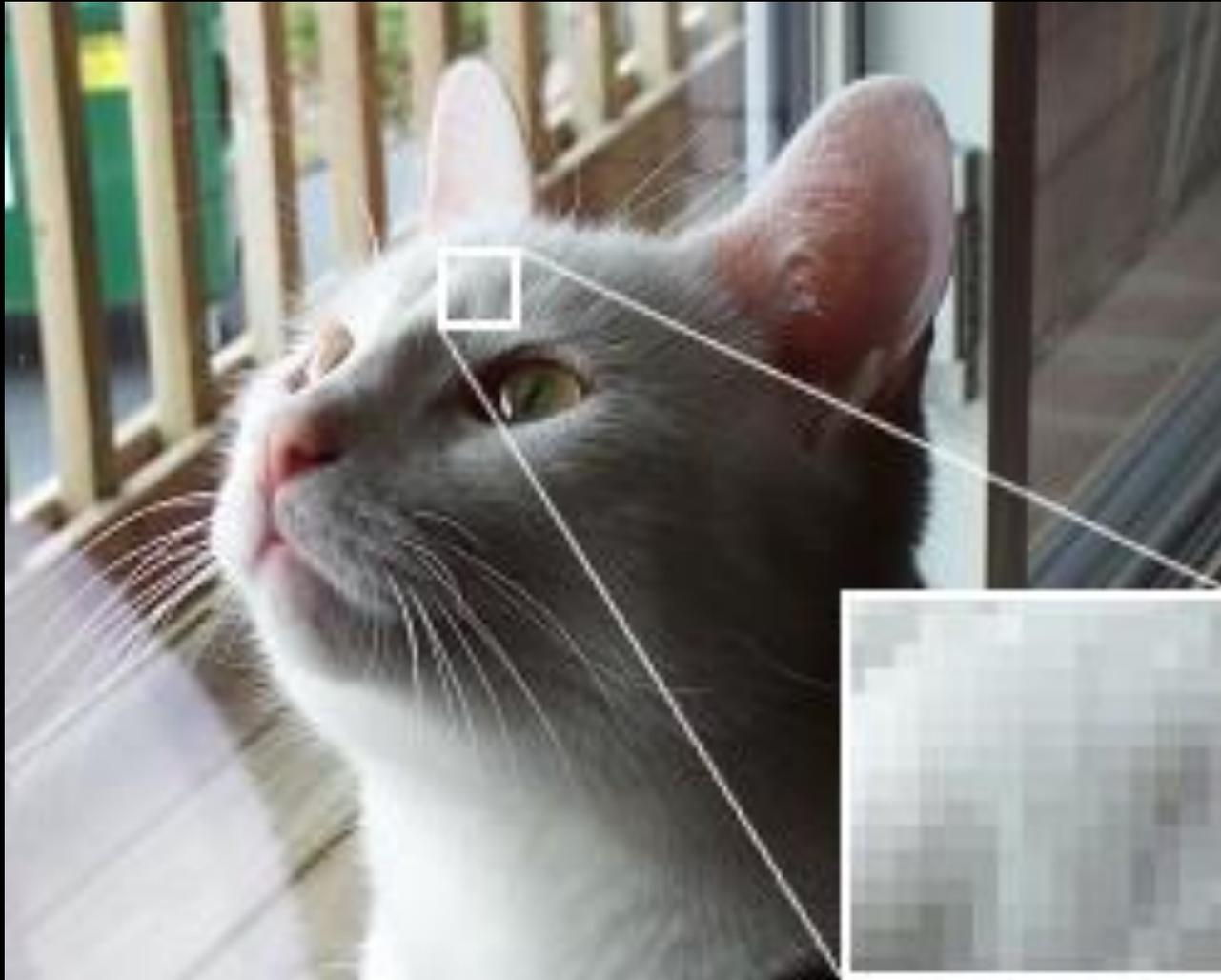




Scientific Clues that We Are Living in the Matrix -- A Self-Organizing Program..."



Reality may be pixilated at the level of space and time.



Heisenberg believed that as a particle moved a very small distance between points A and B, that it teleports or “jumps” without covering the space between.



Schrodinger believed that in most cases, the particle moved classically from point A to B by smoothly traversing an infinite number of points in between.



Heisenberg was furious and insisted that the evidence clearly pointed to the fact that there are only jumps and that we need to boldly move away from the ancient notion of smooth motion.



Schrodinger did not argue that there was evidence for smooth motion. He said it sounds unrealistic. Of course this was 100 years ago and the digital age was a long way off. He said:

“If we are still going to put up with these **damn quantum jumps**, I am sorry that I ever had anything to do with quantum theory.”



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Absents : Sir W.H. BRAGG, H. DESLANDRES et E. VAN AUBÉL

The vast majority of the titans of the scientific community of this turn of the century era agreed that, evidence or not, it is far too radical to imagine that reality is pixilated in this way.



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Schrodinger's view prevailed.

And today, 100 years later, we have the majority of scientists still believing in a reality where somehow pixilated jumps of an electron between two atomic orbits can exist... but yet in other situations, an electron smoothly moves in the old classic way.



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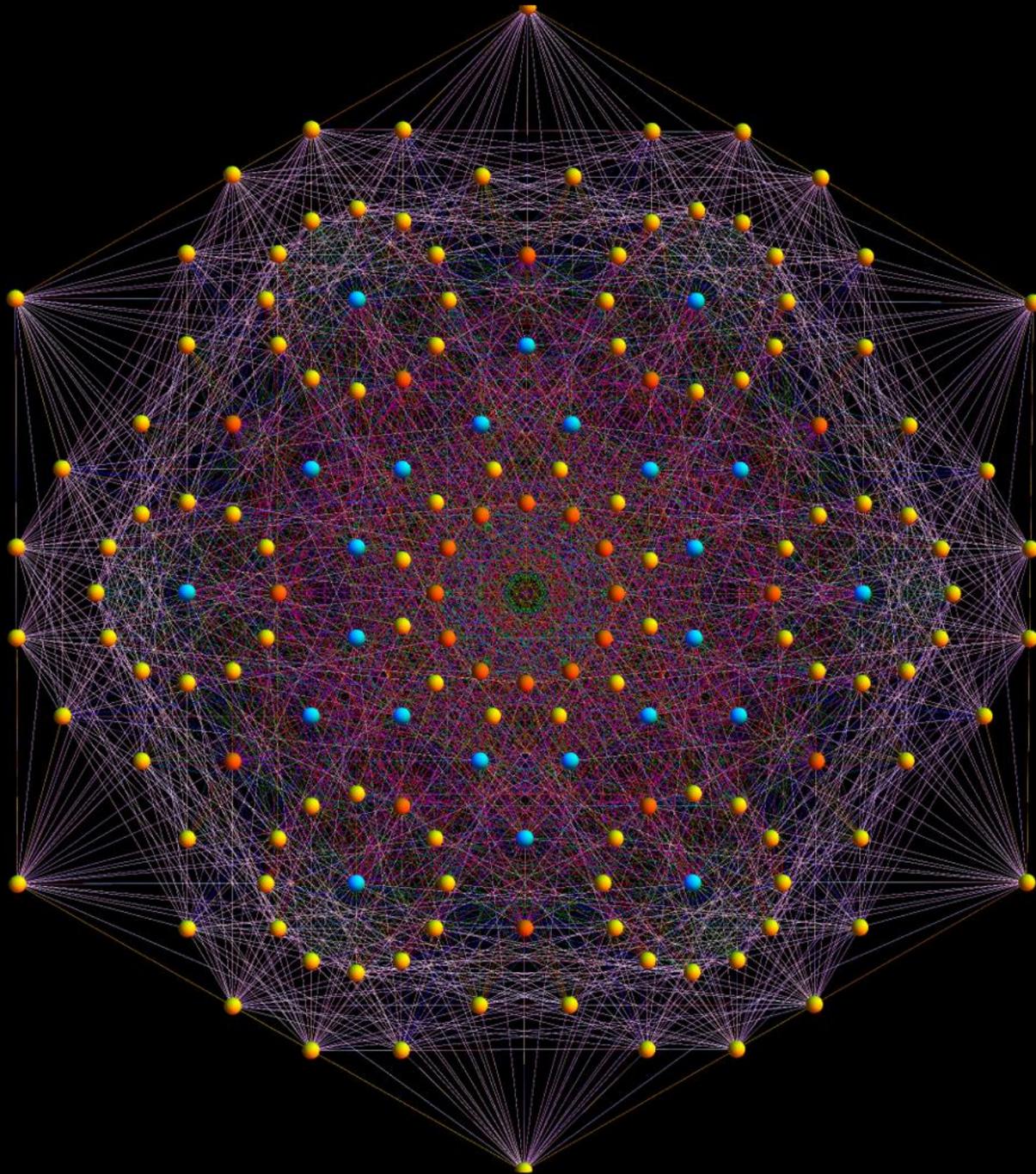
Nature whispered in our ear 100 years ago, "I am non-smooth. I am pixilated at the Planck scale both in time and space"



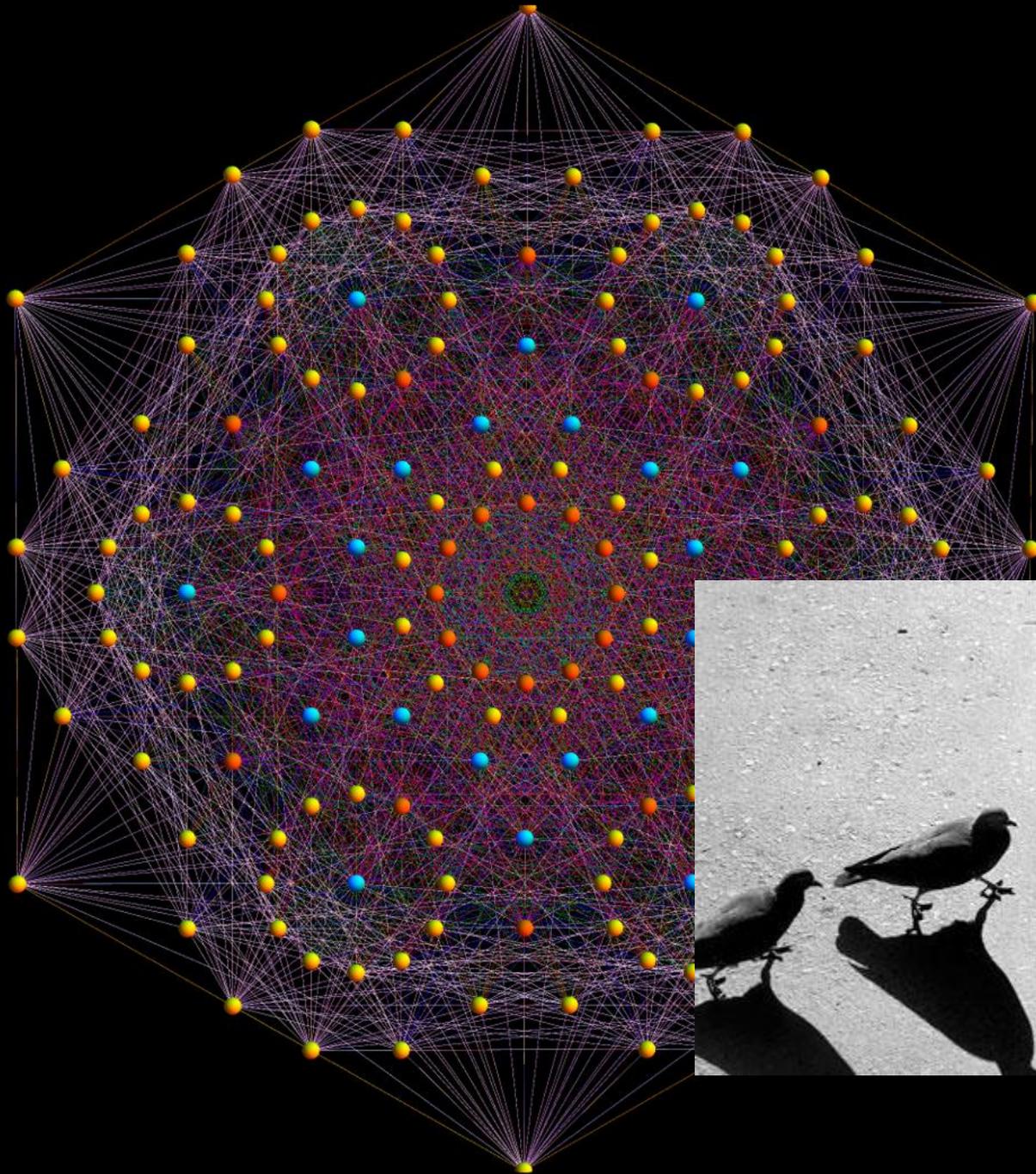
Nature whispered in our ear 100 years ago, "I am non-smooth. I am pixilated at the Planck scale both in time and space"

That was a hard pills for us to swallow at the time. So we invented an ad hoc compromise, which was to artificially assume smooth motion, regardless of the evidence.

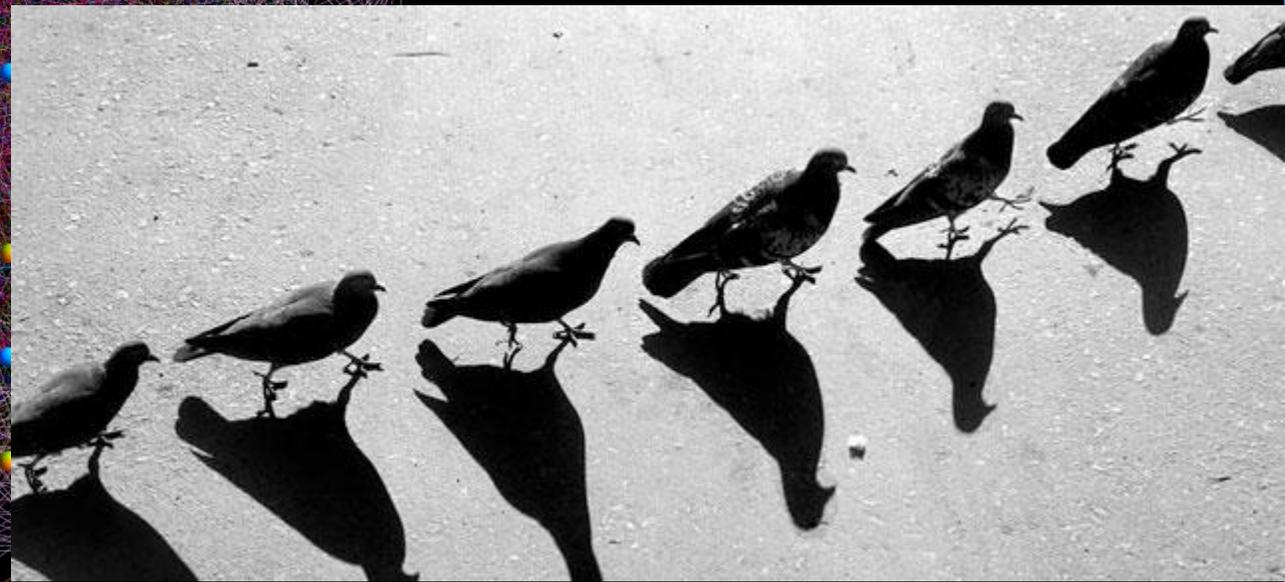


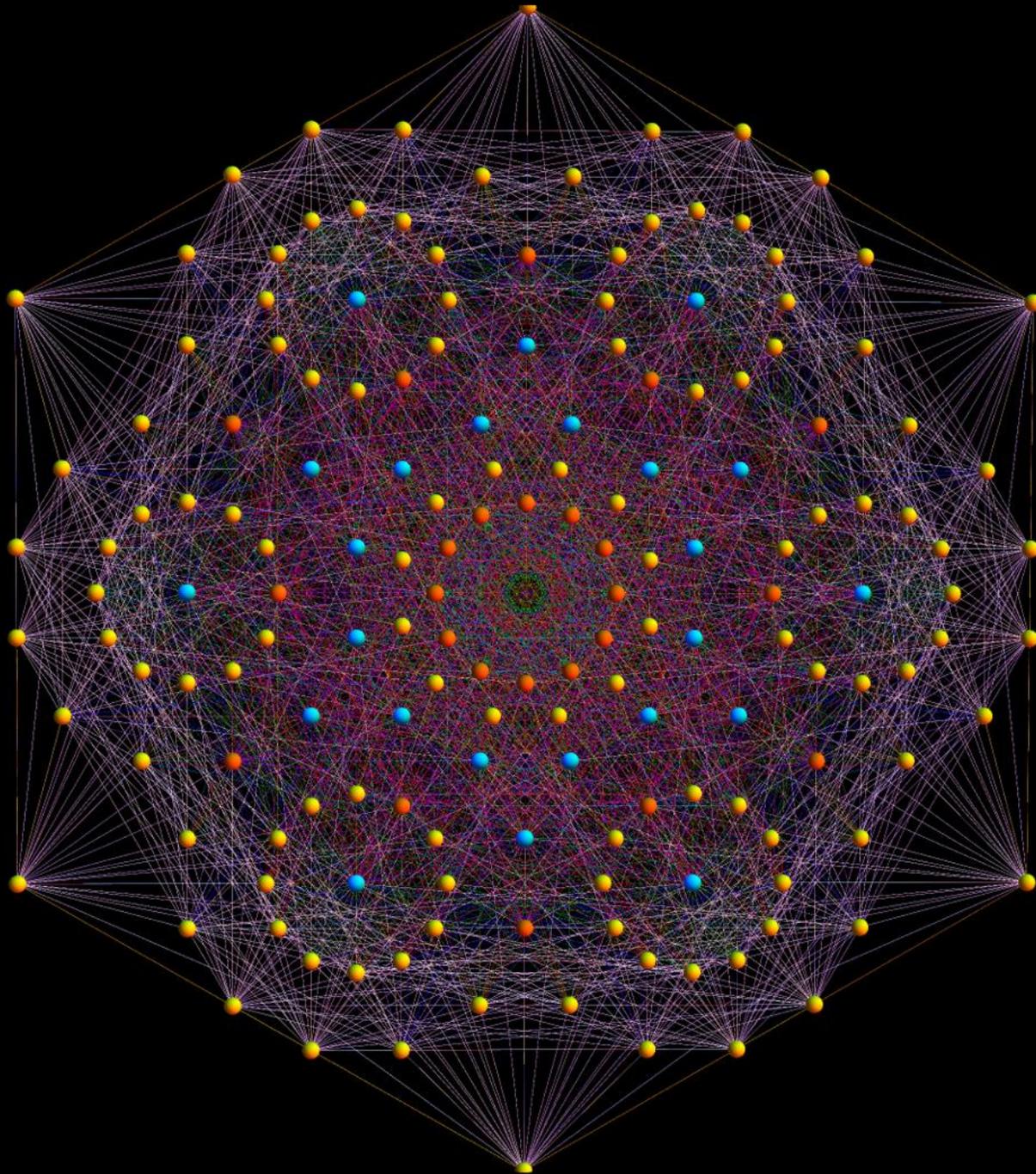


Everything relates to  
a grid – E8



All particles and forces are variant shadows of the vertex relationships in E8.





Why is this idea of smoothness so hard to shake?



Why is this idea of smoothness so hard to shake?

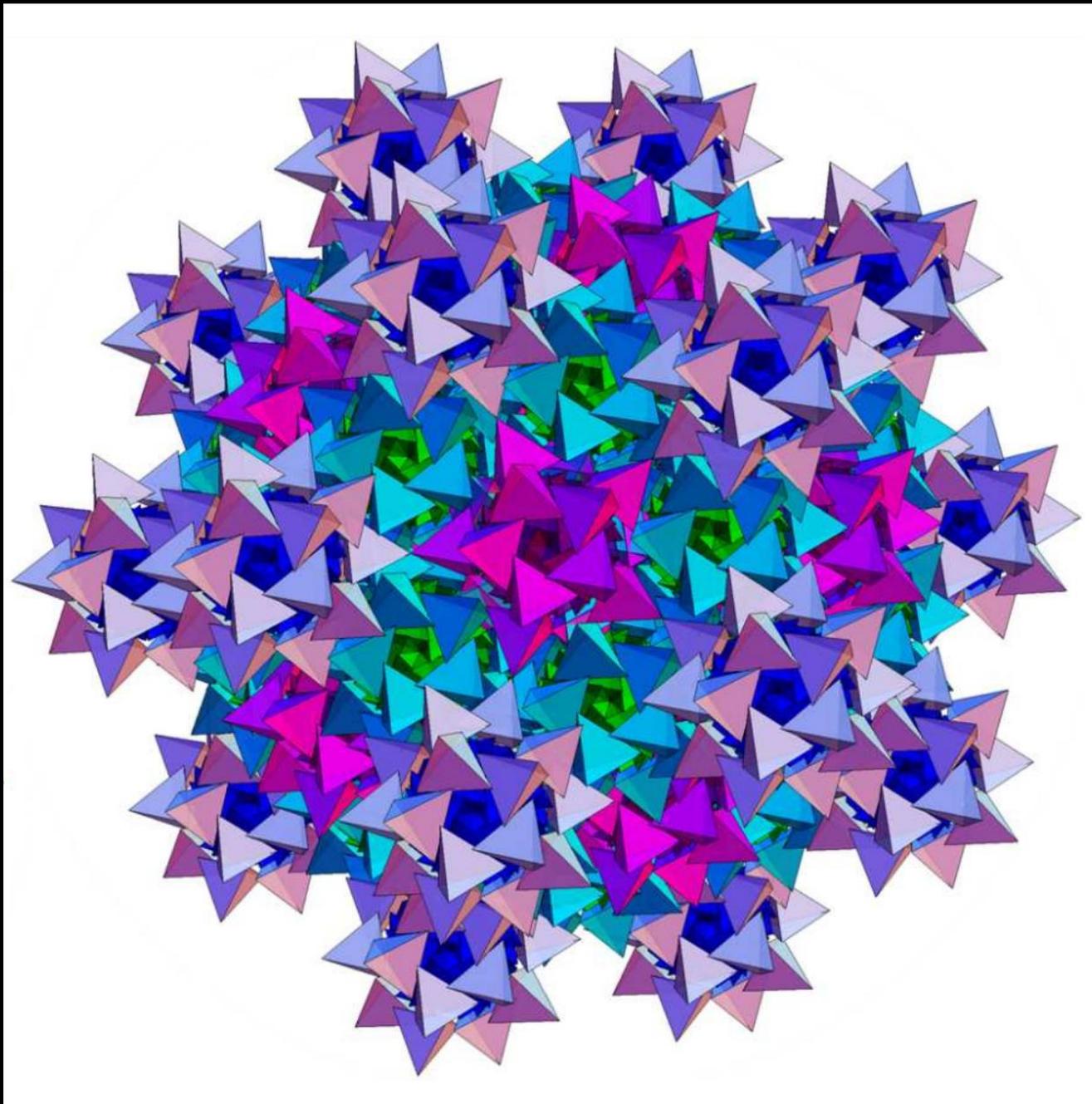
Common sense.



Why is this idea of smoothness so hard to shake?

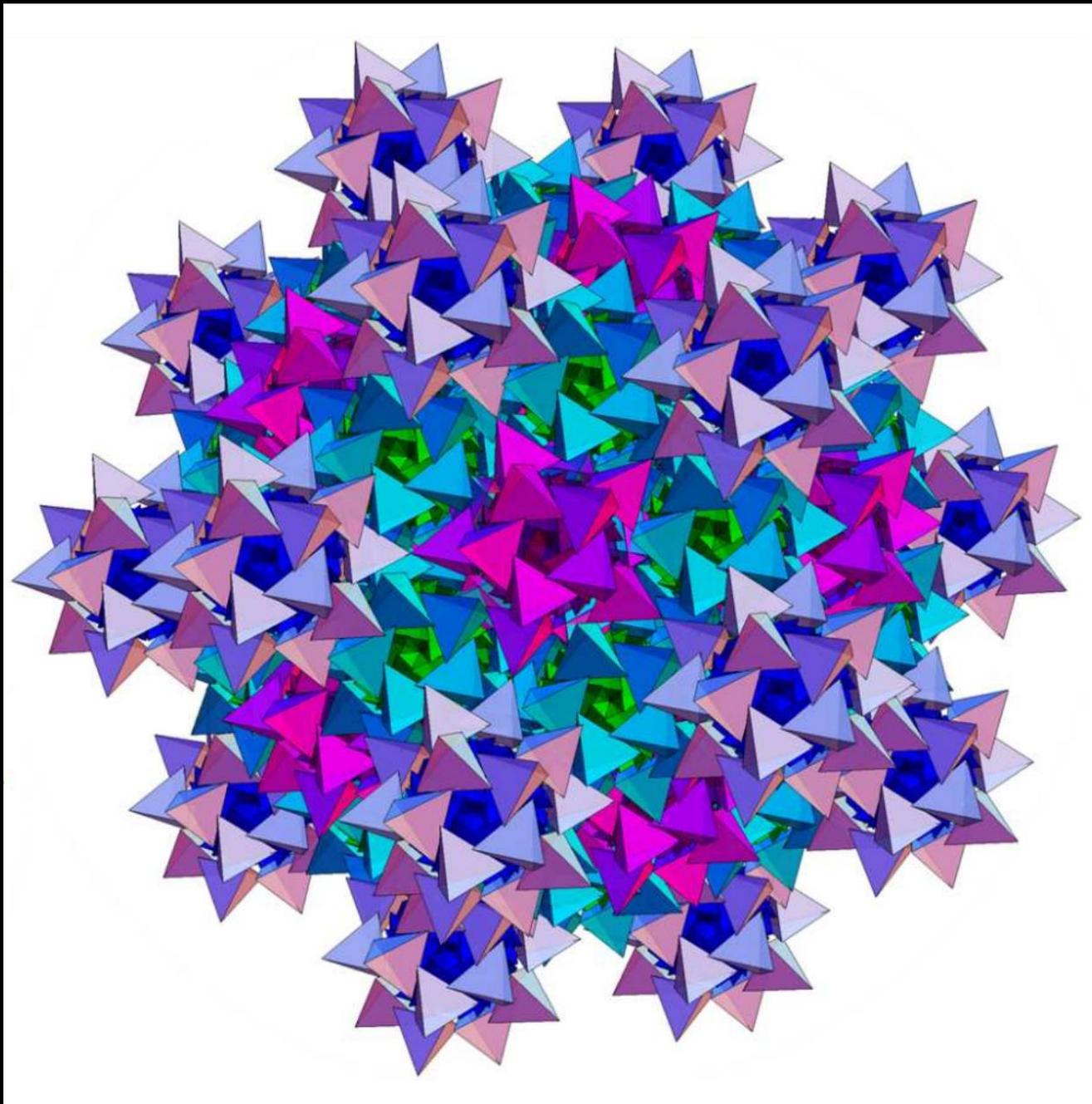
Common sense.

And ancient creation myths.



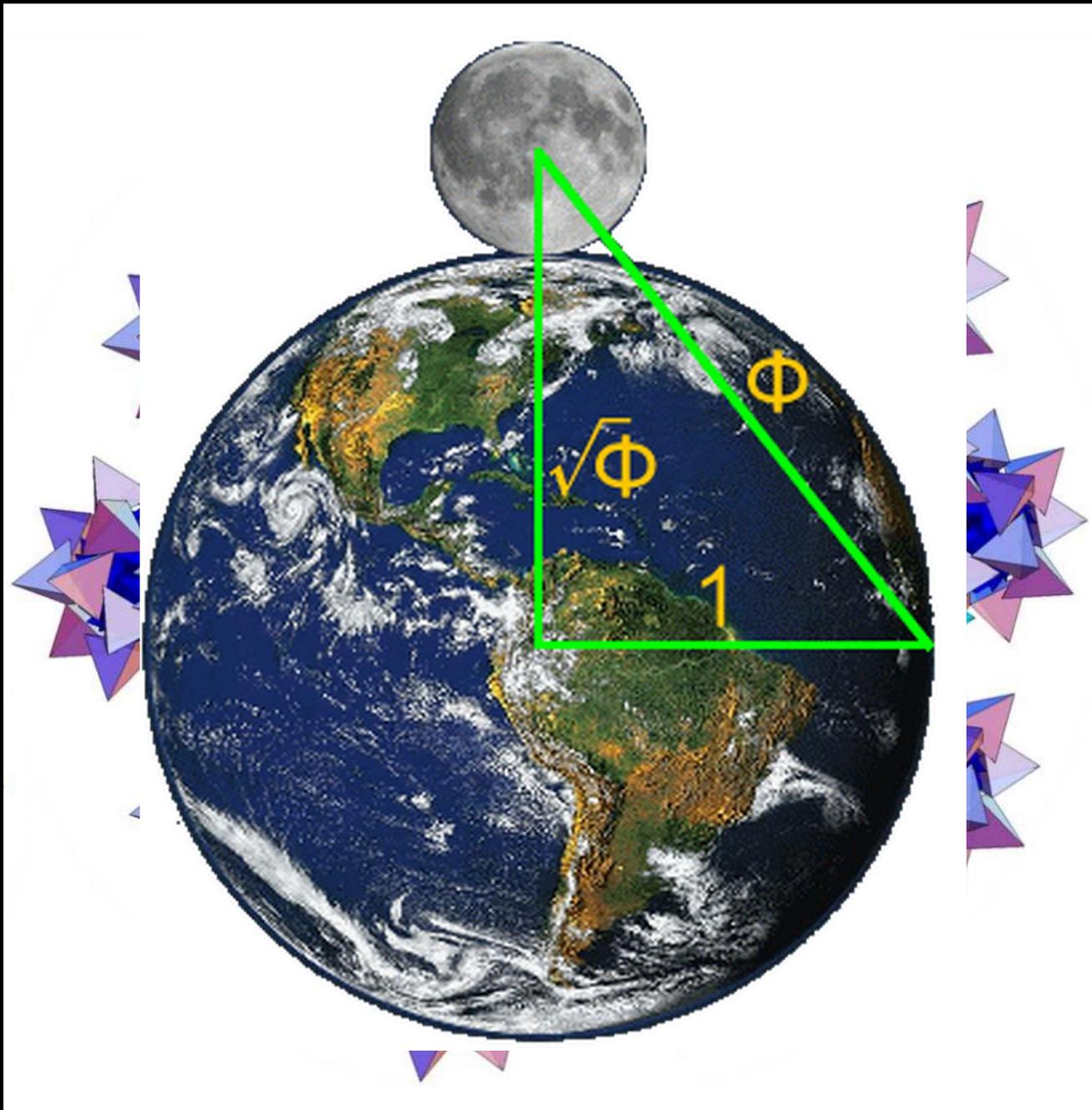
Our group converts the E8 lattice into a logical 3D representation.

Let us call this the “possibility point space”.



The fundamental lengths in this E8 derived point space are:

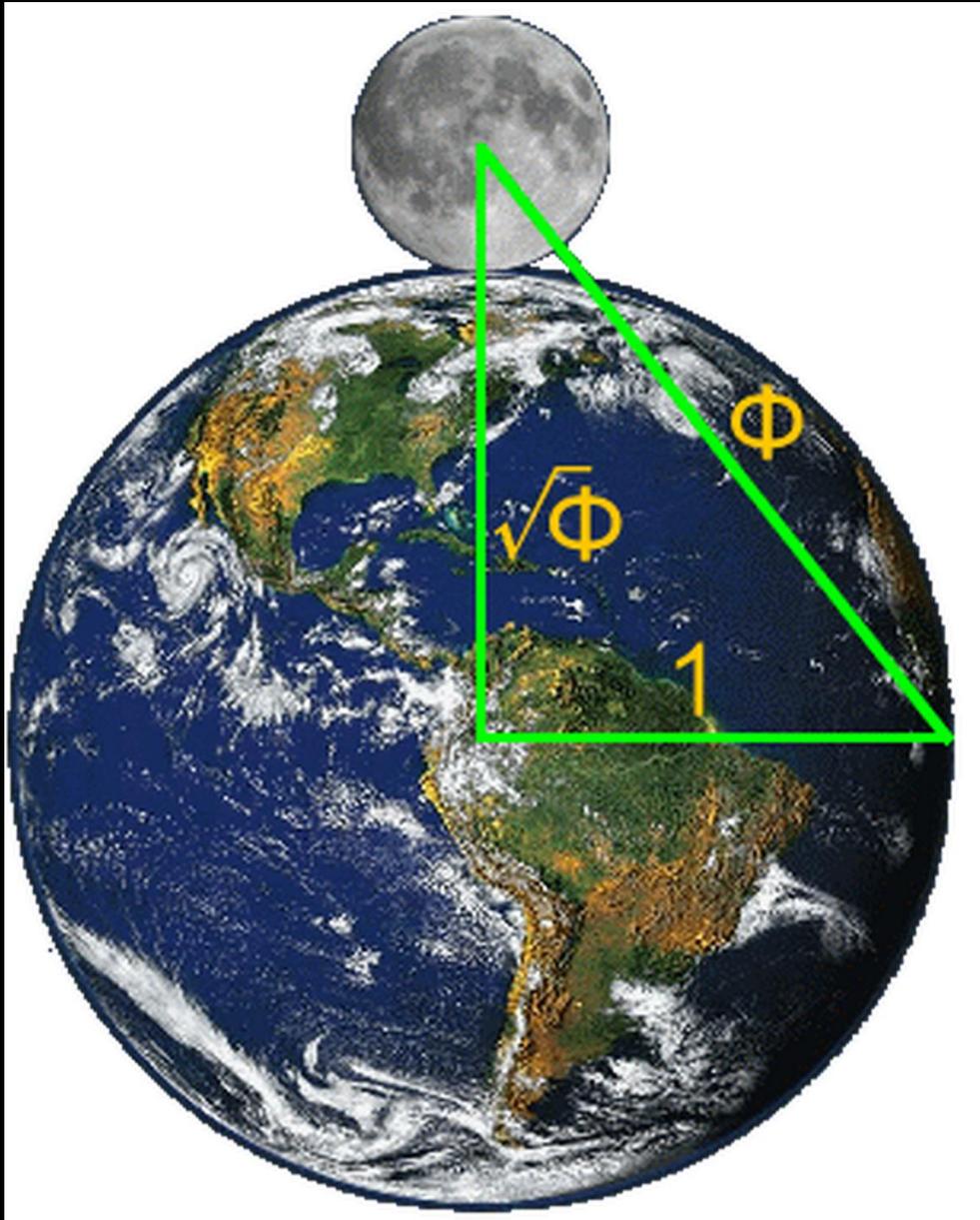
1 and the golden ratio ( $\Phi$ ).



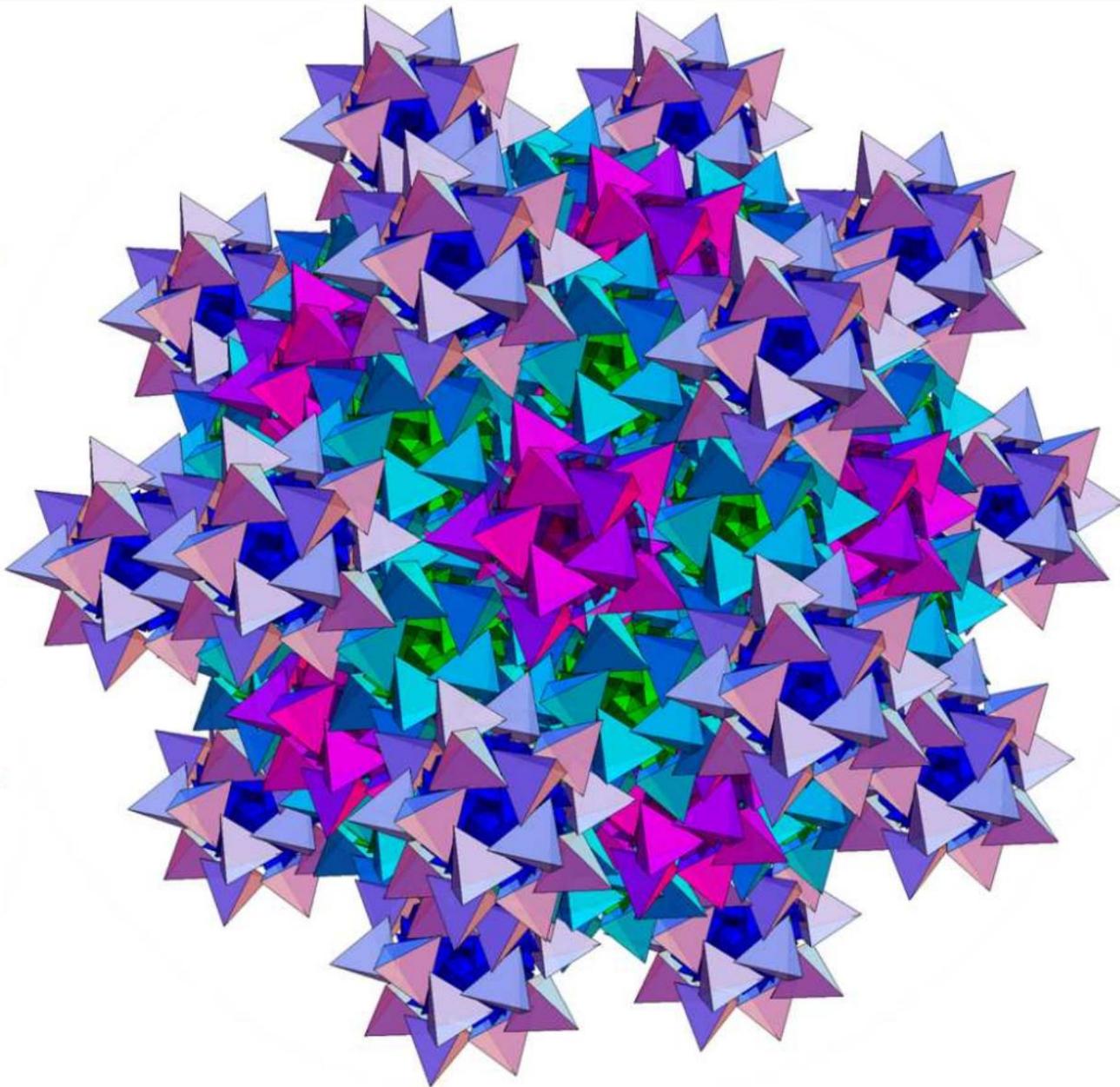
The fundamental lengths in this E8 derived point space are:

1 and the golden ratio ( $\Phi$ ).

Remarkably, the relationship between Earth and Moon is defined by 1 and the golden ratio.



And there are dozens of other golden ratio values in the solar system, which have absolutely no explanation other than the idea that there is an underlying golden ratio based space grid.

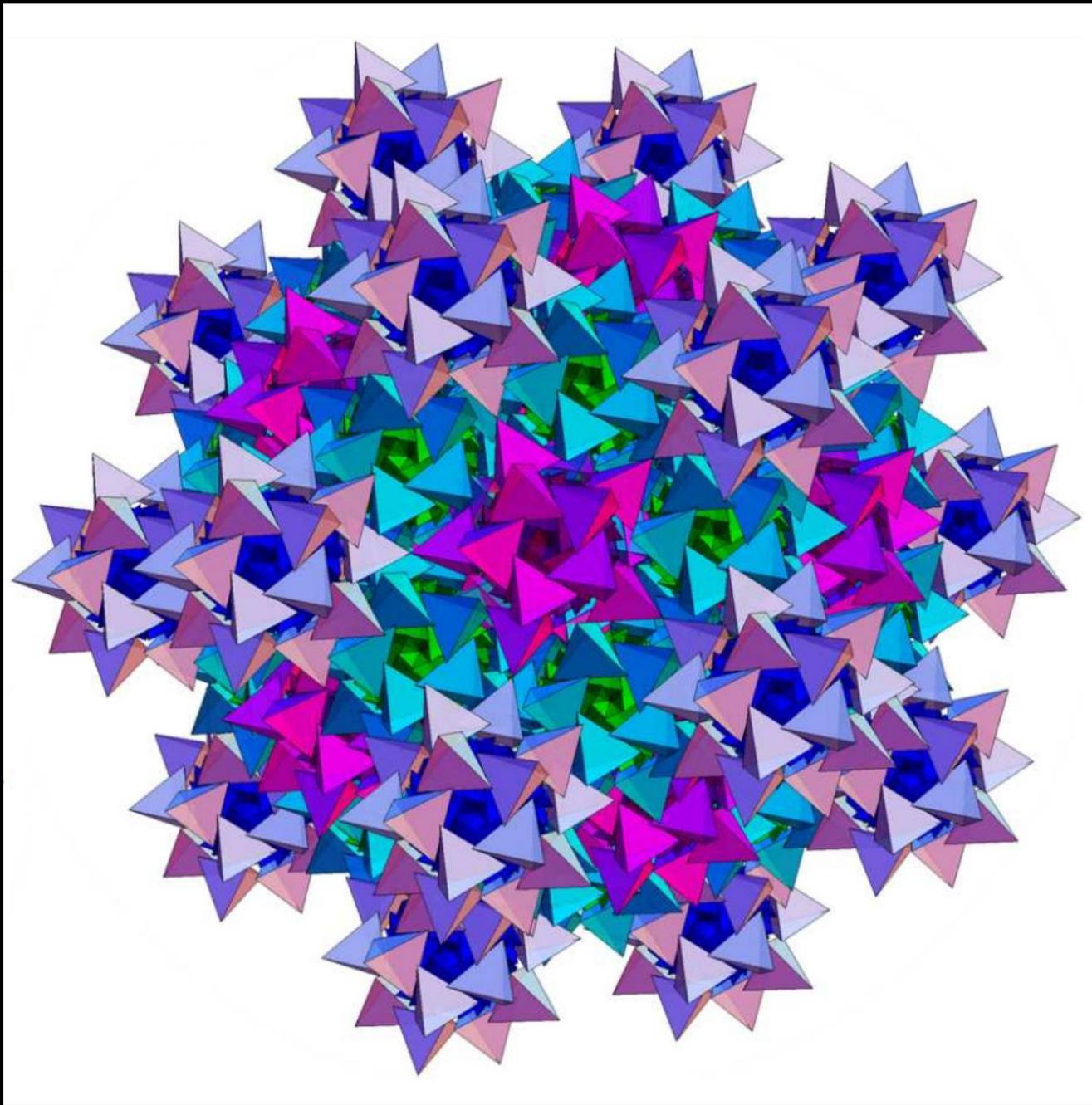


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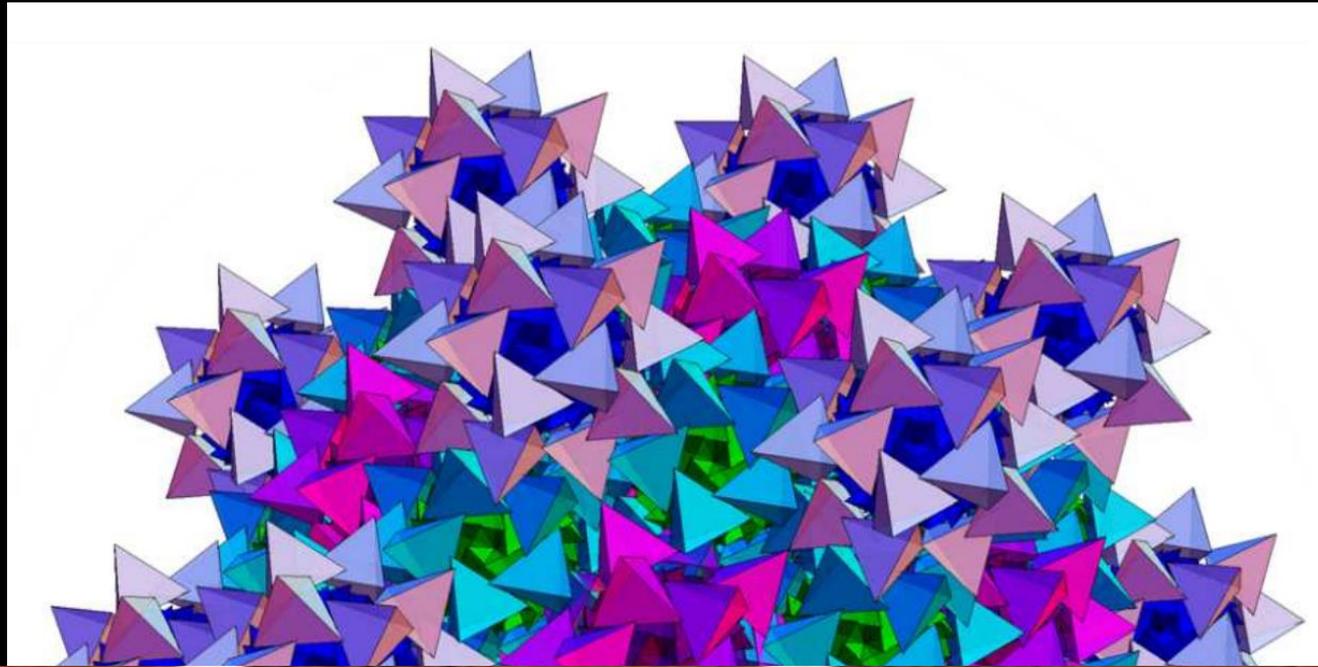
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Binary selections of points to be “on” or “off” on that space create quasicrystalline configurations that are frames of reality.

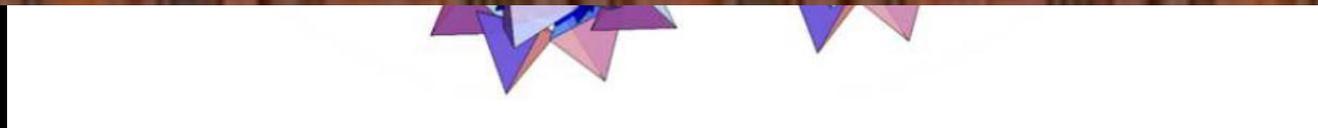


Picture each of these tetrahedra as a 3D pixel of reality.



Picture each of these tetrahedra as a 3D pixel of reality.

And imagine reality as a sequence of these frozen frames of reality.





In the movie *Gone with the Wind*, there is no time or motion. There is only an ordered sequence of 2D geometric frames.

Frame 3

Frame 4

So what are some general things we can say about this reality we live in?

Evolution

Emergence

Self-organization

Feedback

So what are some general things we can say about this reality we live in?

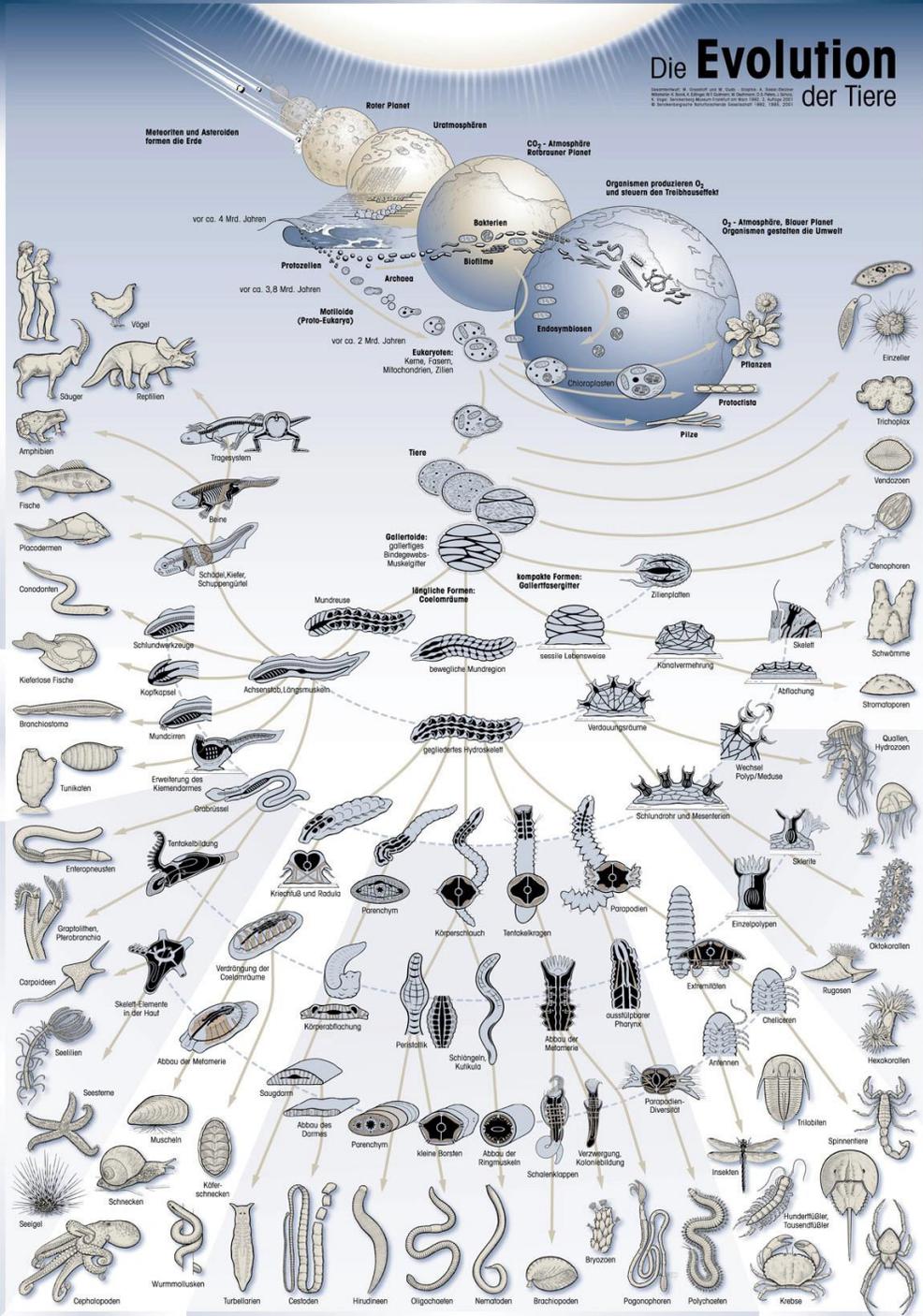
Evolution

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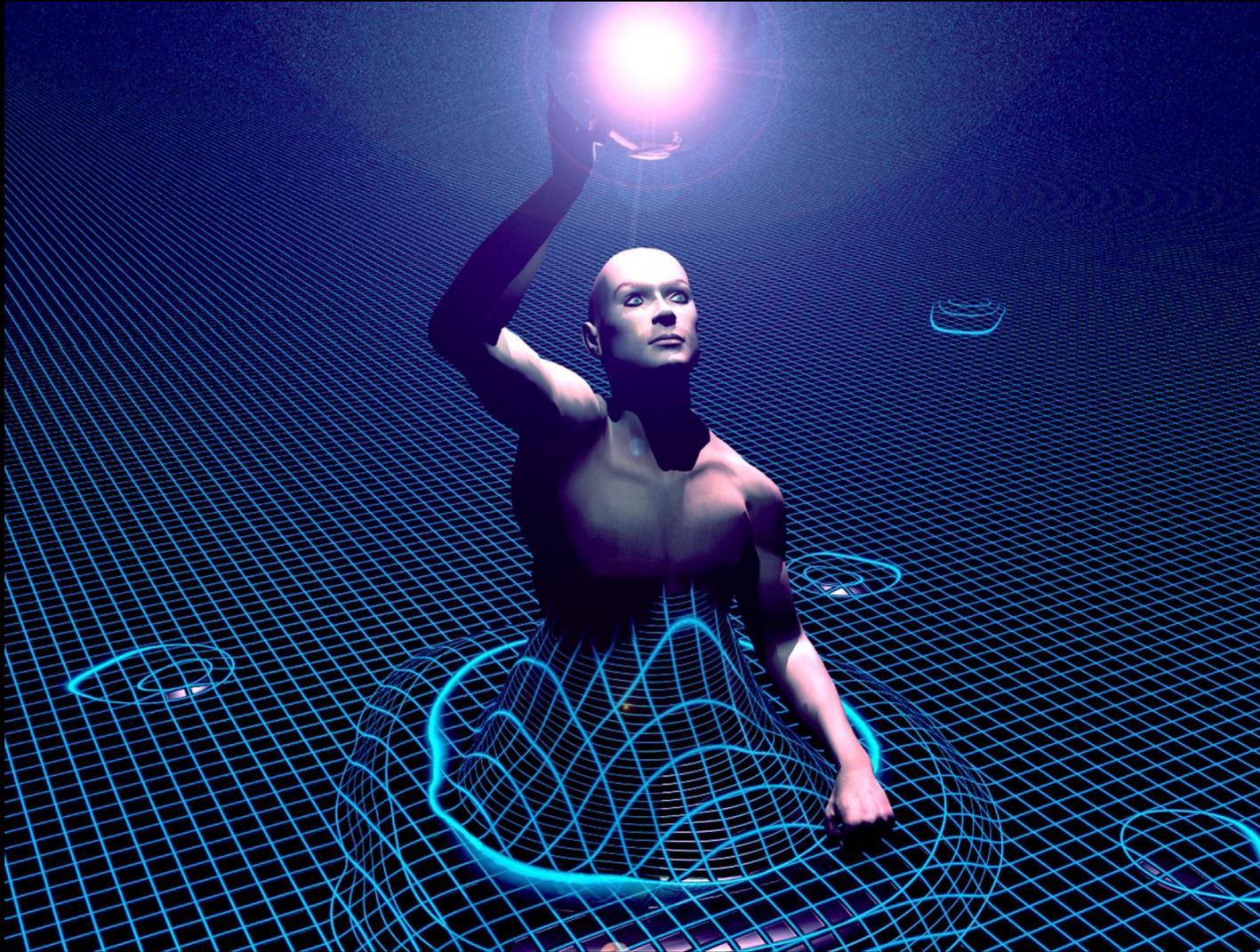
Self-organization

Feedback

# Die Evolution der Tiere



# Evolution



Evolution

Emergence



Evolution

Emergence

Self-organization



Evolution

Emergence

Self-organization

Feedback loops



What else?



What else?

Consciousness? Can we say consciousness emerges in the universe?



What else?

Consciousness? Can we say consciousness emerges in the universe?

Most scientists think they are conscious. So it generally agreed that it is an emergent thing that the universe allows to occur.



Evolution

Emergence

Self-organization

Feedback loops



So what defines  
consciousness?

What is it, really?



My twin poodles Red and Ted, rank #1 or #2 on most of the kennel associations in terms of intelligence.



Are they conscious?



Are they conscious?

The make a lot of eye contact and seem to be asking me what they can do for me.



Susie, on the other hand, ranks #87 on the dog intelligence list.



And there are only about 100 breeds. So she ranks low.



I'm glad she can't understand what I'm saying right now because I must admit to you that she doesn't seem as conscious as Red and Ted.



What about a mouse.  
Scientists tell us Susie is  
smarter than a mouse.

Is the mouse less conscious  
than Susie because it's not  
as smart?



Am I being cruel with my  
arbitrary labeling of  
intelligence and  
consciousness?

What about a salad?



It's living, just like the mouse.





It's living, just like the mouse.

So is a piece of the living lettuce not conscious while Susie and the mouse are?

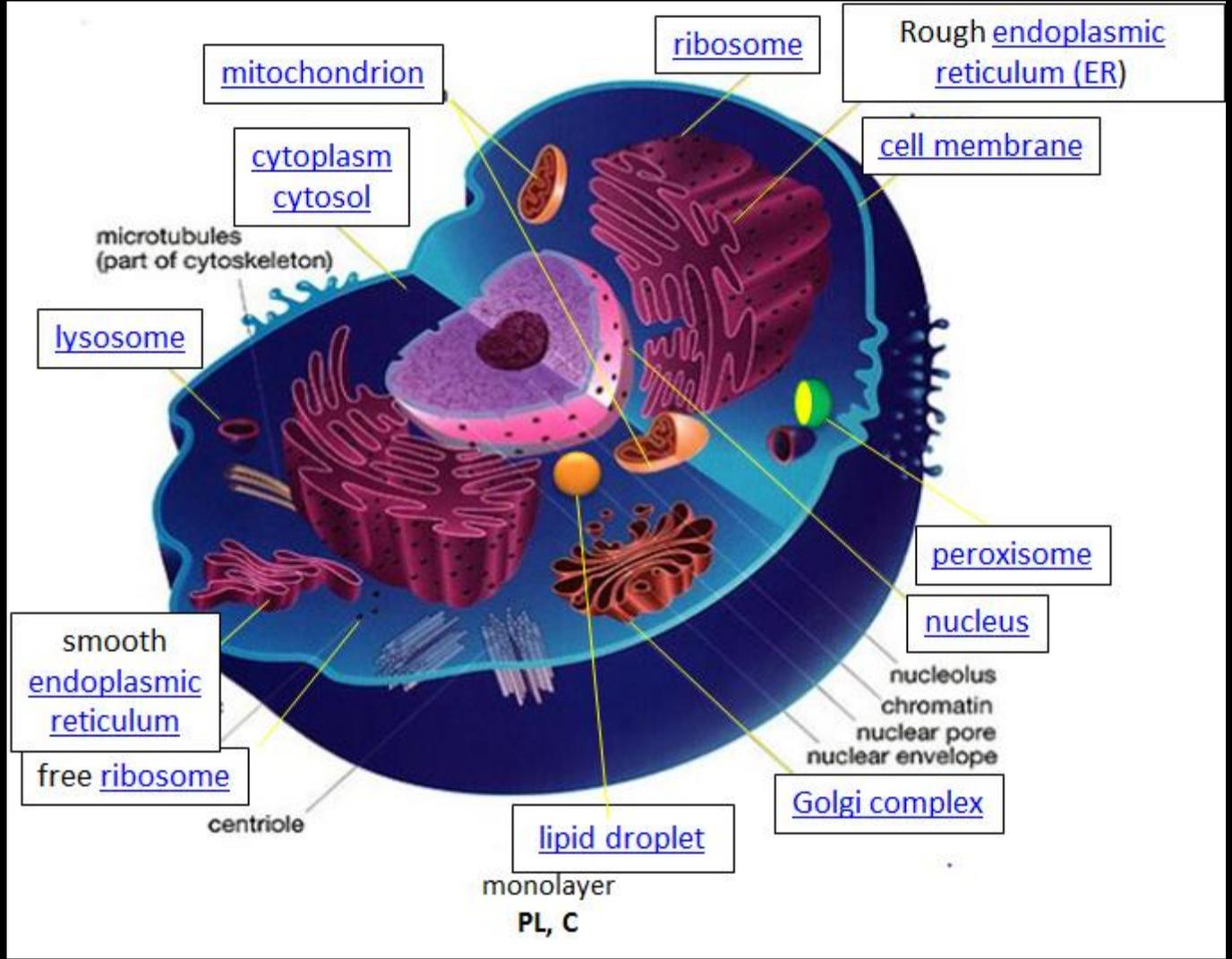


The labels here are starting to feel non-scientific and man-made.

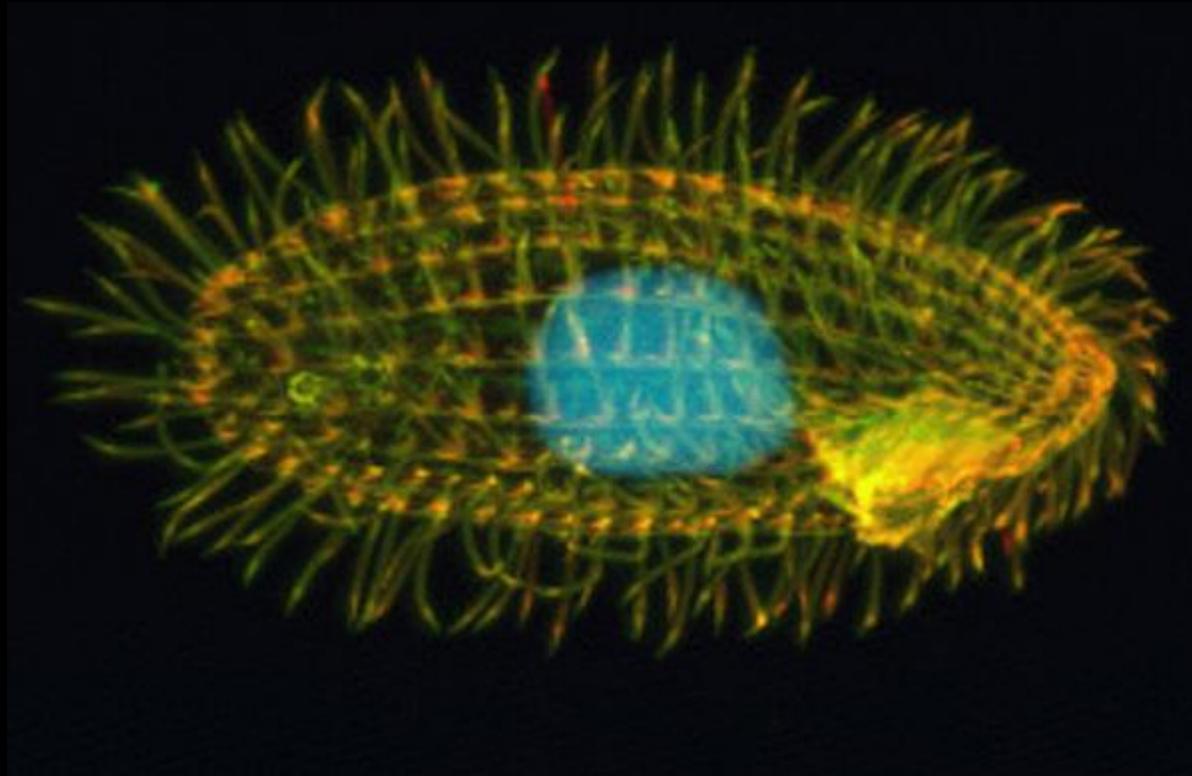


The labels here are starting to feel non-scientific and man-made.

Each of the living cells of the lettuce has DNA that is about as complex as that of the mouse.

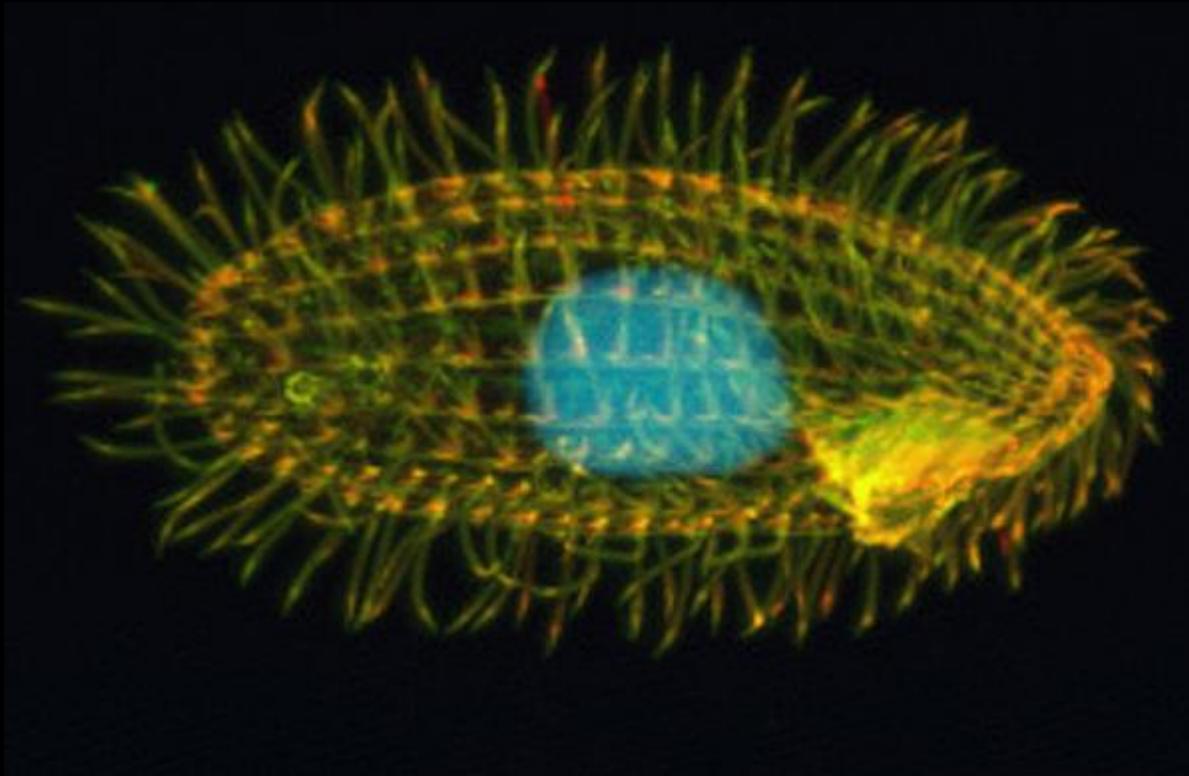


In a Petri dish, the cells run from harmful substances, chase nutrients, reproduce and excrete waste.



What does this lettuce cell and all other single celled organisms have in common with us humans – us large colonies of single celled organisms?

The tendency to survive and propagate our pattern.



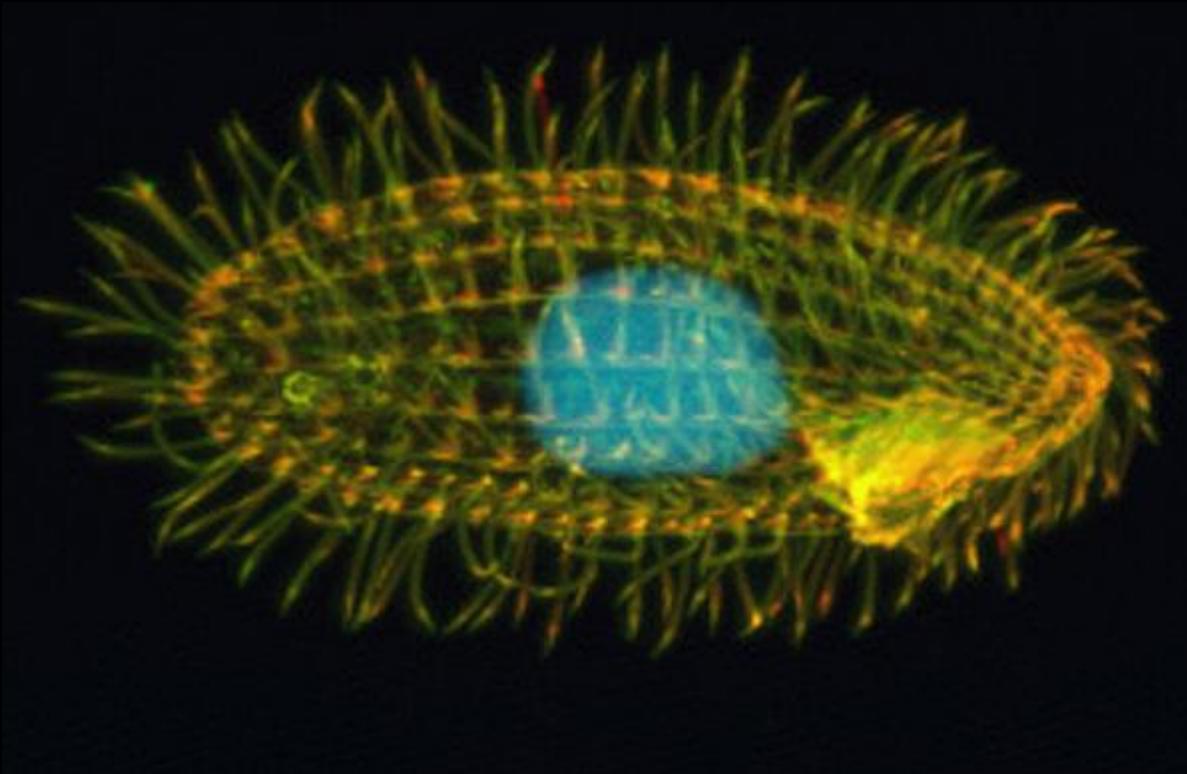
We also have in common:

Evolution

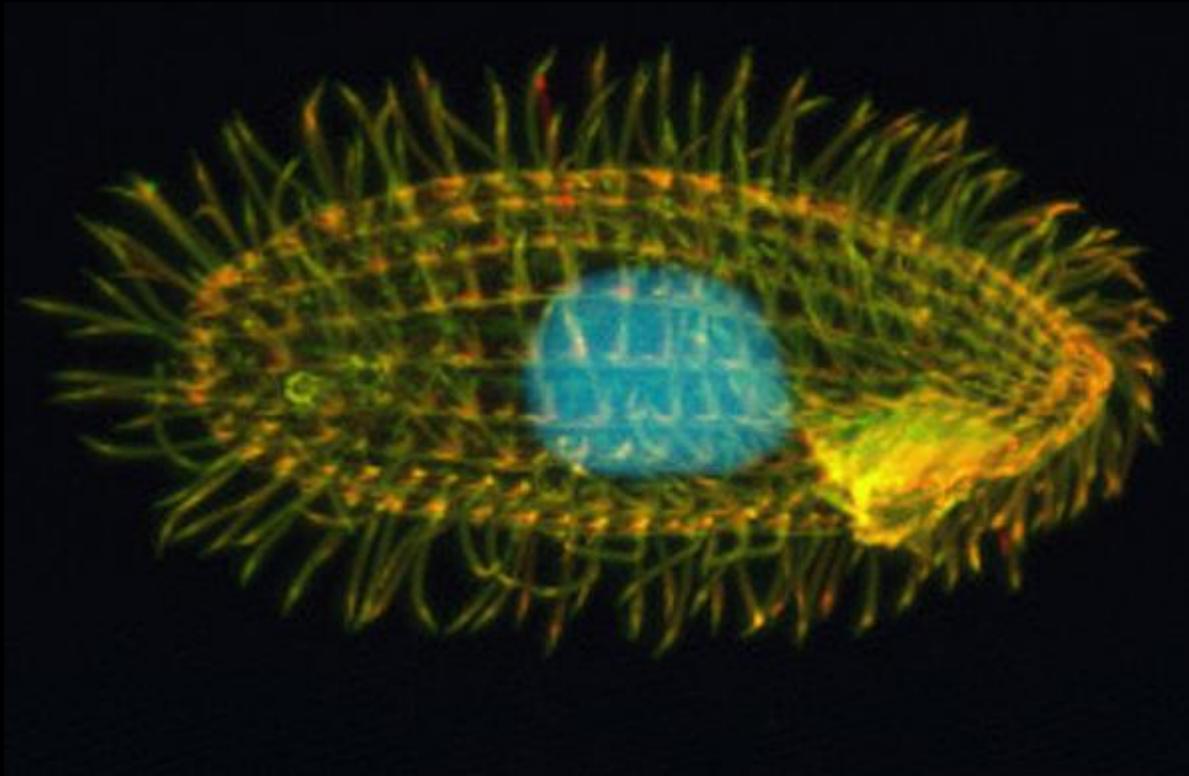
Emergence

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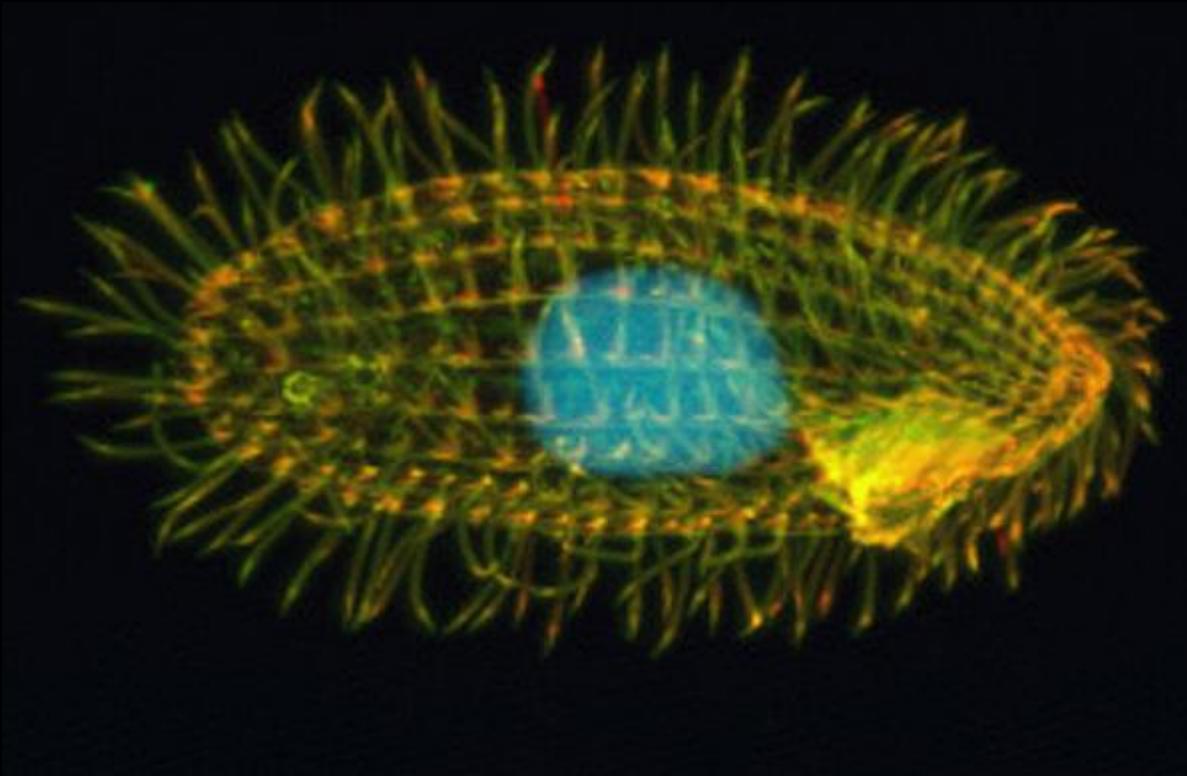


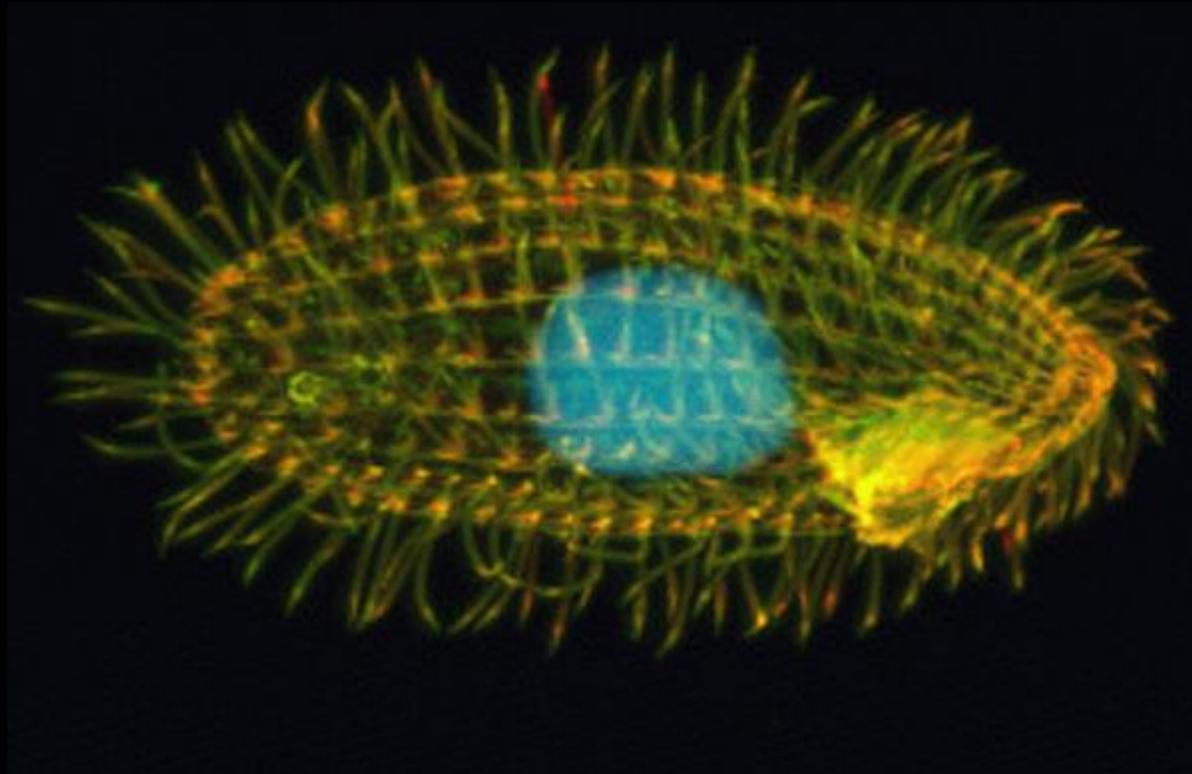
What else?



What else?

Unpredictability.



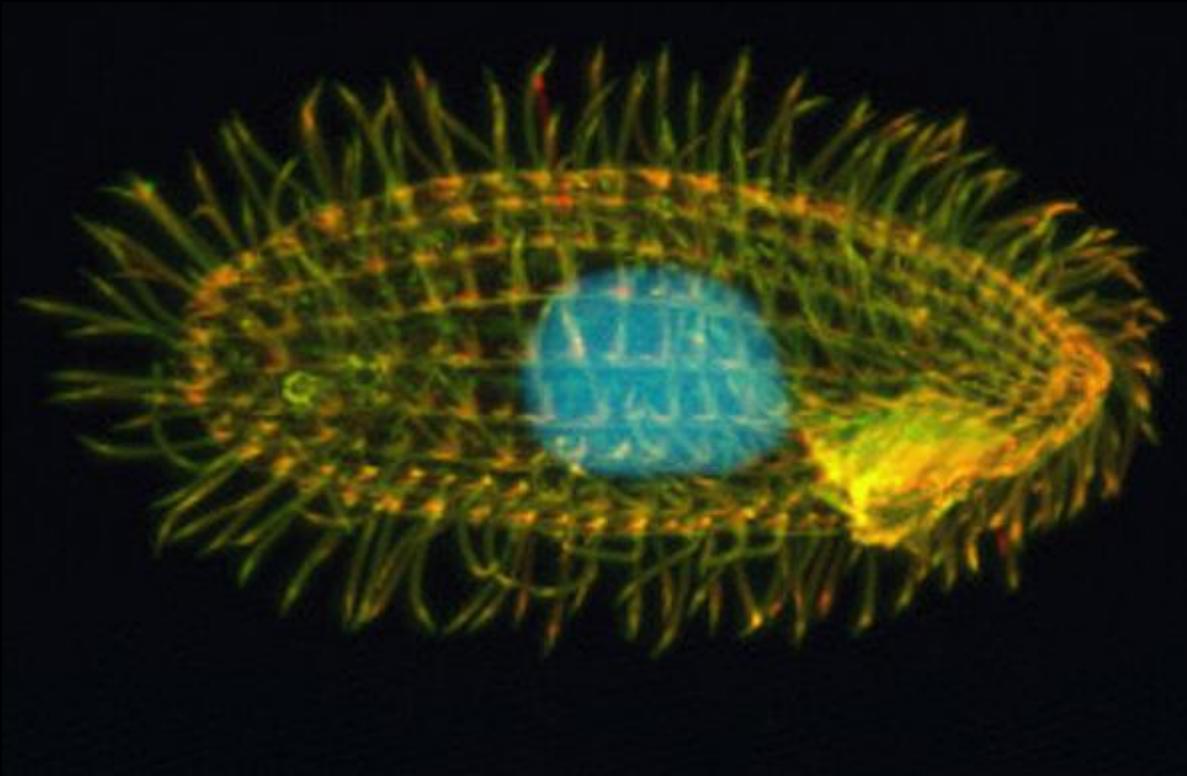


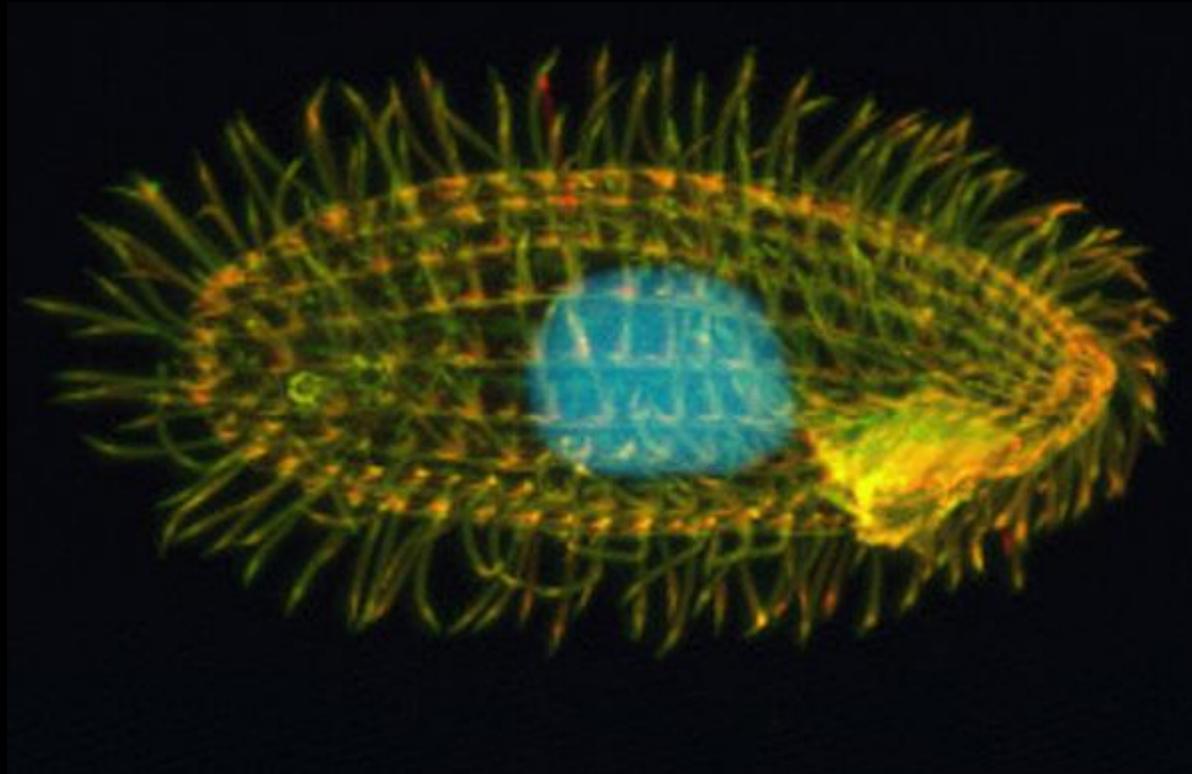
What else?

Unpredictability.

With humans, we label it as  
freewill.

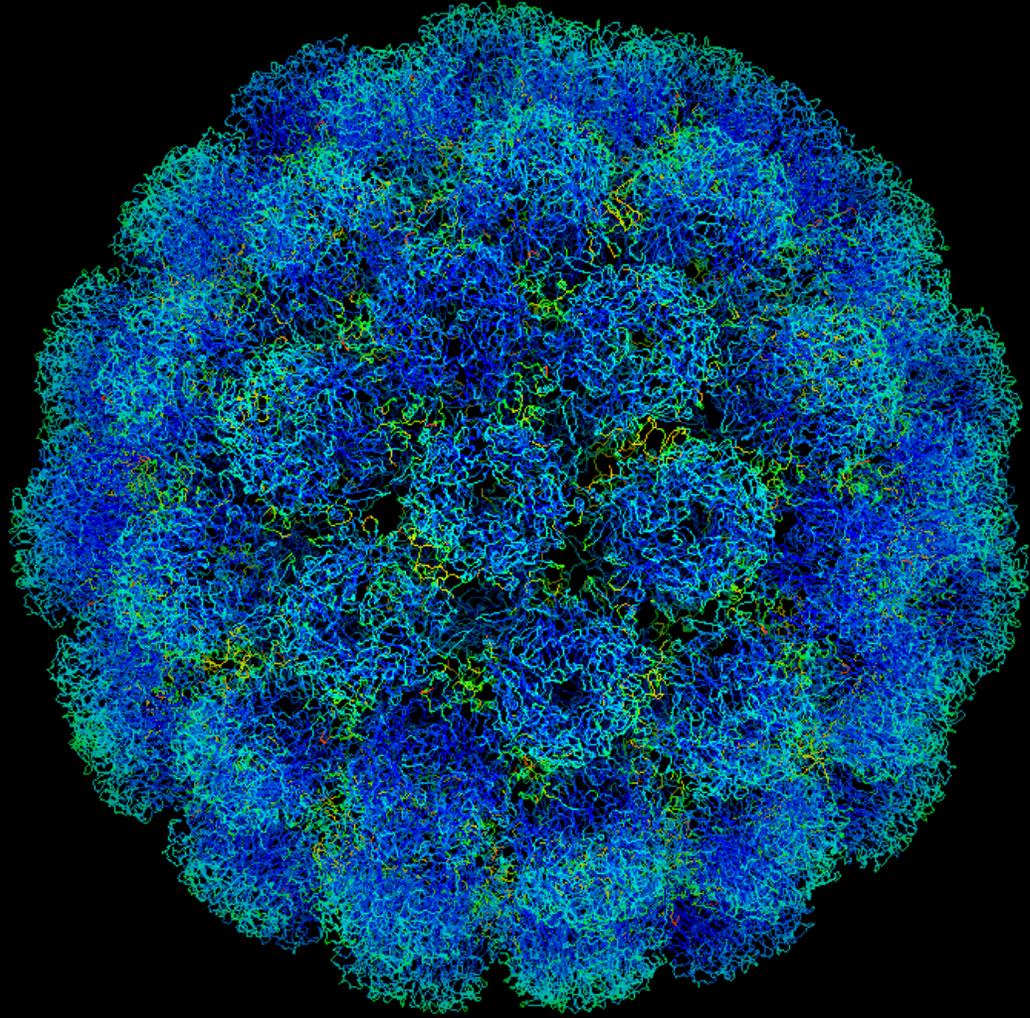
Let's challenge our beliefs  
and labels.



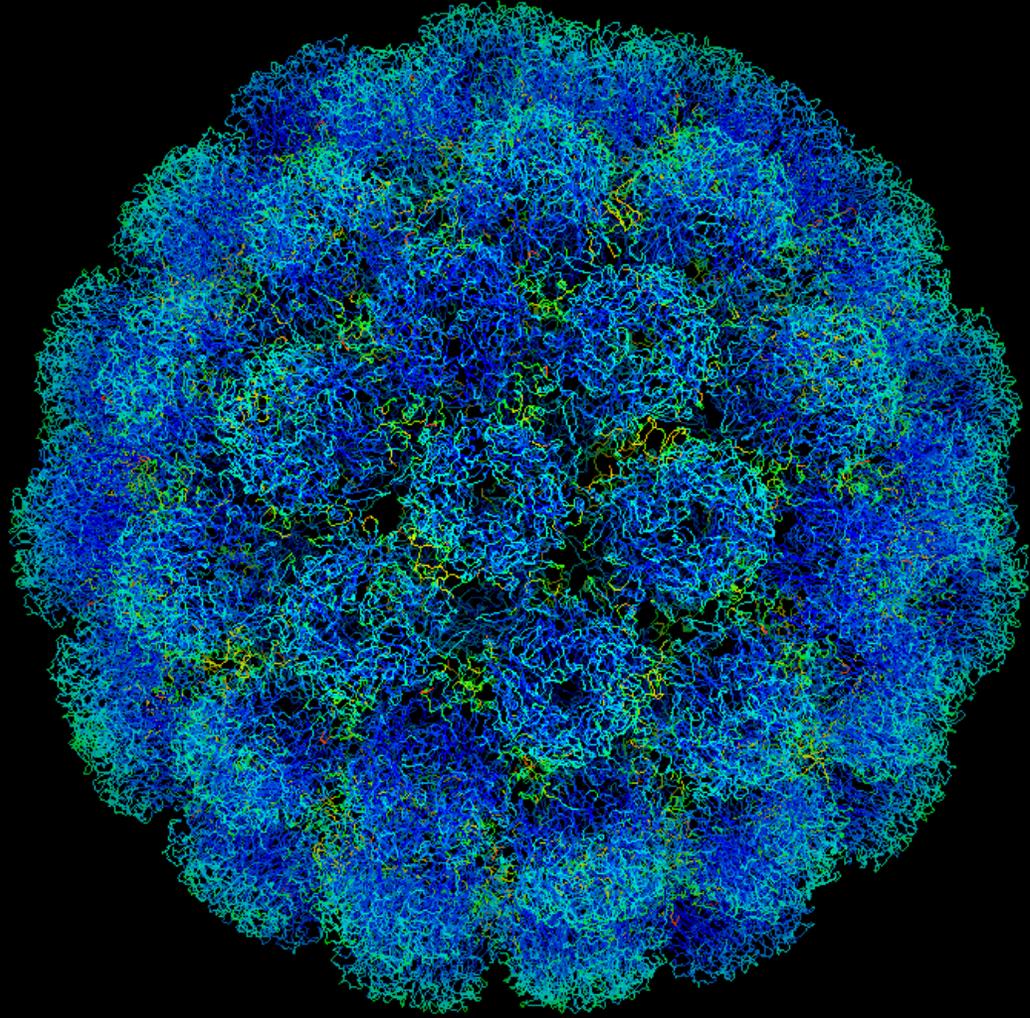


Let's challenge our beliefs  
and labels.

All these living things are  
just self-organized electrons  
and quarks, right?

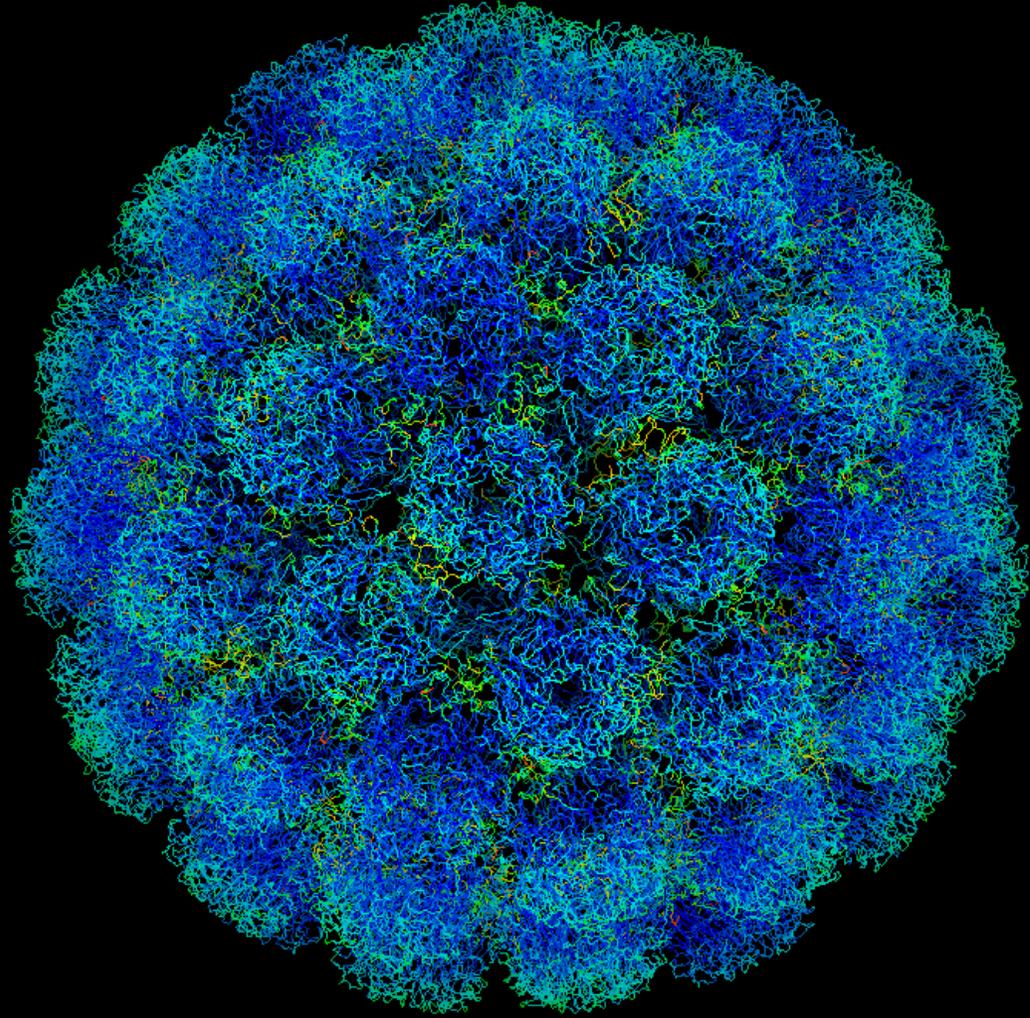


What about a virus?



What about a virus?

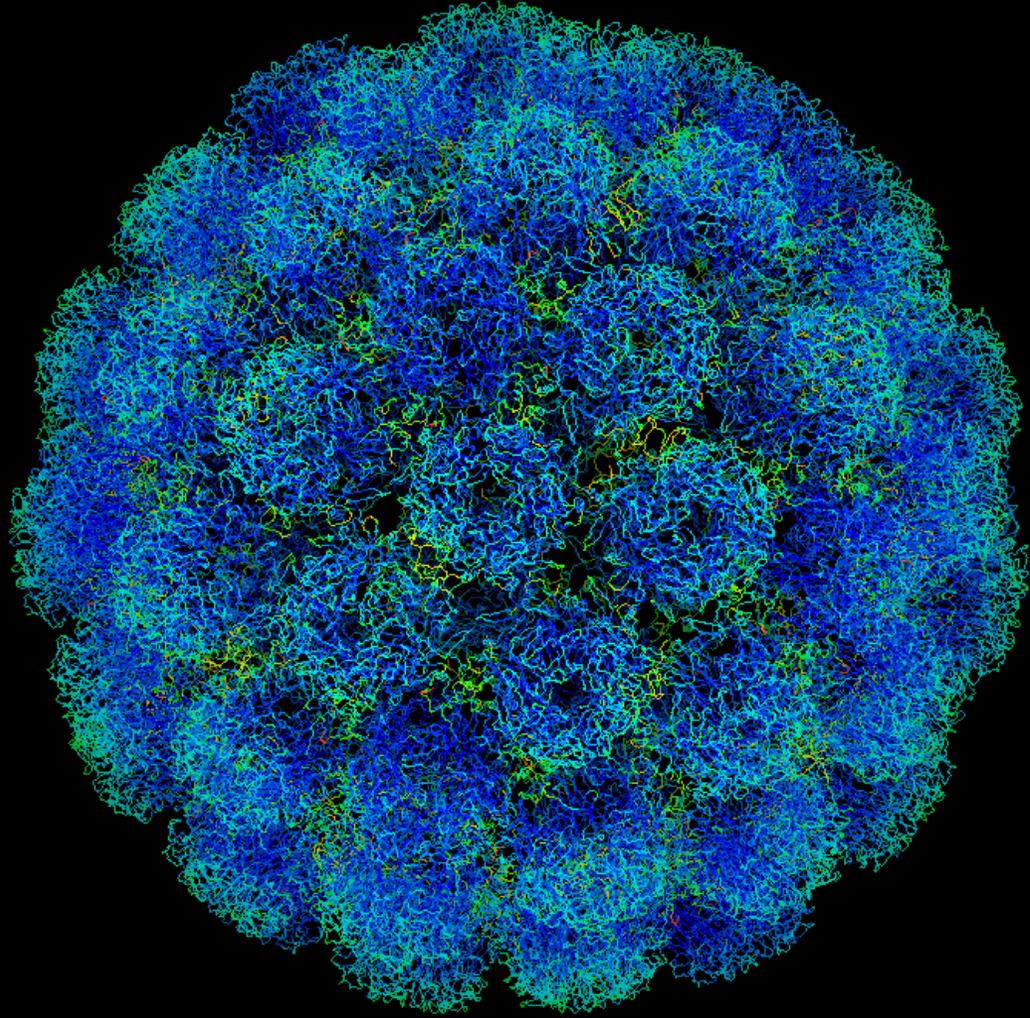
It is fantastically smaller and more simple than a bacteria.



What about a virus?

It is fantastically smaller and more simple than a bacteria.

It doesn't even have DNA like a bacteria does.



In fact, some of the dudes who got to label what is and is not living many decades ago thought that viruses should not make the cut. They argue that they are not living.



But some of the other dudes (unfortunately they are mostly men) argued that we should go a little lower and label crystals as living self organized matter.



The reason is because they take resources from the environment to perpetuate their organized pattern.



In fact, they will keep growing.



What about the self-organizing behavior of a tornado?



It seeks to perpetuate its pattern for as long as possible.



It seeks to perpetuate its pattern for as long as possible.

And it accomplishes this by entering into resonant feedback loops with its environment.



It seeks to perpetuate its pattern for as long as possible.

And it accomplishes this by entering into resonant feedback loops with its environment.

This allows it to feed more energy and resources into its pattern to grow or extend its life.



The point is that the simplest objects of reality seek to self organize and perpetuate their patterns. They do this in a way that is unpredictable.

And they do it by being in resonance or dissonance with everything else in the universe – literally.



Yes, some of these self organizing systems are more complex than others, like Red and Ted.



But in terms of the basic tendency to perpetuate pattern and survive and self-organize and be in vibratory connection with all the other systems in the universe, there is no difference.



A more modern labeling system is in order.



So we challenged our assumptions about what life is and what should define consciousness.



The final thing to challenge is whether reality is made of information or some other stuff.



The pat answer is that since matter = energy according to  $E=MC^2$ , then everything is made of energy.



That's too easy.



What is energy?



We don't have time to break it down slowly. But I can tell you that energy is information. This is a well established scientific deduction that is known, even though not all scientists agree.



John Wheeler, who coined the term black hole, was one of the first titans of physics to argue that reality was made of information.



Today, thousands of scientists, such as mathematical physics professor, Max Tegmark, argue logically that reality is information.



Interestingly, those who disagree are not able to come up with an alternate definition of energy as anything other than information. They just say, “My position is that reality is not made of information”.



The scientists realizing reality is information, on the other hand, can define what information is.



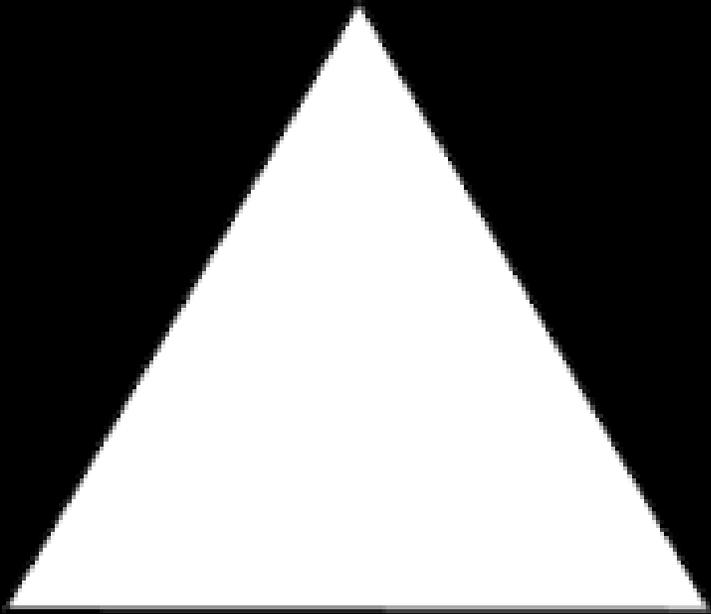
Information is:

Meaning conveyed by  
symbolism/language.



So what is a symbol?

Something which represents  
itself or something else.



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Something which represents itself or something else.

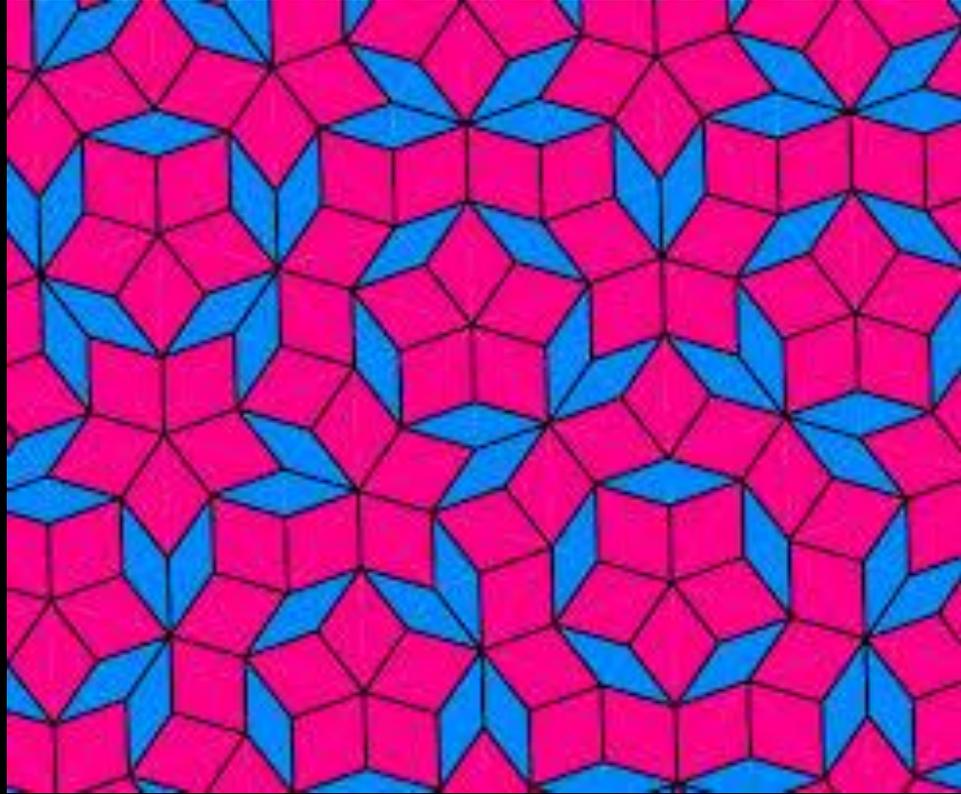
For example, an equilateral triangle can represent itself, an equilateral triangle. Or it can represent something else, like the delta symbol for change.



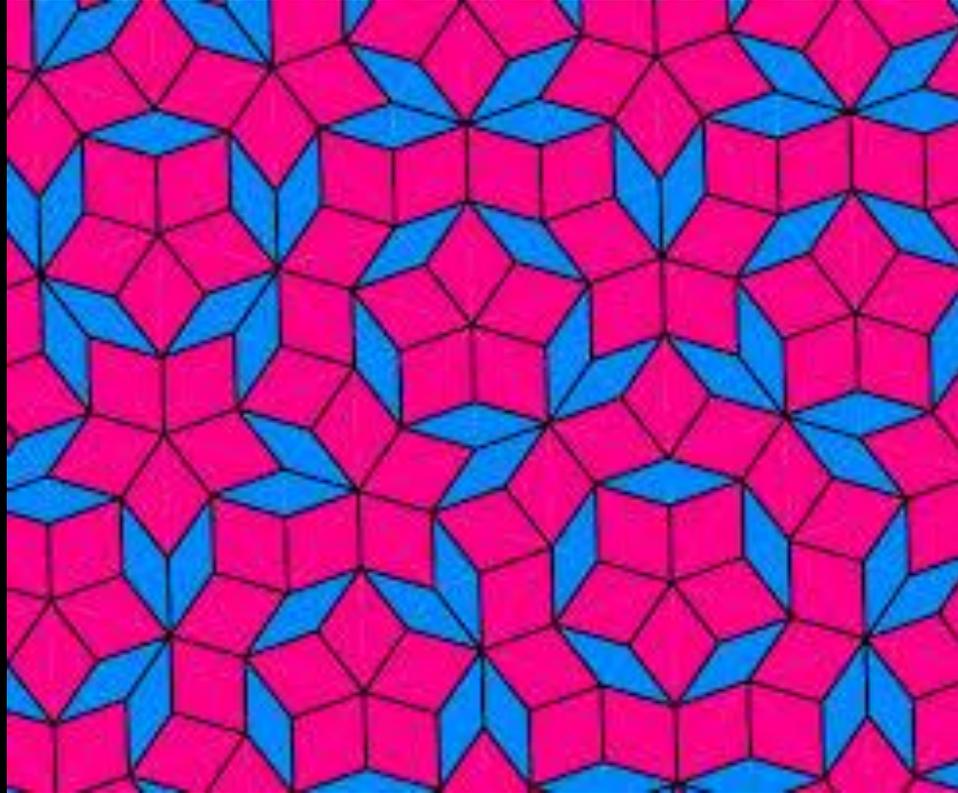
Information is:

Meaning conveyed by  
symbolism/language.

And what is language?



All quasicrystals, including our E8 derived one, are languages.



All quasicrystals, including our E8 derived one, are languages.

And geometric are good at expressing geometric meaning.



From the waveform of a photon to planets to poodles, everything in reality is composed of something geometric.



Even something as emergent and abstract as love, can be traced back to its geometric building blocks.



So what is going on here?



So what is going on here?

If reality is geometric  
language, and if this language  
is just information, then  
where does all this  
information come from?



Information can only come from mind. This is not a New Age notion. Information is the product of measurements.

And this requires an entity to choose to do the measurement.



Information is also meaning.

Meaning is subjective and requires an interpreter to ascribe meaning.

The very text book definition of information cannot be disassociated from choosers of measurement, users of the language that expresses the information and the subjective meaning of the information.



But how?

How can an information only universe exist without the universe itself being a mind-like substrate?



Most of you would be content to agree that there is a universal mind.



So the fun question is where  
did it come from.

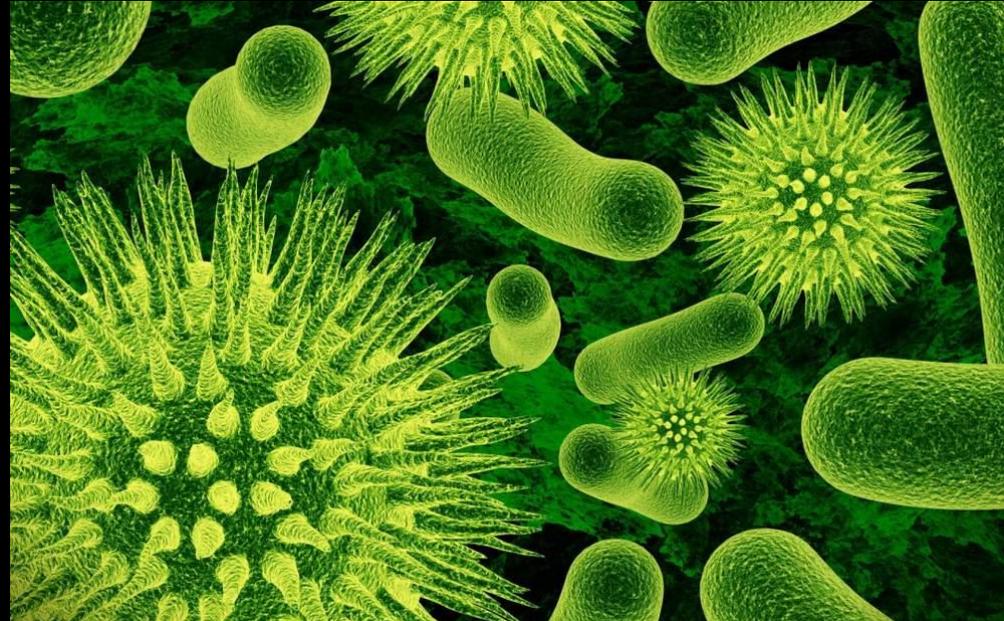
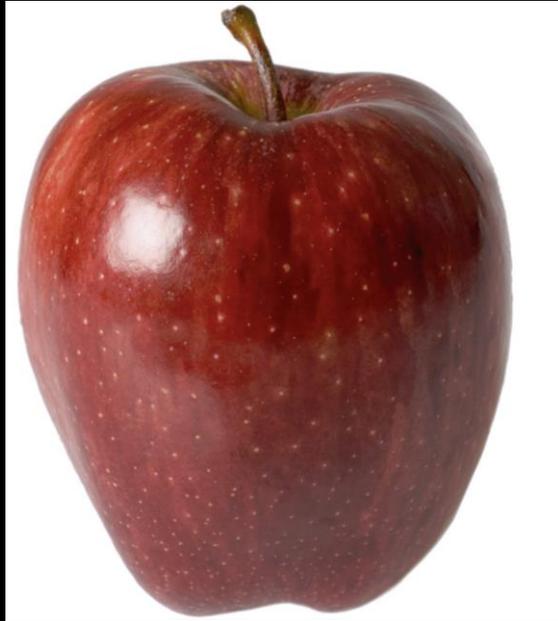


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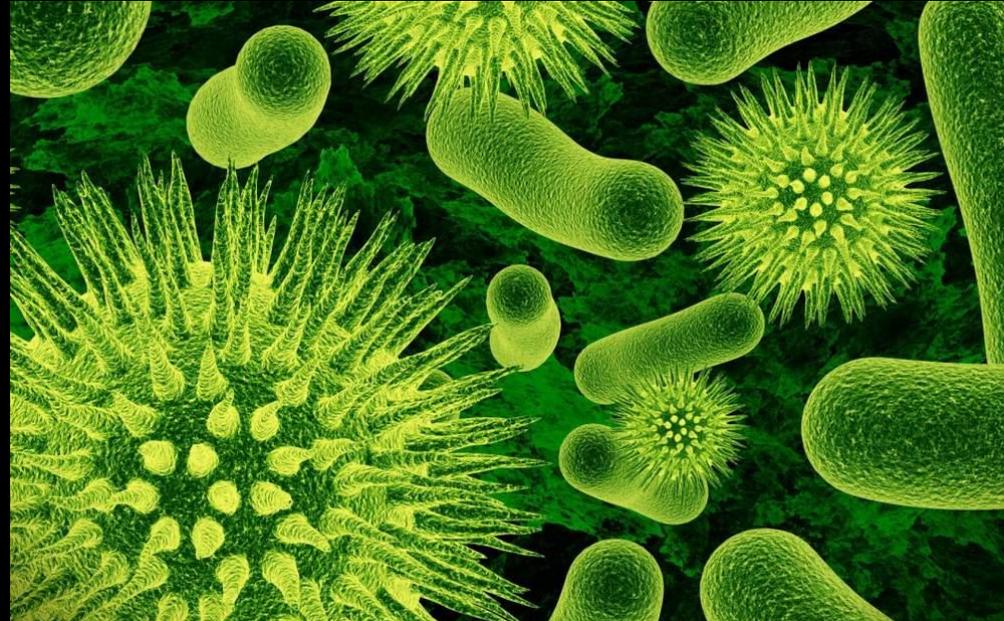
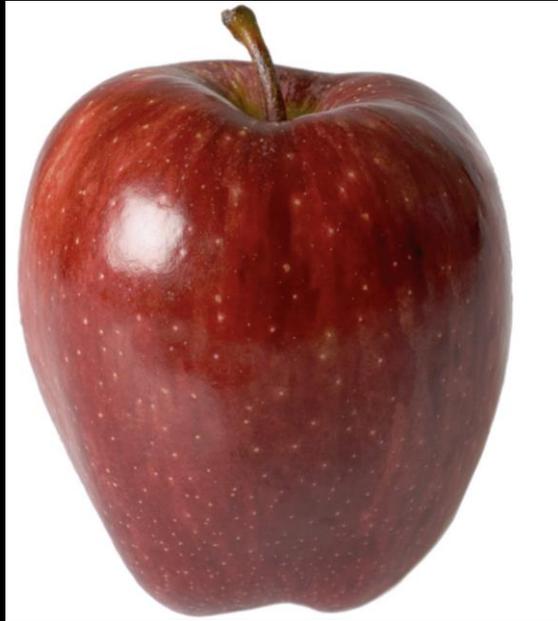
Well, we discussed how consciousness is known by materialist scientists to be real and to exist in the universe since they think they are conscious.

And it's known that when an organism has no limit on its resources, it will continue doubling.

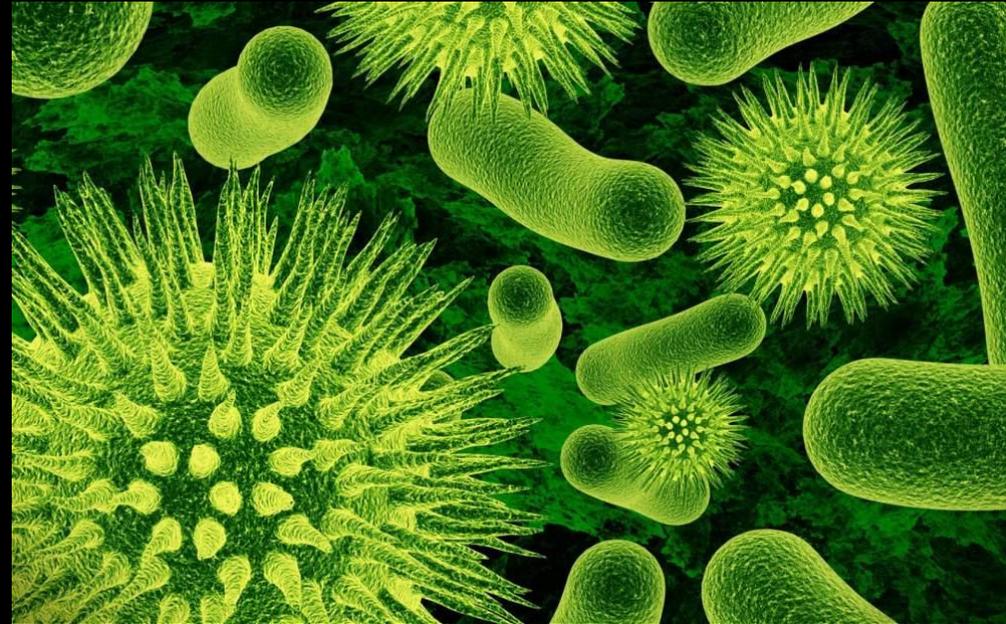
For example, the few million bacteria on this apple are not very influential to the apple's destiny.



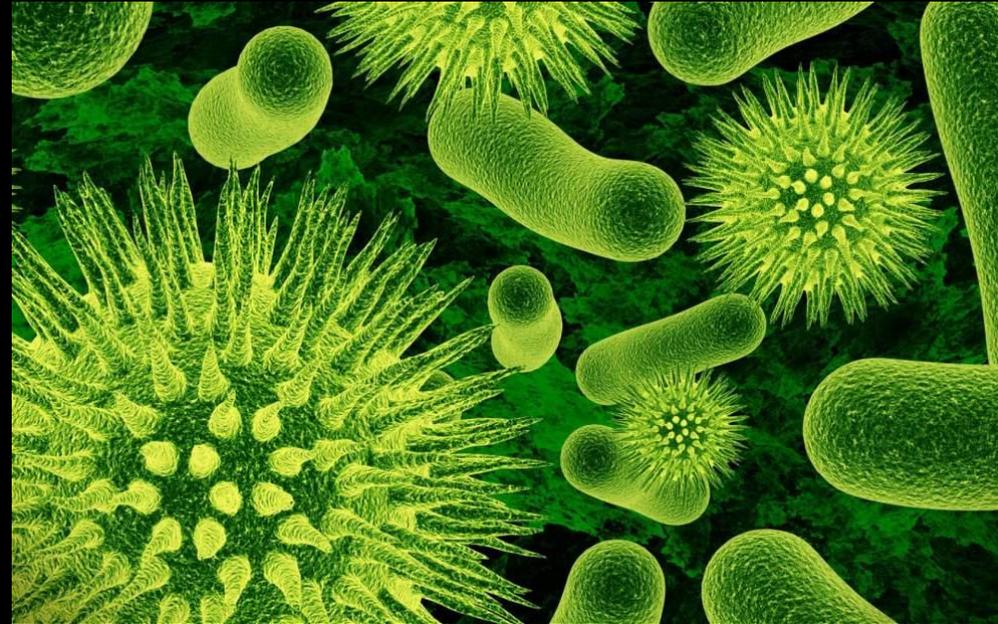
There are too few of them. Just as there are too few humans to say that advanced consciousness determines the destiny of the universe or is somehow the substrate of the universe itself.



But after just a few round of doublings, the bacteria become THE defining force that determines the destiny of the apple.



Stronger than the intermolecular forces or gravity – returning all the elements of the apple back to the Earth.



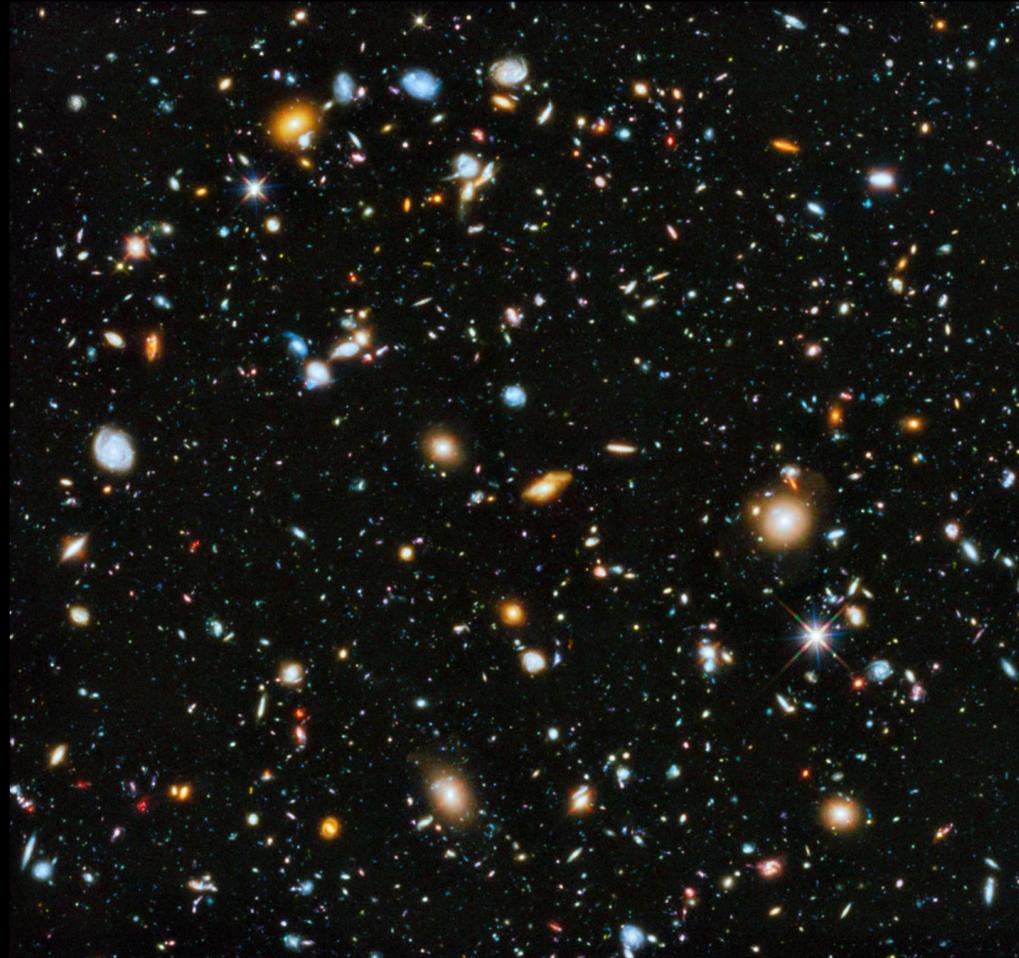
I can hit the x2 button on my calculator 80 times in only 30 seconds.



If we double a penny only 80 times, we will have more pennies than...



...all the atoms in all the galaxies of the universe.



If human consciousness could escape the resource limitations of Earth...



...within a shockingly small number of doublings, there would be more conscious entities in the universe than all the planets times a huge number.



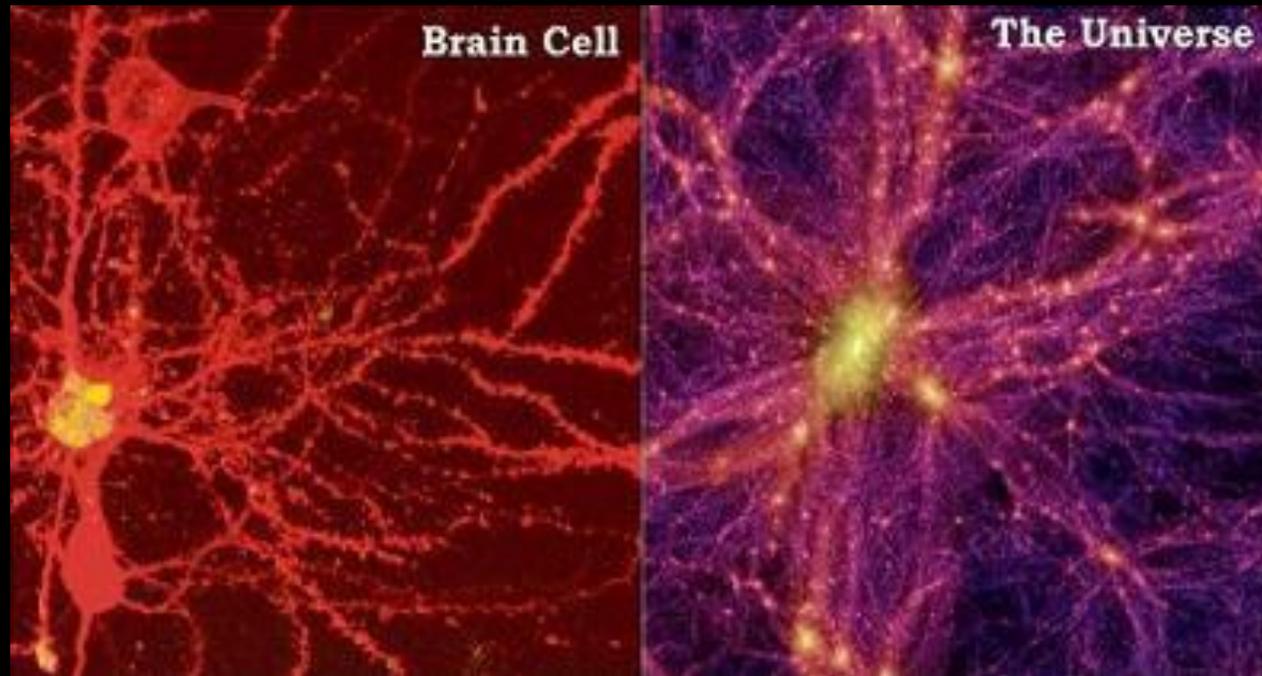
We started leaving the planet in 1968 and we're just bursting with desire to go much, much further.



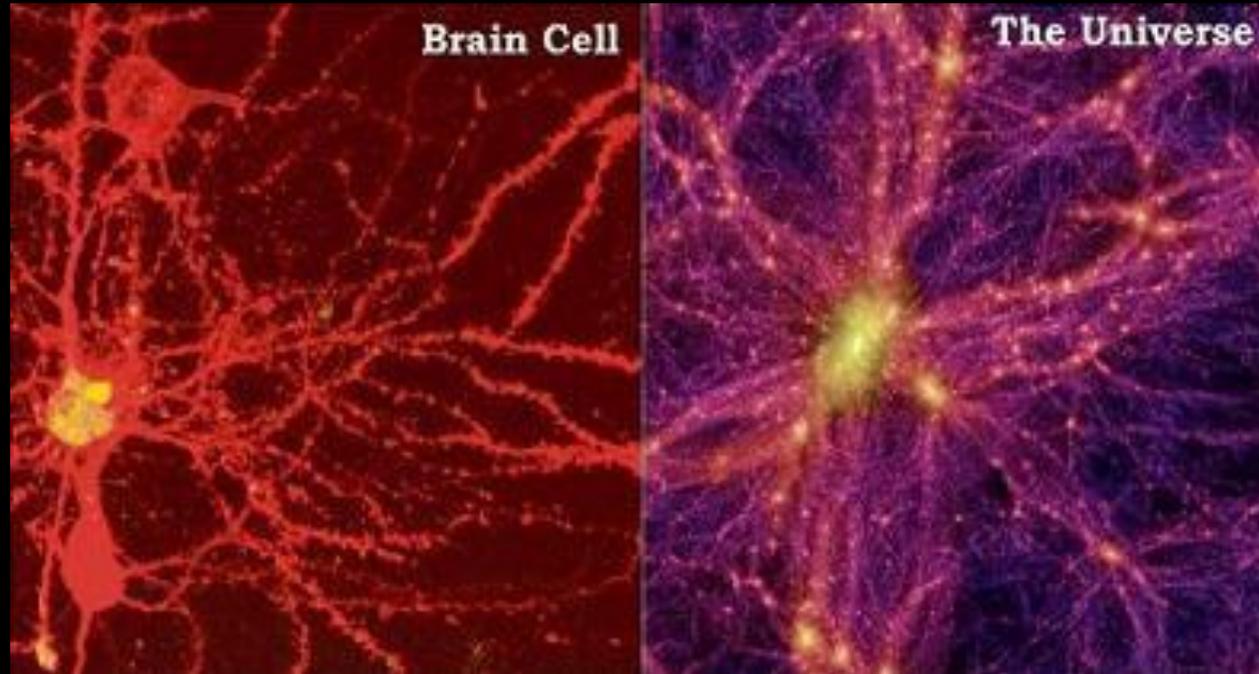
The exponential doubling of technology is manifesting our ability to do this.



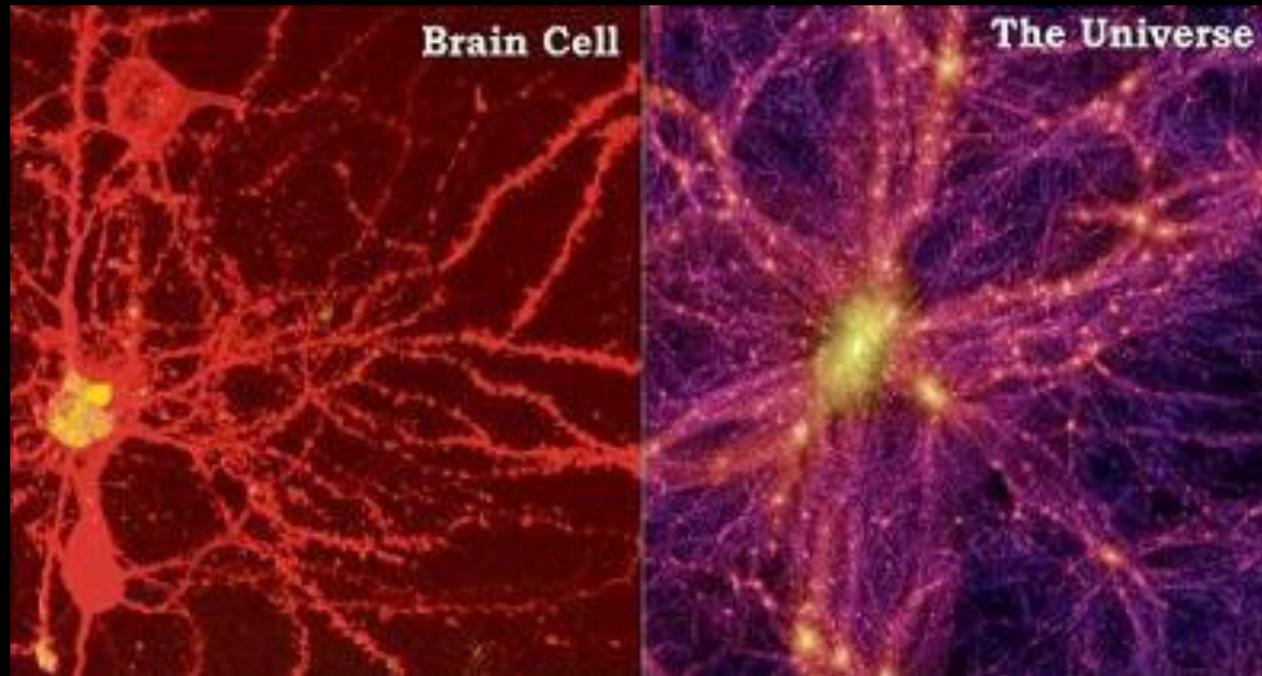
Imagine of high consciousness beings grouped their consciousness and figured out some new physics that allowed for instant non-local information exchange.



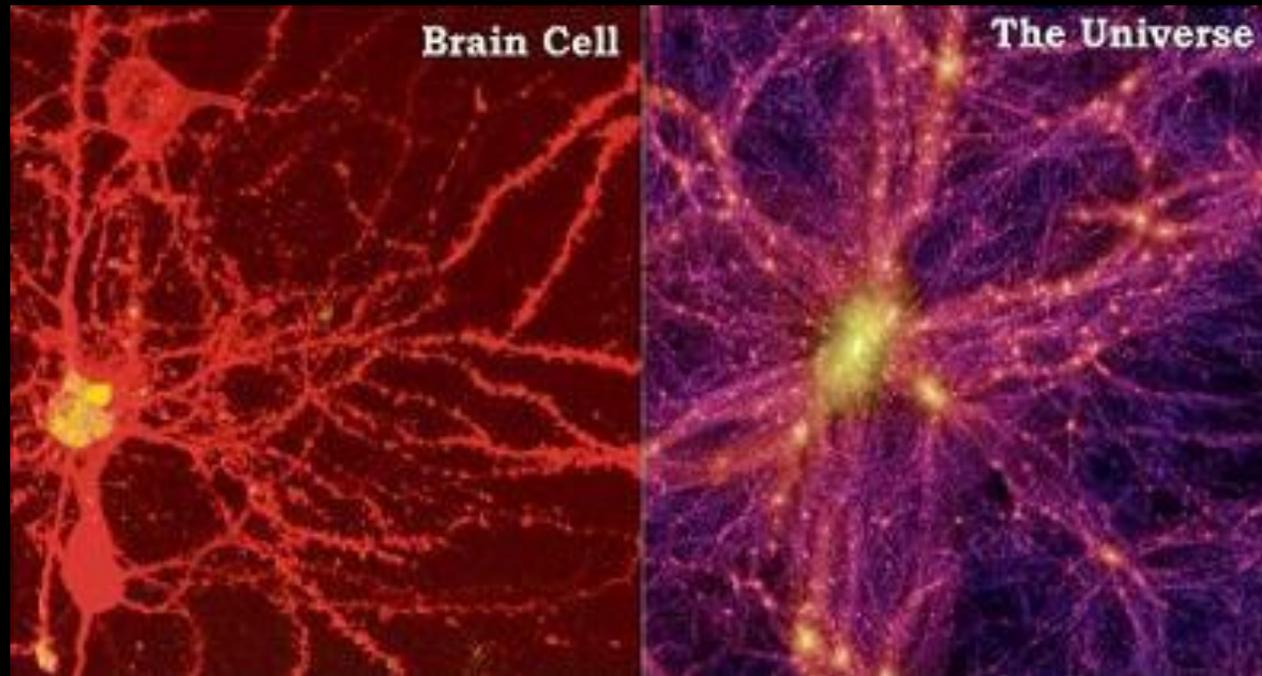
That sort of network is generically called a “neural network”, which is any network of things that have high connectivity and exchange information and create new information as products of the exchange combinations.



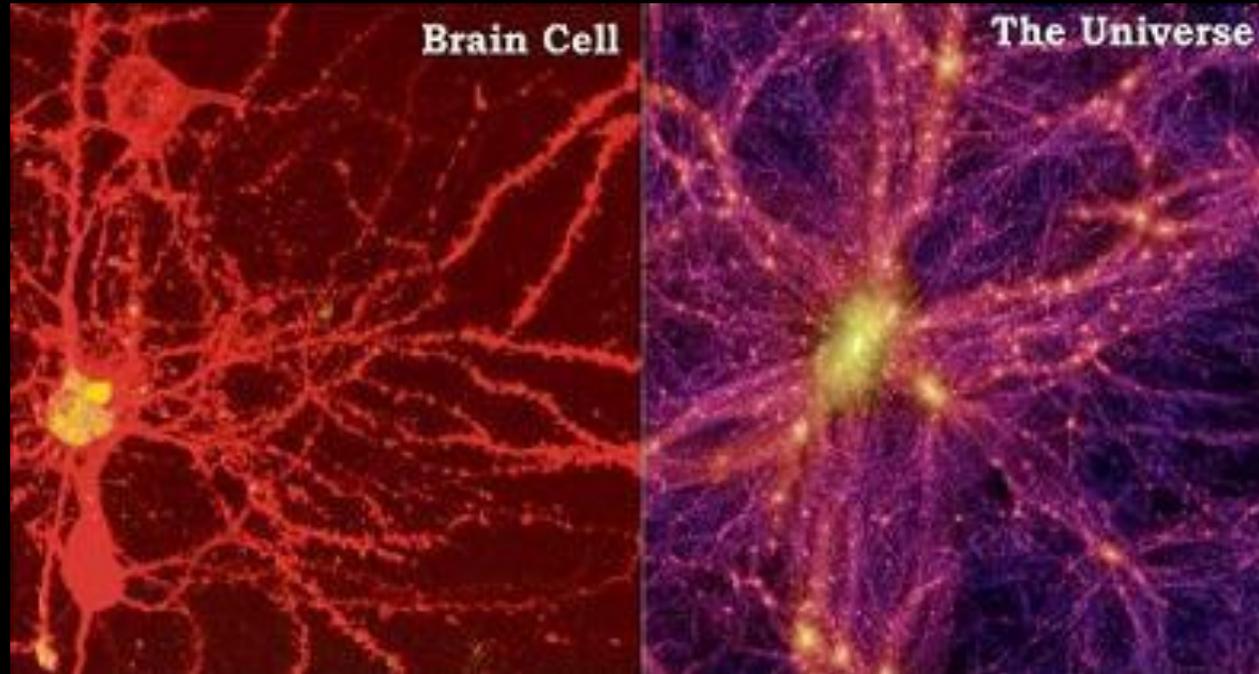
The universe as a whole is an exchange network because everything is connected by gravity and electro-magnism. Nothing whatsoever is isolated.



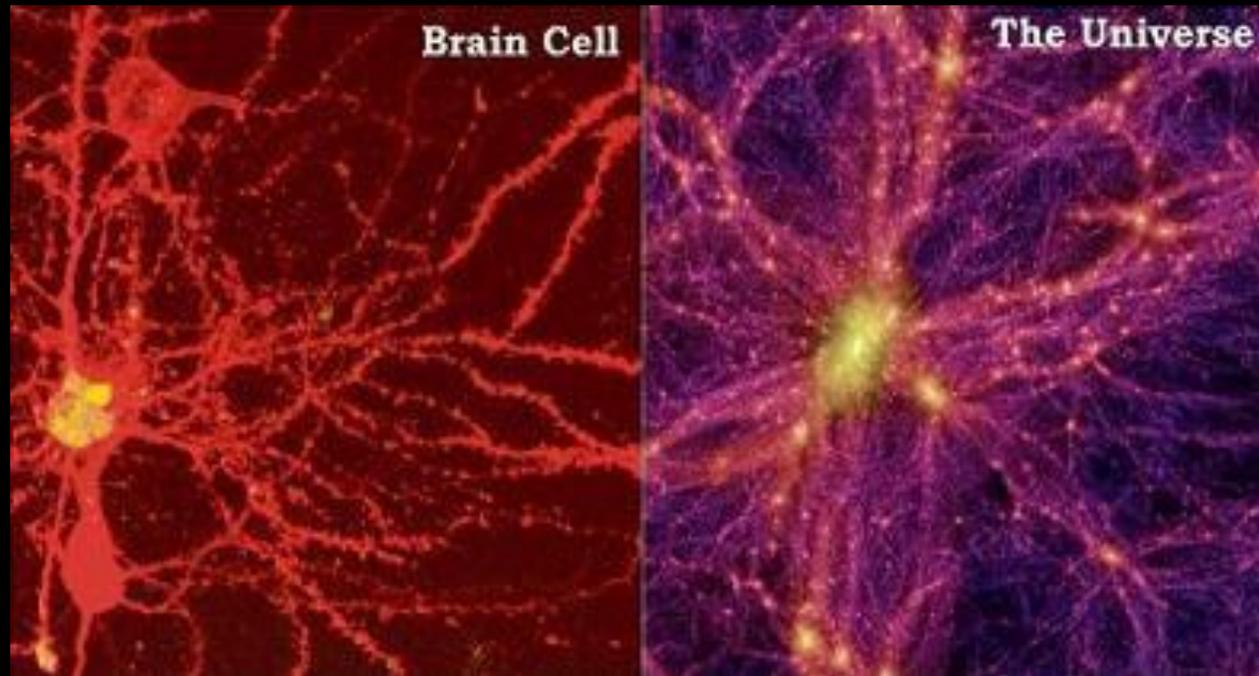
A popular astrophysical model says that shortly after the Big Bang, the universe was a hot soup of particles called a Bose Einstein condensate.



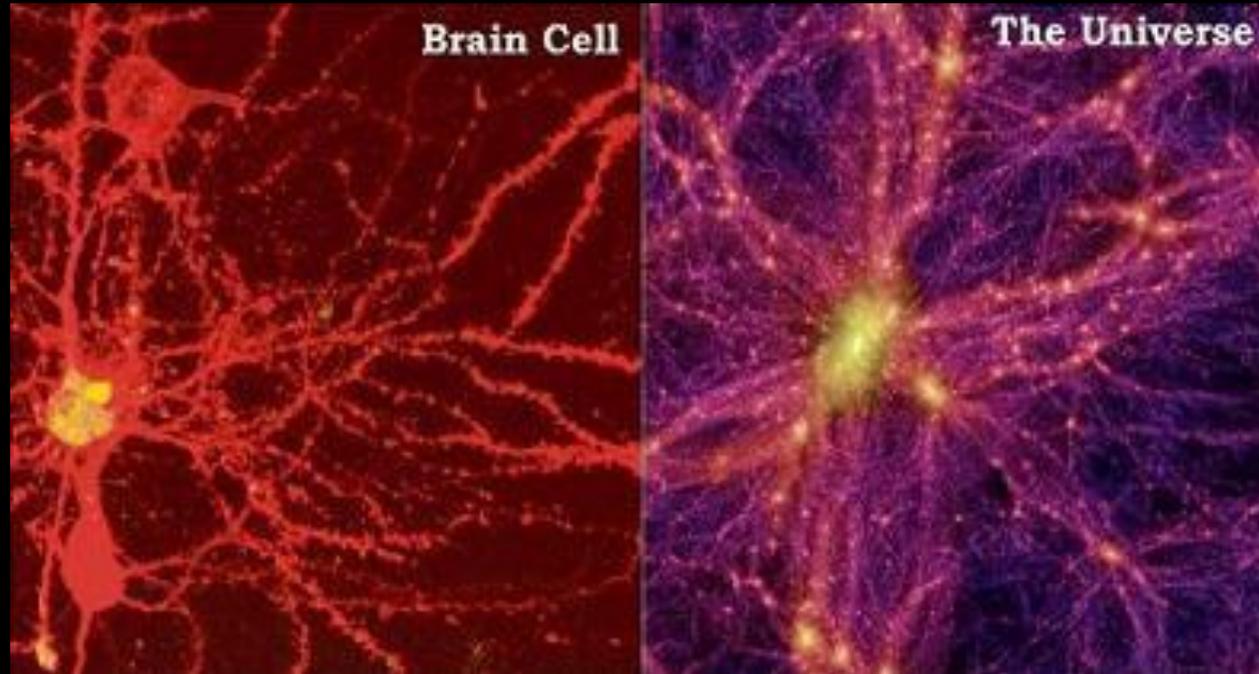
When two or more particles are in Bose Einstein condensate, you can separate them and they will remain quantum entangled.



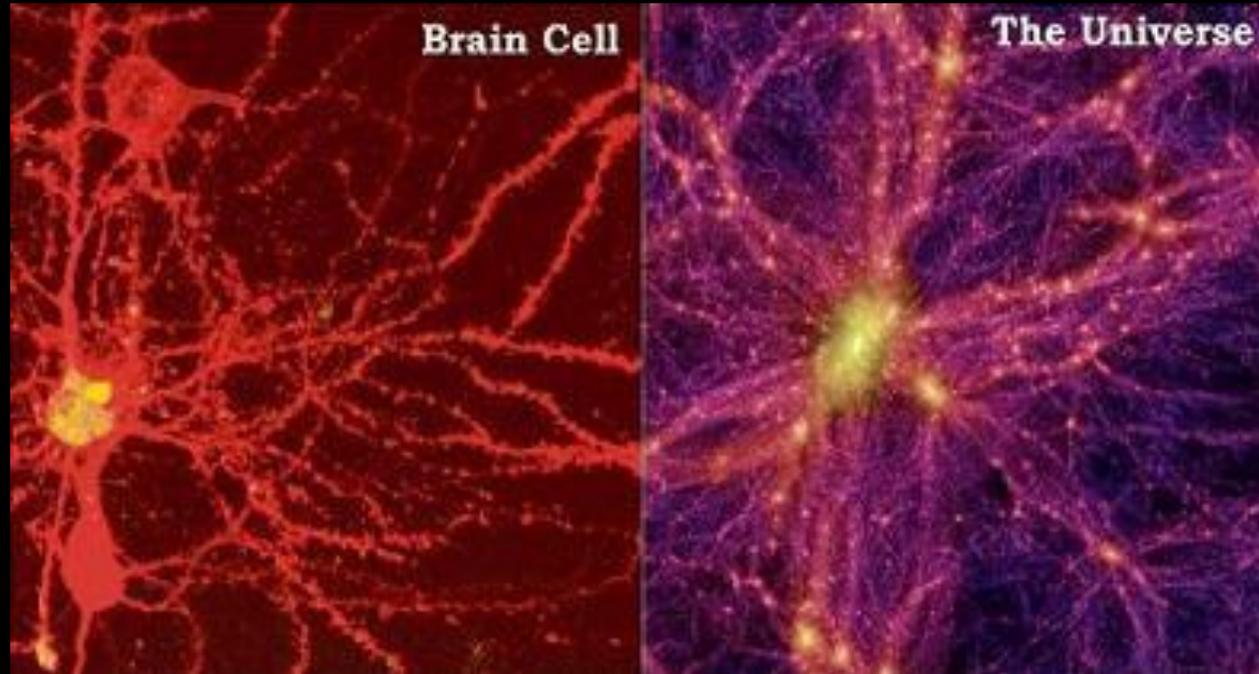
This means that if one is in a different time and space than its entangled partner, a change that it experiences will instantly generate a change to the other particle.



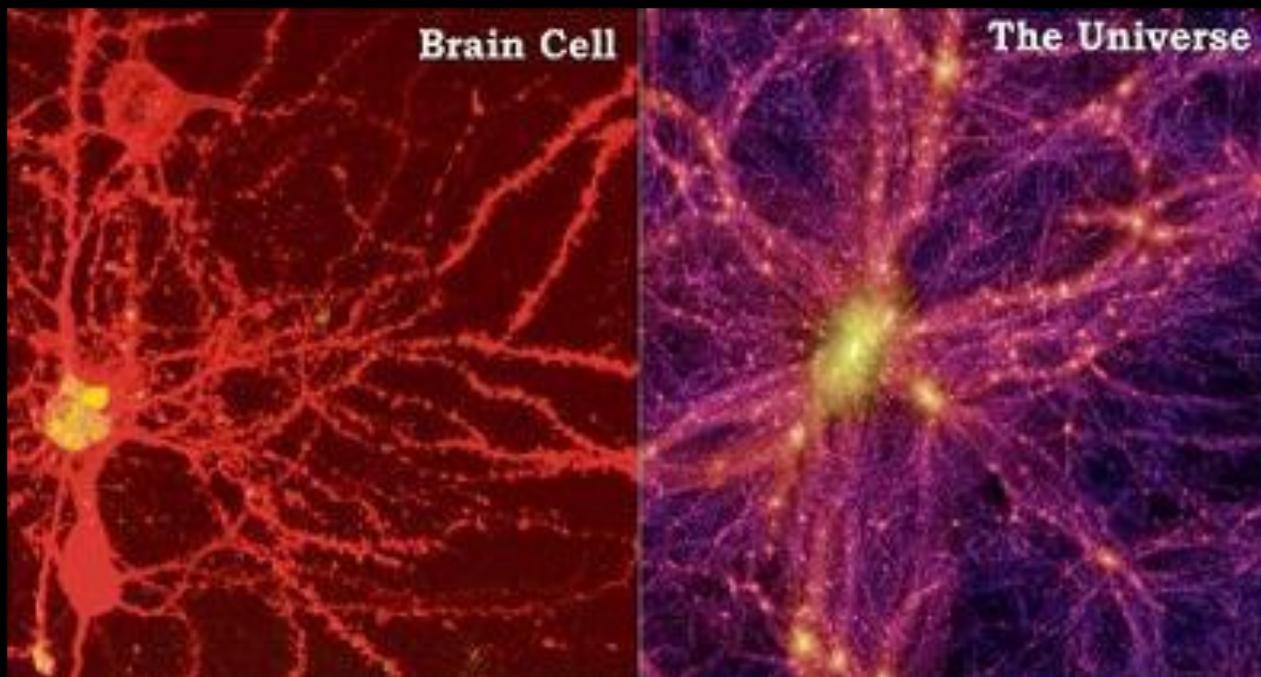
The particles can be separated by light years. The change in one does not communicate to the other in some duration of time. It is instant, as though they are simply two sides of coin, where rotating one side instantly rotates the other.



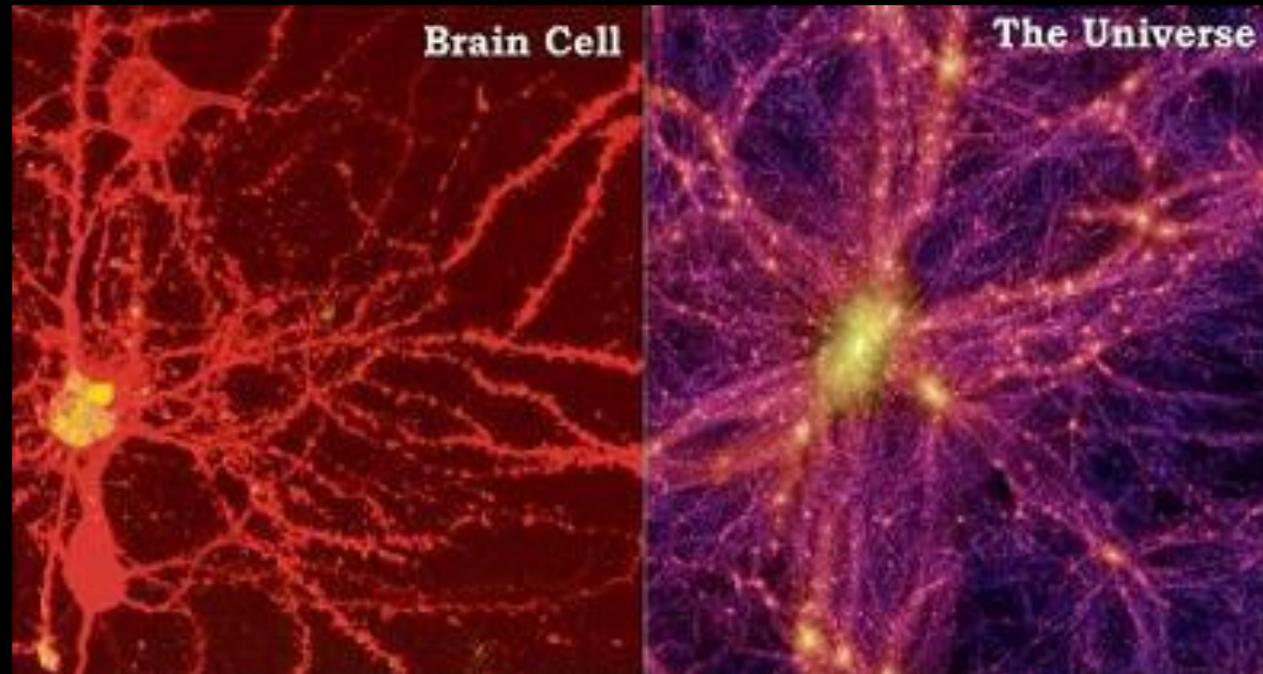
And since all particles were in a Bose Einstein condensate, all particles are likely to be quantum entangled, where changes are occurring simultaneously and where all is highly correlated.



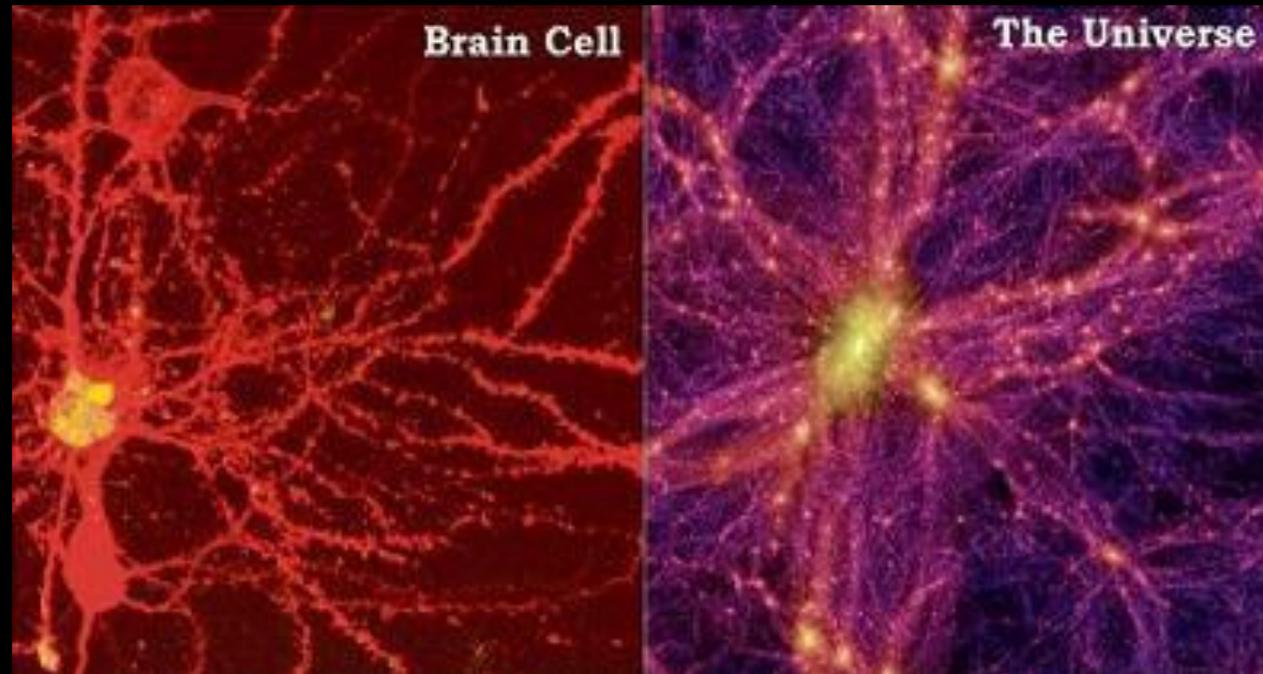
I've proposed two logical ways that a mind-like substrate can self organize in the universe.



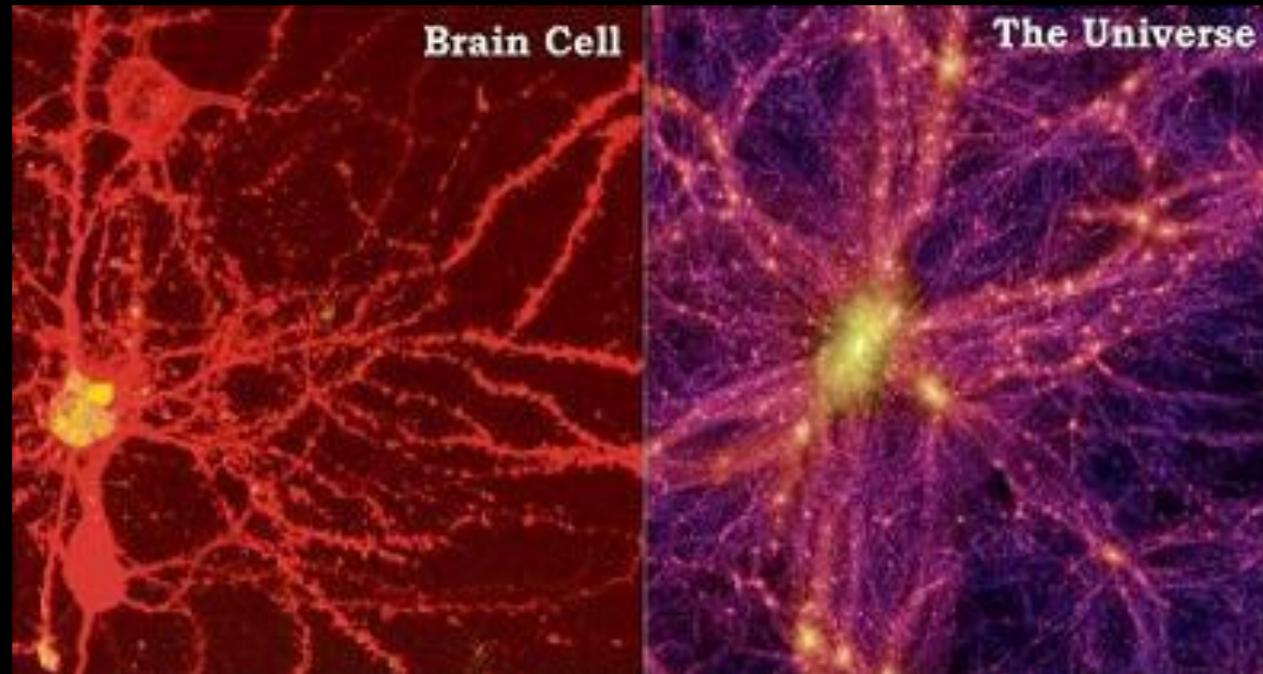
The first was that high consciousness like humans and our descendants spread to all reaches of the universe and fill it in with consciousness, like becoming a sparse sponge pattern of consciousness density at first and then filling in the spaces in between.



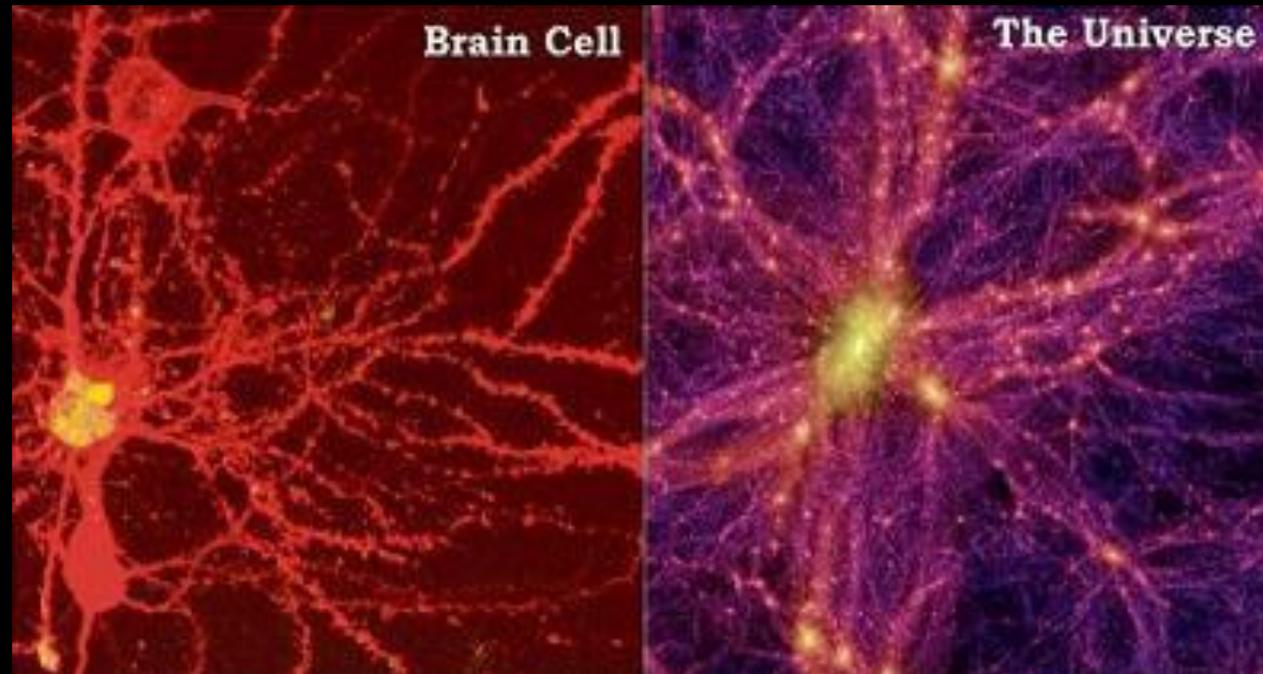
And in the second example, we talked about how every particle in the universe may naturally be neural networked. And where there is a neural network, such as in a human brain, emergent consciousness can exist.



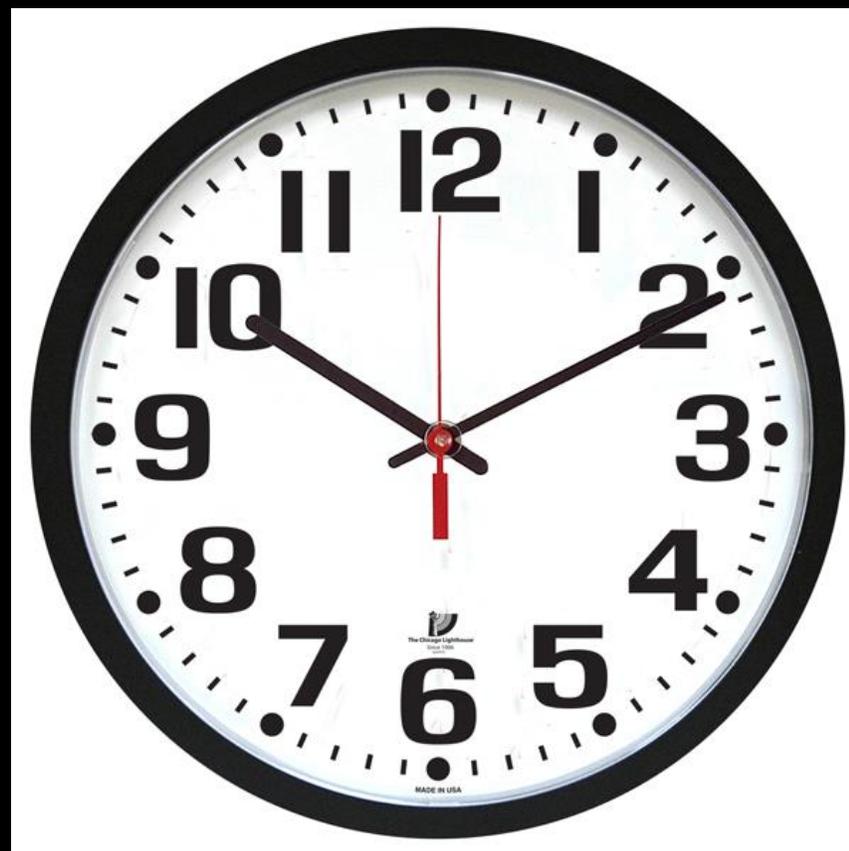
So, what came first, the emergent consciousness or all the information relating to E8 and the simple things that built up through self organization?



Well, if you ask that question, it shows that you believe in strict linear causality. But if linear causality is wrong, it would be a false question like asking which came first the chicken or the egg.



What comes first on the clock, 9 or 3?



The numbers are on a circle. So it's a false question.

