Brain-Controlled Cold Plasma

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Regarding 'macroscopic effects', p. **31** in *Time and Continuum: Zenon Manifold* at
http://www.god-does-not-play-dice.net/zenon.pdf

Let me begin with two excerpts from Wikipedia:

Quantum mechanics and classical physics
https://en.wikipedia.org/wiki/Quantum_mechanics#Quantum_mechanics_and_classical_physics

> Many macroscopic properties of a classical system are a direct consequence
> of the quantum behavior of its parts.

Macroscopic quantum phenomena
https://en.wikipedia.org/wiki/Macroscopic_quantum_phenomena

> Macroscopic quantum phenomena refer to processes showing quantum
> behavior at the macroscopic scale, rather than at the atomic scale where
> quantum effects are prevalent. The best-known examples of macroscopic
> quantum phenomena are superfluidity and superconductivity; other
> examples include the quantum Hall effect.

I suggest new macroscopic quantum phenomena: quantum fluids at room temperature, dubbed 'brain-controlled cold plasma' (BCCP)[1]. Namely, "macroscopic effects of so-called topological bridge (CQV) connecting the *potential* states of the human brain (p. 22) with the *potential* quantum-gravitational states (p. 29) of the physical system entangled with the brain": read p. **31** in *Time and Continuum: Zenon Manifold* at

http://www.god-does-not-play-dice.net/zenon.pdf

Let's dig deeper. To understand the measurement problem in QM, recall the so-called macro-objectification problem, from GianCarlo Ghirardi:
http://www.informationphilosopher.com/solutions/scientists/ghirardi/

> We have now reached the point where we can face the so-called
> problem of the macro-objectification of properties: how, when,
> and under what conditions do definite macroscopic properties emerge?

The measurement problem and macro-objectification problem are not solved: read Erwin Schrödinger from 1935 at p. **2** in *The Physics of Life* and, e.g., Maximilian Schlosshauer, arXiv:quant-ph/0312059v4, 28 June 2005.

The main reason why the measurement and macro-objectification problems in QM are not solved is that the so-called quantum waves (Wikipedia), presenting the *potential* quantum states (read p. **31** above), possess *complex* (not real-valued) phase (Chen Ning Yang).

Think of four quantum dice, which you toss in the air, after which they drop on a table. All dice have to be correlated "in the air" (atemporal *Quantum Spacetime*) in such way that the

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sum of their readings must be **already** (Sic!) confined in the interval [10, 20] at the instant they are fixed/dropped on the table. Due to the "speed" of light (read below), you can see the four dice *only* on the table, where they exist as *physical* 'facts'. Suppose you observe four consecutive sets of readings, (3, 5, 1, 6), (6, 4, 3, 5), (5, 6, 2, 6), (1, 3, 5, 1), all of which are **pre**-correlated by the *atemporal* requirement [10, 20]. The trajectories of all dice are comprised *only* by their *physical* states 'on the table', which were **pre**-correlated (Henry Stapp), like the school of fish below. They will be bootstrapped into holistic 'school of dice' and will display *wave-like* holomovement, without any *physical* source (Erwin Schrödinger) of such "quantum wave" endowed with *complex* (not real-valued) phase (Chen Ning Yang).

The same phenomenon works in your brain, while you've been reading these lines. If the human brain seems too complicated, think of a centipede: how does it correlate its legs? With some invisible "dark" computer, which does not emit nor reflect light? I can't help but quote Sir Arthur Eddington: "Something *unknown* is doing we don't know what."

I suggest that the *potential* quantum states (read p. **31** above) are *atemporal* Platonic reality (Wheeler's "cloud", p. **7** in zenon.pdf), known as *Res potentia*. But what is 'atemporal'?

Read the answer to the question at Quora 'Does light only exist at the speed of light? Does light accelerate and decelerate?' by Andrew Jonkers from 30 March 2018 at

https://www.quora.com/Does-light-only-exist-at-the-speed-of-light-Does-light-accelerate-and-decelerate

> The whole concept of acceleration or deceleration has no meaning in this context. It started here, and ended there, with a certain probability. That is all you can say. Mathematically it is a plane wave traveling out spherically in three dimensions. Not really a satisfying answer. Let's try something else.
>
> It is not even as if the energy spreads out in all directions, and then chooses all at once to clump in one place as a single packet of energy. It is like a large number of zombie copies head out in all directions, each with the energy of a photon, and also in total number only with the energy of one photon! The moment one is observed, all the rest disappear. Mmmm that description is not much better.
>
> However you describe it in English, it won't quite make sense. But that is what Nature does! Perhaps a better explanation is (from Feynman), following emission, all the possible paths are explored, assigned a likelihood, and then the photon takes one. Feynman went a bit further and adds up all the paths it can't take as well, just to show they happen to sum to zero probability.

The *atemporal* Platonic reality is residing "between" the emission and absorption of a photon, which is why I suggested an *extension* (Sic!) of the light cone: read **NB** at p. **16** in zenon.pdf. This is my interpretation of the Feynman path (Wikipedia), by replacing all "zombies" with the Platonic quantum state (read above) of not-yet-observed or "intact" *atemporal* photon, called here 'John' (Erwin_Easter.jpg). See quantum tunneling at p. **4** in Wendelstein_7-X.pdf.

Now, what will happen if we create a new collective *atemporal* quantum state "of the physical system entangled with the brain" (read above)? All constituents of the *physical* system will exhibit **holomovement** (Wikipedia), like a correlated school of fish (YouTube) bootstrapped by their "cold plasma". Hence the term brain-controlled cold plasma (BCCP).

Check out my proposal (8 August 2019) for producing electricity at p. **8** (last) in *Can We Replicate Stellar Nucleosynthesis?*, and the suggestion by a prominent theoretical physicist.

You may ask, what is the origin of the energy? We only have to follow Mother Nature: *tweak* the cancellation mechanism producing **an immensely small** — **but not zero** — **"**positive energy density of about 6×10^{-10} joules per cubic meter" from the vacuum (John Baez), and we will unleash *unlimited* positive energy density, for example, to produce electricity (p. **8** therein). Recall that gamma-ray bursts (GRBs) can release "as much energy in a few seconds as the Sun will in its entire 10-billion-year lifetime" (Wikipedia).

But how to *tweak* this cancellation mechanism? With BCCP and the so-called 'evolution equation' at p. **4** in zenon.pdf. Notice the re-interpretation of "negative mass" (Wikipedia) and "negative energy" (Wikipedia) at p. **23** in zenon.pdf. We need Mathematics and quantum gravity, not some "meditation" or "ecstatic visions" à la St. Joseph of Cupertino (Wikipedia).

For the record: I suggested '*atemporal* quantum reality' on 5 February 1987, ensuing from the interpretation of QM by Henry Margenau from 1954, the transactional interpretation (TIQM), and the first off mystery in QM, known since 1911, thanks to Charles Wilson. Read about it at p. **4** in *Penrose-Norris Diagram*. To understand the current situation, read p. **28** in zenon.pdf.

Watch 'Spacetime Engineering 101' on 15.01.2020 at this http URL. To obtain the password for the video (720p, MP4), please follow the instructions at pp. **2-3** in *Spacetime Engineering*. For other inquiries, notice the excerpt from my website at this http URL.

August 14, 2019
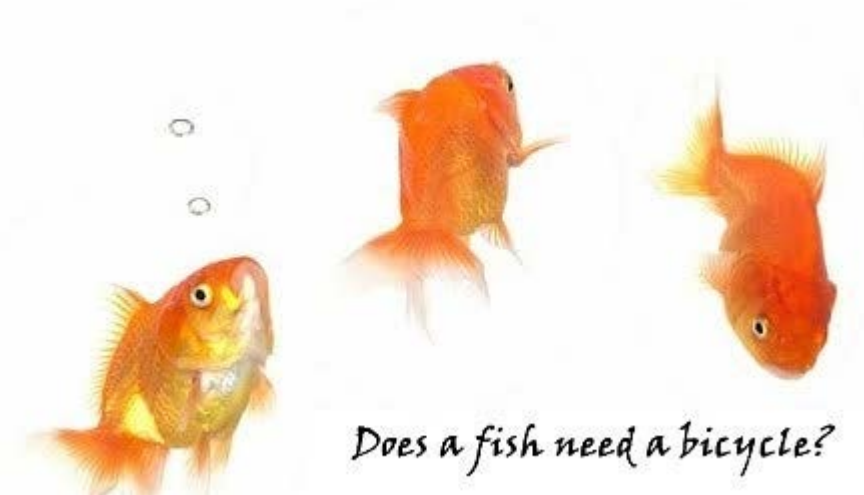Last update: August 27, 2019, 14:25 GMT

Post Scriptum

This is my photo from June 1994 (left), with my one-year old daughter. It was taken three months after I sent by snail mail my updated proposal for *atemporal* quantum reality from February 1987 to many academic institutions, in March 1994. And this is how I look now.

Why is this important? Because now I can claim, with the benefit of the hindsight, that I could have offered my theory of spacetime and its testable predictions twenty years ago, by the end of 1999 at the latest, if only there was a trace of interest in quantum gravity and Mathematics by members of the theoretical physics community. In other words, I believe we could have *unlimited* ecologically clean energy by the end of 1999 (Sic!), instead of going to war on Iraq and killing 650,000 people, as estimated in the second *Lancet* survey from 11 October 2006 (Wikipedia). I can also claim, with the benefit of the hindsight, that we could have avoided the forthcoming climate catastrophe (p. **28** in zenon.pdf). Not to mention that I could have a normal family life, when my three kids were small and I was young and happy.

These statements of mine are, of course, counterfactual. Nobody knows what could have happened to me, if I had offered unlimited clean energy by the end of 1999. I could have been hit by a truck or killed with heart attack, whichever comes first. Anyway.

Now I am really old, and if people are still uninterested in my proposal — fine (Matthew 7:6). As I wrote on Easter 2019, "I keep exploring my "carrot" (p. 1 in [4]), it works like a charm, better than a Swiss watch" (p. **2** in zenon.pdf). I am only scratching the tip of the iceberg, very gently. Personally, I don't need unlimited clean energy from polarization of spacetime. Don't need quantum gravity and cosmology either. I'm fine.

Does a fish need a bicycle?

D. Chakalov
August 19, 2019
Last update: August 22, 2019, 12:50 GMT

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Subject: The preferred basis problem
Date: Sat, 24 Aug 2019 16:48:20 +0100
Message-ID: <CAM7EkxkpuUC3qv9803ojZWMFVbg4Yu-fqe0w2EZEhOQZzMnBxA@mail.gmail.com>
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Hi Max:

You mentioned the preferred basis problem in your arXiv:quant-ph/0312059v4,
http://www.god-does-not-play-dice.net/Max_title.jpg

See the problem in KS Theorem at p. 18 in
http://www.god-does-not-play-dice.net/zenon.pdf

Details in
http://www.god-does-not-play-dice.net/BCCP.pdf

Should you decide to upgrade your arXiv:quant-ph/0312059v4 with KS Theorem,
please drop me a line and I will elaborate: quantum "superposition" of classical
states is an oxymoron. Erwin Schrödinger explained the issue in 1935,

http://www.god-does-not-play-dice.net/Erwin_Easter.jpg

Hope to hear from you. Karl Svozil, for example, knows my research since year 2000,
after we met at his office in Vienna, yet he did not even mention the facts he learned
from me in his 2018 book 'Physical (A)Causality'.

All the best,

Dimi Chakalov
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NOTE

The application of KS Theorem (p. 18 in zenon.pdf) to the preferred basis problem (Max_title.jpg) is
the core of my proposal for *atemporal* quantum reality from 5 February 1987 (read above). Back in
September 2002, I was kindly invited by Prof. Chris Isham, Britain's greatest quantum gravity expert
(Wikipedia), to present my ideas at his *Tuesday Seminar* at Imperial College London, Room 503
Huxley. He knew my proposal for *atemporal* quantum reality very well, after we met in November
1998 and had numerous private discussions at his office. I wholeheartedly agreed, and suggested to
schedule the seminar for *Wednesday*, 27 November 2002. Why? To see whether Prof. Chris Isham
would instead suggest *Tuesday*, 26 November 2002, as his seminar was held only on *Tuesdays*. But
he had no objections. However, my scheduled talk was still **not** listed at the webpage of the *Tuesday
Seminar* by mid-October 2002. I got nervous and ask him by email whether his colleagues at the
Physics Department are aware of the seminar, to which he responded that perhaps 3-4 people (Sic!)
will attend, so we'll have discussion at his office! That was totally unexpected, and I tried to explain
to him the crucial importance of my proposal to quantum gravity. As Henry Margenau wrote in 1954
regarding the **latent** observables in QM (*Physics Today* 7(10), 6–13 (1954), p. 10): "I believe that
they are "not always there", that they take on *values* when an act of measurement, a perception,
forces them out of indiscriminacy or latency."

Where the latent observables could exist, during the "time" (if any) of still being "not always there"?
Erwin Schrödinger explained the puzzle in 1935 (Erwin_Easter.jpg). Once we add to the puzzle from
1935 the KS Theorem (p. 18 in zenon.pdf) and the preferred basis problem (Max_title.jpg and Henry
P. Stapp, arXiv:quant-ph/0110148v2, Sec. 3), the need for *atemporal* quantum reality (read above)
becomes *agonizingly* clear! We need new type of **spacetime** for quantum gravity, to accommodate
the *atemporal* quantum reality, and "Britain's greatest quantum gravity expert" can certainly say
something about it. But he fired back with the following (Wed, 23 Oct 2002 19:24:15 +0100):

"You do not know enough theoretical physics to help with any research in that area."

Then I cancelled the so-called "seminar". And now, 17 years later, it is far too late: read above.

D. Chakalov
August 26, 2019, 12:20 GMT

APPENDIX

Read pp. 16-17 in zenon.pdf. If the presentation seems complicated, try something very simple, such as the staggering error by Chris Isham (mentioned above) in his article, entitled 'Prima Facie Questions in Quantum Gravity', gr-qc/9310031v1, 22 Oct 1993, p. 14: "The background Newtonian time (Sic! – D.C.) appears explicitly (Sic! – D.C.) in the time-dependent (Sic! – D.C.) Schrödinger equation." Do you smell rat?

Let me go back to my proposal for *atemporal* quantum reality from 5 February 1987, and quote Erwin Schrödinger, Die gegenwärtige Situation in der Quantenmechanik I-III, *Naturwissenschaften* 23, 1935, S. 807-812; 823-828; 844-849 (translated by John D. Trimmer):

> Sec. 8, Theory of Measurement
> The rejection of realism has logical consequences. In general, a variable
> *has* no definite value before I measure it; then measuring it does *not* mean
> ascertaining the value that it *has*. But then what does it mean?

It means that we cannot observe *the* quantum state (dubbed 'John', see Erwin_Easter.jpg), but only its *physicalizable* 4D "jackets". Recall Charles Wilson from 1911 (Slide 7 in Quantum Spacetime):
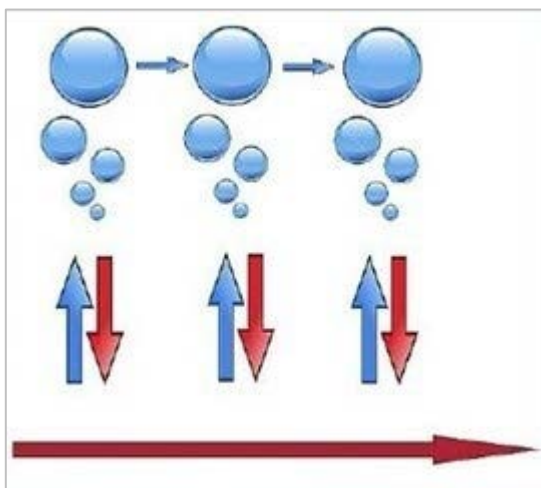
Can we explain the **red** and **blue** arrows in Wilson cloud chamber?

Can we explain *consecutive* energy-momentum exchanges between the quantum **particle** & **wave** and its **macroscopic** environment? Are quantum waves with **complex** phases (Chen N. Yang 1987) physical reality or *physicalizable* reality (Slide 15) "just in the middle between possibility and reality" (Heisenberg 1958)? What is the origin of **time** in Schrödinger equation? Can **clocks** read it?

Yes and **No**: The **matrix** (Chakalov 2016).

Another excerpt from Erwin Schrödinger (emphasis mine):

> Sec. 9, The Psi-function as Description of State
> The rejection of realism also imposes obligations. (…) Therefore if a system
> changes, whether by itself or because of measurements, there must always
> be statements **missing** from the new function that were contained in the earlier
> one. In the catalog not just **new** entries, but also **deletions**, must be made.

Thus, the Psi-function as 'expectation-catalog' offers only **statements** about **propensities** for *physicalizable* 4D "jackets", and these **statements** are of course context-dependent (Wikipedia): we can both **add** and **delete** new "entries". And if we examine the KS Theorem (p. 18 in zenon.pdf) and the preferred basis problem (Max_title.jpg and Henry P. Stapp, arXiv:quant-ph/0110148v2, Sec. 3), the need for *atemporal* quantum reality (read above) is indeed *agonizingly* clear. The quantum state (John) does not live on the light cone (p. 16 in zenon.pdf). It is **UN**colorizable (p. 18 in zenon.pdf) and cannot *in principle* be measured with/by its color-able, physicalizable 4D "jackets", although the latter can indeed be treated with "probabilities" (Erwin Schrödinger) that can nicely sum up to unity. *Der Herrgott würfelt nicht!* (Albert Einstein, 4 December 1926). God casts the **matrix**, not the dice.

In 2006, FQXi awarded Chris Isham $75,000 for his efforts dubbed "topos quantum theory", and in 2011 he received the Dirac Medal for "major contributions to the search for a consistent quantum theory of gravity and to the foundations of quantum mechanics." I only got his statement above. Maurice de Gosson was a bit more specific: "Buzz off, idiot!" (p. 8 in Wendelstein_7-X.pdf).

D. Chakalov
August 28, 2019, 11:30 GMT