A fourteen point conceptual description of space and how and why it works in the manner that it does

Author: John Raymond

Abstract

I believe there is no such thing as a single unity model in Physics. It is far too complicated and beyond our understanding to describe, or demonstrate or test all theoretical possibilities, probabilities and everyday actualities events going on in the widest realms of informational physics.

I have bundled together ideas that might somehow provide a guide for the creation of new lines of thinking with respect to the understanding, description and demonstration of how wider reality physics might come together and work in the manner that it does. Some of the ideas presented here are not new to physics and some of them are. Those that are new relate to ideas that I have developed and deeply thought about which might be worthy of future consideration and perhaps testing in science. The fourteen points relate both to macro- physics and micro -physics.

Prologue

I believe that there are multiple layers of reality physics. Some of these layers we can understand, describe and test, and others we are as yet to find a way to test. This is why I feel that these layers should be considered to be informational layers of possibilities and probabilities to do something. This is as they “bubble” along together and help bring about the workings of the universe as we understand it might be. Our universe contains many mysteries. I believe that many will never be understood by scientists despite the fact that they are informationally describable and experientially real; consciousness is an example of this.

It is in this sense I feel that universal reality should be considered to be a landscape of possibilities and probabilities to do something, “seated” in the matrix of limitless information that we may never be able to discover, appreciate or understand. Out minds and brains were never designed to have this capacity anyway.

The randomness of reality science is well known to physicists. It is also well known that all “things” and associated events relating thereto are somehow subtly connected [entangled] to each other by means of quantum non-locality theory. We sense this experientially as well. Many of these things and how they work will, in my opinion, never be able to be mechanically tested and proven in physics.

These words imply that I believe that there will never be a provable [physics] theory of everything. However, one day there may be developed a theory of everything that embraces phenomena that we consider to be beyond the scope of traditional physics, and will forever remain metaphysical. This means that reality science will forever remain weird to us.

I believe that it will remain weird in this way because the basic principles of reality physics are found within the multiple layers of sub-Quantum Mechanics, and that takes us into the heart of reality itself, whatever this heart of reality might mean. However, it is my belief that these sub-Quantum Mechanics layers of reality do have properties that will help to explain everything going on around us at a micro and macro level of physics. Furthermore they can be conceptually described.

My fourteen point theory describes how this might be possible. My theory is conceptual and does not seek to scientifically prove anything beyond what I have written. It seeks to encourage others to think about such imaginary but practical mechanical lines of thinking as I have done. It is well known in science that sometimes sound physical ideas and theories emerge from such unworldly thoughts. The addendum at the end of this document is a copy of a New York Times article that was published on November the 19th 2018. I believe that it provides pointers as to how some of my physical ideas may have some degree of merit. It is entitled “Does the universe still need Einstein?”.

1] Space is a material like "foam" [substance] with fluid like properties. Furthermore space is not static.

2] I believe that space can be seen to be like analogical jelly that waxes and wanes with respect to itself. It is this waxing and waning that causes variations of space foam densities. It is these variations in space foam densities that cause matter to be formed.

3] It is this variation of densities in space with itself that means space is a dynamic space (like a "brew" of happenings and possibilities to happen in space). This dynamic space has varying ratios, densities and averages of its fluid like (foam) properties. I see this process as being the natural inherent energy of the universe as it “flexes” in the manner that it does.

4] I see that packets of matter in space foam are packets of matter that move away from each other as the universe expands. It is these “gaps” between “blobs” of moving matter in space that causes gravity. Within this process matter also absorbs space foam. This absorption process is also a representation of its dynamic nature.

5] It is these diverse ratios, averages and densities of the dynamic space and matter relationship that are the medium for light waves and it is in this respect that this combined process can be seen as being like an ether. It is for this reason that there can be no absolute frame of space. However, we can talk about space as being a dynamic matrix of information. This is information that means something and creates the conditions for possibilities and probabilities to do something.

6] I see these possibilities and probabilities to do something as being like an “opportunities” field also unto itself from wherein “all things” can happen. I also see this same field as being a field of averages from which the effects of sub-quantum mechanics emerge. It is from these effects that Quantum Particle physics grew. This same field can be also be seen as the field of non-locality [entanglement] that informationally connects all matter and events related thereto together in the universe. This field is without time.

7] Space has two experiential ‘manifestations’. These manifestations are its implicit ‘nature’ and explicit ‘characteristics’. Space’s implicit manifestation (nature) are ‘things’, events, influences and effects that are not materialistic [indivisible]. Gravity, consciousness and every day nature are examples of implicit things. Space’s explicit characteristics are things, events, influences and effects that are materialistic [divisible] in some way. A cup, a tank full of water or a life form of some sort are examples of explicit things. It is the entangled nature of these combined space manifestations that are representative of the universe that we have elected to describe it to be.

8] The seven items cited above explain the elementary informational system of space as well as its associated properties. This is with respect to doing something.

9] Dayton Miller [and other notable physicists around the same time) were seeking to determine if ether in space existed or not. They were seeking to clarify and explain the alleged null result of the 1887 Michelson and Morely experiment that was attempting to do this. Miller and others were seeking to explain the spread of values from measurements derived from the apparatus that was being used at that time. I believe that the variations in the measurements that Miller and others detected can be explained by the natural and dynamic process of space itself. By this I mean that these variations of measurements at different times [also across the wider universe] are because of the changes in ratios, densities and averages of the properties of space.

10] The Earth moving through these space disturbances [including light] in the sub-quantum mechanics field exacerbates these natural space fluctuations. These fluctuations would be significantly less if the universe was static.

11] For these reasons I consider that it should be the *averages* of the measuring apparatus readings with respect to the original Michelson and Morely experiment that should be considered by physicists. This as distinct from short term measurements that might have been taken at either regular or irregular times.

12] I feel that it is only by physicists regularly checking the readings of the measuring apparatus over a considerable time [as Miller did] that meaningful averages with respect to these measurements can determine if the 1887 Michelson and Morely measurements were null (relating to the existence of ether in space) or not. This also questions whether the dynamic nature of space would then be needed to be considered by physicists with respect to the measurement results as well. This includes in contemporary times.

13] Also, because of the “primitive” nature of the original measuring apparatus of the Michelson and Morely interferometer, I feel that it is unreasonable and incorrect for contemporary physicists to maintain that the Michelson and Morely results were null. I say that their results were measuring “something”. These “somethings” were further identified by Dayton Miller and others. These “somethings” also mean "somethings" with respect to the dynamic nature of space too.

14] Thus I am suggesting that certain relativity modelling types that contemporary physicists are using to justify their theories today have never been substantially correct in the first place.

29th of November 2018

Addendum:

Does the Universe Still Need Einstein?

Physicists are no longer unified in the search for a unified theory.

(New York Times Nov. 19, 2018)

By Dennis Overbye

Quote:

“Is Albert Einstein finally dead?

Yes. The old sage took his last breath and muttered his last indecipherable words, in German, on April 18, 1955. But lately he has been dying a second death, if one believes a new spate of articles and papers bemoaning the state of contemporary physics.

Never mind the recent, staggering discovery of gravitational waves: ripples in space-time that Einstein predicted a century ago, and which indicate the universe is peppered with black holes that shred and swallow stars.

No, something much deeper than gravity or quantum theory, Einstein’s other misbegotten legacy, is at stake.

More than anyone, it was Einstein who set the goal for modern science: the search for a final theory of everything, a “unified theory,” he said, that would explain why there was no other way to put together the universe than the one we seem to live in.

Or, as he famously put it, “What interests me is whether God had any choice in the creation of the world.”

Roll over, Albert.

“**There are no laws of physics**,” read the headline on an article in Quanta, the online science magazine, last summer by Robbert Dijkgraaf, the director of the Institute for Advanced Study, where Einstein spent his last 22 years.

Instead, Dr. Dijkgraaf wrote, **there is a frighteningly complex “landscape” of possibilities, a nearly infinite, subtly connected network of complementary versions of reality. There exists a universe for every good or bad dream you’ve ever had, each with its own set of so-called fundamental particles, forces, laws and dimensions.** [I emboldend]

This landscape, also known as the multiverse, is the vision of string theorists who have vaulted past Einstein in the current scientific imagination.

String theory unites gravity, which curves the cosmos, with quantum mechanics, which describes the randomness that lives inside it, by envisaging the fundamental constituents of nature as tiny strings of energy vibrating in 11 dimensions.

The theory has been described as a piece of 21st-century physics that fell into the 20th century by accident — and which might require 22nd-century mathematics to understand.

The result is a mathematical labyrinth with 10^{500} solutions, each one a different potential universe. In principle, one of those universes is ours — but nobody knows, because the math and physics are so horrendously complex.

Or so the story goes. “If our world is but one of many, how do we deal with the alternatives?” Dr. Dijkgraaf wrote. “The current point of view can be seen as the polar opposite of Einstein’s dream of a unique cosmos.”

Reached in Princeton, Dr. Dijkgraaf said that the article’s headline, which he hadn’t written, perhaps was an overstatement. Probably there is some fundamental principle, he said, perhaps whatever it is that lies behind string theory.

But nobody, not even the founders of string theory, can say what that might be.

Scientists were drawn to this vision by the discovery, two decades ago, that a mysterious force — “dark energy” — is accelerating the expansion of the universe, making the galaxies retreat from each other faster and faster as cosmic time goes by.

This dark energy bears all the earmarks of a fudge factor, called the cosmological constant, that Einstein inserted into his equations a century ago, and later rejected as a blunder. But the amount of this dark energy is smaller than the predicted value of the cosmological constant by a factor of 10^{60}.

Physicists can only explain the discrepancy by assuming that the value of Einstein’s constant is random across all potential universes; we live in one with the right amount of dark energy to allow stars and galaxies to form.

In short, we live where we can.

For some physicists, the landscape is a logical extension of the Copernican revolution. Just as the Earth is not the center of the solar system, nor the only planet, so our universe is not the only universe.

For other physicists, the idea of other universes is an epistemological absurdum, a dead end of unprovable speculation and a betrayal of the Einsteinian dream of a unique cosmos.

Even in our one universe, Einstein’s pilgrims are in trouble, their path to ultimate knowledge blocked or perhaps nonexistent.

The discovery in 2012 of the long-sought Higgs boson confirmed the last outstanding piece of an ambitious mathematical edifice known as the Standard Model, which details all the forms of matter and energy that can be measured in a lab. The Standard Model explains why your computer boots up and why a gardenia smells so sweet.

But the model works too well. Particle physicists have now sifted the debris from trillions upon trillions of subatomic collisions in the Large **Hadron Collider**, the immense machine in which the Higgs was discovered**. So far they have confirmed that the Higgs behaves as the Standard Model predicted.**

That is a great intellectual achievement, but it fails to reveal any discrepancies that could lead to a deeper theory. In particular, researchers have found no trace of a much-hoped-for phenomenon called supersymmetry, which would tie together the individual physical forces and supply a whole new menu of elementary particles, including, perhaps, the stuff of dark matter.

But supersymmetry might always have been an illusion, according to Sabine Hossenfelder, a theorist at the Frankfurt Institute for Advanced Study. She emerged last year as one of the most vocal critics of modern physics, with a provocative new book, “Lost in Math: How Beauty Leads Physics Astray.”

Dr. Hossenfelder argues that physicists have gone off course by exalting mathematical elegance. “They believed that Mother Nature was elegant, simple and kind about providing clues,” she wrote. “They thought they could hear her whispering when they were talking to themselves.”

Particle physicists contend that they merely have been following time-honored and successful principles. They chased the Higgs boson for half a century, and nearly gave up before nature finally coughed it up.

Meanwhile, the cosmologists, a notably fractious group, have agreed on their own standard model of our particular universe.

According to them, atoms — the stuff of you, me and the stars — account for only 5 percent of the cosmos by weight. Dark matter, of which we know nothing except that its collective gravity sculpts and holds the galaxies together, amounts to 25 percent.

The remaining 70 percent is dark energy, pushing everything apart; we don’t know anything about that, either. We only know that this “dark sector” exists because of the effect of its gravity on the luminous universe, the motions of stars and galaxies.

A theory that leaves 95 percent of the universe unidentified is hardly a sign that science is over.

Maybe we don't understand gravity after all, some astronomers say. "I worry that we deify Einstein too much," Stacy McGaugh, an astronomer at Case Western Reserve University, told Gizmodo in June.

If scientists want any gift for the holidays, it's some new physics that would break the stalemate of these "standard models" and provide new clues to our existence.

Maybe that breakthrough will come from finally figuring out what dark matter is, or from the Large Hadron Collider, which will continue banging together subatomic particles for the next 20 years in search of new forces and phenomena. Every collision recorded is another step into the unknown.

For now, the universe might have 11 dimensions, or it might be somebody's dream. Life might have started on Mars or in a boiling ocean vent, or maybe we're all bits in somebody's computer simulation. The search for who we are and how nature is put together is one of the flagship human endeavors, like art or music. It will continue.

Dr. Hossenfelder, for all her skepticism, ends her book on a hopeful note.
"The next breakthrough in physics will occur in this century," she wrote. "It will be beautiful." "

https://www.nytimes.com/2018/11/19/science/einstein-physics-universe.html?rref=collection%2Fsectioncollection%2Fscience&action=click&contentCollection=science&region=stream&module=stream_unit&version=latest&contentPlacement=4&pgtype=sectionfront