

Following up on the natural state of nature being an infinite succession of nested frames of reference or an infinite succession of pockets of relative spacetime massenergy the implications of accepting this possibility extend much further than explaining the big bang and dark energy. I think we can better understand dark matter, wave particle duality, quantum superposition, among other things if we contemplate for a moment what the implications of a truly infinite Universe means.

It means much more than being able to set two parallel lines in motion in any direction and never hitting the start or the end to the entire Universe. It means accepting that the cosmic speck of dust we call our visible universe is but one of an infinite number of cosmic specks of dust that evolve and revolve and reevolve and rerevolve for eternity at many more scale factors than just the mass energy that is relative to our scale. In doing so I feel we can unravel additional underlying mysteries of science with very logical reasoning. Relativity would in turn define our scale factor that is relative to us as is in fact relative to less of the Universe than the portion of the Universe that does see our scale factor as relative.

Proposition 28

A wave is a movement of energy. A wave can be both a transfer of energy from one point to another as well as a displacement from some state of equilibrium all along the wave.

The relative friction of the displacement from equilibrium that takes place to move the energy along the wave is directly related to how quickly the amplitude of the wave transfers its energy into extending the wavefront as it grows in circumference. The greater the aggregate friction or desire to return to the equilibrium state the wave undergoes, the smaller the sphere of influence that will be measurable.

All waves cause something to displace from a state of equilibrium because that displacement is what carries the energy of the wave.

All waves are mechanical waves and All waves require a medium.

All electromagnetic waves use a medium to travel.

All probability waves of our standard model rely on a medium.

It is the waves themselves that define how energy manifests itself at all different densities of energy and densities of matter and densities of space and densities of time.

The wave is the building block of The Universe. The movement of energy and manifestation of energy, the dual nature of subatomic particles, the EM spectrum, and the how spheres of influence allow the basic forces of nature to drive the behaviors of

mass energy as it intercepts space time are all tied to the mechanics of waves. All we can see and all we can feel are made up of waves of energy.

These waves that make up all we see and all we can touch have a single driving force behind them. All four basic forces of nature share a single core force behind them. All four basic forces, or two basic forces if you accept we really only have electroweak and gravistrong forces, have a single driving force behind them. That single force is the desire of nature to return to equilibrium. The desire of nature to seek out lower potential energy is the driving force behind how the waves of the two basic forces interact to cause repulsion and attraction which in turn drive all other equations and forces and reactions of our universe.

All waves are a form of disturbance in one of the many different equilibriums of our Universe. Heat as great example, travels in spheres of influence in an attempt to seek equilibrium or its own lowest possible energy state. Gravity warps space and time and the denser the tensor mesh strength we can see the lensing occur that we attribute to dark matter. Gravity also travels in waves and is a disturbance in the quantum foam and the quantum foam's desire to reach its lowest possible energy state means the effect we feel of that we label gravity is the Universe's desire to return to a state of equilibrium from the displacements in spacetime caused by the gravitational waves.

I predict we will someday find a form of electromagnetic radiation possibly at incredibly hard to detect wavelengths far below radio wavelengths that will be shown to be highly excited in areas of the strongest tensor mesh. In the areas of space where the intersecting spheres of gravitational waves are the strongest we might be able to locate these hard to find very long wavelength transfers of energy that we attribute to gravity.

At the core of all waves and all movements of energy that make up particles and radiation and all we can see the return to equilibrium is the single driving force of the universe and the wave is the building block that nature uses to accomplish this goal.

Proposition 29

The Universe is in absolute 100 percent absolute chaos and disorder. Random interactions of waves of mass and waves of energy at all different scale factors of densities that follow the basic laws of physics manifested through random collisions and chance encounters where nothing is predetermined regardless of the deterministic predictability of each of the random chance encounters.

Random interactions that manifest themselves instead as a very ordered natural state of nature at multiple different scale factors.

We can see that at a certain combination of the densities mentioned that matter and energy will form a periodic table of elements. Very specific properties manifest themselves tied to the behavior of matter at a very specific scale factor tied to the energy

density and mass density and space density and time density and temperature density and pressure from the shared parent frame of references.

At a different scale of mass density and energy density and space density and time density and possibly heat or pressure we see the probabilistic waves of the quantum world and the standard model.

Proposition 30

We exist inside a dimension of energy that manifests itself in many different ways but it all boils down to waves or displacements in spacetime from equilibrium. Waves move energy as they displace spacetime and in a sense one could say that gravity is nature's desired attempt to return spacetime to equilibrium. The desire of spacetime to unwarp space may be the effect we call gravity. All different spheres of influence of every conceivable frequency and wavelength and amplitude all vibrating and tugging on each other and some also tugging on spacetime itself. Maybe spacetime tugs back.

Proposition 31

When one begins to visualize what it means to have an infinite succession of nested pockets of spacetime massenergy there are likely other tables at other massenergy densities that might define a wide range of different objects with assorted properties. Fixed properties that manifest based on frequencies of waves relative to energy carried at specific scales of time and space.

There could be scale factors where the laws of physics and the pocket's quantum mechanics allow only two possible particles or frequencies to coexist and be stable. Another scale factor might have five specific configurations of mass energy density that can coexist and be stable.

There is a cycle that will happen when specific combinations of the densities of the measurable dimensions are seen across specific pockets of spacetime. At some larger scale there is a repetition of the periodic table and at a certain scale of increasing magnification inside every atom is a smaller atomic layer. Scales of spacetime density where matter and energy take on discreet relative measurements that would repeat and produce the periodic table we are familiar with.

The number of different variations of that table could vary but the core functionality of atomic mass defining physical properties of elements will repeat in infinite succession because our scale factor is no more or no less important than any other scale factor.

These could very likely be hundreds of thousands if not millions of nested pockets of spacetime deep. If each atomic layer is separated by the relative speed at which baryonic matter with mass is seen to move at the speed of light relative to the parent frame that crosses into the next atomic layer it would make logical sense for this type of distinction

to happen. I don't like to use beauty in defense of science but there are times where one could point out the elegance of a proposition and the speed of light would seem like a logical number of nested frames of references needed before we saw the cycle repeat.

There is likely going to be certain sequences in the cycle that are rigid and always follow in a specific succession and there may be certain sequences that can skip a generation or even two and not see any noticeable change in the resulting parent frame of reference.

Proposition 32

Just as children are born into shared frames of reference it is actually their birth that creates the parent.

This is the ultimate paradox. Every frame of reference has a parent frame of reference, but every parent frame of reference is created by the birth and or adoption of children.

A nested succession of parent frames of reference created by collisions of two prior pockets at all different scale factors where the birth of child pockets creates the parent pockets.

Every frame of reference always has a current parent frame of reference and often it is not always the one it was born into.

Parents can drift apart and separate and take some of the offspring with them and new pockets of spacetime massenergy can form.

Gravity will cause pockets at all different scale factors to try to enter into orbits or merge and the tensor mesh at each scale factor would be seen anywhere there are pockets that attract to each other and if their relative speeds are close enough a new parent pocket can form by the children entering into their own cosmic dance.

Proposition 33

In theory the scale factor where our planet and sun move at the speed of light relative to some much much larger parent frame of reference that could be a billion nested frames deep, but that number is a measurement that I don't think any species could ever measure. Assuming an infinite Universe then I guess it could possibly happen, but it would be such a tiny miniscule percentage.

The gap between different scale factors of subpockets can have many factors coming into play but I think what we will find in the long run is that we really have an electroweak force and a gravistrong force and their interactions based on the density of matter and density of energy and density of space and density of time and possibly temperature and pressure produce very specific patterns.

The particles that make up quarks and leptons could be hundreds of trillions of times smaller than a neutrino and would be unnoticed by our best detectors. Bonds even

stronger than the strong force reform any electron if it ever takes on damage and the time it takes could be nearly unmeasurable just as quarks immediately reform as quarks.

But its not a bond stronger than the strong force because it is the strong force. QCD are behaviors of matter that attract at not just the scale factors we can measure but we will find similar behaviors at other scale factors of pockets much much smaller than those we can measure now.

A couple thousand years from now we might have the type of magnification levels needed to take trillions of frames per millisecond at trillions the size of a neutrino because that's the way to find out the properties of the quantum foam's real natural state.

A quantum foam would explain how virtual particles can appear out of nowhere. It would explain how we have the underlying fields of quantum field theory and even quantum electro-chromo dynamics. It would explain in my opinion odd quantum behaviors like superposition that gave rise to the uncertainty principle and Feynman renormalizations.

If electrons are manifestations of quantum foam at discreet points in time traveling in waves, then it explains the wave particle duality that DeBroglie helped visualize. What we see as our standard particles and at the same time the movement of energy in waves of specific frequencies is because the particles move in waves as our entire universe hurls through space time. Because our space and time is not stationary but hurling through space everything is in motion and energy in motion moves as waves.

If instead of actually having a discreet electron it was in fact a wave and the medium where subatomic particles much smaller than we will ever measure in our lifetimes is what is displaced from equilibrium to manifest as an electron or a quark we can see how many quantum anomalies could actually be represented with classical physics. We see excitations in quantum fields being responsible for particles, well those excitations are just waves of energy or displacements from equilibrium in a quantum foam of particles that are each made up of their own quantum foam since every particle of quantum foam is its own pocket of relative space time mass energy.

Proposition 34

Chaos begets order. Random chaos will at specific densities of time and space and mass and energy and heat and pressure behave with predeterminable properties.

We will almost certainly never be able to determine what those levels of separate properties are because we will unlikely reach the level of evolution capable of gauging the orbital period of our Post let alone the orbital period of its great grandparent post and we know we can never peer in deeper than Planck Length.

We might someday gauge the approximate relative axis of rotation and possibly speed of rotation of our Post using parallax if in fact we did find other siblings of our Post sharing the same parent pocket of our universes.

The magnitude of such an accomplishment to be able to peer outside the outermost edges of our Post in all directions and being able to consolidate that information together could take a trillion years.

We (and by we I loosely mean some sentient species that shares our Post, unlikely to be human at the rate we are going) might gauge our speed of rotation someday, but the type of information capture needed to map out our orbital period would be an incredible task.

Some civilizations evolve long enough to gauge their orbital period or confirm their eventual collision path but very few do. I earlier mentioned the very small percentage of civilizations that could ever find out how many nested levels deep we are until the next atomic layer but just the single feat alone of being able to find out if our Post has an orbital period and if so what that period is would be a monumental if not almost impossible task. The chain of evolution that could lead to finding how many nested levels deep we are could take a google centuries and would require a species being able to outlive the eventual end of their own Post and even that Post's parent.

Proposition 35

The human species could choose to try to become one of the rare species that masters space travel and spreads across all habitable environments or it can let our evolutionary path meet a much earlier demise. At each moment of evolution, it is the collective choices of all that determine the fate of our species. We can choose to make it better or choose to foolishly throw it all away.

Evolution can be an infinite process as long as habitable environments can be sustained.

Humans can evolve living on planets, moons, asteroids, manmade vessels, and other celestial objects and we are but infants in the potential evolutionary chain ahead of us. We could evolve for a billion years or five hundred billion years or five hundred trillion years or much much longer if we strive to.

It would take an incredible effort to be able to determine the orbital period of our Post and it takes a very rare set of both luck and planning to succeed at evolving for hundreds of trillions of years but eventually when taking into account the number of other cosmic specks of dust like our known universe there will be a small handful of those that do.

Even fewer will make it to hundreds of quadrillions of years but some would. And that life force that evolves and spreads is what I predict we have to thank for first life on our planet.

Proposition 36

Life can evolve through the atomic layer and what could be minutes for us could be millennia for the next smallest atomic layer.

We already know that the slower you move through space the faster you move through time so at scales billions of powers of ten in magnitude smaller than our Planck length the amount of relative time that passes could be tens of thousands of years for each second of our time.

Given habitable conditions that need not be favorable, life will look for every possible chance to spawn and cross over from inside the atomic layer. That is how first life forms in the deepest layers of our planet and all across its surface and oceans. We will find life in our solar system in our children's lifetimes and maybe ours. Life abounds everywhere it can establish a foothold and is much heartier and smaller than most of us ever realize. If you doubt the diversity of life at the micro level research what there are more of, the number of cells in the average human body verses the average number of microbes that live on or in the average human body. It's an interesting fact to find out that our pocket of spacetime feeds its perception of time to more foreign cells than host cells.

Proposition 37

Mass is the manifestation of energy slowed down enough for us to see it. Energy is the manifestation of mass moving too fast for us to see it. There is no smallest particle of matter and every piece of quantum foam has its own version of a quantum foam at its relative scale factor. Zoom in to the size of that piece of quantum foam so it is as large as the Milky Way galaxy. There will be nested pockets of spacetime massenergy obeying the same basic laws of physics that we see around us. There is no bottom turtle.

But how could we ever hope to prove such a crazy idea. How can there be an infinite number of habitable planets inside every atom? It seems too farfetched to conceive of an infinite regression that goes on forever and a Universe that is eternal and infinite. But maybe there is a simple test. Suppose we intercepted alien transmissions? If we had multiple confirmed incoming alien transmissions coming in that could be found to have no other source but other intelligent life that exists inside of atoms then we could unequivocally agree we are one insignificant scale factor and one tiny speck of dust inside a tiny nothingness of spacetime inside the aforementioned infinite and eternal Universe.

Imagine a civilization able to locate the outside edges of their Post. What would a society that evolved likely do? They would put arrays of transceivers and arrays of receivers along the edges of their universe trying to make contact with any of the other siblings created during the same cosmic collisions that created their Post. Those waves would aggregate just like any other spheres of influence and might be picked up by the smallest bones in the human body. Almost too weird of a coincidence that our ears would be just sensitive enough to hear the symphonies inside silence.

So find two pillows and a quiet room and put the pillows around both ears and spend five minutes listening to the symphony of silence. If you suffer from tinnitus you don't need pillows or a quiet room and can back up my assertion that we can all hear a never ending flood of tones and blips and beeps but there are some much different than others.

We all hear a never-ending flood of frequencies coming out of the atom but most are very faint and very short but then once in a while for some, more often for others, we have tones of slightly different frequency that last 15, 30, and sometimes as long as 60 seconds although my longest has been about 40 or so.

They are not heard by both ears at the same time and each ear is picking up a different barrage of alien communications. Almost none of them are meant for us. It could easily be none of them are meant for us but again with an infinite Universe it is possible there could be a tiny tiny percentage of the times where the longest and loudest of them could in fact have been meant for us. But even I feel that is farfetched and I take most logically possible things at face value.

When on rare cases we all hear that loud tone in one ear that lasts a good 20-30 seconds that could be two thousand years or twenty thousand years because I predict we will never be able to slow the messages down slow enough to decipher them. But someday I predict someone without even knowing how monumental an event has occurred could hear a pattern in the noise that starts in one ear and either moves to the other ear or gets to be heard in harmony.

Those with tinnitus may hear random harmony occasionally but they are most always going to be distinctly separate sources. In in an infinite Universe someone on this planet that had or will or does exist or someone on some other planet will or does or has heard a tone such as this move from one ear to another and someone else has heard them both. There could be someone that heard the tone from both ears for much more than the normal max of 60 seconds and in theory could hear the same tone possibly with a pattern from both ears for days or even weeks. But the sounds always fade away. Some may fade away because they perish and others could fade away because they evolve into our atomic layer.

Before we invest funds into any collider larger than what we have already achieved I propose we put one tenth that amount into researching atomic acoustics. Remove every type of possible noise filter so we can listen to the smallest sounds coming out of atoms and we should be able to build atomic microphones far more sensitive than our human ears and record in as many frames per second at the highest resolution possible and that be a fairly simple way to prove in our lifetime whether our scale factor is important or average.

If we do hear what I think we go out of our way then we need to do the carbon molecule experiment. To hear form two different sides to see if we can distinguish different sounds and then try to hear the sound become one before fading away. With this tests and positive results we may gestimate the timescale factors between atomic layers.

Proposition 38

Tensor mesh time dilation is present at all scale factors because gravity and electromagnetism are likewise scale invariant. Part of the reason for superposition , the

uncertainty principle, and Feynman renormalizations is due to tensor mesh time dilation. The impacts of moving through spacetime where gravitational fields dilate the passage of time are scale invariant. This causes things that our guts tells us should be deterministic to instead be temporarily probabilistic.

Once we better understand the tensor mesh time dilation caused by the electric fields and magnetic fields present in the waves that makes up the smallest particles, we can measure then how different objects will react to passing through those areas of increased or decreased time dilation. With high resolution imaging taking more frames per second at hi-res we may someday see how time dilation occurring inside the quantum realm can help explain the anomalies that seem so otherwise perplexing.

Proposition 39

I feel that our current understanding of gravity has deceived us. The effects that we see that we attribute to dark matter may be related to two separate things. One is the aforementioned quantum foam of high speed particles creating fields of both matter and energy and the other is in how gravity actually works.

We can visualize gravity as the warping and bending of space time and that is a perfectly fine visualization when represented as a 3D cartesian coordinate system overlaid on two dimensions for presentation. But a computer simulation of holographic spheres of influence interacting is the real way we need to visualize the warping of space time.

As our visualization of the localized relative strength of the tensor meshes across our galaxy and universe is better understood we can see how the spheres of influence of gravity are aggregate in nature. Just as luminosity increases when spheres of influence are in phase and how magnetic fields increase in strength when those spheres of influence are in phase, so would the effects of gravity increase when they are in phase.

If you want to visualize in the more generally accepted 2D representation of spacetime warping then think about the strongest points of attraction between two massively dense objects. That shape where the two spheres of influence for gravity intersect puts a greater disturbance from equilibrium at that point and then lower as it gets farther from one and closer to another until it gets closer to one object and then the other sphere becomes negligible.

It is those intersecting points from multiple spheres of influence that increase the amplitude and energy of the waves at those points and gravity is stronger at that point and warps the space time around it tugging on spacetime itself. Because many different spots of localized relative spacetime have increased combined gravitational attraction it increases the aggregate attraction that is felt by all objects that are within the influences of the localized tensor mesh. Each then tugging in a reverberating wave back to the source.

All those points in space time where a specific object's sphere of influence is intersected are all being tugged at in many directions and the total average density of the gravitational strengths determines what final direction the tugs on space time caused by the binding of mass energy to spacetime will pull towards. This aggregate effect is why the outside of galaxies are kept in tow as the entire cohesive frame rotates.

I coined the term Aetheric Density related to increased gravitational strength thirty years ago. In a nutshell let us say we have two 1 kiloton objects in the center of the largest supervoid in our universe as far way from all other matter as possible and place them 500 meters apart. The laws of physics tells us they should attract each other and will move towards each other and could possible collide. They might as they approach find they are moving through spacetime a little differently and might not hit each other and instead pass each other but enter into the centrifugal dance of orbit. There are two intersecting spheres of influence with little else to impact them and so the aggregates impact of all those intersections from the two spheres of influence would produce a very close approximation to Newton's inverse square law of gravitational attraction.

Now lets add in another 1 kiloton object and place it directly in between the other two. Each pulling on this new object and at the same time pulling on each other. There shared attraction to this third object increases the total attraction that either of them felt against the other two. Add two more objects between the two original and the new center so five 1kt masses each 100 meters apart. The total aggregate attraction felt by the two points on the end are increased by not only the extra pull of the three objects themselves but because they themselves are pulling on each other the force between the second most outer objects is also stronger because of the middle object.

I believe strongly we can see this happening in normal experiences. An object that is inside our atmosphere gets pulled down quickly while an object outside the edge of the atmosphere can free fall in orbit. Some if not much of this could be due to friction caused by atmosphere but I think the aggregates attractions of every particle in the atmosphere cause gravity to have a stronger effect. I think we test Aetheric density / aggregate gravity and find these propositions to in fact be true then I think it would have a significant impact on cosmology and astronomy and physics as a whole.

Proposition 40

We already see the end of our universe happening all around us every second of every day. Not only are we experiencing what will happen to our known universe daily but it's happening to every one of us trillions of times every second.

As already stated, every orbit will always have a finite measurable amount of relative mass inside the outer edge of the orbit and an infinite amount of mass outside the orbit no matter the size of the orbit.

All orbits give way to loss of mass and loss of energy over time and spread out. There will be no Big Crunch coming. There is only the Big Freeze to look forward to as the last of our galactic nebula produce the last stars that will eventually die and fade away.

Some dead stars and moons and planets and black holes etc... may someday find temporary homes in other pockets of spacetime and see the light of a star again but even those homes will be transient.

Smaller and smaller pockets of spacetime with less objects and smaller tensor meshes would propagate outwards in all directions as our universe ages. There could be a natural state of nature that decides at certain densities of massenergy and densities of spacetime that the dead remnants of systems group into specific sizes. As an example, some that are like 30,000 large but sparse galaxies acting as a cohesive frame spread apart much further than what we see inside our universe while others could be like 90,000 medium size sparse galaxies and a third that has closer to 600,000 smaller galaxies and the laws of physics at that scale cause a specific grouping into three roughly specific sizes. These guesstimate numbers are just that. A random approximation of what we might see contained inside nested frames of reference that are billions of levels deeper than the pocket of spacetime we call a neutrino.

Proposition 41

If every Big Bang ends up making tiny pockets of massenergy extending in all directions and every sub sub sub atomic collision was responsible for thousands of separate big bangs or tens of thousands of big bangs at scales hundreds of trillions of quadrillions of times smaller than Planck length, then we would expect the natural state of nature to produce a steady flow of tiny particles of specific sizes based on the best resolution we have possible.

Collisions many times smaller than atomic collisions and smaller than neutrinos happen all the time at high speeds under high pressure and neutrinos are expelled. Not just stars expel neutrinos. They come from all atomic collisions. Neutrinos are flowing from all directions not just the sun, but the sun has the greatest number of atomic collisions by far of any other objects nearby and as such provides us the largest number of neutrinos by far. Neutrinos are an indirect byproduct of atomic collisions and increased atomic collisions will spawn a greater flood of neutrinos.

If we could peer into a neutrino and magnify, we would see the three different masses are specific sets of cohesive structures of subparticles obeying specific laws of electromagnetic attraction because all forces including gravity will someday be shown to be different manifestations of how different types of electromagnetic waves interact when they are in partial phase.

To us if we peer in too close unless we can take sufficient number of hi-res frames per second we see vibrating energy manifested as particles. It's the faster moving smaller particles or posts that provide that energy relative to our scale factor.

Proposition 42

There will always be rogue objects traversing relative spacetime flying between pockets trying to find a home. Even when we see the laws of physics dictate the three different masses of neutrinos there will still be instances of other smaller rouge pockets and so empty space will be found to be much less empty than we expect. Inside our Post we can expect to see higher zero-point energy along the strongest areas of the tensor mesh and in the supervoids far from any stars the zero-point energy would be much lower. That energy can be the charges and fields present from objects moving fast or it could be the energy released by collisions.

Neutrinos are not completely passive, and the rouge particles are not either. They can collide with each other and when a handful coming from different directions intersect there is a higher disturbance from equilibrium. This could manifest as zero-point energy if there is the same approximate number of these types of micro collisions.

There would be a decreasing measurement of zero-point energy if someday we could ever reach the edge of our Post and take measurements of zero-point energy every thousand parsecs. I predict we would find

In Summary

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Thank you for your time and consideration.