Spacetime Engineering

D. Chakalov[1]
chakalov.net

Abstract

Explanation of spacetime engineering, tailored for general audience.
It will be supplemented by demonstrations of reversible elimination of
inertial mass (REIM), which will be posted at YouTube until Christmas 2019.

It is my great pleasure to announce a major breakthrough in our understanding of the Universe: the Platonic theory of spacetime[1]. It is a new pre-geometric theory of spacetime, derived from first principles[1]. In a nutshell, the *atom of geometry* (dimensionless point that "has no part", Euclid[2]) is endowed with non-trivial topology, structure, and dynamics, thanks to which we can tweak the state of physical systems, including living organisms, at fundamental level. This is spacetime engineering, based on the physics of life[3] (cf. John's jackets metaphor). Let me focus here on the former.

Every scientific theory is expected to be falsifiable and to offer at least one prediction, which is (**i**) unique to the theory and (**ii**) verifiable by experiment and/or observation. It is preferable that the prediction shows a simple algorithm in the format 'if A, then B'. Say, if we stroke cow's head, she will *most likely* wave her tail. In our case, we suggest that if we permanently fix a new future potential state of physical systems, the latter will *most likely* change their dynamics to reach the new future state[3], as depicted in the drawing below.

You only have to swing the carrot (*potential* future) toward your
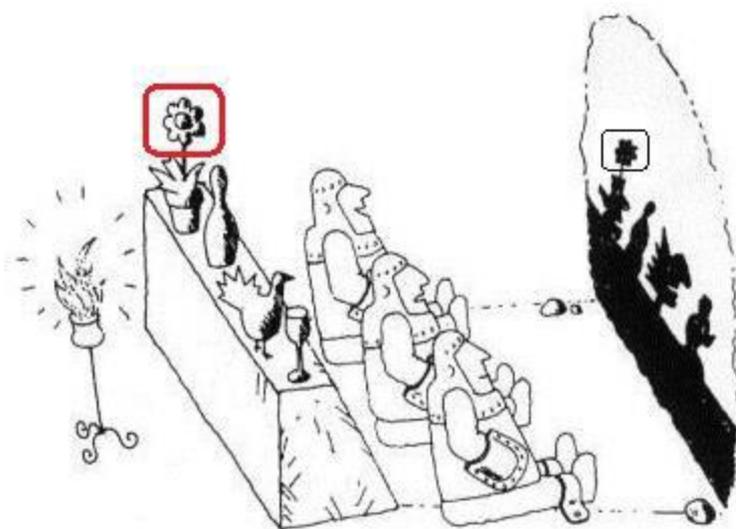desired destination, and the donkey will carry you and the cart there.

There are many issues related to the *potential* future ("carrot"), which need explanation[3]. I will do that by referring to my 2008 proposal for two *modes* of spacetime, local (physical) and global (Platonic *Res potentia*), based on the ideas of Plato, Aristotle, and Heraclitus

---

(p. 11 in *Platonic Theory of Spacetime*[1]). The so-called local mode of spacetime pertains to 4D *physicalized* world of Platonic "shadows" (*ibid*., p. 4) endowed with Archimedean topology (*ibid*., p. 16), whereas the global mode of spacetime refers to the Platonic state of the entire Universe as ONE, dubbed *Res potentia* (*ibid*., p. 33). It keeps the "carrot" shown above (dubbed 'matrix' on p. 10 in *The Physics of Life*[3]; see also pp. 7-10 therein). It is unphysical *pre-geometric* entity, resembling one single geometric point (cf. Euclid[2]) stretched to actual/completed infinity (p. 15 in *Platonic Theory of Spacetime*[1]). In a way, it wraps the local (physical) mode of spacetime (*ibid*., p. 18) and, depending on the direction we look at the global mode from the physical world, it looks *both* infinitely small *and* infinitely large "boundary" of the 4D physical world.

Let me explain the arguments for Platonic *pre-geometric* global mode of spacetime, and the reason why it cannot be directly observed. Notice that the **red** Platonic flower below corresponds to the "carrot" in the drawing above, but we cannot "turn around" and look at it. Why not? Because it is hidden by the "speed" of light (Slide 19 in *Quantum Spacetime*[4]). We can see only the *physicalizable* 4D "jackets" projected on the local (physical) mode of spacetime from/by the Platonic world. Example: quantum mechanics (QM)[3].

See p. 11 in *Platonic Theory of Spacetime*[1]

Check out Slides 9-12 in *Quantum Spacetime*[4] and read again the explanation of Platonic matrix on p. 10 in *The Physics of Life*[3]. It is indeed impossible to explain the physical world without its *atemporal* Platonic source in the so-called global mode of spacetime. The latter is always *precisely* **nullified** in the local mode (p. 30 in *Platonic Theory of Spacetime*[1]). We detect only its fleeting 4D "jackets", as depicted in John's jackets metaphor.

The good news is that the human brain can produce mental images (p. 8 and p. 11 in *The Physics of Life*[3]) from the Platonic matrix. This is the crux of spacetime engineering.

For example, reversible elimination of inertial mass (REIM). It's not some supranatural "magic". You only need to know the *origin* of inertia; all the rest is a matter of learning. Read pp. 41-43 in *Platonic Theory of Spacetime*[1] and study the current paper **thoroughly**.

To watch the demonstrations of REIM at my YouTube channel, you will need password. Feel free to contact me by email (available at my website above). You should explain (**i**) what you were unable to understand, and (**ii**) *exactly* why. Please be specific in explaining (**ii**), because I will start from there. Also, please put "!REIM" (without quotation marks) in the

subject line of your email, otherwise I might accidentally trash it. I will respond within five working days. To get you started, recall a well-known demonstration of REIM, and Escher's Drawing Hands.

How can you access the "carrot" (dubbed 'matrix' on p. 10 in *The Physics of Life*[3]) residing in the global mode of spacetime? Can't use 1D model of time. For if we look at Escher's 'drawing hands' above, *before* the left arm begins to define/draw the right one, it must be *already* defined/drawn by the right one, but *before* the right arm begins to define/draw the left one, it must be *already* defined/drawn by the left one. Thus, no arm can execute any action, and we have frozen 1D time (not like the alleged "disappearance of time" in background-independent theories, John Baez) in *fundamentally* non-linear interactions.

The only solution is to "move" to the global mode of spacetime, in which the two arms are *already* pre-correlated (cf. Gottfried Wilhelm Leibniz in Slide 14 in *Quantum Spacetime*[4]) at every consecutive instant 'here and now'. But how can you "move" there? You can't. Only you brain can develop the mental image of the *matrix* (p. 6 in *The Physics of Life*[3]) in the global mode of spacetime, by 'learning' (p. 43 in *Platonic Theory of Spacetime*[1]). The matrix will unfold toward you by *its own self-action* (*ibid.*, p. 38), and in few years' time you too will be flying in the 4+**0** (Sic!) local mode of spacetime. As Henry Ford famously noted, whether you believe you can do a thing or believe you can't, you are right.
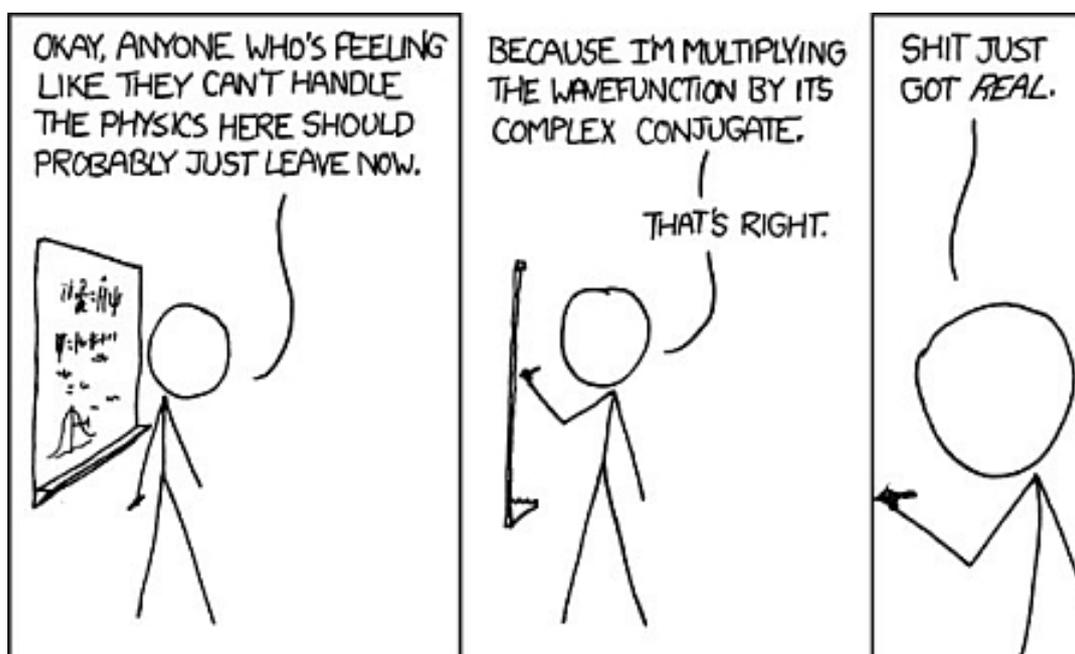
5 February 2019
Last update: 7 February 2019, 10:48 GMT

References and Notes

1. D. Chakalov, *Platonic Theory of Spacetime*. November 2018, 45 pages, at this http URL.

2. C. Stover and E. Weisstein. "Point." From MathWorld — A Wolfram Web Resource.
http://mathworld.wolfram.com/Point.html

3. D. Chakalov, *The Physics of Life*. 20 January 2019, 14 pages, at this http URL.

4. D. Chakalov, *Quantum Spacetime*. 14 March 2017, 19 slides, at this http URL.

P.S. To those who usually look first at the last page: read *The Physics of Life* above. It resolves two outstanding issues. First, there is no 'quantum world' in QM textbooks (see the cartoon below), because quantum objects become *instantaneously* real *only* at the instant of wave-function "collapse", and secondly — the alleged Higgs boson *inevitably* leads to deadly catastrophe, which has never happened (cf. Ivo van Vulpen below).

D.C.

Why is the universe larger than a football ?

Measured vacuum energy density:

An experiment to measure the energy density in vacuum and the energy density in matter has shown:

$$\Omega_m \approx 30\% \quad \text{and} \quad \Omega_\Lambda \approx 70\% \sim 10^{-46}\text{GeV}^4$$

$\rightarrow$ empty space is really quite empty.

Problem: • 10^{54} orders of magnitude mismatch.
                  • Why is the universe larger than a football ?

Ivo van Vulpen, *The Standard Model Higgs Boson*. Lecture Notes, October 2013