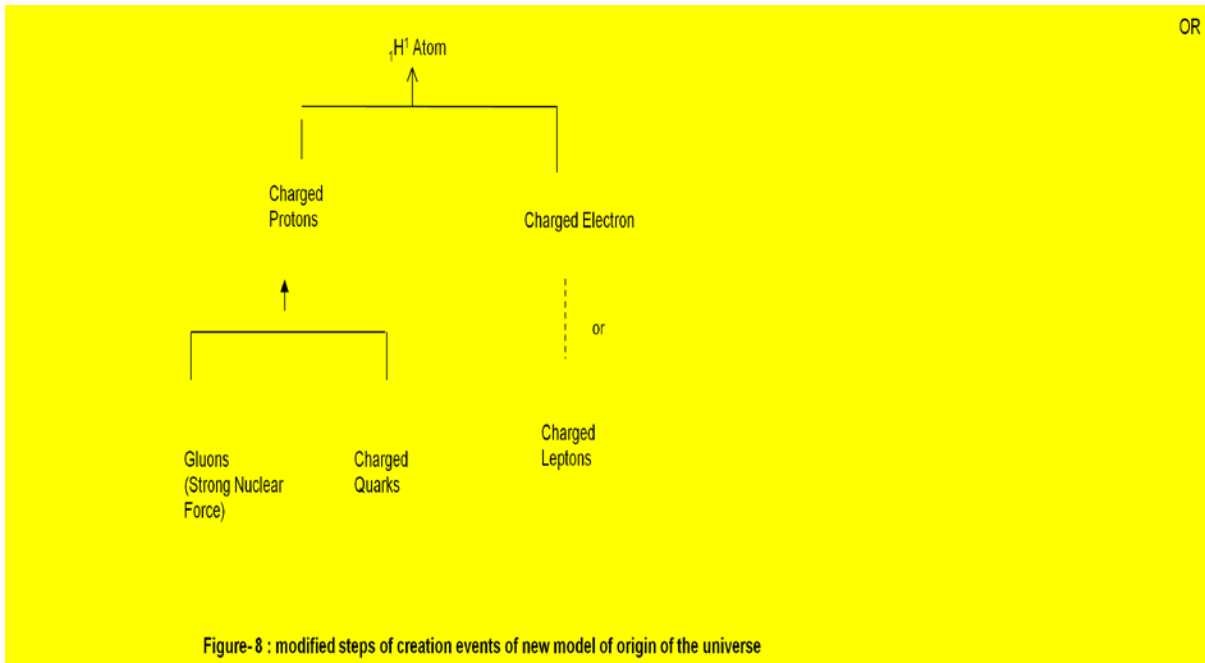
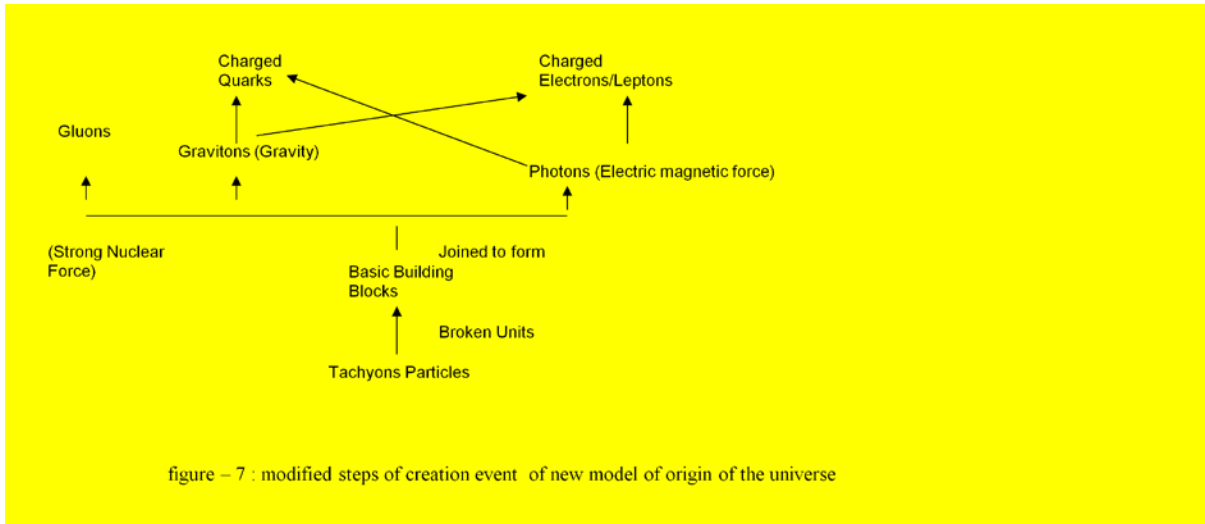


(Figure 3 : Basic (Predicted) Steps of Creation)



(figure – 4 :Structure of Matter)



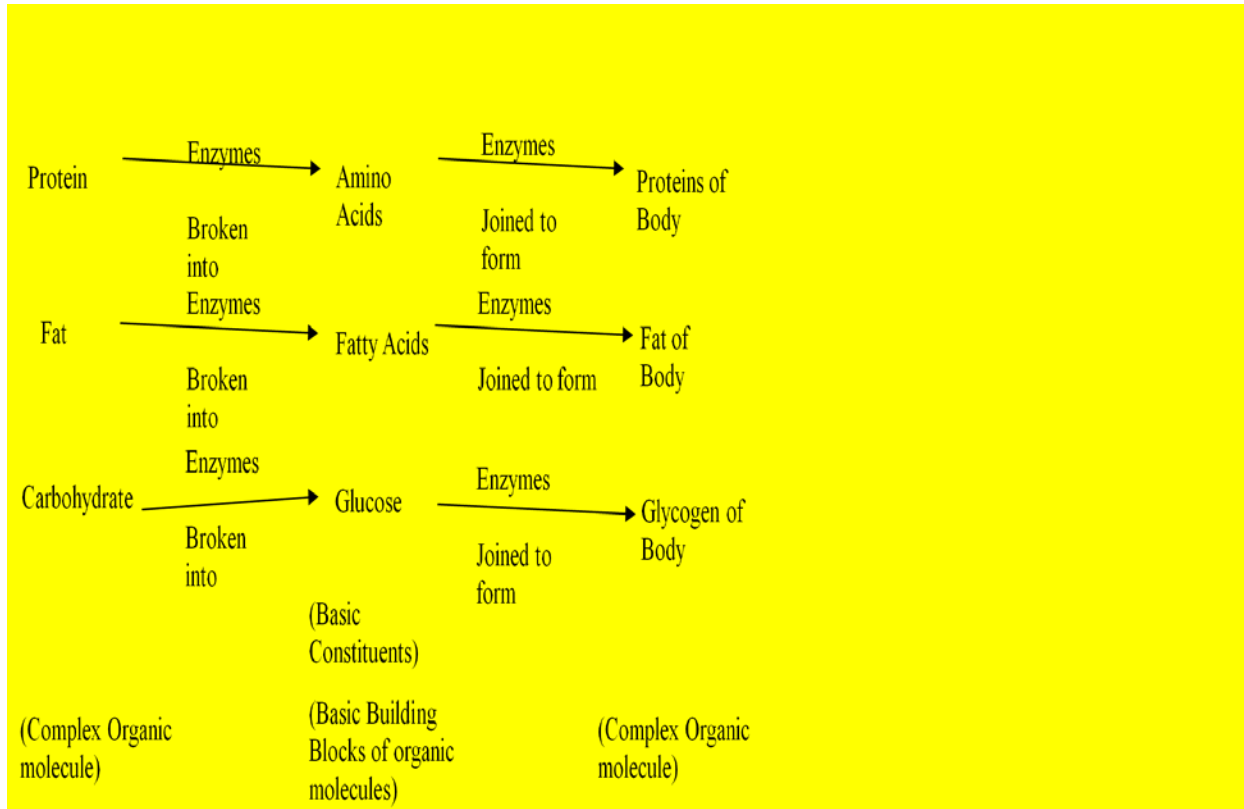


2.2 Laws of transformation of micro particles

Modern physicists believe that mathematics is the only way, which could visualize or realize about the working of physical universe. But in participatory science, first we understand the principles and working of biological world & then we apply the same principle in understanding the working of physical universe. For example:-

Laws of transformation is biological world:-

In biological world, the complex organic molecules transform into another complex molecules only when they are first broken into their basic constituents and later these basic constituents are joined to form the bigger complex organic molecules. This all happens in presence of bio-molecules called enzymes as under (figure 9) :-



(figure 9 – transformation of bio molecules)

The same principle is applied during transformation of micro-particles during creation of fermions and bosons from tachyons -

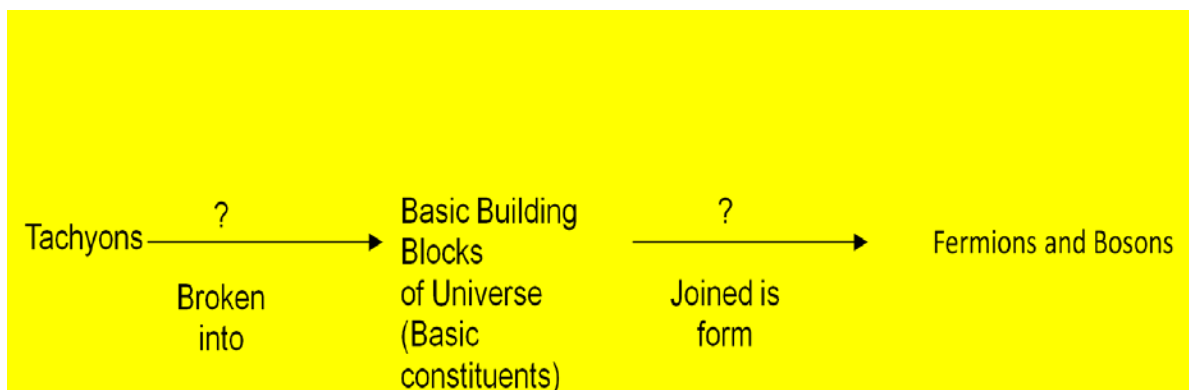


Figure 10 . Transformation of micro-particles

In biological transformations, there is need of enzymes . They are supposed to be bio-molecules. Their function is to trigger the transformation. They are specific for specific bio-transformation. Similarly, in micro particle

transformations, there has to be triggering force which could not only trigger the physical transformations but also they have to decide the type of transformation process. They have to be specific for specific physical transformation. The search for triggering force or factors would be discussed in the topic of assumptions of atomic genes (factors) with their realizations.

The process of biological transcription and translation forms these bio-molecules (enzymes). Similarly triggering force or factor used in transformation of micro particles must have come from *atomic transcription and translation*. This idea has given rise to assumption of a new chapter in the science, which goes by the name of Atomic Genetics, i.e. memory system of the atom or nature. At present I have just put a mark of interrogation (?) (figure 10). We shall discuss again the laws of transmutation of micro particles after the search of B. B. Bs. of the universe.

2.3 Is Super unification is myth ?

Whether the super unification is possible or not?

(a).Prof. Stephen W. Hawking has said the above prediction of unified theory in his famous book ‘A Brief History of Time’ that “But can there really be such a unified theory? Or are we perhaps just chasing a mirage? There seems to be three possibilities:

1. There really is a complete unified theory, which we will someday discover if we are smart enough.
2. There is no ultimate theory of the universe, just an infinite sequence of theories that describe the universe more and more accurately.
3. There is no theory of the universe, events cannot be predicted beyond a certain extent but occurs in random and arbitrary manner. Some would argue for the third possibility on the grounds that if there were complete set of laws that would infringe God’s freedom to change his mind and intervene in the world. It’s a bit liked the old paradox: Can god make a stone so heavy that he can’t lift it? But the idea that God might want to change his mind is an example of fallacy, pointed out by St. Augustine, of imagining God as a being existing in time: time is a property only of the universe that God created. Presumably, he knew what he intended when he set it up!”.....[2]

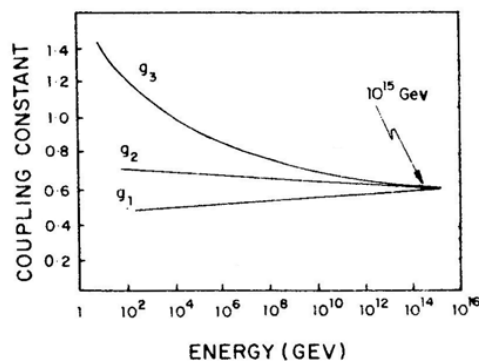
(b).Searches for Proton decay and super heavy magnetic monopolies, by B.V. Sreekantan, TIFR, Bombay— [3]

Another existing development that has taken place in last two decades is the unification of the weak and electromagnetic force, again as a gauge theory. While in the QED the electromagnetic interactions have considered to be mediated by photons, the weak interactions in the Electro weak have assumed to be mediated by massive intermediate vector bosons W^{\pm} and Z^0 . As was already noted in the context of QCD, in non-Abelian gauge theories (of which the Electro weak is also one) the identity of the particle is changed when the mediating bosons are absorbed or emitted.

An electron may emit a charged boson (W^-) and get transformed into a neutrino. In the unified Electro weak theory, the photon, the W^\pm and the Z^0 belong to the same family. At extremely high energies ($>10^{16}$ GeV) the strength of their interactions becomes identical. The force is then no longer long range and the weak coupling constant is the same as that of the electromagnetic force. Below this energy due to a mechanism known as spontaneous symmetry breaking, the W^\pm and Z^0 acquire mass, and the long-range character of the weak force becomes an extremely short range one. The Weinberg- Salam Electro weak theory made specific predictions –(1) the existence of neutral currents involving the exchange of the neutral Z^0 particles, and (2) the mass of the W^\pm as 81 GeV and that of Z^0 as 93 GeV. Experimentally, the neutral currents were established in 1974. The W^\pm and Z^0 with precisely the masses predicted, were discovered at the CERNpp Collider in 1983, thus giving final stamp of success to the Electro weak theory.

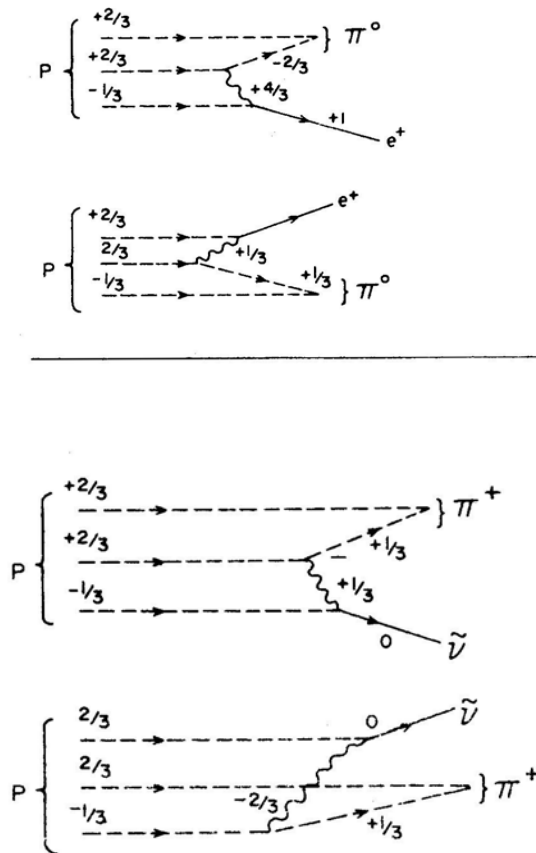
The initial success of the gauge theories in unifying electromagnetic and weak forces propelled many theorists to explore the feasibility of constructing a single gauge theory of all the three forces the strong, the weak and the electromagnetic particularly since strong interactions had been incorporated into a successful gauge theory, i.e. QCD. Pati gives an excellent account of the historical development, the current status and future prospects of these theories with an exhaustive list of references. The experimental support for such unification came from the inelastic scattering experiments of electrons and neutrinos on nucleons and from the study of the behavior of coupling constants of strong and Electro weak interactions with increasing energy transfer. In these theories all the coupling constants converge to a common value at the unification energy of 10^{15} GeV as shown in Fig 10.1

While there are a number of models $SU(4)^4$, $SU(5)$, $SO(10)$, E_6 , E_7 , $SU(7)$ etc named after the mathematical group of symmetries that connect the forces in the following we shall consider simple $SU(5)$ model to illustrate the general direction of progress. In $SU(5)$ model, there are 24 vector bosons that couple 24 different currents. The photon, W^\pm , Z^0 and 8 gluons of QCD, constitute a subset of 12 vector bosons. The other 12 are new massive lepto quarks (X,Y) which carry both flavor and color, three of charge $-(1/3)e$ and three of charge $-(4/3)e$ and the six corresponding antiparticles. It is the lepto quarks that bring about the interaction between the quarks and leptons and their mass is around 10^{15} GeV, the unification energy. The two important predictions of the grand unification theories (GUTs) are; (1) the proton (and the neutron even if it were bound) must decay violating baryon number conservation and (2) super heavy magnetic monopoles must exist.



(Figure 10.1. The energy dependence of the strong and electroweak coupling constants showing

convergence at $\sim 10^{15}$ GeV. While g_3 is the strong coupling constant, g_1 and g_2 are linear orthogonal combinations of the electromagnetic and weak coupling constants.)



(**Figure 10.2.** Emission and absorption of leptoquarks through quark-quark interactions leading to proton decay).

The typical mechanism of *proton decay* brought about by the emission and absorption of Lepto quarks by Quarks is illustrated in Fig 10.2. For example, by the emission of a Lepto quarks of charge $(4/3)e$, the quark with charge $(2/3)e$ transforms into an antiquark of charge $(2/3)e$, which together with a quark of charge $(2/3)e$ becomes a X^0 the emitted $(4/3)e$ Lepto quark is absorbed by the $(1/3)e$ quark of the proton and transformed into a position. A Lepto quark, which plays this dual, is called a d quark. Note that the electric charge and color are conserved in these reactions throughout. The probability of this type of interaction depends on the mass of the X particle. In fact, the lifetime for decay is proportional to the fourth power of M_X , the mass of X particle i.e.

$$T_p = \frac{k}{\alpha^2} \cdot \frac{M_X^4}{m_p^5}$$

where $k \sim 1$ and $\alpha = 0.02$. If $M_X = 2 \times 10^{14}$ GeV/c² then $T_p = 3 \times 10^{29}$ yr.

Table 1. Predictions for branching ratios for proton and neutron decay into the major two-body decays in the SU(5) model.

Proton decay:

Mode	(a)	(b)	(c)	(d)	(e)	(f)		
	REC	NR	R	R	R	NR	REC	R
$e^+ \pi^0$	31	37	9	13	31	36	40	38
$e^+ \rho^0$	15	2	21	20	21	2	7	11
$e^+ \eta$	11	7	3	.1	5	7	1.5	0
$e^+ \omega$	18	18	56	46	19	21	25	26
$\nu_e^c \pi^+$	12	15	3	5	11	14	16	15
$\nu_e^c \rho^+$	6	1	8	7	8	1.0	2.6	4
$\mu^+ K^0$	1	19	—	7	.5	18	8	5
$\nu_\mu^c K^+$	2	0	—	.5	—	0	.2	.6

Neutron decay:

Mode	(a)	(b)	(c)	(d)	(e)		
	REC	NR	R	R	NR	REC	R
$\nu_e^c \pi^0$	5	8	2	3	8	7	7
$\nu_e^c \rho^0$	3	.5	5	4	.6	1.2	1.8
$\nu_e^c \eta$	2	1.5	1	—	1.5	—	—
$\nu_e^c \omega$	3	3.5	14	10	5	5	5
$e^+ \pi^-$	54	74	23	32	79	72	68
$e^+ \rho^-$	27	4	55	48	6	12	19
$\nu_\mu^c K^0$	0	10	—	2	1.1	3	0.6

The various decay modes of protons and neutrons according to SU(5) are given in (Table 1). The range of branching ratios for the different decay modes is due to the difference in the approaches of different authors and the parameters used by them . It is important to note that in the SU(5) model, the dominant lepton secondary in the decays of the proton and neutron is the electron and not the muon.

Grand Unification Monopoles (GUMS) – Catalysed Proton Decays

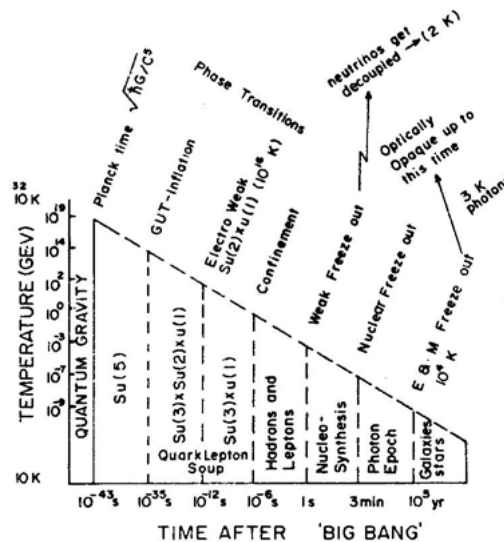
In his attempt to understand the quantization of electric charge, half a century ago Dirac had proposed the existence of magnetic monopolies with magnetic charge a multiple of $g = hc/2e = (137/2)e$. Experimental searches over the 50 years since then *have not provided any evidence for them*. However, the advent of grand unification theories has revived the interest in the field. Breaking of the GU symmetries down to SU(3), SU(2), U(1) predicts the existence of the Hooft- Polyakov type magnetic monopolies with the masses of the order of the grand unification mass $10^{16} \text{ GeV}/c^2$, which corresponds to 10^{-8} g the mass of bacterium. The GUT monopoly or GUM as it is called has a long-range magnetic field. However, being a massive quark condensate with a core of 10^{-30} cm or so, it will need to have a state of perfect symmetry that could have existed perhaps only immediately after the big bang, when quarks and leptons would have been *identical* as also photons, heavy

vector bosons and gluons. In such a state the gauge hierarchy gets broken in stages as on as one proceeds outwards from the core and the various particles begin to assume their identities. Thus if GUMs are available, they will constitute a wonderful laboratory for exploration of GUT effects.

Leptoquarks, the Grand Unification Monopolies (GUMs) and the Early Universe

The masses of Lepto quarks and GUMs being of the order of or more than $10^{15} \text{ GeV}/c^2$, it is *extremely unlikely that these will ever be produced in terrestrial accelerator laboratories*. It has been estimated by an enterprising scientist that a linear accelerator for the purpose would have to extend from the earth to the moon. This being the case, the question arises as to whether these super-massive particles remain only as prediction of GUTs or whether there exists any possibility. They could have been produced at some point of time in the history of the universe and played a role in its evolution, perhaps even surviving upto the present time as relics. It turns out that if we believe in the big bang origin of the universe, then at times less than 10^{-35} s, conditions were suitable for production of these massive particles.

This exploration to such a small values (over 53 decades of time) is based upon current ideas of the universe that have emerged from a variety of astronomical observations in the different bands of the Electromagnetic spectrum. Constrained by observations of the rate of expansion of the universe, the temperature and density of the universal microwave background and the cosmic abundance of the light nuclear and using all of physics relevant to the different stages of the evolution of the universe. It become possible to construct scenarios of what happened immediately after the big bang. This is illustrated in (Figure 10.3), which is adapted from Schramm As is evident from it, the astrophysics of what followed the big bang is best described in the language of modern particle physics.



(Figure 10.3 Physics immediately after the big bang at different time intervals—symmetry breaking and phase transitions.)

In the time interval between 10^{-43} to 10^{-35} s after the big bang the temperature of the universe could have been higher than 10^{12} GeV (10^{25} K) and the density greater than 10^{74} gcm⁻³ sufficiently high to produce particles of mass equal to or greater than 10^{15} GeV/c². It is precisely in this interval that the super heavy particles and the monopolies could have been produced. If they were two astrophysical *puzzles* automatically get solved.

Based on the measurement of the microwave background and the estimated amount of matter in the universe, the ratio of the number of photons to baryons is 10^9 - 10^{10} ; *radiation rather than matter dominate the universe*. Also, all attempts to detect antimatter in the primary cosmic radiation have resulted only in setting upper limits, clearly showing that in the universe matter dominates over antimatter. In the framework of GUTs, both these large-scale asymmetries can be explained on the basis of a perfectly symmetric origin of the universe. In one of the typical models, it is assumed that initially the massive X, Y particles and their antiparticles were produced in equal numbers; their decays led to creation of quarks and leptons and their antiparticles. As the temperature fell, nucleons and anti nucleons were produced but not in exactly equal numbers. Their annihilation produced the observed background radiation and the excess baryons, which survived constitute the matter observed now in the universe. By a suitable adjustment of asymmetry in the decay of the X,Y particles and introducing in additions the violation of CP symmetry, the observed photon to baryon ratio as well as the limits on the matter to antimatter ratio can be explained.

In the early universe, super-heavy magnetic monopolies would also have been produced during the symmetry breaking phase transitions. The only way these monopolies could have disappeared is by MM annihilation, but a fraction could have survived. It is therefore very important to search for monopolies and measure their flux. Their detection would be of tremendous significance for both physics and astrophysics.

Super-Unification : SUSYGUTs

In the grand unified theory, the strong, electromagnetic and weak forces are unified as also quark and leptons. A natural extension of forces is unified as also quark and leptons. A natural extension of this would be to bring gravity also into the same fold. In molecular, atomic and nuclear phenomena, the role gravity is in significant compared to that of the other three forces. But as we have seen, extrapolation to the early universe leads us a situation where density becomes enormously high even compared to nuclear densities. Thus at less than 10^{-43} s, quantum gravity effects must also come into play and will require a quantum theory of gravity. One promising attempt in this direction is super gravity theory. In it, super symmetry, i.e. symmetry between fermions and bosons, is introduced as gauge symmetry. As consequences, boson partners of all fermions must exist and vice-versa. Thus the super-unification of super gravity with a GUT (SUSYGUT) necessarily leads to new spin 1/2 fermionic partners for all bosons including the gauge Higgs bosons. It also predicts new spin 0 particles corresponding to quarks and leptons, which have been christened squarks and sleptons. In SUSYGUTs the proton decay lifetime may be extended to 10^{32} yr and even beyond. In the simplest super symmetric SU(5) type theories, the dominant nucleon decay modes will be $p \rightarrow \nu \bar{K}_+, \nu_\tau \bar{K}_+, n \rightarrow \nu_\mu \bar{K}_0, \nu_\tau \bar{K}_0, p \rightarrow \nu \bar{K}_+, \nu_\tau \bar{K}_+, n \rightarrow \nu_\mu \bar{K}_0, \nu_\tau \bar{K}_0$, while the decay modes $e^+ \pi, e^+ \bar{K}, \mu^+ \pi, \nu \pi$, etc. will be suppressed compared to the predictions of the earlier models.

Limits on of Superheavy magnetic monopoles (GUMs)

Excepting in the experiment of Cabrera : In which the magnetic monopole is detected by the change in magnetic flux as it passes through a super conducting ring, *all other experiments that have been carried out recently depend on the velocity of the*

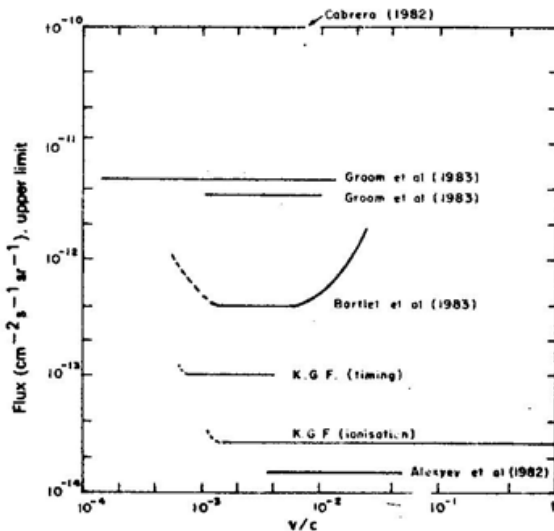


Figure 10.4. Comparison of the upper limits on the flux of GUT monopoles in various experiments as a function of velocity.

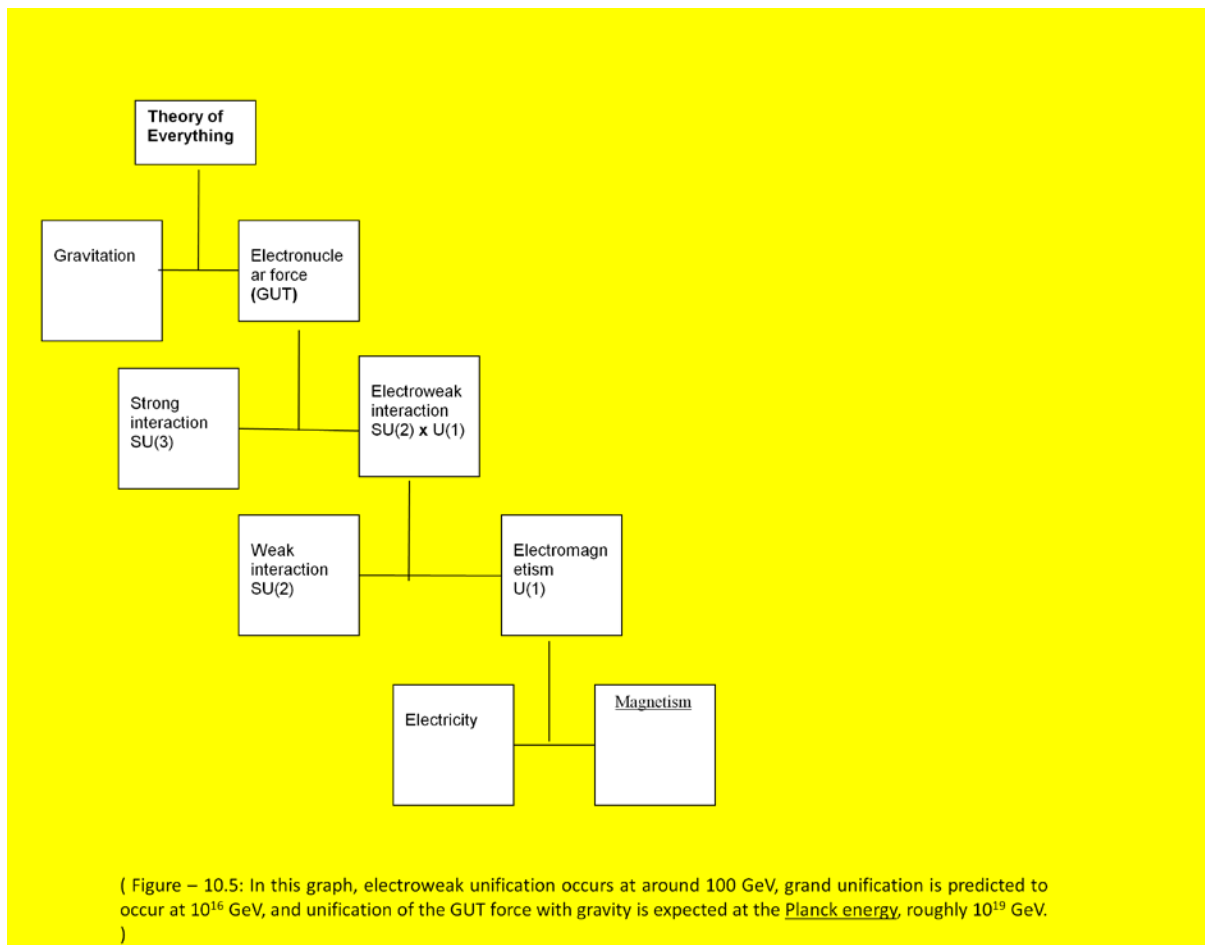
magnetic pole and its ionization characteristics. They are therefore sensitive only in certain velocity range. Cabrera's first experiment carried out with a super-conducting loop of area 20cm^2 gave evidence of one candidate in an operating period of 151 days which corresponds to a velocity independent flux limit of $6.1 \times 10^{-10} \text{cm}^{-2}\text{s}^{-1}\text{sr}^{-1}$. In a subsequent experiment, using a three – loop super-conducting device of effective area 476cm^2 , did not find any candidate in 150days of operation thus setting an upper limit of $3.7 \times 10^{-11} \text{cm}^{-2}\text{s}^{-1}\text{sr}^{-1}$. The limits set by different experiments sensitive to different velocity ranges are shown in Fig.10.4. It is clear that the flux in the velocity range $10^{-3} c$ to c is less than $2 \times 10^{-14} \text{cm}^{-2} \text{s}^{-1} \text{sr}^{-1}$ at least three orders of magnitude lower than the limit to the velocity independent flux given by Cabrera . The experiments will soon be able to reach the bound of $10^{-16} \text{cm}^{-2} \text{s}^{-1} \text{sr}^{-1}$ set by Parker on the basis of the existence of a galactic magnetic field.

In conclusion as of 1984 January, it may be stated that the *existence of super-heavy monopoles and the phenomenon of nucleon decay, both of which are extremely important from the point of view of grand unification theories are still very open questions.* While there has been just one magnetic monopoly candidate so far, there have been several as far as nucleon decay is concerned. The first candidates for nucleon decay came from the fine gray calorimeters of KGF, and NUSEX; recently there have been candidates from the water Cerenkov experiments as well. The experimental situation regarding the other important phenomena of relevance to grand unification which have not discussed in this article like finite mass of neutrons, neutrino oscillations and neutron oscillations continues to be indefinite through many dedicated experiments are in

progress. With the continued operation of the nucleon decay experiments already collecting data and the commissioning of the new generation of experiments over the next few years, the stage is set for a resolution of this problem in a time scale of 5-10 years. The present indication that the dominant decay mode for the proton (even if it decays) is not $p \rightarrow e^+ \pi^0$ and that the lower limit to the lifetime of the nucleon is 10^{31} years, does not favor the simple SU(5) type models. The remarkable discoveries of W^\pm and Z^0 with mass values exactly as predicated have been a boost to the unification based on the gauge theoretical approaches. Whether grand unification can be extended to super unification experimental alone can tell. *This will be the challenge for the remaining years of this century.*-----[3]

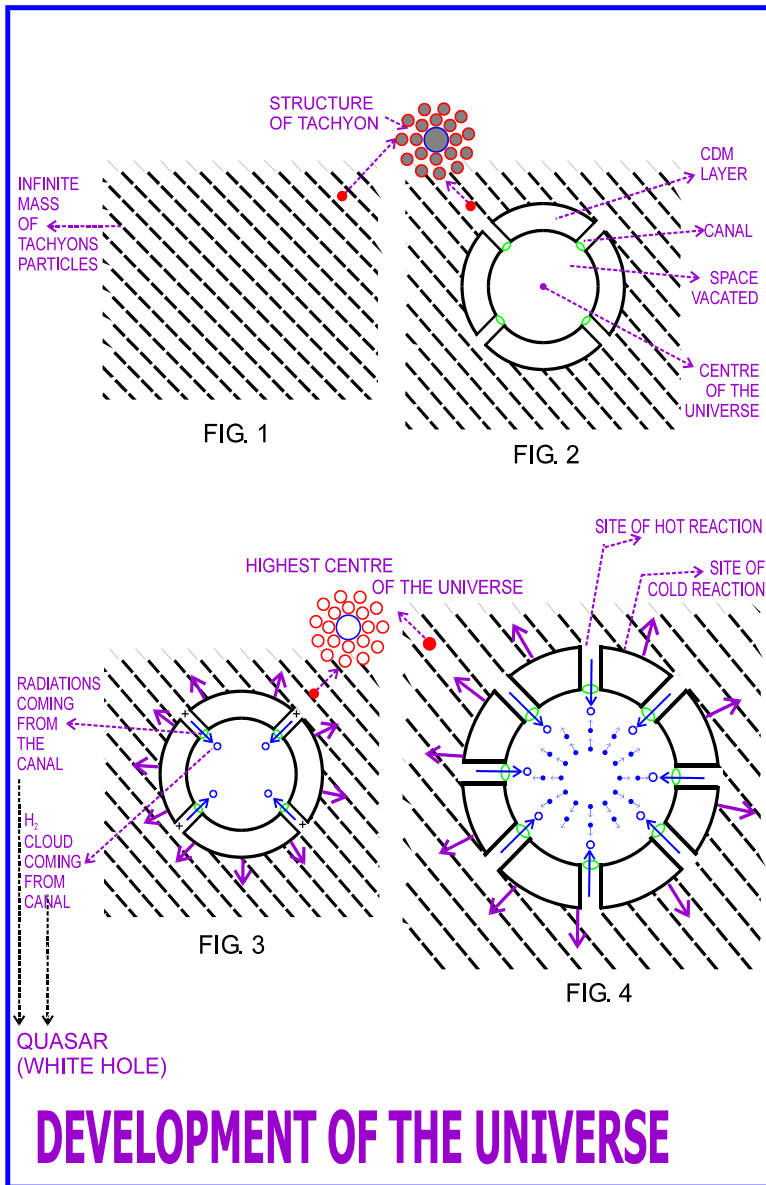
Theory of Everything (ToE) ----[4]

A Theory of Everything would unify all the fundamental interactions of nature: gravitation, strong interaction, weak interaction, and electromagnetism. Because the weak interaction can transform elementary particles from one kind into another, the ToE should also yield a deep understanding of the various different kinds of possible particles. The usual assumed path of theories is given in the following graph, where each unification step leads one level up: (figure -10.5)



Having equipped with the ideas, knowledge and experimental limitations of super unification , GUT theories and Theory of Everything , participatory science clarifies the unification concept as follows-

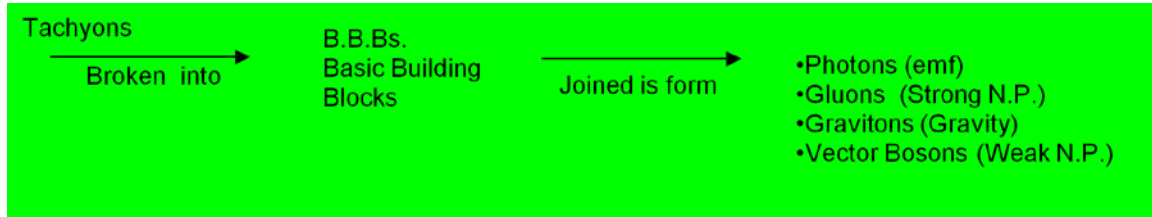
1. What is symmetry and what is symmetry breaking phase?
2. What is unification of forces?
3. Could the GUT theory and super unification be proved?
4. What are the flaws in GUT and super unification models or theory?
5. Is there any other theory or models that could replace the GUT and super unification scenario?



(figure 10.6 – Development of the universe and symmetry (fig 1) and symmetry breaking phases (fig -2,3,4))

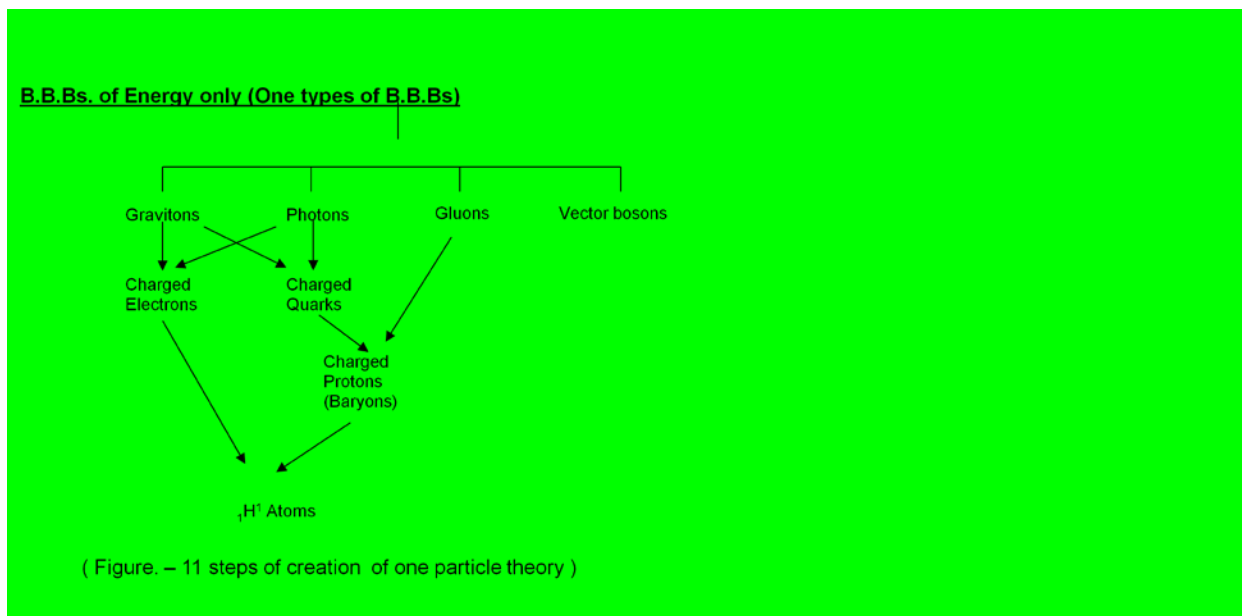
According to the new model of the universe (Figure 10.6), there was a time, when neither galaxies nor space were formed and it was occupied by tachyon particles. So tachyons were everywhere in the universe. This state of the universe is called Symmetry State. During origin of the universe this symmetry got broken and new particles were formed by phenomenon of transmutation from tachyons with formation of different particles

,nature entered in symmetry breaking phase. It does mean that tachyons started transmutating into other new particles after breaking into their basic building blocks (B.B.Bs.) (figure 10.7)



(figure 10.7 tachyons breaking into B.B.Bs before formation of force particles)

According to participatory science, unification of forces means; four different natural forces, which are mediated by different particles, behave identical in strength or belonging to the same family. In the other words, if constituents of these force particles are one, then only they could behave identical in strength otherwise not. So, GUT means that basic constituents of three force particles (gluons, vector bosons, photons) are one i.e. they are made up of same basic building blocks. While super unification means that all four-force particles (gluons, vector bosons, photons and gravitons) are made up of one B.B.Bs. It is also called *one particle theory*. One particle theory means four natural forces, which are mediated by four different particles, are made up of *one type of B.B.Bs.* or their constituents are same. So according to SU(5) model ,existing before creation, this one type of B.B.Bs. had joined to form bigger particles, which are now called force particles (gluons, vector bosons, photons and gravitons). According to modern physics these force particle are *bosons* or energy particles. Further, during creation these bosons transmutated into matter particle (fermions) or *Lepto quarks*. The whole scenario is like that (figure 11):



(Figure. – 11 steps of creation of one particle theory)

As super unification is not proven yet, it does mean that $E=mc^2$ is not confirmed yet. *Super unification is the confirmatory test of $E=mc^2$* because during origin of the universe the energy (bosons) particles transformed into matter (fermions) particles. As super unification is not proven yet, it does mean that these four natural force particles *are not bosons* or their basic constituents *are not same* or they are not made up of one types of B.B.Bs.

As super unification is not proven yet, on this basis participatory science concludes following inferences:

Table 1.1 , Modified inferences of Unified theory

Experiment	Observations	Inferences
<p>No experiment to confirm super unification.</p> <p><i>No big-bang</i> means no super unification.</p> <p>No Theory of Everything (ToE) yet investigated (figure- 10.5)</p>	<p>No observation to confirm super unification.</p> <p>In this graph, electroweak unification occurs at around 100 GeV, grand unification is predicted to occur at 10^{16} GeV, and unification of the GUT force with gravity is expected at the <u>Planck energy</u>, roughly 10^{19} GeV.---[4]</p>	<ol style="list-style-type: none"> 1. Out of four natural force particles, one particle is made up of two types of B.B.Bs. 2. Out of four natural force particles, gravitons are not bosons rather they are fermions. 3. It does mean that there are two types of basic constituents of fermions rather than one type. 4. while gravitons are made up of two types of fundamental particles. Hence super unification cannot be proved 5. Had graviton is made up of one type of basic building blocks , the coupling constant could have merged at energy 10^{16} GeV. But instead of that it is merging at energy 10^{19}GeV. 6. This gives rise to <i>two particles hypothesis.(figure 12)</i>

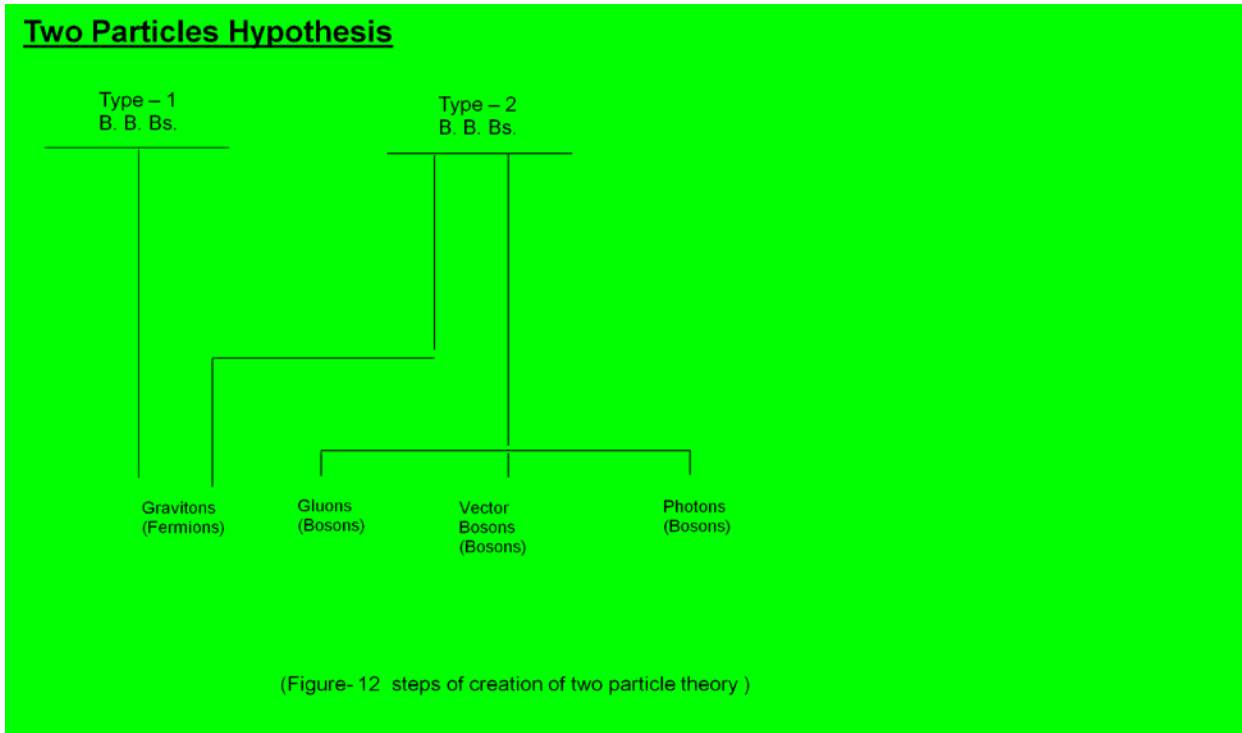


Table 2, Observation that proves that gluons, Vector bosons and photons are made up of one type of B. B. Bs.

Experiment	Observations	Inferences
Experimental support for such unification came from the study of the behavior of coupling constants of strong and Electro weak interactions with increasing energy transfer.	In these theories, all the coupling constants coverage to a common value at the unification energy of 10^{15}GeV as shown in section 2.3 --- (b), (figure 10.1)-----[3].	<ol style="list-style-type: none"> 1. The inferences of the graph are not proven yet. 2. Participatory science realizes one truth by the graph i.e. these three forces particles are made up of one type of B. B. Bs. 3. How did one type of B.B.Bs. transform into three types of bosons (gluons, vector bosons & photons) and How did symmetry breaking phase trigger , shall be discussed in atomic genetics .

2.4 Structure and Properties of two B.B.Bs (figure 13)

On the basis of *inertial* properties of the matter, we define again *inertia* (classical definition) again at the level of B.B.Bs. i.e. when nature is having its fundamental structure.

1. Mass: By virtue of which fundamental particles (B. B. Bs.) occupy space.
2. Absolute rest or Uniform motion: By virtue of which these two types of B.B.Bs. are opposite in nature, that is why nature does not behave identical or belonging to the same family. This is the reason we can never achieve super unification i.e. all the four natural force particles behave identical or belonging to the same family. Absolute rest is the property of *PURE m* or matter B. B. Bs. while motion is the property of energy B. B. Bs.

Thus energy (energy B. B. Bs.) and matter (matter B. B. Bs.) should only be defined at B.B. B. level and this is true stage of nature where we can realize their eternal properties.



Assumption of two particles hypothesis with their observations

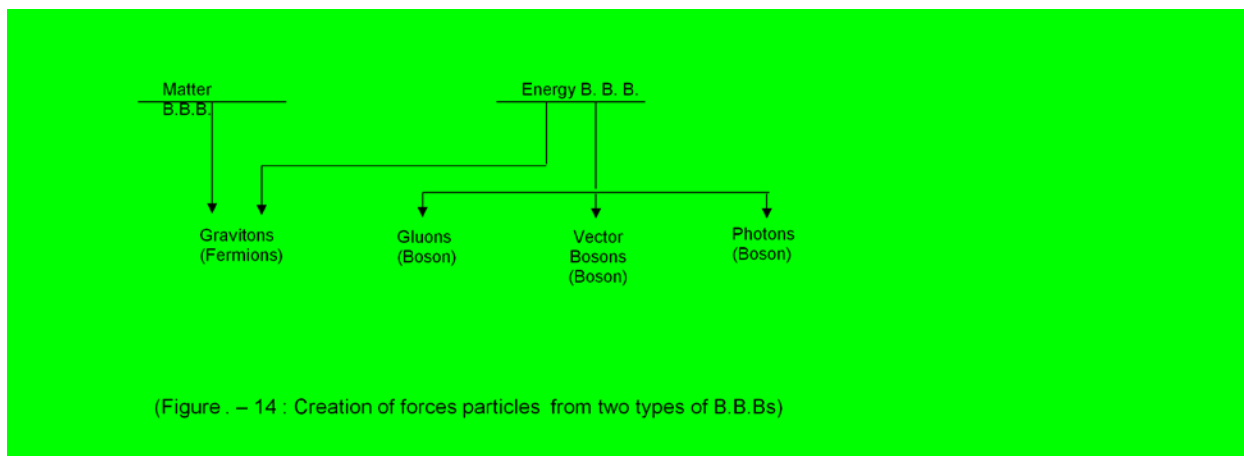
Two particles hypothesis means super unification cannot be proven in future. The basis of two particles hypothesis is - there is no observation which can prove that all four natural forces which are mediated by four different particles (gluons, vector bosons, photons and gravitons) were identical or belonging to the same families, before the origin of the universe. It does mean that gravitons are made up of two types of B.B.Bs while rest three forces are made up of one type of B.B.Bs.(figure 14)

As gluons, vector bosons and photons are energy particles (bigger units), therefore the name of their B.B.Bs is energy B.B.B. All fermions are *impure matter* particles and few release gravitons from them which form gravity field around them. Thus quarks (fermions) are made up of gravitons or they are filled with gravitons.

Gravitons give two types of effects:

1. Gravitational energy effects that shall be discussed in gravity chapter.
2. Matter B.B.B. effect, it can only be realized when we discuss the problem of super unification i.e. can there really be such a unified theory?

Thus we conclude that gravitons are made up of two types of B.B.Bs i.e. one on the basis of basic properties of graviton or on the basis of gravitational energy effect which is due to energy B.B.Bs. and the second one the matter B.B.Bs. effect as gravity cannot be unified with other three natural forces and these two types of B.B.Bs. are opposite in nature or they could not be transformed into each other. Hence, it is now necessary to define energy (E) and matter (m) of $E=mc^2$. If energy (E) and matter (m) are not unified by virtue of their opposite behavior and it is being confirmed by not getting proved super unification phenomenon, it means $E=mc^2$ is a fictitious equation.



What is the definition of energy and matter according to physics and how they are wrong in defining them?

Physicists have defined energy (bosons) and matter (fermions) only when they have been created and they started interacting with one another. So physicists have defined energy (bosons) and the matter (fermions) at particle level (big units) . This stage of matter (fermions) is not true stage of matter rather it is *impure* matter (mixture of energy B.B.Bs. and matter B.B.Bs.). As energy and matter are not in their true fundamental stage, therefore, their definitions are spurious as given by physicists. Whatever matter (fermions) is showing their properties, basically these are acquired (spin) after they were formed from their B.B.Bs. The true stage of matter (fermions) and energy (bosons) is when they are in their fundamental stage i.e. at B.B.B. stage. The true definition of energy and matter can only be made when nature is in B.B.B. form. So we have to define energy and matter at B.B.B. level or when the nature is in fundamental form.

2.5 Assumption of Atomic Genes (Memory System of Nature) With their Observations

Q. Are bigger units, (fermions and bosons) conscious organisms?

Q. What is phenomenon of consciousness? How it should be defined? How it could be studied or searched?

Q. What is memory system of atom? How does it work? How it can be researched?

Realization of consciousness is purely participatory. One can realize phenomena of consciousness in one self as well as in the outer world too. To realize and to study phenomenon of consciousness, nature has blessed us different systems in our body. The main system is nervous system through which one can realize inner as well as outer conscious phenomena.

At present I will acquaint you the existence of atomic genes (messages carrying conscious particles) in the nature. Our body has got receptor end organs, which receive different messages (different types of activated atomic genes) from outer world. These receptors are:

1. Eye : receives different messages of color (color activated atomic genes)
2. Ear : receives different messages of voice (voice activated atomic genes)
3. Nose : receives different messages of smell (smell activated atomic genes)
4. Tongue: receives different messages of tastes (taste activated atomic genes)

General Receptors

5. Pain : receives different messages of pain (pain activated atomic genes)
6. Touch : receives different messages of touch (touch activated atomic genes)
7. Pressure : receives different messages of pressure (pressure activated atomic genes)
8. Temperature: receives different messages of temperature (temp. activated atomic genes)

Inner Messages (activated atomic genes)

1. Hunger: messages of hunger (hunger activated atomic genes)
2. Thirst : messages of thirst (thirst activated atomic genes)
3. Speech : messages of speech (speech or sound activated atomic genes)
4. Creative thoughts : messages of creation (creative activated atomic genes)
5. Dreams : messages of audio visual (audio visual activated atomic genes)
6. Libido : messages of libido (libido activated atomic genes)
7. Emotions: different messages of emotions (emotions activated atomic genes)

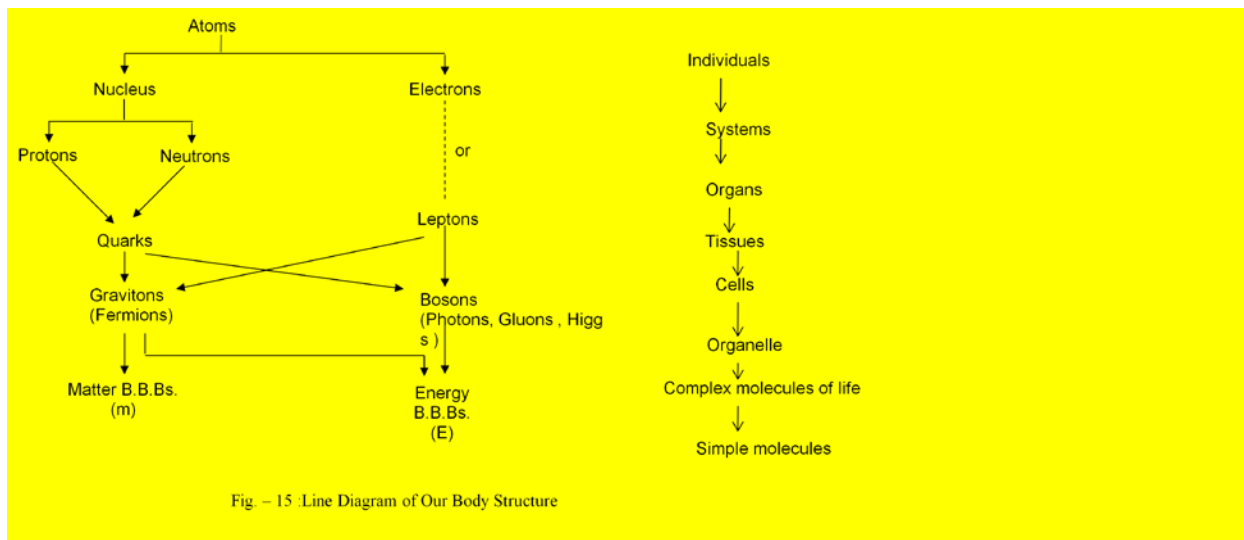
There are many other inner and outer messages, which are activated atomic genes that are realized by us in our life span. Now the question is:

Q. How does nature generate these inner and outer messages?

Q. How these messages are carried from source to our brain?

Q. How do we realize it? Or what is phenomenon of realization and where does it take place in our brain?

Let us first study about inner messages that we realize in our self in the chapter of *mysterious behavior of the brain*. Physicists have to learn medicine also if they want to know about universe or particles. Without knowing oneself (figure 15) , one cannot be participator in this universe or one cannot know about phenomenon of consciousness or atomic genetics or memory system of the atom.

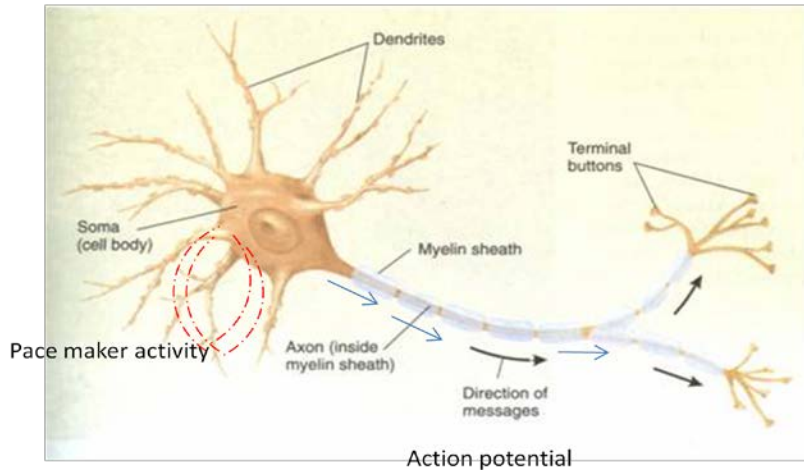


Mysterious Behavior of The Brain Structure and Function of Neurons

At present neurologists do not know how does brain function. Now, we shall study about it and simultaneously we shall confirm the theory of *atomic genetics* by realization in our self. Having equipped with the configuration of our body by a line diagrams, now we shall localize our studies towards brain only. Brain has got very complex network of neurons. It is very difficult for beginners to understand the complete anatomy of the brain. However, I will narrate the subject in very simple way.

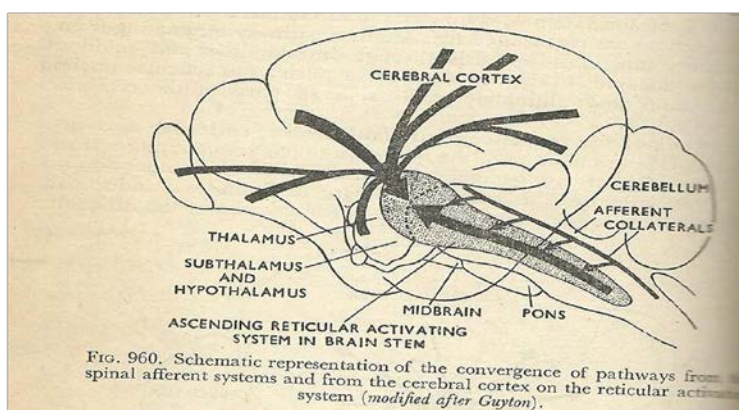
The structural and functional unit of the brain is neuron (figure 16). It has got following parts:

1. Cell Body, 2. Dendrites, 3. Axon



(Figure. – 16 : structure of neuron cell)

The gross anatomy of the brain is very simple. The brain has got many areas. These areas are nothing but groups of neurons forming those areas. There is network of other neurons, which interconnect these areas or interconnect other parts of body. This whole network is called nervous system. There is an electrical activity in the area called *pace maker* activity and it is being generated between body and dendrites. The other electrical activity which is called *action potential* generates in axon and it carries the message from one cell body to other cell body. The pacemaker activity brings the *inner messages* from membrane (membrane theory) of the cell body and later these messages are modulated (shifted) on action potential or they are carried by action potential to the realization centre and finally the messages brought are realized there. Similarly, messages coming from outer world are first received by receptors (cell body) by phenomenon called *transudation*. Receptor works as transducer. Later these messages are again modulated on action potential and action potential carries the messages to their respected areas and from these areas messages are relayed to realization centre present in RAS (reticular activating system). (figure 17)



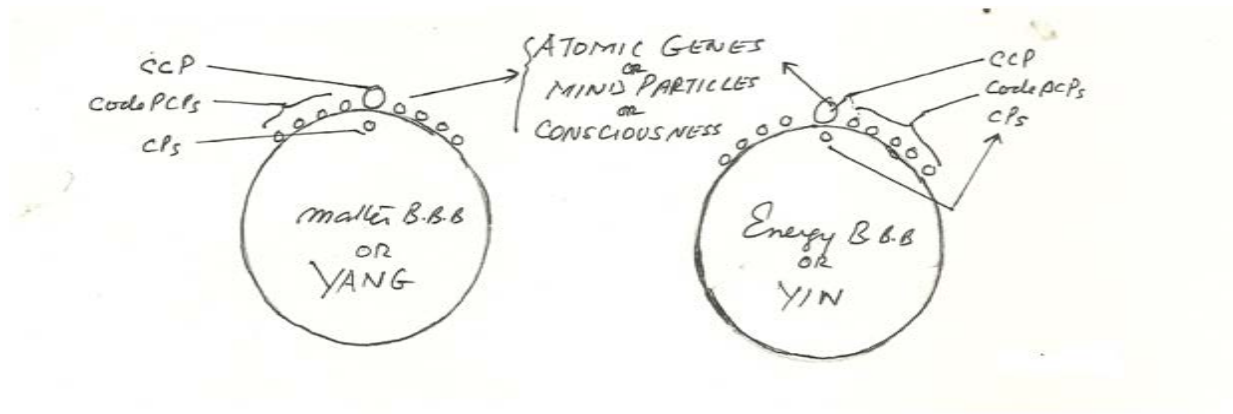
(Schematic representation of conversion of pathways from the spinal afferent system and from cerebral cortex on the reticular activating system (RAS different messages are realized here)

(Figure. – 17: Genesis of Inner Messages (activated atomic genes)

Having equipped with the realization of different inner messages, which are also called activated atomic genes or mind ness or consciousness of the universe, or different information s , now we make the hypothesis of their genesis.

Hypothesis of atomic genes and their genesis

These different types of activated atomic genes are found on B.B.Bs. as shown below:(figure 18)

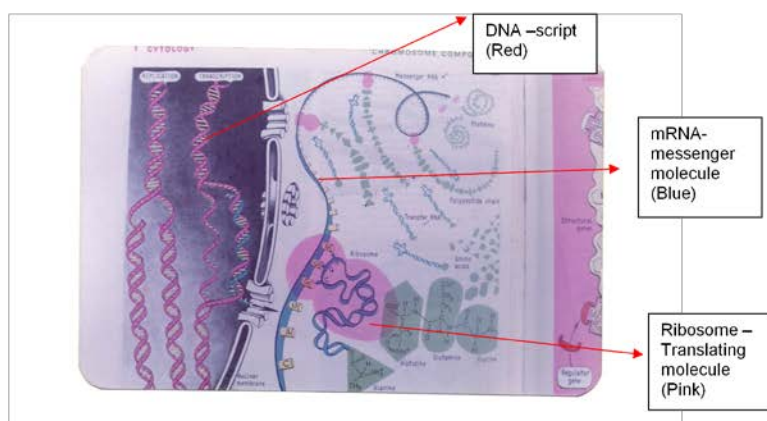


(Figure. – 18: eternal mass and eternal Mind property of B.B.Bs)

To understand about the genesis of the messages, which is also called *atomic transcription*, one has to understand *biological transcription* first. In biological transcription, there generates biological messages (mRNA) inside nucleus of the cell. These messages (mRNA) are transcript from a message storage system called DNA (biological messages script). This message comes out from nucleus to cytoplasm where one more molecules called ribosome translates it. Ribosome having realized the message, it works accordingly. The whole concept is called *biological transcription and translation* (figure 18.1)

2.6 Understanding The Atomic Genetics Through Structural and Functional Analogies

Analogies if become available are helpful in understanding a physical system. In general the analogy means some kind of mental construct which is useful in understanding the “unknown” in term of the “known”. Literally the word “analogy” means similarity or parallelism. This similarly could be just a concept or a sequence of concepts or a description of a model or the phenomenon as a whole. Further these analogies could be well within the same discipline or in disciplines of knowledge.



(figure 18.1 : Biological transcription and translation)

Table 3 , messages from biological world to understand the working of B.B.B. world.

Biological World (<i>figure .18.1</i>)-----[5]	B.B.B. World (<i>figure .18</i>)
<p>1. Cell is the structural & functional unit of body.</p> <p>2. Biological genes are triggering cell working by phenomenon called biological transcription and translation.</p> <p>3. Bio molecules take part in bio transcription & translation are:</p> <p>DNA: message strong system.</p> <p>mRNA: messenger molecule it carries the messages from nucleus to cytoplasm.</p> <p>Ribosome: translating molecule it translates the messages and work accordingly.</p>	<p>1. B.B.Bs. are structural and functional units of the universe.</p> <p>2. Atomic genes trigger functions of B.B.Bs by phenomenon called atomic transcription and translation.</p> <p>3. Atomic genes take part in atomic transcription & translation are:</p> <p>CCP: through strong system (omniscient). It is similar to DNA of biological world.</p> <p>(It is throughout script called cosmic conscious particles)</p> <p>Code PCPs: messenger atomic genes. It is similar to mRNA.</p> <p>Inner and outer world messages are carried by Code PCPs. (programmed conscious particles.</p> <p>CP : translating atomic genes. It translates the messages brought by Code PCPs and it works accordingly.(conscious particle)</p>

2.7 Models of B.B.Bs. with Their Few Properties

(Concept of Unity of Opposite)

Before I shall make the final model of two B.B.Bs. I would like to narrate properties of B.B.Bs. (Figure -19)

Properties due to mass reality of B.B.Bs.:

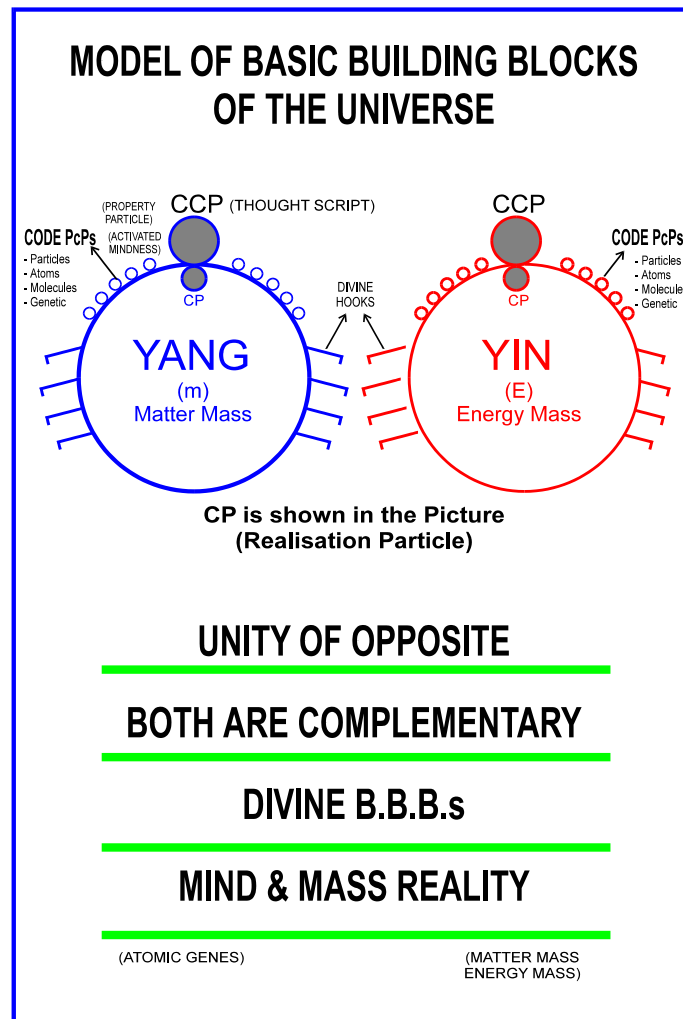
1. Mass property of B.B.Bs. by virtue of which they occupy space.
2. Inertial property of B.B.Bs. by virtue of which one type of mass has inherent property of absolute rest while other type of mass has inherent property of motion.
3. Hooks property of B.B.Bs. by virtue of which they lock and unlock with one another during formation of bigger particles. Thus they get adhere with each other. These hooks are the part of their mass or body.
4. B.B.Bs. obey the law of conservation of *energy* and *matter*. The energy B.B.B. obeys the laws of conservation of energy i.e. energy B.B.B. cannot be created or destroyed. Similarly, matter B.B.B. obeys the laws of conservation of matter i.e. matter cannot be created or destroyed. But being opposite in behavior (unity of opposite as their inherent properties or inertial properties are opposite i.e. one has inherent property of absolute rest and other one has inherent property of motion). They cannot be inter convertible i.e. energy B.B.B cannot be converted into matter.B.B.B. and matter B.B.B. cannot be converted into energy B.B.B. Thus $E=mc^2$ is a fictitious equation.

Properties due to mind (atomic genes) reality of B.B.Bs.:

1. Mind or intelligence particles or atomic genes or memory system are found on B.B.Bs. by virtue of which B.B.Bs. have power to transmute to form different properties and laws in the universe that are studied in different branches of science. These B.B.Bs. have power to transmute to form any bigger units of the universe. By virtue of these atomic genes, B.B.Bs are divine that they can talk with each other. Messages are formed on one B.B.B. by phenomenon called atomic transcription and translation. Atomic genes from one B.B.B. to other B.B.B. carry messages and finally messages are realized and recognized and finally other B.B.B. reacts in similar way.

These are the eternal properties of B.B.Bs. By virtue of these properties (properties due to mass and mind or memory system) B.B.Bs. are called conscious or divine fundamental particles. By virtue of these properties of B.B.Bs, we get different particles, atoms, molecules, individuals, satellites, planets, solar system, galaxies, super galaxies and dark matter. Existence of these bigger units is due to *synchronized* working of mind and mass. Bigger units get shape due to mass property of B.B.Bs. while appearance of new properties and laws are due to atomic genes property of B.B.Bs. Atomic genes are the basis of genesis of different physical as well as life sciences laws.

Revised model of basic building blocks (figure 19)



(Figure. – 19: Model of two B.B.Bs)

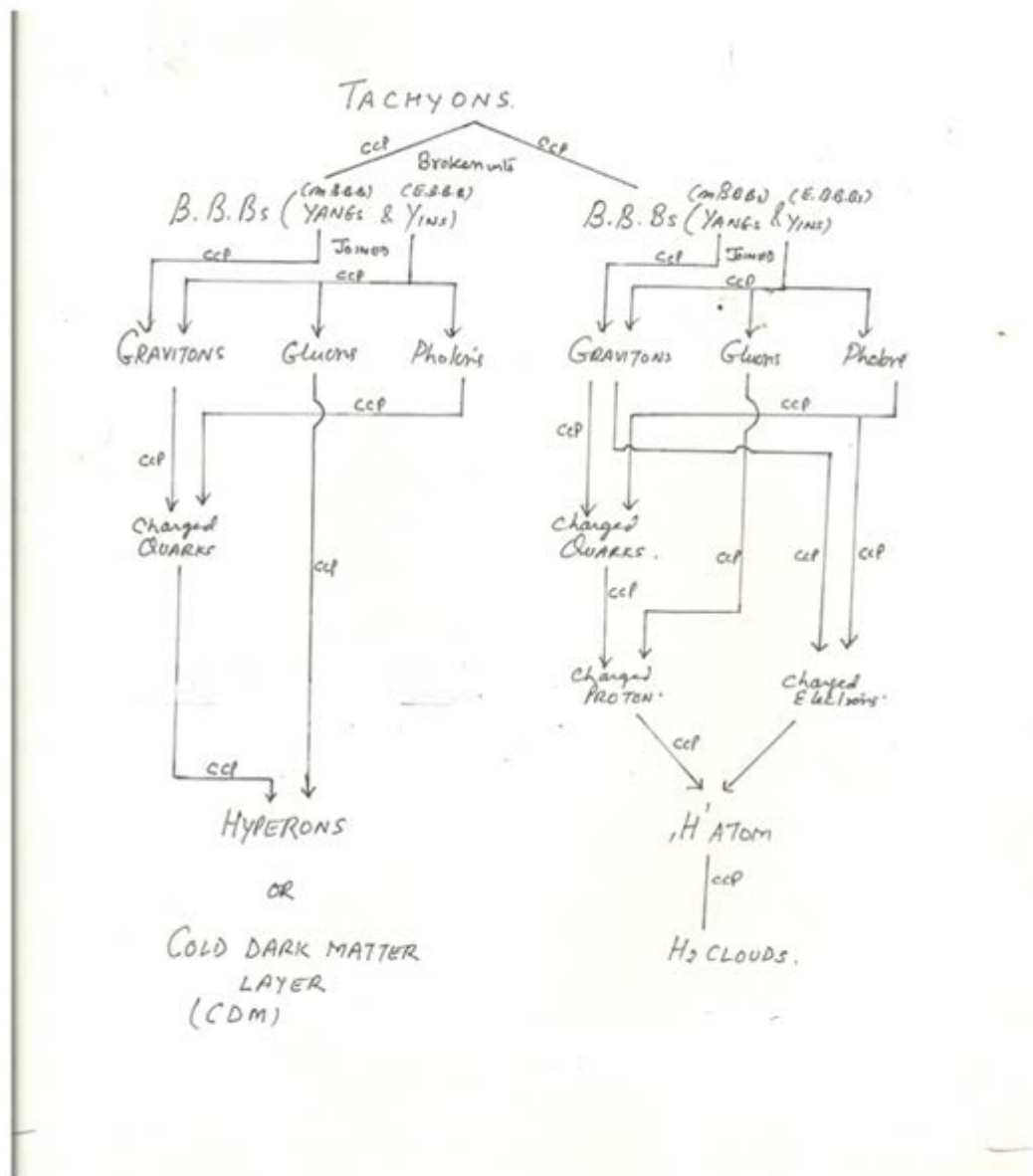
2.8 Phenomenon of Transmutation: *What is transmutation phenomenon ? How does it trigger ?*

The phenomenon of transmutation is the property of both living as well as nonliving. Particles, atoms, molecules, complex molecule of life, cells, tissues, organs, systems and even individuals transmute. Transmutation means, changing of shapes, properties and laws. After origin of the universe, nature created different particles, different atoms, different molecules, different complex molecules of life, different cells, tissues, organs and different individuals, different satellites, planets, solar systems, galaxies, super galaxies and cold dark matter. We study about their shapes, properties and laws in different branches of science. They all were created by phenomenon of transmutation. Still this phenomenon is seen in these units either in lab or in the nature. The reason of transmutation phenomenon is still obscure .

How does bigger units, transmute?

As all the bigger units are made up of more fundamental units called B.B.Bs. , so phenomenon of transmutation starts with origin of the universe i.e. with creation of fermions and bosons. During transmutation newer and newer shapes, properties and laws got appeared. So, basically it is the behavior or power of B.B.Bs. that had

transmuted them self into different bigger units of the universe. The basis of transmutation is atomic transcription and translation. The details would be taught in chapter of *atomic genetics*. When atomic transcription takes place, it is also called thought expression, it leads to formation of bigger units. Unless the atomic transcription takes place, nature cannot transmute. So the triggering event of each and every transmutation is atomic transcription or thought expression. It is denoted by CCP in the line diagram. During origin of the universe the following transmutation steps had taken place for the creation of *cold dark matter* (CDM) and for creation of hydrogen clouds (H₂ molecules) (figure 20).



(Figure. – 20: simple line diagram of hydrogen creation and dark matter creation in side quasar)

It is believed in science that transmutation is the property of every unit (from particles to living individuals) of the universe. Every unit of the universe is believed to change its shape, properties and laws with the passage of

the time. No one unit is immortal in this universe starting from particles to living individuals to entire universe. This basic property of transmutation is due to their basic constituents called B.B.Bs. It is the basic property of B.B.Bs. which is made up of mind (atomic genes) and mass. *So B.B.Bs. are structural and functional divine fundamental units* of the universe. Thus they have power to transmute at all levels (from particles to living individuals to entire universe). On this divine behavior of B.B.Bs. we can say that these B.B.Bs. are *conscious fundamental particles and they can transmute according to their wish* or they can transmute according to outer stimuli. When they transmute by their own wish, it is called *unconditioned* transmutation. When they transmute by outer stimuli, it is called *conditioned* transmutation phenomenon.

2.9 Simple Line Diagram of Hydrogen Creation (figure 21)

Postulation mean: fundamental principals or self-evident truth. It is true that hypothesis take birth only when it is based on few postulations. These postulations are the back bone of hypothesis because postulations are the inferences which are confirmed by observations. Postulations are pillars of hypothesis without which hypothesis is ridiculous. So, here are steps of hydrogen creation (line diagram of H₂ creation) based on postulations of participatory science. Hydrogen creation is very complex process. It is based on principles of atomic transcription and atomic translations. Before I explain these two processes, I would like to present a line diagram (simple one) to understand the basic steps of hydrogen creation. These steps follow the postulations of participatory science. These postulations are as follows.

Postulations of Participatory Science

Postulation: 1. Energy B.B.B. (YIN) and matter B.B.B. (YANG) are separate and absolute. They are not inter-convertible. So, $E=mc^2$ is a fictitious equation.

Evidences:

1. Electro-nuclear force (GUT) and gravity force is still un-unified. In this graph, (figure- 10.5) electroweak unification occurs at around 100 GeV, grand unification is predicted to occur at 10^{16} GeV, and unification of the GUT force with gravity is expected at the [Planck energy](#), roughly 10^{19} GeV.-- [4]
2. When velocity of the electron is increased, the gravitational mass of the electron also increases.
3. Fermions and bosons are truly distinct classes of particles in the sense that no interaction has ever been seen that can convert one into the other. This distinction, as we shall see, persists back to the earliest stages of the Big bang. [6]

Postulation: 2. Quarks and leptons are fermions, so their basic constituents are same. They must be made up of more fundamental particles as they were created after the force particles during symmetry breaking phase. Therefore, quarks and electrons are not fundamental particles.

Postulation: 3. Inertial properties of two types of B.B.Bs. are separate. For matter B.B.B. (YANG), it is inherent property of absolute rest and for energy B.B.B. (YIN), it is inherent property of motion of all type (not spin). These are the properties of their masses.

Postulation: 4. All energy particles have mass (photons, vector bosons and gluons , Higg's).

Postulation: 5. Tachyon particles exist in abandon in invisible universe. Their velocity as calculated by participatory science is 305224 Km/sec ($H_0=72\text{km/sec/Mpc}$).

Postulation: 6. Protons are made up of quarks and strong interaction force between them is mediated by gluons.

Postulation: 7. Visible universe is dynamic interplay of energy B.B.Bs. and matter B.B.Bs. They interact through their atomic genes or memory system or consciousness.

Postulation: 8. B.B.Bs. are structural and functional fundamental units of the universe. They are divine in the sense that they can talk with one another by phenomenon called atomic transcription and translation. They have power to transmute to form any bigger unit of the universe.

Postulation: 9. All created particles both fermions and bosons are conscious particles as their B.B.Bs. are conscious fundamental units. All interactions of these particles are triggered by atomic transcription and translation i.e. memory system of the atom.

Postulation: 10. Photon is neither wave nor electromagnetic in nature. They do not have dual nature. It is conscious particle and all effects are triggered by atomic genetics and all effects are due to synchronized working of mind and mass.

Postulation: 11. Similarly all other particles (fermions) are neither wave nor they have dual nature. They all are conscious organism. They interact through their atomic genes.

Postulation: 12. All bigger units (particles, atoms, molecules etc) have power to transmute. Atomic transcription and translation trigger transmutation phenomenon, as it is one of the properties of B.B.Bs.

Postulation: 13. Protons liberate gravitons forming gravity field around them. These gravitons are coming from decay of quarks while electrons do not liberate gravitons.

Postulation: 14. Gravity force is mediated by gravitons. Electrons are held in atom by gravity force not by Electromagnetic force, which is mediated by photons.

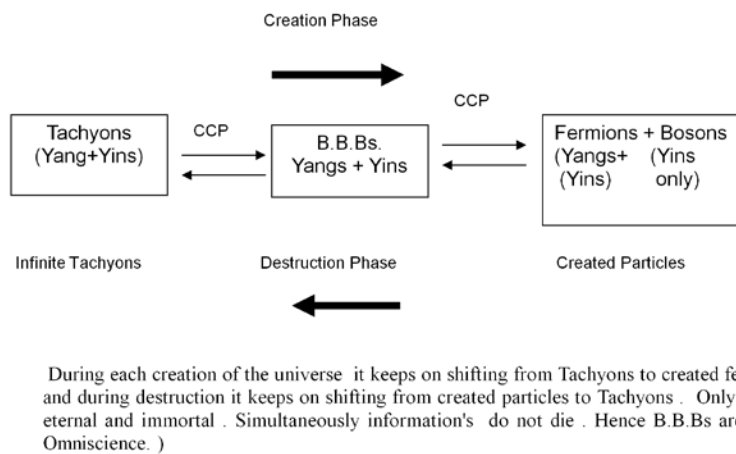
Why is Ruther Ford's atomic model not stable?

Because, stability of the atomic structure is maintained by gravity not by Electromagnetic force. Therefore, atoms do not show tendency to collapse. Observed emission of spectral lines of fixed frequency show that atom is stable. Because, atomic model is maintained by gravity not by Electromagnetic force. Gravity is not a exchange phenomenon but on the contrary Electromagnetic force is a exchange phenomenon. Hence, there is no shielding effect on electrons in different orbits. Thus stability of atom is maintained. It is similar to the planets

moving around sun do not show shielding effects among them. As regard to the *gravity and its interaction*, we shall discuss it in gravity chapter.

Postulation: 15. Electro magnetic force (photons) that binds separates atoms together into molecule and holds them together in solids.

Postulation: 16. During creation phase, particles are created from tachyons after they are broken into their B.B.Bs. During destruction phase, all created particles (fermions and bosons) will be transformed into tachyons after they would break into their B.B.Bs. Creation and destruction phase are triggered and controlled by atomic transcription or thought expression (figure 20.1)



(figure 20.1 One creation and destruction cycle)

Postulation: 17. Created particles have been classified according to their basic constituents. Either they are *fermions* or *bosons*. Fermions are those which are made up of matter B.BBs. (YANGs) and energy B.BBs. (YINs). While bosons are those which are made up of energy B.BBs. (YINs) only. Spin is their acquired property and it is being triggered by atomic transcription. So, classification based on spin is not correct classification because gravitons are fermions rather than bosons though they are having integer spin.

Albert Einstein’s Dream is a Mathematical Fiction

“Creation of GUT mass ($10^{15}\text{GeV}/c^2$) did not take place because density of the universe was never 10^{74}cm^{-3} , which is one of the prerequisites for GUT mass particles [7].”

Supper symmetry super unification and super gravity are mathematical fiction because Big Bang physics and models of origin of the universe as proposed by Big Bang theorists are wrong.

Super Symmetry: “Symmetry between fermions and bosons is not proven yet [8].”

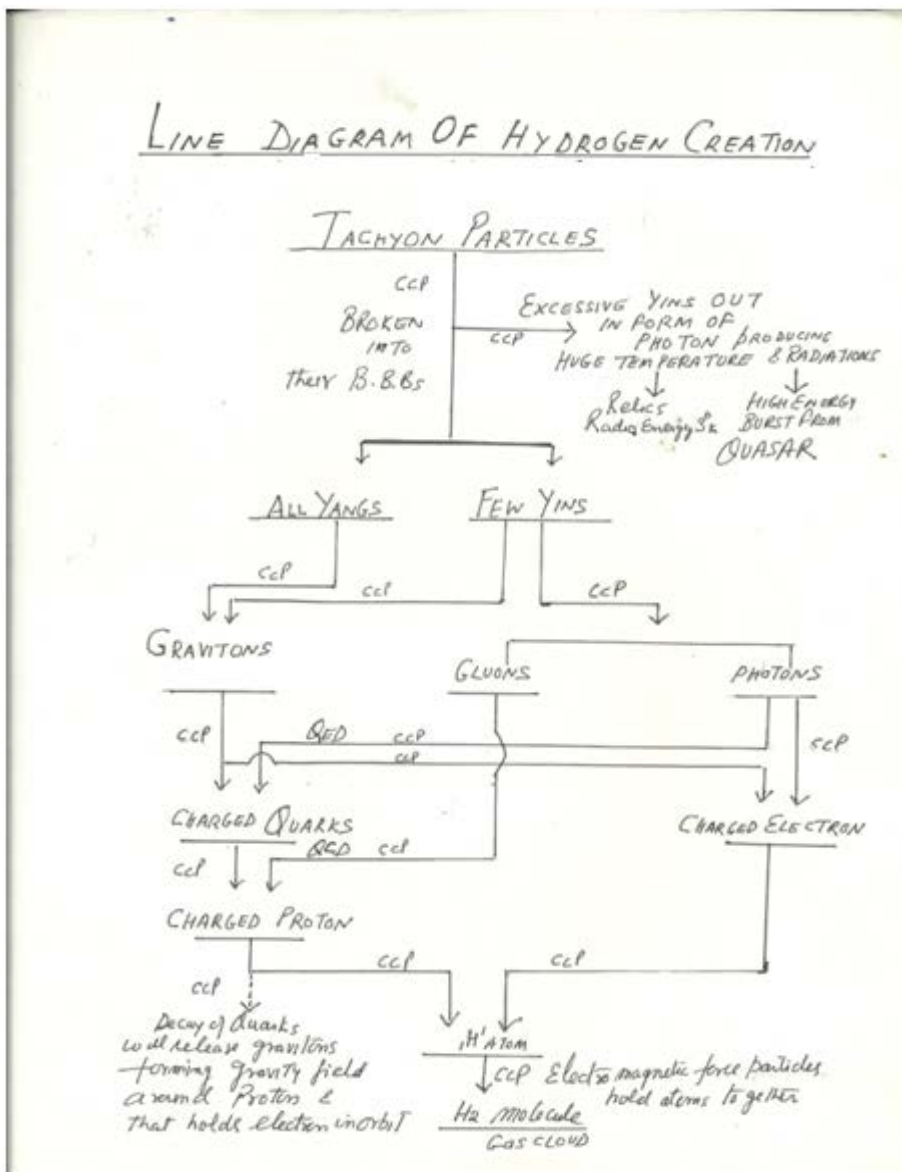
Super Unification: “Unification of gravity and GUT is still not proven yet [9].”

Super Gravity: “Quantum gravity effect was never present in past because density of the universe was never 10^{75} gram cm^{-3} or more at less than 10^{-43} seconds of Big Bang which is one of the prerequisite of super gravity [10].”

Super Massive Monopole: “Neither GUTs have been observed nor they are produced in Lab. For the point of view of GUTs, their existence is an open question [11].”

Neither Model nor Physics of Big Bang Theory (Rapid Inflationary Scenario) of Universe is Correct.

Line Diagram of Hydrogen Creation



(figure 21 : Simple Line Diagram of Hydrogen Creation)

3. Parallel between Science and Spiritualism (figure-22)

A word about -- Fragrance of God in two B.B.Bs making them “I” or two God Particles

“ My message , then to those who feel that science is overstepping its bounds when it probes the early universe is simple : don’t worry . No matter how far the boundaries are pushed back, there will always be a room both for religious faith and religious interpretation of the physical world . For myself , I feel much more comfortable with the concept of a God who is clever enough to devise the laws of physics that make the existence of our marvelous universe inevitable than I do with the old fashioned God who had to make it all , laboriously, piece by piece[12].”

Understanding the B.B.Bs. through Structural and Functional Analogies

Analogies if become available are helpful in understanding a physical system. In general, analogy means some kind of mental construct, which is useful in understanding the “unknown” in terms of the “known”. Literally, the word “analogy” means similarity or parallelism. This similarity could be just of a concept or a sequence of concepts or a description of a model or the phenomenon as a whole. Further, these analogies could be well within the same discipline or in different disciplines of knowledge. Indian Spiritualism guides us in recognizing these two B.B.Bs. or fundamental particles . Indian Spiritualism has given us two clues. These clues are based on basic properties of B.B.Bs. Why did Indian Spiritualism make this picture, it is a matter of separate discussion. Modern physicists have not defined energy (E) and matter (m, pure matter) in terms of their eternal properties. On this fundamental basis Indian Spiritualism has made these clue pictures. Thus incorporation of science and Indian Spiritualism is made possible. Modern physicists have explored the nature at particles (fermions and bosons) only. They have not been taught search and properties of B.B.Bs.

The first clue picture is androgynous form of “I” . It is the clue as regard to the mass part of reality. It does mean that there are two types of masses existing in the universe. One is matter (m or pure matter) mass and other one is energy (E) mass. The inertial properties of these two types of masses are opposite that is why one is shown as male and other one is shown as female (*unity of opposite*). The blue B.B.B. is represented as blue body while red B.B.B. is represented as red body of androgynous form of “I” .

The second clue picture is *God form of “I”* as shown in Indian Spiritualism (Bhagwat Gita). It is clue as regard to the mind part of reality. It does mean that mind or conscious particles or atomic genes are found in the nature. As this picture does not show *two particles hypothesis*, therefore, we have modified it and replacing the central head and body with androgynous form of first reality . The *final truth* has emerged as shown in the picture of *final truth*. It is called mind and mass part of truth.

To understand the properties and complete working of B.B.Bs., one has to read about all the spiritual books on the earth. All spiritual books have guided us not only in recognizing these B.B.Bs. but also to understand about working of entire universe. Without there knowledge, one cannot make a complete realization as regard to the models as well as working of B.B.Bs and universe. Spiritualism not only evoke realization of God in our self but also it teaches us to understand “unknown” i.e. what are God particles and how do they work ? As these B.B.Bs.

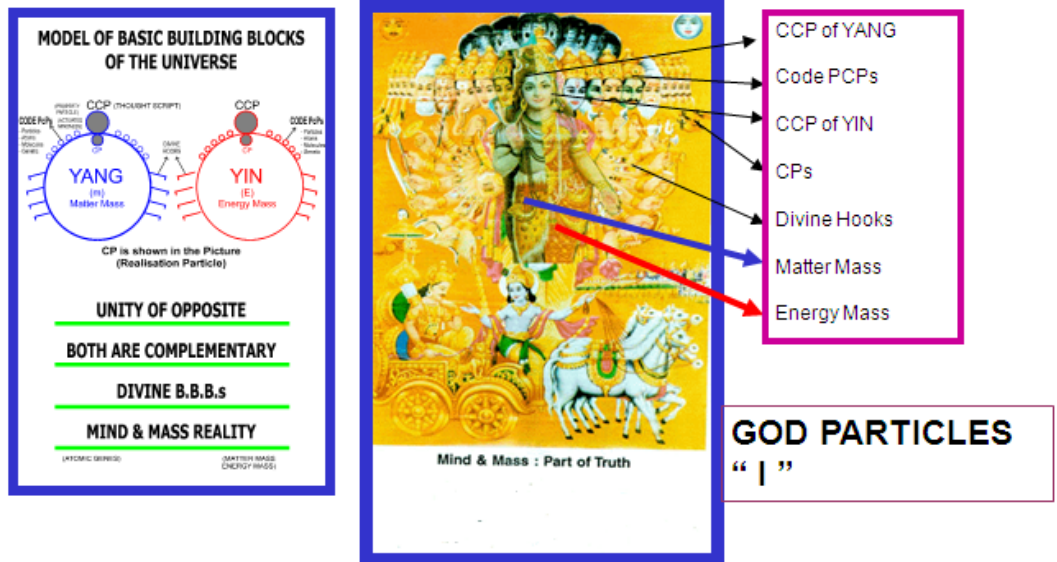
are divine and they are present everywhere in the universe, therefore they are *omnipresent*. The omnipresent is defined as God in all spiritual books. For example chapter 10/8 of Bhagwat Geeta.

“I AM THE ORIGIN OF ALL EVERY THING EVOLVES FROM ME

KNOWING THIS THE WISE WORSHIP ME.-----[13]”

So basically these B.B.Bs. are nothing but “I” of Indian Spiritualism . In participatory science “I” is the name of these two God particles or two B.B.Bs and every bigger unit (particles, atoms , molecules, complex molecules of life , organelles, cells, tissues ,organs , systems , individuals, satellites, planets, solar systems, galaxies, dark matter and tachyons) of the universe has been originated from these two B.B.Bs or “I” of Indian Spiritualism. Having realized about “I” or God particles (omnipresent), our inquisition as regard to the spiritual aspect of science gets over. Why did Indian Spiritualism give this picture only, It would be clarified when we talk about *the immortal properties of omnipresent or “I”* like eternity (inertial property of mass) , omniscience (consciousness of all knowledge) , invisible , having power of creation and Almighty power and also by knowing its other 94 names written in Koran [14] . At present we only realize their names in terms of “I” or *energy B.B.Bs(Yin). & matter B.B.Bs(Yang)*. rather than any other names given in different religions as those names are mortal as all religions are mortal but Spiritualism is immortal.

This is called Final Truth . Mind and Mass mysteries have emerged like
 OMNIPRESENT i.e. Every small and bigger units are made up of these B.B.Bs
 I am The origin of all every thing evolved from Me.—Gita 10/8
 These are divine in the sense that they talk with each other. They have power to transmutate to form any bigger
 unit of the universe . The triggering activity is atomic transcription and translation.



(figure -22 :Fragrance of God ---- Between basic Building Blocks and clue picture depicted by Indian spiritualism . This is called parallel between science and spiritualism . It is based on inertial property of mass and mind .)

4. Conclusion

The quest for such theory is known as “ the unification of physics” Einstein spent most of his later years unsuccessfully searching for a unified theory. It does mean that four natural forces which are mediated by four different particles were identical or belonging to same family in plank’s time of Big Bang origin of the universe. The modified name of this Einstein’s dream is “ One particle Theory”. As GUT and Super unification are not proven yet as Nobody could create conditions of Big Bang either in Lab or in Universe, hence these theories are left unproved. During my making of new model of the universe by continuous creation , I observed that the energy dependence of the strong and electroweak coupling constants showing convergence at $\sim 10^{15}$ GeV. This gave the idea that these particles are bosons and they are made up of one type of Basic building blocks. But Gravity is unifying at energy 10^{19} GeV (In graph ToE , electroweak unification occurs at around 100 GeV, grand unification is predicted to occur at 10^{16} GeV, and unification of the GUT force with gravity is expected at the *Planck energy*, roughly 10^{19} GeV.) . Hence this gave the idea that gravitons are not bosons rather they are fermions and they are made up of two types of Basic Building Blocks . Thus two particle hypothesis has come in my mind. Simultaneously super unification is confirmatory test of $E=mc^2$ which is not proven yet , it means matter and energy are separate basic particles (B.B.Bs) and by virtue of opposite in nature (opposite inertial property of their masses) they are not inter convertible at the time or even before origin of the universe. Having known about two smallest mass particles by virtue of which bigger units attain different masses , I shifted to investigate about mind particles by virtue of which these two particles create different properties (living and nonliving) and laws (physical and life sciences) in this universe . The idea to incorporate mind in astrophysics came when I was forced to assume these particles to explain triggering of expansion phenomenon other than Big Bang. I expanded my chest with my thought of expansion and my chest expanded (inspiration) like cold dark matter layer , further after expansion of the chest I contracted it by my thought of contraction and my chest contracted (expiration) . This give birth to new cause and effect concept where effect is triggered by thought leading to THOUGHT – PROGRAMMING- INTERACTION – EFFECT philosophy . Now each and every effect of the universe would be explained by these four steps . First three steps is called CCP which is not visible to us as it occurs on Basic Building blocks . But the effect part is studied in all the branches of sciences. It is called ToE. With more research I could name these conscious particles and I have introduced the laws on which these mind particles work . Atomic Genetics is the new branch in science where we study about Mind and its synchronized working with mass to give desired effect as wished by nature. Hence uncertainty principle has been replaced by deterministic order of universe by these mind and mass B.B.Bs particles. By adding fragrance of God to these two B.B.Bs , they become God particles as they are eternal particles and exist up to infinity in form of tachyons particles or we can say they are Omnipotent, Omnipresent and Omniscience.

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