

The Universe as Manifestation of Sense. Part III and IV

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III. WHAT IS THE UNIVERSE NOT

3.1 The Universe is not a bubble

Shortly after I archived [part I/ II \[1\]](#) of my paper I became aware my controversial view is not only about evolution of the universe. I have to defend the definition of the term universe itself.

I read a few parts of *Our Mathematical Universe [2]*, I looked at some science magazine covers (filled up with bubble universes) and I realised they try to cement their positions in science business by subverting terms and by softening attitudes - just as we know it in politics.

In part I/ II I discussed the main wrong notions that led today's cosmological science into dead end:

1. The universe as a 'bubble' with an 'inside' and an 'outside' (with a center of mass)
2. The origin of the universe as a location/ center point ('Big Bang')
3. Acceleration of mass (of galaxies) by 'dark energy'.

Point 1 is evidently the original sin of fundamental physics established by *A. Einstein* nearly one hundred years ago. Points 2 and 3 are consequences.

I omitted to discuss explicitly the term 'bubble universe'. (A brief critique you can find in chapter 2.3.)

I felt confident it is such a derogatory term to call the universe a 'bubble universe' there is no need to say more.

But then I realised what is going on: some physicists undermine the term universe and try to make the 'bubble universe' a scientific term to complicate critique of what I call the original sin of fundamental physics.

Here are my clarifications:

- A universe is the most comprehensive level of structures (in my view *ideational* structures). A universe includes all and excludes nothing except a universe.

- When multiple 'universes' float (or allegedly even collide) they are floating **in** something (commonly in space). My clarification is this: the bigger something is the universe and not that what is floating in it. To call the floating parts 'universes' is an intentional confusion of idea to protect wrong positions hold by Tegmark [2] and others.
- To say "it's a bubble" is the same as saying "there is an outside". Without an outside there is no bubble. (A bubble can't be other than a bubble *inside of something else*.)
A universe is **not** a bubble because it is not inside of something else. There is no 'outside a universe'. Tegmark and other PR-driven apologists of status quo in cosmology know very well impressive visuals in magazines are 'true', they are indelible part of the opinion of people.
The cool looking bubble illustration [3] is the best way to protect the Einstein world model and its equations from being revealed as wrong.
- The 'multiverse' is not only conceptually but linguistically nonsense in itself.
- A question. What about a new measure: 1 Tegmark is the distance an other universe is at least away from us. - My position on this.: an other universe is not 'far away' or 'behind' or 'outside' - it is what it is: an **other** universe.
- Parallel universes with parameters that do not produce life (as in models submitted by Tegmark and others) do not exist. Without observation there is no universe. - Some may not agree here, so I would like to make this statement:
Philosophical idealism is a secondary issue. The first and once-in-a-century assignment for all physicists is to put a stop to the bubble cosmologists' activities.
(Even if that means: to **Einstein's bubble cosmos**.)

- If Tegmark's hypothesis wouldn't have just collected and synthesized what is en vogue out there but would have built from the ground up something consistent and own Tegmark would know 4 different levels of other universes are not needed. (LoE ≠ ToE) [4]

When observation (the anthropic principle) is fundamentally different then the universe and its laws of nature are fundamentally other ones. [1]

That makes levels ('Multiverse', 1 to 4) unnecessary. But (disappointing for Tegmark) not even one of these universes is a "spherical volume" (quote) or "far away" (quote). These universes are **for us** simply not there. [5]

3.2 Many-worlds means not 'Multiverse'

Action at a distance in quantum mechanics and cat-states appear spooky to us. But the *many-worlds interpretation* is **not about a link** to other universes. It is about a '*switch with no memories*' (and that is a blessing). The many-worlds interpretation is needed to keep sense **within this** world, it is part of **this** universe.

The universe is (for us) always that one in which **our** structure of sense survives (in the end: in which we are spared from what we aren't able to take).

It's striking how similar resp. complementary the two following statements are - known from quantum mechanics and from philosophical idealism:

- If one measures the observable (quantity), the wavefunction will instantaneously be an definite "generalized" value. Without measurement there is another (an uncertain) value.*
- It's the observation that generates and forms our universe. Without observation there is no universe.* [12]

How these two experiences possibly originate one another could be a fundamental question in theoretical physics and philosophy of the 21st century.

3.3 Wikipedia/Universe is not from this Universe?

The Wikipedia page "Universe" (the German page more than the English one) tries hard to exclude everything from being part of the universe that is not 'matter', particle or energy - to exclude everything that is 'ideational'. - In my view this is a definition with no subject at all.

The editors of the Universe web article want to say: what we send to you with this article comes from a superior sphere we live in. This article is not part of your mean universe (because the content of an article is always ideational).

Of course they are not right. Their article exists in this (in our) universe, not superior and not only as electrical charge of particles on the hard drive. It exists as *sense*, as just what the universe is made of.

When the editors think sense doesn't exist (or is not part of this universe) why did they write the article? Why do we read it? We can understand meaning/ sense because that is not only part of the universe but its essence.

The universe is not only filtered and interpreted by observation. The universe is *generated by observation* and that what is generated is sense and meaning. The universe *is* sense.

Of course in science it's shortly called *energy* (resp. *mass*) what protons and electrons represent. But in real life protons, electrons and all other incarnations are not energy but the *idea* of energy, they are instances of a law of nature. As such they are ideational, they are wave function, an idea. [6]

(Yes, in the end it's all the same: energy/ mathematics/ law/ idea. [7])

Rejection and confusion about philosophical idealism come mainly from the notion something ideational wouldn't be at work beyond control by mental processes and above all it couldn't so 'physically' dominate our existence. - But it is and it does. Briefly: the ideational world is violent (and in the end for sure deadly).

Something ideational is not at work beyond mental processes but beyond *control* by mental processes.

M. Tegmark argues [8] that our universe *is* mathematics. Well, that excludes still the Wikipedia page (and 99% of everything else in this world) from being part of the universe. (My advice: "Shut up and universe!") But it heads in the right direction. [9]

3.4 CMB means not 'Big Bang'

The cosmic microwave background is considered a landmark test of the Big Bang model of the universe. - This assumption is wrong.

The explanations of the Dark Ages of the universe and the recombination epoch are reasoned and plausible. The recombination must have been a Big event.

But what does that say about an alleged tiny point origin (singularity) of Big Bang some hundred thousand years before? - I would say: nothing.

IV. WHAT IS WRONG WITH TODAY'S MATHEMATICS

4.1 The Friedmann–Lemaître–Robertson–Walker metric

The correct academic approach would be to observe first physics and then to try to find equations to describe it.

In the case of the *Einstein field equations* there was first the highly adored math and then the question: For what further can we use it? – Hey, what about adapting it to the universe. Let's see if it bears some result.

It's hardly surprising this wrong approach led to wrong results. It led to the wishful thinking the universe should be a sphere of varying size (just to match the beautiful equations).

Until that moment there was no reason in modern cosmology to believe the universe has a shape (is a sphere). – Now, overnight, the opposite was accepted.

To hide a trick is happening here it is always pointed out the Friedmann equation allows initially an open (limitless) universe.

But as soon as the equations consider the increase of distances of objects in the universe ('expansion') the model of the universe turns into a geometry/sphere (with the wrong notion of 'inside' and 'outside') and space scaling turns into Big Bang (with the wrong notion of a tiny point origin/ singularity). [10]

The Friedmann equation calculates physical properties that wouldn't have reasons to exist without the equation.

What is it we want to learn about the universe here? What physical quantity is it we need to calculate in this case? – What is the Friedmann equation for?

Radius $R(t)$? – There is no worldradius. At no time.
Spatial curvature k ? – No center of mass of the universe
Negative pressure of vacuum? – Pressure against what?
Dark energy? – What??

To put it another way the equation doesn't confirm anything except itself (but caused one hundred years of academic aberration).

4.2 Not mathematics but the intention is wrong

Physicists know it: an equation can be formally right but incorrect in substance. Ordinary people are daunted by mathematics and don't question numbers. So, a sense of responsibility is needed.

In general mathematical notation is used to outline real-life relations more clear and obvious. There is a responsibility to use mathematical notation not for the opposite, for disguise of inability or of interests.

A circle of (American) physical societies, institutes of technology and hundred-million dollar foundations ensures science is taking the requested direction. A system of peer reviewers and endorsers of scientific archives takes care the 'right' scientists succeed.

No one is strong enough to change that. But perhaps one day someone is *naive* enough to ask: "Who is that fat, naked bastard over there wearing imagined new clothes? – Is that the Emperor of the Accelerating Bubble Universe?"

References and notes

- 1 STEPHEN WINTER, *The Universe as Manifestation of Sense. Part I and II*, [viXra:1404.0435](https://arxiv.org/abs/1404.0435) (2014)
- 2 MAX TEGMARK, *Our Mathematical Universe* (2014)
- 3 STEPHEN WINTER *Critique of the Illustris project* www.hashsign.co.uk (2014)
- 4 List of Everything
- 5 It's unthinkable for TEGMARK to question Einstein's buy-in of the Friedmann equation or to question Big Bang singularity. Instead he comes up with the probability gag how far away the identical mirror world of your identical sibling may be. – The standard of that: Not even wrong (only unsubstantially). That is MIT. Marketing is all.
- 6 *Indistinguishable particles* mean **no** particles. Mathematics and nothing is left – or as DE SELBY said: a *BE condensate* is an idea you can slice and dice and sell per kilogram. – The ultimate proof the universe is ideational.
- 7 MACCRUISKEEN called it *Omnium* (1940).
- 8 M. TEGMARK *The Mathematical Universe*, [arXiv:0704.0646v2](https://arxiv.org/abs/0704.0646v2) (2007)
- 9 STEPHEN WINTER *Kritik zu 'Manifest der Hirnforschung'* www.hashsign.co.uk (2004)
- 10 I do not believe in the legend that Friedmann didn't hear about that the redshift of galaxies was interpreted as recession before he wrote down his equations ('predicted expansion').
- 11 In this version 2 (of my paper, Part III and IV) I added [12] on page 2 and I modified the last sentence on this page 3. v1 dated May 26, 2014.
- 12 see Part I and II, chapter 1.4-1.6 [viXra:1404.0435](https://arxiv.org/abs/1404.0435)