CORRECTING FIVE HISTORIC FAULTS IN MODERN COSMOLOGY
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The modern cosmology fundators have commited five dramatic deviations from scientific traditionnal methods, leading to a general crash of the current reductionist scientific system. The corrections of theses deviations lead to a Coherence Principle, ruling a simple galilean one-parameter cosmology rehabilitating Eddington's Fundamental Theory without primordial Big Bang, and abandon of reductionism. This unifies scientific domains, and introduces an *Inverted* Anthropic Principle.

1. Poincaré's cosmological statement: *Do not use differential equations for describing the unique Universe*. No respect of this statement (General Relativity) leads now to a 6 free-parameters model, while only one is sufficient in the simplest cosmological model, in accordance with the Ockham principle: "*Frustra fit per plura, quod potest fieri per pauciora*" (In vain is done by many things, what can be done by few). A generalisation of the no-differential virial theorem leads to an universal Coherence Principle ruling a simple galilean one-parameter cosmology **http://viXra.org/abs/1403.0309**

2. Refer to what is exactly measured
     In the redshift galactic phenomena, one observes that the relative shift is proportional to the galactic distance. This writes:

$$\delta\lambda/\lambda = l/R$$

this defines a length *R*. Only recently this length has been considered by cosmologists, and called Hubble Length. A Doppler interpretation, due to a galactic speed *v*, leads to:

$$\delta\lambda/\lambda = l/R = v/c \qquad => \qquad v/l = c/R = 1/T$$

this is called the 'Hubble constant' since nearly a century, while the real direct one is the length *R*. In spite of these names, both are considered variable with time in current cosmology, so *1/T* is noted H_0, the suffix aplying for 'present time'.

3. Do not consider seriously a result based on a single measurement
     The above law was predicted by Lemaître, but with an erroneous estimation for *R*, because several galaxies he considered was belonging to the Local Group, not participating to galactic recession. Hubble only confirmed this, adopting the Lemaître's erroneous value, which was *officially checked by a single far galaxy*, measured by Humason, the formerly mule driver of the Hubble observatory at Mount Wilson. This was presented in the same journal where Hubble published his so-called decisive results, in a short article immediatly preceeding it. How a scientific system could accord a credit to this is a deep mystery of science history. The dramatic consequence is that the *correct prediction of an invariant R without Big Bang* **http://viXra.org/abs/1403.0309** by Eddington was not taken seriously, and he was considered a fool, because of trying to rely cosmology with microphysics.

4. Dinstinguish fundamental constants versus arbitrary ones
     The Boltzman constant is based on the arbitrary Celcius degree. Also, the so-called 'dielectric permitivity' and 'dielectric permeability' of vacuum are based on the arbitrary Coulomb: they are not fundamental constants. This is why theoricists do not use the official International System, which dare to present on the same footing the *three* basic concepts, Mass, Length, Time, with 4

other, including the above temperature (natural unit: that of energy) and electric charge (natural unit: $kg^{1/2}$ mètre$^{3/2}$ s^{-1}). Due to the use of the american non-metric unities a martian sond crashed, but now, it is a whole scientific system crashing in this question of the Universe radius.

5. Consider the length assosiated to the *three* most pertinent fundamental constants

Contrary to general belief, the speed *c* is not directly pertinent in cosmology, because it is far too slow a speed to ensure coherence in a so vast Universe. For this reason the initial Big Bang model was corrected by an ad-hoc inflation stage. The *three* main fundamental constants are $\hbar$, the natural unity of kinetik rotation momentum, the gravitation constant *G*, and a particle mass *m*. By symmetry, the first choice is the product of the three masses of electron, proton, neutron. The formula is $\hbar^2/Gm^3$ (which is tied to the so-called Weinberg-Eddington formula implying c/H_0 instead of *R*, a formula out of the elementary three-parameters dimensional analysis) giving 6.9004 giga-lightyears, corresponding to the half of the so-called Universe age (in its acurracy 0.3%) of the Planck mission (March 2013). The 2 factor is given by the above Eddington theory, where *R* is invariant, contrary to the current thinking. This reads, by confonding neutron and proton masses and with M the Universe critical mass: $R/2 = \sigma\sqrt{(M/m_e)} = GM/c^2$, with $\sigma = \hbar/m_p c$, showing the Eddington's symmetry proton/electron.

So, i) The Eddington theory is rehabilited, ii) the primordial Big Bang is refuted, iii) as *the simplest calculation gives R,* cosmology takes the status of a basic scientific domain, contrary to the general opinion it is a marginal one. This is the end of reductionnism, which is the cause of a splitting of physical theories, in particular Biology. The strange 'emergence' concept is replaced by the 'immergence' one, so leading to an Inverted Anthropic 'Principle': Cosmos implies Life, not the contrary.

The author has made *this mandatory calculation in his first 3 minutes of his first sabbatical year*, in September 1997, and this was rejected by the French Academy, in spite of the endorsement of Pecker. The calculation was deposed in the Academy archives in March 1998, and finally published by Pecker in 2006, in spite of a strong opposition from Narlikar.

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