

I want to know God's thoughts; the rest are details.
Albert Einstein, 1925

Universal Holomotion: Think Globally, Act Locally

D. Chakalov

35A Sutherland St
London SW1V 4JU, UK
dchakalov@gmail.com

Abstract

Many physicists have speculated about the physics of the [human brain](#) from the perspective of materialism ([IGUS](#)) – the brain is the hardware and the mind is the software. Their approach cannot explain the correlations of the [constituents](#) of the human brain. My approach is different: I collect many facts from [life science and psychology](#) to 'connect the dots', and then look at theoretical physics to find out if the theory of [universal holomotion](#) can fit there. A penny for your thoughts!

1. Introduction

Many physicists have speculated about the physics of the human brain^[4] from the perspective of [materialism](#) – the brain is the hardware, the mind is the software (Fig. 1). This "scientific" approach may lead to very sticky brainwashing religion called [antitheism](#), from which you can never recover.

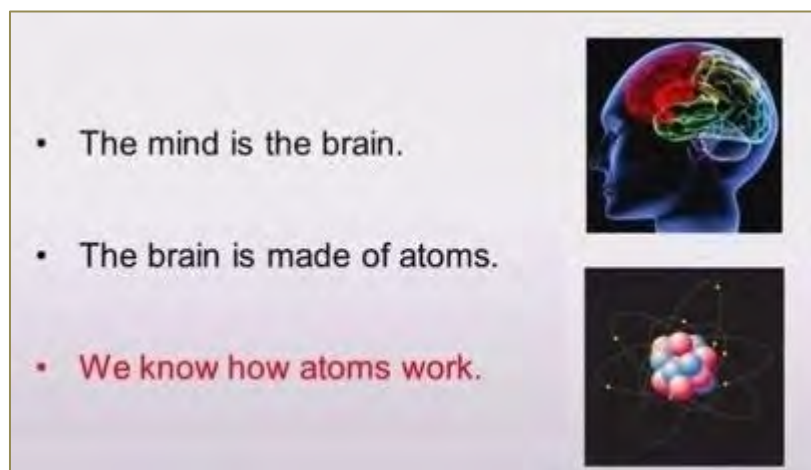


Fig. 1. Notice the absence of [Psychology 101](#).

It is painfully obvious that the physics of “hardware” (IGUS) cannot even remotely address the correlation^[5] of all constituents of the human brain.^[4] Besides, the claim “we know how atoms work” is questionable, to say the least, because physicists (Sec. 3) cannot explain even the quantum vacuum.

My approach is different. I collect many indisputable facts from life science and psychology to ‘connect the dots’, ensuing also from the arrow of Time and the doctrine of trialism, and then look at theoretical physics to find out if the theory^{[1],[2],[3],[5]} fits there. Briefly, the ball is now in the court of theoretical physicists, particularly those indulging in GW parapsychology.^[2] So far their response has been quite muted, but let’s hope for the best.

In the next section, I will examine the biological holomovement (Sec. 2). Later I will move to the quantum waves with complex phase (Sec. 3), which we cannot directly observe,^[3] and will compare them to the gravitational radiation (Sec. 4). Finally, I will argue that in all cases we encounter the phenomenon of universal holomovement along the arrow of Time (Sec. 5).

2. Biological holomovement

Recall the holomovement of a school of fish. It is *bona fide* example of the rule ‘think globally act locally’ — the collective holistic “thinking” leading to quasi-local interactions along the arrow of Time. The idea goes back to July 1986 (p. 35 in *Platonic World*^[1]). I tried to test my specific approach to theoretical physics by suggesting two fundamentally different types of ‘distance’: physical distance between all spacetime points, definable with spacetime metric, and Platonic “distance” between all spacetime points; the latter is always *exactly* zero in the physical world along null intervals.

But what is the “distance” between the Platonic *idea* of a tree and the *idea* of a mountain in your memory? My effort to answer this question, again in line with my approach to theoretical physics, came on 21 September 2008: two modes of spacetime along the arrow of Time (Sec. 5). The end result is a new dynamics of spacetime itself (p. 19 in GWP^[2]) and an *atemporal* web of EPR-like correlations in the global mode of spacetime, which leads to biological holomovement: think globally act locally. If true, we can expect to unravel a similar (not identical) holomovement in the quantum world,^[3] exhibited in quantum waves. In both cases, biological and quantum, there is no “agent” that vibrates and send waves, like a vibrating drum sending sound waves (nor universal “drum” emitting photons with invariant speed).

3. Quantum holomovement

To understand the [complex quantum waves](#), consider their [correlations](#).

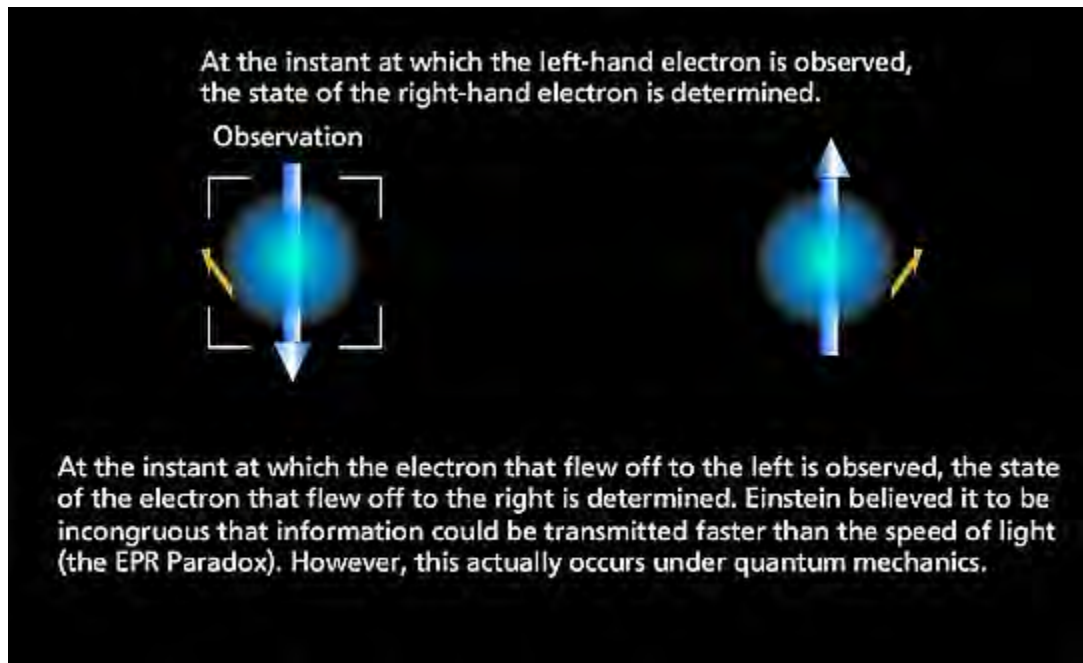


Fig. 2. Explanation by [Henry Stapp](#) and [Mark John Fernee](#).

Information *cannot* be transmitted faster than the speed of light (Fig. 2), which is why I suggested in September 2010 (in the context of my [approach](#)) the so-called PR² (Potential Reality & Proper Relativistic) interpretation of QM, based on Aristotle's *potentia* ([Werner Heisenberg](#)) and the [two modes of spacetime](#) (Sec. 2) along the [arrow of Time](#) in the quantum world.^[3] Namely, the *atemporal* correlation (Fig. 2) is performed in the [global mode of spacetime](#) and *simultaneously* sent^[5] to both entangled electrons, hence their *instantaneous* correlation occurs in line with the [principle of locality](#): think globally act *locally*, as "one always takes the real part in the end" ([Chen Ning Yang](#)). Have your cake and eat it. One can explain in a similar way the *instantaneous* inertial reaction forces: read closely p. 17 in GWP.^[2]

4. Gravitational holomovement

Before trying to apply the same ideas to gravitational holomovement, we have to elaborate on 'the real part in the end': the *gravitalized* energy from gravitational radiation (Sec. 4 and pp. 11-12, and p. 19 in GWP^[2]). Forget the fake GWs (*ibid.*, p. 18). The task is non-trivial ([MTW p. 467](#)) and requires new [Mathematics](#). I am ready to explain everything, [from scratch](#).

5. The arrow of Time: Think globally act locally

Please read pp. 5-9 and p. 12 in *Platonic World*^[1] and [Slide 1](#). As I explain on [15 January 2020](#), the potential future exists as Platonic *propensity* – “just in the middle between possibility and reality”, [Werner Heisenberg](#) – and all entangled “fish” ([Sec. 2](#)) experience feedback from their common potential future, thanks to which they proceed to their **next step** in perfect [EPR-like](#) correlations, which leads to pre-established harmony ([Leibniz](#)) exhibited in their holomovement. Ditto to the entangled electrons in [Fig. 2](#). But how about the gravitational holomovement ([Sec. 4](#)) in the cosmos? Well, first we need quantum gravity^[2] to replace all “[dark energy](#)” and “[dark matter](#)” with the two tug-of-war manifestations of gravity, [repulsive and attractive](#). As of today, the jury is out. Curiously enough, some people can [modify gravity](#) and even fly like a ‘[gimbal](#)’, but do they tweak the *rate* of Time ([Bill Unruh](#))? What if Time is *imaginary* variable ([Arthur Eddington](#)), so if *squared* in the [invariant spacetime interval](#) it will obtain negative sign?

It cannot be ruled out the [universal holomovement](#) can feedback-correlate events from/by their common potential future, hence create [Synchronicity](#). I personally use modified gravity (pp. 22-29 in *Platonic World*^[1]) to tweak the two tug-of-war manifestations of gravity (p. 6 in [RS.pdf](#)), but still with [very limited](#) success. To paraphrase [AC/DC](#), it’s a very long way to [the top](#).

References

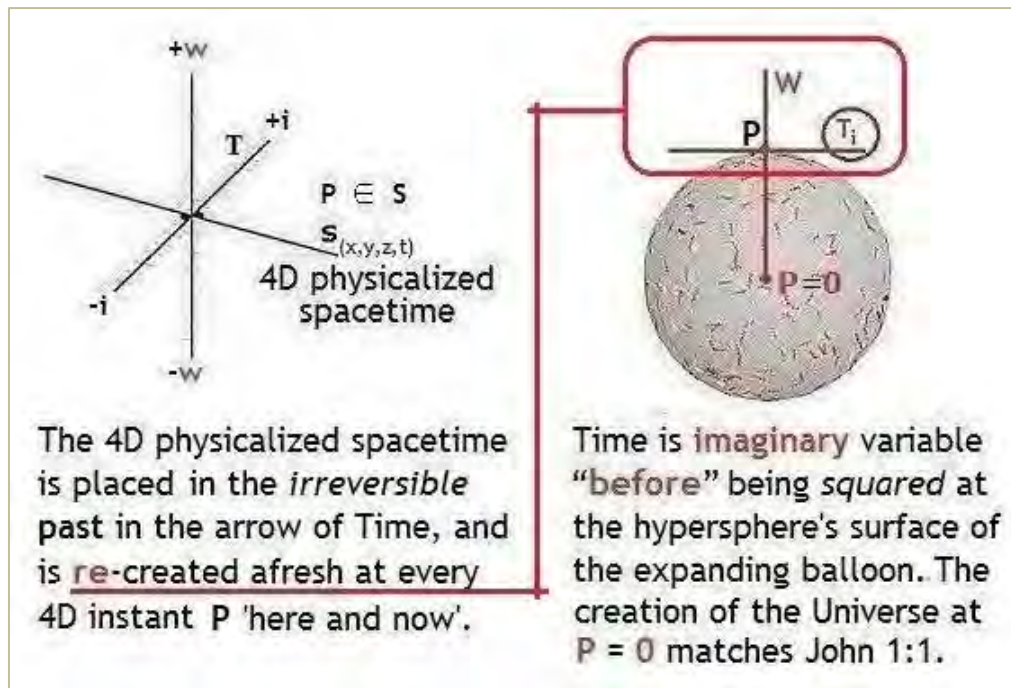
1. D. Chakalov, *Platonic World: The Force of Life, Time and Gravity*. 31 May 2023, 42 pages. <https://chakalov.net/book.pdf>
2. D. Chakalov, Gravitational Wave Parapsychology. 30 July 2023, 21 pages. Read excerpts from pp. 18-20 [here](#); URL: <https://chakalov.net/GWP.pdf>
3. D. Chakalov, The General Rule $1 + \mathbf{0} = 1$. 2 May 2023, 6 pages. <https://chakalov.net/rule.pdf>
4. D. Chakalov, Where Does Knowledge Come From? 29 August 2022, 5 pages. <https://chakalov.net/brain.rar>
5. D. Chakalov, The Fifth Force. 15 September 2022, 20 pages. <https://chakalov.net/talk.pdf>. *Idem*, Simple Quantum Mechanics, 31 August 2023, 6 pages. <https://chakalov.net/quanta.pdf>

Questions and Answers

Q1. Can you explain your “modified gravity” in simple terms?

A1. Thanks for the question, [Stavros](#). You always hit the nail on the head.

You can modify gravity iff the spacetime *itself* (p. 19 and p. 16 in GWP^[2]) is *evolving* along the arrow of Time (Sec. 2), by passing through the universal Platonic state **P** (also called **Zen**) in the drawing below.



Please click the image from The Fifth Force^[5] below and read the report.

Excerpt from p. 15 in <http://chakalov.net/talk.pdf>

15

Perhaps the core idea in Fig. 8 is indeed **very difficult**. Let me try to shed some light on it. Think of the *atemporal* offer wave & confirmation wave (*ibid.*) as “inhaling & exhaling” of the Universe. To quote **David Schiller**, before Zen, mountains are mountains and trees are trees; during Zen, mountains are no longer mountains and trees are not trees; after Zen, mountains are once again mountains and trees once again trees (Fig. 10).

Q₁: [mountains and trees] **Zen** Q₂: [mountains and trees]

Once the gravitational state moves^[5] to the irreversible past, it becomes **fact** and cannot be modified. We can modify gravity only for the **next step** along the arrow of Time (Slide 1). How? By gently tweaking the ‘blue cube’

explained at p. 3 in *The Fifth Force*.^[5] In the doctrine of *trialism*, the ‘blue cube’ is the common source of matter and psyche, called ‘trunk’. Thus, if you manage to modify the Platonic ‘trunk’ (called **Zen** above), you’re done: your **next state** Q_2 will modify gravity with the Fifth Force^[5] and let you fly like a “gimbal”. Once physicists explain the **gravitational rotation**, we should be able to develop technologies for producing **unlimited electricity** by enhancing and rescaling the low-energy gravitational rotation shown on 23 June 2022 with a **solar radiometer** (private video). And even **much more**, provided I’ve been on **the right track** since **April 1984**.

But the current conditions for going public and embarking into this complex program are not at all favorable. The majority of physicists are indulging in GW parapsychology (p. 18 in GWP^[2]) and don’t want to reconsider **their GR**, and the reaction to my project could be really nasty — nobody is prepared to retire the current power plants (p. 12 in *Platonic World*^[1]). Even climate activists (Sic!) did not reply to *any* of my messages sent since August 2019.

I’ve been talking to a brick wall for 15 years now, since **21 September 2008**. My video from **15 January 2020** was totally neglected by physicists, while other people called it ‘a show’. Nobody tried to read the theory (Q1/A1).

Q2. What do you suggest about quantum gravity?

A2. Gravity is real, so to reach quantum gravity the quantum world must be real as well. But what is ‘real’ in quantum gravity? In current QM textbooks, we have the murky idea of ‘**quantum contextuality**’ from **Kochen-Specker** theorem, which clashes with the old idea of ‘realism’ (**Erwin Schrödinger**). We need a brand new type of ‘reality’, which is not limited to the 4D physical world: the **intact** Platonic quantum reality. If physical objects have a common generic property called ‘color’, the **intact** Platonic quantum reality will be an entirely new **non-colorizable** reality, which cannot be directly observed (with light) in the physical world. The chance to be found there is *exactly* **zero**^[3] and the “**measurement problem**” in QM textbooks is solved from the outset: the Platonic quantum reality does not “collapse”, because it **can’t**. Thus, there is no fundamental “**uncertainty**” in the **intact** Platonic quantum world: God casts the die, not the dice (Albert Einstein). This is **the solution** to the problem with the old idea of ‘realism’ from **1935**.

Ditto to Platonic gravitational reality. In both cases, we observe (with light) only their fleeting ‘jackets’ (*ibid.*, p. 2). Otherwise quantum waves would

have real-valued (not complex) phase ([Sec. 3](#)) and gravity ([MTW p. 467](#)) will be another mundane physical field. Thus, the *quantization* of 4D spacetime (pp. 5-9 in *Platonic World*^[1]) is made by the [arrow of Time](#): read [Q1/A1](#) and the origin of *positive* mass in the gravitational dipole below, taken from p. 11 in GWP^[2], and compare it with the [positivity mass conjecture](#).



Here the *gravitalized* (not “[gravitational](#)”) energy is always (+) positive. It is [dynamically balanced](#) (not “conserved” by $T^{ab}_{;b} = 0$) and “[moves](#)” to the universal [future](#) by *quasi-local* holomovement — think globally act locally, read [Sec. 2](#) — resembling a [school of fish](#). Or rather a school of 4D “[gloves](#)”.

Notice that the gravitational dipole above is the *physicalized* manifestation of the [arrow of Time](#), which would run orthogonally to the surface of your screen. When the arrow is “[flattened](#)” on your screen, the mathematical machinery of GR will show only [two time-symmetric and frozen remnants](#). People speculate about fields with [negative energy densities](#) or imaginary mass ([tachyons](#)), but these are *artifacts* of the “flattened” arrow of Time. There is no proper negative mass nor imaginary mass in the dipole above. Only positive mass driven by the [Fifth Force](#) toward the universal [future](#) along the (hyperimaginary) axis [W](#) in the second drawing at p. 5 [above](#).

People nowadays suggest some mythical tachyonic field with an imaginary rest mass, called [Higgs field](#), which might decay to one stable Higgs boson, or rather to five ([CERN](#)). To reconcile these speculations with [current GR](#), CERN’s talebans have to explain why the universe is [larger than a football](#). What’s the point of suggesting “Higgs field” with math if you talk bullshit?

Not surpassingly, the talebans at CERN banned my email in November 2015 “[due to phishing attack](#)” (examples [here](#) & [here](#)). Can’t talk with [Russians](#).

Q3. I can’t understand your “Platonic quantum reality”. Can you explain?

A3. Look at the wooden tripod at pp. 2-3 in *The General Rule*^[3] and notice that the three legs have *pre-existing* generic color: [brown](#). So, the tripod can obtain a complete coloring, *contrary* to [Kochen-Specker](#) theorem (Sic!), and the new ‘context-dependent’ colors, either red, blue, or green, will be laid out over the pre-existing generic [brown](#) color of the three legs. But the

quantum world is different (Q2/A2), because the underlying **intact** Platonic quantum reality does not have any color *whatsoever*, a bit like the *colorless* light that can “collapse” into any **specific color**. We face the same puzzle in background-independent quantum gravity, like “trying to paint a painting without any canvas” (John Baez). The “canvas” does exist, but as Platonic gravitational reality, which must be *completely* removed (**nullified**) from the physical world (p. 5 in [Newton.pdf](#)) located in the irreversible past of the **arrow of Time**, and shifted to the *potential* future as Platonic **matrix**: read p. 7 and pp. 35-38 in *Platonic World*. ^[1] Have your cake and eat it. ☺

Perhaps the three types of Platonic **matrixes** — biological (Sec. 2), quantum (Sec. 3), and gravitational (Q4) — are shifted into their common *potential future* in the **arrow of Time**, and we can use **spacetime engineering** to tweak our common *potential* future until we **get what we wanted**. In some cases, the end result may look as being delivered by blind chance or by Synchronicity (Sec. 5). The latter is ignored by theoretical physicists, so they prefer to talk about ‘blind chance’; for example, the chance to wind up **13.787 billion years** ago in a unique universe (Slide 12), which happened to be perfectly tuned for life, only billion years *later* “**at some stage**” (here people use **lots of math**). Sounds like some unearthly “**Biblical miracle**”.

But can we *evoke* Synchronicity (Sec. 5)? Can a **small single fish** influence the entire school of fish (Sec. 2)? It should be possible in the **spiritual track** of spacetime engineering, but the task is still very speculative and unclear.

NB: The biological **matrix** rules the evolution of human body ever since its **prenatal stage**, but can we access the Fifth Force^[5] ([ball.mp4](#)) with/by the brain?^[4] Read pp. 5-6 **above**, and pp. 10-12 and p. 17 in *Platonic World*. ^[1]

Q4. What do you mean by **gravitational dipole**?

A4. Keep in mind that the gravitational holomovement (Sec. 4), driven and controlled by the gravitational **matrix** (Slide 12) during the **arrow of Time** (p. 7), is a mystery: we do not know the origin of gravity, which is *always* bundled with the gravitational rotation (**Richard Feynman**). We can only speculate about some phenomenon creating net positive mass with the alleged **gravitational dipole**. If the latter has mental correlates (**qualia**) that are accessible with **spacetime engineering**, one can further speculate that we could reversibly *tweak* the gravitational dipole until we develop a new gravitationally-neutral system with *zero* inertial mass, which now “can be

accelerated with no cost, no effort" ([Bernard Schutz](#)). Perhaps this was the 'gimbal' of U.S. Navy. BTW are the [human thoughts](#) constrained by inertia?

The only feedback to my [efforts](#) hit me in 2012, from [Maurice de Gosson](#): "Buzz off, idiot!" (Mon, 21 May 2012 18:47:46 +0200). Any other ideas?

The [talebans at arXiv.org](#) will of course reject this report (p. 1), exactly as they did with my latest report on GW parapsychology (p. 18 in GWP^[2]) and review article from [17 July 2005](#) (*ibid.*, p. 8). You can't talk with [Russians](#).

My first effort to explain the bold facts in QM, known after [Charles Wilson](#), was in February 1987 (p. 4 in [Penrose-Norris Diagram](#)). It was met with dark silence — no comment came from my former "colleagues". And even today, I still encounter the same somber silence from hundreds of physicists. Some of them, like [CERN](#), "replied" by blocking my gmail address. Nothing else.

[Russians](#) are everywhere, no matter how they look and the language they speak. As Max Planck explained in 1936 (*The Philosophy of Physics*, p. 53):

An important scientific innovation rarely makes its way by gradually winning over and converting its opponents: it rarely happens that Saul becomes Paul. What does happen is that its opponents gradually die out and that the growing generation is familiarized with the idea from the beginning: another instance of the fact that the future lies with youth.

I don't want to wait until eventually "Saul becomes Paul", and will have to go public with [modified gravity](#) (p. 20 in GWP^[2]). Expect the [unexpected](#).

Here I can only offer the illustration of [spacetime engineering](#), which was sketched in my video from [15 January 2020](#).

Imagine a train, which adapts to its environment and behaves like a *flexible* (not "uncertain") living organism: it always **re**-creates its rail track ahead. To quote [Antonio Machado](#): "Traveler, there is no path. The path is made by walking." Now, suppose this train is stationed in Lyon, and we instruct it to make a new rail track to Paris. The train will look at Google Maps and create a unique rail track to its fixed final destination in Paris. Notice that we only fix a *final* destination of the train. We are not concerned about the work made by the train and how it will create its new rail track to Paris. Then we fix another final destination: from Lyon to Lille. No problem, the train will create its new rail track and arrive there. Then we fix yet another

final destination: from Lyon to London. The train will probably complain, but at the end of the day will manage. But not to New York, obviously.

Likewise, [spacetime engineering](#) has limitations, but the important thing is to 'set and forget' the final destination of the train. For example, from [water to wine](#) — the water has no choice, because its final destination to 'wine' is *irreversibly* fixed in its potential **future** (Q1/A1). Such kind of water-to-wine holomovement will look anomalous in classical physics (p. 8).

We try to understand it by suggesting a "**non**-colorizable" quantum reality (Q2/A2), which creates the transition between its *physicalized* "colored" states, water and wine. There is nothing "between" them, just like there is no water between two water molecules. Only [vacuum](#) along [null intervals](#).

Any sufficiently advanced technology (photos from [July 2010](#) and [May 2012](#), and from [U.S. Navy](#)) is indistinguishable from "magic" ([Arthur C. Clarke](#)). Sure enough, there is no "magic" in rotating my [solar radiometer](#) either. If my theory of [modified gravity](#) is false, what else can do the job? [Blind luck](#)?

NB: Is the universal holomotion the correct path to quantum gravity (p. 6)? The rule 'think globally act locally' applies to all *quasi-local* [biological](#), [quantum](#), and [gravitating](#) systems: they "think" in the [nonlocal global](#) mode of spacetime about the **next step** along the arrow of Time (Slide 1), and "act locally" in the irreversible **past** — once-at-a-time, *ad infinitum*. The end result is pre-established harmony ([Leibniz](#)) of all types of *quasi-local* constituents, exhibited in [universal holomotion](#). In my opinion, this is the correct path to quantum gravity and, as a bonus, to [the physics of Life](#).^[1]

Again, the [nonlocal global](#) mode of spacetime is not some *pre-existing* physical object in the quantum world with "generic **brown** color", which could patiently wait to be "painted" upon observation (Q3/A3), nor some *pre-existing* [physical pool](#) of energy-momentum and angular momentum, which could be reserved exclusively for gravity. In both cases, quantum and gravitational, the physical systems "act locally" on *themselves* by universal **self-action**: the Fifth Force.^[5] We see only a [school](#) of **self-acting 'gloves'**.

In the case of living organisms (p. 8), the biological holomotion orchestrates the collective behavior of all constituents of the 'train' (p. 9). Consider for example [firewalking](#): people change their '[end station](#)' to 'walking on damp moss'. This is not some "mind over matter" crap, but a real phenomenon hinting at the power of the [spiritual track](#) of spacetime engineering (p. 8).

Bottom line here is the [force of Life](#). To quote Erwin Schrödinger from 1944 (*What Is Life?*, pp. [28-29](#)), “we are here obviously faced with events whose regular and lawful unfolding is guided by a mechanism entirely different from the probability mechanism of physics. (...) We must be prepared to find a new type of physical law. (...) It is nothing else than the principle of quantum theory over again.”

Some talebans [disagree](#). Other talebans from [arXiv](#) claim that my [report](#) “does not contain sufficient original or substantive scholarly research”. Perhaps they have quietly solved the “[measurement problem](#)” in QM (p. [6](#)) and the [dynamics of spacetime](#) (p. 19 in GWP^[2]), but are shy of sharing it. Or perhaps they are just [Russians](#). More from Max Planck [above](#).

One can expect that many physicists will be eager to dismiss the proposed [dynamics of spacetime](#) (p. 19 in GWP^[2]) and will need particular prediction of my theory, which makes it falsifiable. It will be like I claim that it never rains on Wednesdays: they only have to show at least one rainy Wednesday.

Done. I listed [6](#) objections to their theory of gravitation on p. [18](#) in GWP^[2] and expect by the [end of 2023](#) to read their reviews of [objections \(1\) - \(6\)](#), posted at arXiv.org and submitted to peer-reviewed academic journals. They only have to find remedies to [objections \(1\) - \(6\)](#) at p. [18](#) in GWP^[2] and the entire theory of universal holomotion (p. [1](#)) will be demolished. Then I will have to wait until they suggest their theory of [quantum gravity](#).

Q5. Why are you banging your head against a wall?

A5. Because of the [climate change](#). Read the last page in *Platonic World*. ^[1] The temperatures could rise by [more than 1.5C by 2027](#). Not by 2030, as we were told two year ago. Unless the world [rapidly stops burning fossil fuels](#), the extreme heatwaves in North America, Europe and China “will become even more common and the world will experience heatwaves that are even hotter and longer-lasting” (Imperial College Report [25 July 2023](#)).

We must do everything to eliminate the risk for [climate apocalypse](#), for the sake of our children and grandchildren. Time is running out!

31 August 2023, 21:30 GMT

Cite as: D. Chakalov, Universal Holomotion. 31 August 2023, 11 pages.
<https://chakalov.net/waves.pdf>