If "It from Bit", what mean 1836 ?

(A sketch)

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Abstract

An attempt have been convert conceptually ratio of the present epoch Mpr/Mel=1836 to Mpr/Mel=1 at the final stage of the Universe. After the proton-electron annihilation the remaining neutrons during the process of beta decay (p,e,neutrino) provided means for the next cycle of the Universe. What would be happen with fundamental constants when mention above transform masses of the proton and the electron could be real.

John Wheeler [1] summarizes his life in physics as follows:
"I think of my lifetime in physics as divided into three periods. In the first period, extending from the beginning of my career until the early 1950's, I was in the grip of the idea that Everything Is Particles. I was looking for ways to build all basic entities - neutrons, protons, mesons, and so on - out of the lightest, most fundamental particles, electrons, and photons." …
"I call my second period Everything Is Fields. From the time I fell in love with general relativity and gravitation in 1952 until late in my career, I pursued the vision of a world made of fields, one in which the apparent particles are really manifestations of electric and magnetic fields, gravitational fields, and space-time itself."…
"Now I am in the grip of a new vision, that Everything Is Information. The more I have pondered the mystery of the quantum and our strange ability to comprehend this world in which we live, the more I see possible fundamental roles for logic and information as the bedrock of physical theory."

If we compare the amount of information stored by high energy physicists, the most quantity and diversity of information to be the mass (more than 350) of elementary particles. In spite "There remains one especially unsatisfactory feature: the observed masses of the particles, m. There is no theory that adequately explains these numbers. We use the numbers in all our theories, but we do not understand them – what they are, or where they come from. I believe that from a fundamental point of view, this is a very interesting and serious problem" [2]. Particularly is challenge to analyze the information on dimensionless ratios of mass.

John Baez [3] calculated 15 dimensionless values of masses of the fundamental particles (relative to the Planck mass), namely: 6 quarks, 6 leptons, the Higgs boson, the W boson, the Z boson. The most important, in our opinion, is the proton-to-electron mass ratio, the rest mass of the proton divided by that of the electron (Mpr/Mel≈1836.15). Yuri Manin call

it a number of truly fundamental, and the theory is explained to him, probably will be an important theory[4]. Latest data set up limit on a possible cosmological variation of the proton-to-electron mass ratio μ by comparing transitions in methanol observed in the early universe with those measured in the laboratory. From radio-astronomical observations we deduced a constraint of $\Delta\mu/\mu = (0.0 \pm 1.0) \times 10^{-7}$ at redshift z = 0.89, corresponding to a look-back time of 7 billion years. This is consistent with a null result [5]. We don't now look-forward value of this ratio however. It seems very interesting to contemplate about future destiny this ratio.

But first of some quote from Lev Okun[5]:
"As for the fermions of the second and third generations, their role in the world around as appears to be negligible. At first glance, the world would not seem to be any worse if these particle never existed. These particles resemble draft versions that Creator has thrown out as unsuccessful, but that we, using sophysticated instruments have retrieved from the waste basket." Is there a theory that can explain the masses of particular quarks and leptons in particular generations ?

My proposal about meaning of generations :

1.Mass of proton and electron vary in the future of the Universe, increasing during the time

And become equal in the end one cycle of the Universe.

2.The generations are different manifestation the same particle.

3.The generations #2, #3 are the signs or the hints from the Future.

Similar idea presented by C.D. Frogatt, H.B. Nielsen, "Influence from the Future" [6]

What can happen with mass of atom in the future?

Does mass of atoms, in particular atom of hydrogen, undergo to increasing?

Now:
Mass of proton Mpr=1.672x10^-27kg ;
Mass of electron Mel=9.109x10^-31kg
Mpr/Mel=1836.152

Future:

An possible example of variation Mpr and Mel.
Masses of proton and electron grow up different way from each other.

Future of Mpr(fut) =1836.152x12=22033.824 ; additive law.
Future of Mel(fut)= e^0 x(exp) ^10=22026.465 ; exponential law.
Future Mpr(fut)=1836.15x11.99=22026.465(more precision)
Final value Mel(fut) =2.0^-23g; Mpr(fut)=2.0x10^-23g
The ratio of mass proton to electron finally become equal to 1.
Process of annihilation starting when Mpr/Mel=1.Only neutrons and photons stay as a remnants in the Universe. Neutrons give birth by beta decay to protons, electron and neutrinos, and the start of another new cycle of the Universe.

Mass of quarks and leptons grow up different laws.

Can the exotic atoms [7] to be non-exotic atoms for the future of the Universe?
Can ingredients these atoms to be particles of generation #2, and then #3?

These assumptions can support by a theory of Fred Hoyle and Jayant Narlikar in which the masses of fundamental particles are assumed to vary with time in a manner that precisely accounts for the Hubble redshift law.

This theory as a reformulation of the general theory of relativity that incorporates and extends Mach's principle In this theory, the inertial mass of a particle is a function of the masses of all other particles, multiplied by a coupling constant which is a function of cosmic epoch. In cosmologies based on this theory, the gravitational constant G decreases strongly with time. [8]

Some hints of confirmation.

Proton mass increased by 12 times.
Heaviest t-quark mass Mt=170900-177500MeV
Natural logarithm lnMt=12.04-12.08

Strange coincidence…

We consider also ratio masses of charged leptons to mass of electron:

Me=0.510 MeV ; lnMe = -0.67; ln Me/ln Me=1;

Mmu=105.65 MeV lnMmu=4.66; ln Mmu/ln Me= -6.95;

Mtau=1777 MeV; lnMtau=7.48; ln Mtau/ln Me= -11.64;

11.64:6.95=1.6 close to golden mean Fibonacci number 1.618

Manifestation of the future in the present is not so stupid idea as seem at first glance. Shadow of Parmenides' ideas can be seen in the physical concept of Block time, which considers existence to consist of past, present, and future, and the flow of time to be illusory. In his critique of this idea, Karl Popper called Einstein "Parmenides"[9].

How would to operate the Universe if above mentioned transform masses of the proton and the electron could be real?

1.It must be cyclic model of the Universe

2.Dirac large number $\frac{4\pi\epsilon_0 G m_p m_e}{e^2} \approx 10^{-40}$. must be run to 1 in the last stage one cycle of the Universe.

Reminding two formulas $F_C = \frac{1}{4\pi\varepsilon_0}\frac{q_1 q_2}{r^2}$ and $F = G\frac{m_1 m_2}{r^2}$

3.That means:

A.variation of constants ε_0 = 8.854 187 817... x 10^{-12} ($F \cdot m^{-1}$).

$\varepsilon_0 = \frac{1}{\mu_0 c_0^2}$ consequently the speed of light c

B. variation of during evolution process.

Eventually G and c must be vary.

Evolving length, mass, and time become dimensionless in Planck units.

The speed of light constant in a vacuum is

$$c = 2.99792458 \times 10^8 \text{ m s}^{-1}$$

the gravitational constant is

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and the reduced Planck constant is

$$h = 1.054571726(47) \times 10^{-34} \text{ J s}$$

Therefore, the Planck mass is

$$m_{\mathrm{P}} = \sqrt{\frac{\hbar c}{G}}$$

$2.176\,51(13) \times 10^{-8}$ kg

the Planck length is

$$l_{\mathrm{P}} = \sqrt{\frac{\hbar G}{c^3}}$$

$1.616\,199(97) \times 10^{-35}$ m

and the Planck time is

$$t_{\mathrm{P}} = \frac{l_{\mathrm{P}}}{c} = \frac{\hbar}{m_{\mathrm{P}} c^2} = \sqrt{\frac{\hbar G}{c^5}}$$

$5.391\,06(32) \times 10^{-44}$ s

The physical significance of Planck lentgh an argumentative topic of research. Therefore, his research on is been primarily theoretical. For example, in string theory, the magnitude order of the oscillating strings that form the elementary particles, so shorter lengths do not make physical sense. But string theory is only one approach to establishing a unified field theory and is not yet supported by experiment. An alternative unification candidate is loop quantum gravity, which competes with string theory. In loop quantum gravity, the area is quantized so the Planck area is the smallest possible area value within a factor of order unity.

Does all Planck units have sense ?
We attempt to proof does not.
a)We doesn't have guarantee G, c, stay constants or not, during the future of the Universe. The Universe is still relatively yung(13.7Gear)
b).We doesn't have guarantee G, c depend of each other or not.

Version 1. G and c not depend from each other and not vary. Silent agreement all modern physicists.

Version 2. G and c depend from each other and vary.

Version 3. G and c not depend from each other, but depended from third value, expanded medium of the Universe(density of vacuum). Likely that G and c simultaneously vary…and have some term. They depended only from time. Nothing lasts forever exept of time. Every exstrapolation (inflation hypothesis, etc) is false.

But we naive used formulas:

1.Schwarshild black hole R radius G/c^2 If G=f(c)^2 ??? or c=f(G) ???

2.Planck unit L of length G/c^3
If G=f(c)^3 ??? or c=f(G) ???

3.Cosmological constant

If G=f(C)^4 ???? or c=f(G) ???

4.Planck unit T of time G/c^5
If G=f(c)^5 ??? or c=f(G) ???

5.Planck unit M of mass c/G

What is correspond to real world?
If all, it would be absurd

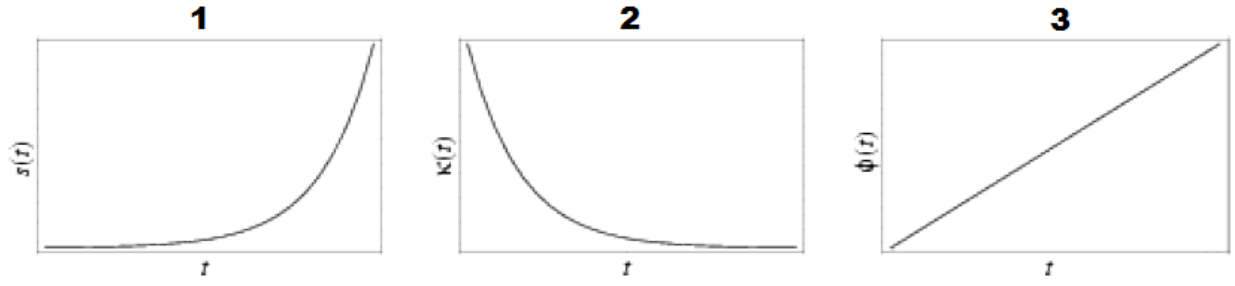
Possible case when Mpl stay constant (contrary to Lpl and Tpl) when G and c simultaneously vary.
To my opinion only version #5 linear link between G and c is real….
And #1,2,3,4 are fake that only teasing physicists.

My proposal is to “untie” Mpl from Lpl and Tpl which is based on the “common sense” defined below: If and can vary simultaneously and h is constant Mpl remain the same. Simultaneously variation of G and c with decreasing 20 order of amplitude [10] in the end single cycle of the Universe.

Possible that and can vary simultaneously because the density of vacuum energy varies according to the temporal evolution of the Universe (see Figure 1).
Physics equations simplified when they assume so the energy, momentum, and mass share the same dimension. Hence, in the case that and do vary simultaneously and is constant, this reception does not working. Also, the fundamental difference arises between Mpl and Epl, where

Epl=Mpl x var(c)^2

Figure 1: The simultaneous variation of G,c,Mpr,Mel .



Pic.1 Mass of electron increased by exponential law from M=10^-31kg to M= 10^-26kg
Pic.3 Mass of proton increased by additive law from M=10^-27kg to M=10^-26kg
Pic.2 G and c decreased by exponential law 20 order magnitude [11]

, ,

$$m_{\mathrm{P}} = \sqrt{\frac{\hbar c}{G}}$$ 2.176 51(13) × 10^{-8} kg

Mpl is not mass of concrete particle but some border stone value between mass of stars and mass of particles
Mpl served as a medium between cosmological scale and elementary particles scale

Mstar=10^33g-10^35g

Mst/ Mpl=[Mpl/Mpr]^2; [10^35/10^-5]=10^40=[10^20]^2

Comment:

This is attempt to support Eon theory of Roger Penrose[12]

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