

THE INVERSE ANTHROPIC PRINCIPLE

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Heavy scientific faults, including the Primordial Big Bang, are shown to be at the origin of the Anthropic Principle. Direct bio-physics relations favor rather an Inverse Anthropic Principle, implying universality of Intelligent Life.

In the Middle Age, official science said wrongly we are in a very special location, but now it says we are living a special epoch. Indeed, in the famous article of Carr and Rees, '*The anthropic principle and the structure of the physical world*', published by Nature (278, 605-612 (1979)) one reads "*All these scales can be deduced directly from known physics except the mass and length scale of the Universe, which depends on the age of the Universe being A times the electron timescale $1.2881 \cdot 10^{-21}$ second*". A is the quantum gravitational pure number: $1.6929 \cdot 10^{38}$.

Now, the point is that, apart a 2 factor, this formula corresponds to the so-called 'universe age' 13.80 billion years of the Planck mission (March 2013), in its subpercent undeterminacy of 40 million years. This means dinosaurs have not got our chance to live a so particular epoch.

Moreover Eddington's fundamental Theory contains this formula, including the 2 factor, among other so-called 'free parameters' of the current cosmology: this refutes the Primordial Big Bang, and its fatal consequence, the controversial Multiverse, <http://vixra.org/abs/1403.0309>.

How such a so ridiculous idea emerged is detailed now in the following.

The term "anthropic principle" first appeared in a symposium honoring Copernicus. Brandon Carter disagreed with using the Copernican principle to justify the Perfect Cosmological Principle, which states that all large regions *and times* in the universe must be statistically identical. The latter principle underlay the steady-state model, which is said to be falsified by the 1965 discovery of the cosmic microwave background radiation (CMB). This discovery was claimed to be the unequivocal evidence that the universe has changed radically over time (for example, via the the Primordial Big Bang model). These arguments receives severe objections, as detailed below

Objection 1. First of all, *a black body radiation is far more logical in a steady-state model than in an explosive one*. Moreover, the CMB have been predicted by the steady-state cosmology, with a precise evaluation of its temperature (much more precise than the PBB model). This is obtained in a one-line calculation, admitting simply that the star radiation is thermalized (Hoyle et al, 2000). The main objection against this reasoning was the apparent lack of any material such as 'iron whiskers' capable of thermalizing the stars radiation. This is a false problem, if one suppose the existence of an external grandcosmos playing the role of a thermostat, showing itself by the CMB (Sanchez et al, 2011)

Objection 2. In the steady-state cosmology there is no begining of the Universe, no evolution, no 'age', so the concept of 'special location' or 'special time' is nonsense: this is the above Perfect Cosmological Principle. All locations and times being equivalent, the latter principle implies the Copernician Principle, not the reverse. But tenants of the anthropic principle used *temporal* relations. The most famous one (Dicke, 1961) is to consider as roughly equivalent the mean lifetime of a star with the so-called 'Universe age'. Such a rough approximation cannot be compared with the calulation of the author, confirmed by Eddington's Great Theory, giving the so-called Universe age within 0.3 % of its Planck mission measurement in March 2013: *it is now proven that there is no 'Universe age': and so no Primordial Big Bang (PBB)*.

Objection 3. The real scientific method is to interconnect the measurement values (not to check current theories, as is usually professed). So the fine-tuning between physical parameters is simply proving the existence of a Great Theory. The impossibility to explain presntly these relations means only that our theories are incomplete. In fact, the Great Theory of Eddington has predicted some of the cosmic parameters considered now as 'free' by current cosmology. But this Great Theory has

been unduly rejected because it ignores the Primordial Big Bang (PBB).

Objection 4. Tenants of the anthropic principle used only *indirect relations*. By instance, Hoyle remarked that the nuclear spectra of some atoms must be resonant. It is really the case, but the chain of arguments is long and indirect to connect this with Life.

Objection 5. The extension of the Anthropic Principle leads to the Multiverse, a series of unobservable universes unable to permit Life. Such a ridiculous, but official, idea, shows the dramatic status of modern cosmology.

Solution. The real question is 'does biological parameters enter *direct connections* with physical parameters' ? It is indeed the case (Sanchez, Kotov, vixra 1401.0228 2014). For instance a mean nucleotide mass is close to the Fermi mass, while an ADN codon mass is in the same ratio to the proton mass than the later to the electron one. Another example implies the CMB temperature, tied to the characteristic temperature ('triple point') of Water, Hydrogen and Oxygen, through the relation $(T_{\text{hydrogen}})(T_{\text{oxygen}}) / T_{\text{water}}$. Moreover, T_{water} is directly associated with both a main cosmic length, the Planck length and the mammal temperature, which is related to the CMB one by the canonic factor $8\pi^2/\ln 2$. The precision of these relations exclude any role of chance. Indeed, Schrödinger have insisted on the crucial role of temperature in biologic evolution. Note that this does not confort *darwinian* evolution, which is ruled out by the inexistence of so much intermediary forms.

Conclusions. So, direct connexions between physical and Biological parameters cannot be denied, but while the Anthropic Principle states that Life implies Cosmos, *the Inverse Anthropic Principle (IAP) is more logical, stating that Cosmos implies Life*. The general current inversion of reasoning comes from that excess of anthropomorphism and reductionism that plagied modern science. In particular, tenants of the Anthropic Principle have considered large number correlations as a temporal problem instead of a simple spatial hint refuting the PBB model ! The later, being the support of false anthropic temporal arguments and the rejection of Eddington's Theory, appears as the most pernicious idea of all science history. Indeed, the simplest 3 minutes calculation gives directly half what is believed to be the 'Universe age' (Sanchez 1998-2006).

The terminology *Inverse Anthropic Principle*, meaning intelligent Life is concerned (while it was not a Carter's intention: he declared later regretting this terminology), is comforted by the fact that cosmic constants are directly tied both to basic mathematical constants and musical scales (Sanchez et al, 2013). This confirms that the Cosmos is a calculator, and this explains, through the IAP, *why* humans look for numerical relations between measurement values, which is the very foundation of Science.

This means intelligent Life is universal. Now, the famous Fermi question comes back with much force : "Where are they ?", with the obvious answer: "everywhere". Now, why they do not contact us ? Answer : do you contact termites ? For an advanced civilisation, our status of blind believers of PBB, among other dogma, means we are not a real civilisation.

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