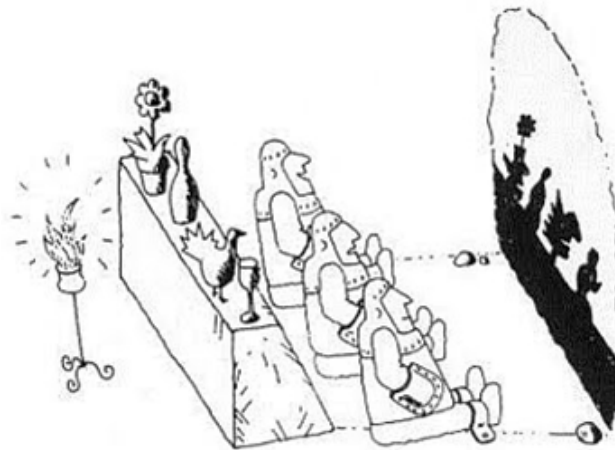


## The Fifth Force: Proof of Concept (text version)

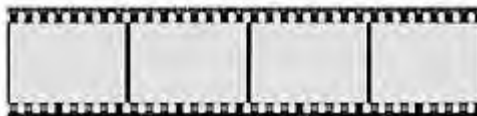


Yes. This was me four year ago, on 23 September 2018. I announced the paper version of the main report, titled *Platonic Theory of Spacetime*. The report is available at my [website](#). I elaborated there on the proposal about the Platonic world as ‘the common source of matter and psyche’ (Gottfried Leibniz called it *the monad without windows*), suggested on 23 March 1994.



Dimi Chakalov, 23 March 1994, 9:00-9:20 CET. Talk at the *Conference on Science and Theology (ECST V)* in Freising by Munich, March 23-27, 1994.

Notice that the three “chained” guys not only cannot “turn around” and look *directly* at the Platonic world, but also belong to the Flatland of the “shadows” on the wall, like animated 2D images from a movie reel.



We are “shadows” from the 4D “movie screen, and the “movie operator” is a hypothetical *atemporal* state of the entire Universe, as suggested on 31 October 1989 in the official announcement of my research program: read *How To Bind Mind To Matter?* (January 1990) at my website ([Matter.rar](#)). Why *atemporal* “movie operator”? Because if he takes a coffee break and stops the movie, we will not notice any “gap” (p. 31) in our 4D “shadows”.

After my announcement on 23 September 2018 (the first clip), I focused on the effects in the physical world, produced by the *invisible* (with [light](#)) Platonic world: read [chakalov.net/history.pdf](http://chakalov.net/history.pdf) and [chakalov.net/talk.pdf](http://chakalov.net/talk.pdf). Details at <http://chakalov.net/#reports>.

As an analogy, recall the images and sound we see and hear from a TV set: we know that they are not created by the TV alone. Replace the TV with your brain and ask the following question: what is the [physics of the brain](#), facilitating – [very tricky issue!](#) – the emergence of mind, consciousness, volition, and memory?

Look at your brain ([photo 2.jpg](#)): how come nothing goes wrong with its [86 billion](#) neurons and [trillions](#) of synapses? This is why I suggested on 23 June 2022 a new force of Nature – the *fifth force* ([talk.pdf](#) and [history.pdf](#)).

It (not “He”) has a very wide triple presentation. The fifth force is the force of Life ([Erwin Schrödinger](#)), as it empowers [all living organisms](#). It is also the force of Time as ‘[energy from geometry](#)’ ([Slide 1](#) and [Slide 2](#)), thanks to which we face the [asymmetry](#) of [past and future](#). Last but not least, it also delivers the [energy of gravity](#), still unexplained in [textbooks](#).

Now I will briefly explain the crux of the fifth force as the force of Life. Then will proceed to the [proof of concept](#) with a [Crookes radiometer](#).

The [self-action](#) ([ball.mp4](#)) is *not* like [Baron Munchausen](#). Illustration with a kitchen glove: the fifth force makes all [four forces self-acting](#). No “mental energy”, no “[dark energy](#)”, no “[gravitational energy](#)” and *no physical force* of the [arrow of Time](#) either. We only have [self-acting](#) ‘gloves’ empowered by the [fifth force](#), like a physical 4D ‘glove’ with [Platonic](#) ‘hand’ *inside* it.



The [monad](#) itself has no *windows* through which anything can enter or leave (Leibniz, [Monadology 7](#)). The [Platonic](#) hand has no *windows* either. We see only its 4D ‘glove’, and can deduce the existence of [Platonic](#) hand only from the [self-acting](#) faculties of its 4D ‘glove’ (p. 5 in [history.pdf](#)).

In this video, I will skip the [complicated issues](#) above and will proceed to the analogy with a ball ([ball.mp4](#)) and the [proof of concept](#), following my first video presentation *Spacetime Engineering 101* from [15 January 2020](#). No, spacetime engineering is not “[magic](#)”. You can learn it in two weeks or less, depending on your motivation. It will be like learning a new motor skill; for example, how to juggle three balls. [No special gifts](#) are needed.

A [friend of mine](#) asked me last year whether he could learn [spacetime engineering](#) without the hassle of learning my “crazy stuff”. Suppose you wish to learn how to juggle three balls: watch the manual at [YouTube](#). However, suppose you cannot see the balls, and actually have three spoons at your disposal. You only *believe* that you’re dealing with balls, but they are in fact spoons. Moreover, you *believe* that you will be tossing balls (not spoons) in the air, but you have feedback from your legs only, because you are blindfolded and can’t see anything. You try to move your arms and toss the balls in the air, but in fact you’re moving your legs and kicking the three spoons on the floor. What skill could you learn without that “crazy stuff” (p. 3 in [talk.pdf](#))? Try [meditating on a rock](#), for at least 10 years.

To avoid further misunderstandings, I will clear the most common issues.

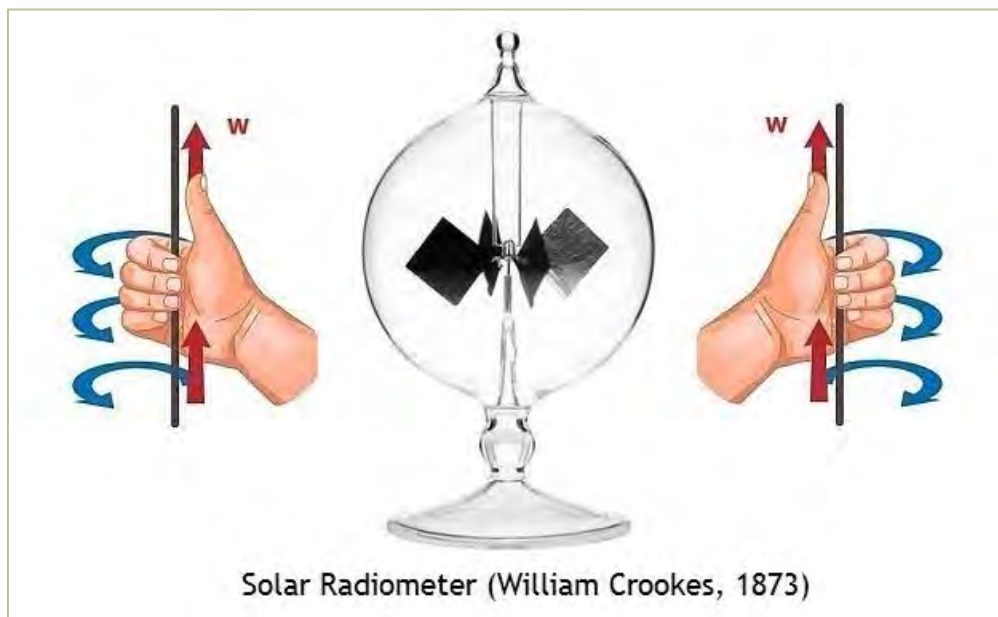
Recall the [first drawing](#): our [mind](#), [consciousness](#), [volition](#), [memory](#), etc., along with the entire physical world, are just 4D “shadows”. They must be *separated*, to preserve the ontologically distinct nature of mind & matter, and also *connected* ([Slide 1](#)), so that they can also [interact](#). The only way to ‘have our cake and eat it’ is to suggest [two modes of spacetime](#) along the [arrow of spacetime](#) depicted below.



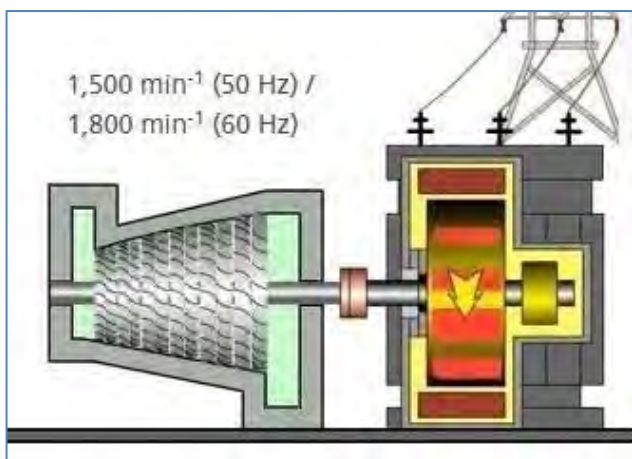
You only have to change your NEXT [future](#) state (“[carrot](#)”), and you’re done. Due to the “speed” of light, we [cannot see](#) the (*atemporal*) transition of the potential [future](#) into the irreversible past. With [light](#), we can see only the past, and only *post factum*. Why? Let me quote from [Slide 19](#) in *Quantum Spacetime* (14 March 2017). Imagine that you stay in front of a wall: at  $t_1$  you toss a ball at it, in such way that the ball will bounce back and hit you later at  $t_2$ . You will be watching all the consecutive states of the ball during the entire interval  $t_2 - t_1 > 0$ . But you cannot replace the ball with a photon, because the null interval between its emission at  $t_1$  and absorption at  $t_2$  will be *exactly* zero:  $t_2 \equiv t_1$  denotes a single 4D event ‘here and now’ cast in the irreversible past. Thus, when you watch the [billiard ball](#), you can see only its consecutive states cast in the past, which were “[already](#)” influenced by the [fifth force](#) – [once-at-a-Time](#) ([Slide 1](#)). With [light](#), we can’t see the NEXT [future](#) state (“[carrot](#)”) of the ball ([ball.mp4](#)).

This is how the **ball** is literally **acting on itself**, like the 4D glove **above**.

Let me show you the **self-acting** fifth force with the **Crookes radiometer**, without light source (flashlight): it can spin in both directions.



The magnitude of the fifth force here is immensely small, perhaps in the range of the **Casimir force**. Does the **fifth force** originate also from the **quantum vacuum**? Can we scale it up to spin the rotors in power plants?



My proposal for producing unlimited electricity is based on gravitational rotation, as gravity can rotate a **whole galaxy en bloc**. Just spin the steam turbine rotors in the **power plants** with **spacetime engineering**. There is no need for water supply, heat, nor **coal** or **nuclear fuel**. Is this possible? We urgently need **quantum gravity**!

I hope the third (and last) part of this video will be recorded later in 2023, at a technical lab in **Europe** or in Israel, under tightly controlled conditions.

Yes, the theory is **speculative**, like the **dubious map** used by **Christopher Columbus** in August 1492. But if he didn't go west, with the insane hope to find shorter route to the Far East, how could have he discovered America?

**D. Chkalov**  
Christmas 2022

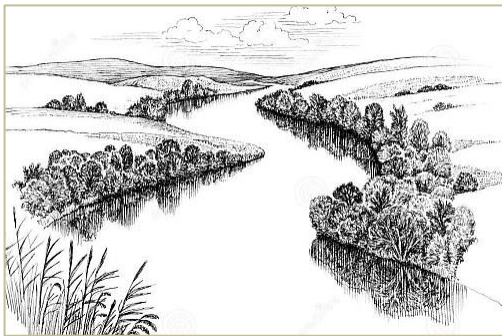
## Rejections and Clarifications (RAC)

R1. There is no math in your theory.

C1. Nobody knows the math. I suggested the new *hyperimaginary numbers* denoting a **Platonic object (W)** which, “when” squared, yields zero:  $W^2 = 0$ . Read *Relative Scale (RS) Spacetime* [here](#). We need hypercomplex analysis.

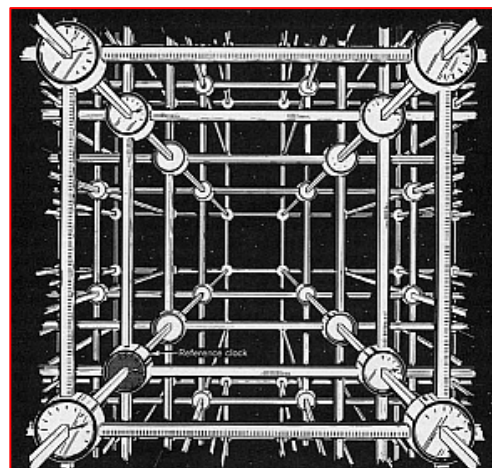
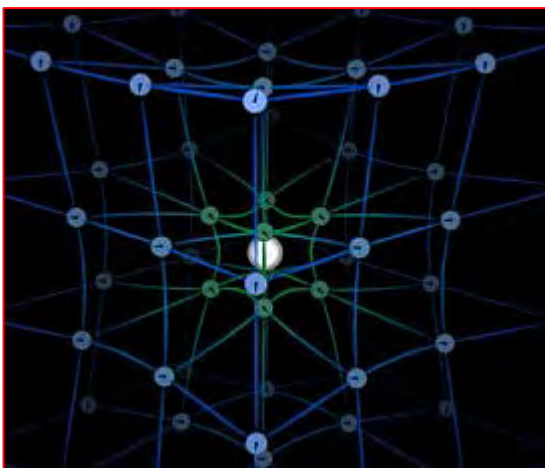
R2. Your “**arrow of spacetime**” is fundamentally unobservable.

C2. True. With **light**, one cannot detect the *flow* of 4D events, called Time. The latter in *non-relational*. Otherwise the banks of Heraclitus’ river below could be real and at **absolute rest**, like a physical **luminiferous aether**.



Everything changes and nothing remains still – you cannot step twice into the same stream.

Yet the *flow of Time* does exist. We can always pick a reference frame at which a system is ‘**at rest**’, and in this sense it does not “**consume**” space. But the *flow of Time* will not perish: it will keep running. At what “speed”, however? One second per second makes no sense. Physicists have *no idea* what **slows down** time and produces **gravity**: click the images below.



Please do not hesitate to send your comments.