Dirty Wet Chemical Universal Awakening

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The question of aims and intention, how can mindless mathematical laws give rise to them? Is one facet of a most pervasive topic of our time. The discussions relating the complexity and fine tuning problem. Some might wonder if I exaggerate, and to them I suggest looking at the following topics, and **realize their themes are entirely motivated by the apparent and unexplained complexity of the world**. These topics being prominent in the minds of people, evidences the complexity and fine tuning problem is a most pressing issue confronting our universal awareness.

Common Thoughts

What is the multiverse hypothesis, beyond attempt to explain the unlikely universal circumstances that enabled life to emerge? The answer is, it has proven to be not much more than. It is a mathematical trick of infinities, that makes inevitabilities of the most unlikely. A fascinating possibility and discussion I will not contest, but **don't you think an extreme measure to invent numberless universes, to place an evidence-less band aid over our incomplete universal comprehensions.** Considered within wider scope than reason for invention, it hasn't led too much of use. Nothing resembling a prediction has been demonstrated, precluding it from being evidenced. Neither has it opened line of inquiry, that led somewhere insightful. I know there is **a very persuasive rationale that would make it seem like the only possible answer**, **however it might only seem that way in absence of a correct solution**. It is perfectly fine to speculate, but in light of what it doesn't achieve, don't let it be the reason alternative prospects are neglected.

What is the anthropic principle, if not an effort to dismiss universal complexity as a needless discussion. It discourages inquiry, by suggesting it is unremarkable that this universe has the fundamental constants that happen to fall within the narrow parameters, thought to be compatible for life. It employs circular reasoning, while attempting to add determination to a contested issue. **It might be an answer a bad science teacher invented, to quiet his students ceaseless questioning. The shame!**

Theists most effective argument toward existence of a universal designer, is the complexity fine tuning issue. Science unprepared with a ready and satisfactory answer, is for the most part frustrated in attempts to counter.

More recent and large acclaim to Lee Smolin and Richard Dawkins. They have suggested a process of cosmological selection, explaining for the unlikely nature of universal complexities. I judge you both well. **Darwinian evolution is after all, the only organisational principle of nature known, with a capacity for generating compounded complexities and orders.** Knowing the process of evolution, biology can be said to be a type of complexity which requires an organisational principle. Pure chance would never do, not even fortified with the mathematical trick of infinities. Cast handful of dirt in the air times infinite, an advanced organism will never spontaneously assemble. The question

is, are the physical laws and character of this world, a comparable type of complexity? **Will mere happenstance serve, without need of a natural organisational principle of physics?**

The above speculations are only a few of the many that typify today's discussion on universal complexity. And for which the word "extraordinary" hardly seems unjustified. That these speculations are typical of what people are talking about in their attempt to understand the nature of the world. In my opinion it's hard to overstate, and **qualifies complexity as our most pressing issue of scientific unawareness.** Question of emergent aims and intention from mindless mathematical laws, qualified top of consideration.

Un-obvious Universal Contraption

I recall a television show. The host presents the guests with weird and wonderful unidentified mechanical contraptions, and the guests and viewers attempt to discern the mystery of purpose? It is a much harder time providing answers than you might think, making for a fun show. What strikes me on reflection, is how the contraptions observable mechanics, provided such little clue. However, **the most perplexing puzzles of purpose become obvious having been told**. This might seem like a mild point, but as Columbus so aptly conveyed, "Columbus egg", it might be something to keep in mind while in search of these world answers. The existence of the Americas might seem obvious to those following Columbus, but that is more the nature of hindsight. The Earth being round seems most obvious to us, but only recent of history can you indulge this sense. It begs wonder, could this be the case of our universal awareness, our attempt to discern mechanics of the world, but perplexed for quantum, relativity, cosmology. **For not knowing a simple naturalistic purpose, that would otherwise make this universal contraption obvious.** Could a simple natured universe be unwittingly tricking us? Could a complete knowing of nature be a but a small intuitive step? Could there be a series of well-aimed assumptions that leads us there? A lot of coulds and maybes, but we are indulging an essay, the wonderful mystery of things.

And a word toward caution. **Progression is usually slowed by prior held expectations of what we think we are aware.** There are a number of conventional boundaries that flatly compress the discussion on complexity. Progression is so often the fruit of relaxed preconceptions, so which preconceptions might be relaxed?

Darwin's Contribution

We cannot raise the issue of complexity, without acknowledging a **large portion of the answer provided for. Charles Darwin's discovery of an organisational principle of nature, biological evolution via natural selection.** With this critical insight, we came to know something of how awareness occurred, and therefore the origin of goals and intention. We know that life having been initiated, how the most complex aspects of universal structure came to be. But **the problem that stands in the way of a more complete understanding, is that life exploits and is entirely dependent on the pre-existing potentials of matter**, exampled by elemental and molecular bonds, photon interactions, heat process, chemistry, the properties of mass which give rise to cosmological structures and orbits, planets, suns and galaxies. **This is where the stubborn question of complexity**

still resides. The universal complexity problem as it therefore stands, is that conventional theory of universal emergence, is not ascribed to an organisational principle, that would otherwise explain natures observed structures and interactions. The number and nature of speculations attempting to answer to this question, indicates **we may be missing something important in the mix**.

The question of the emergence of goals and intentions, for the most part **is not a question of how biology achieved it, but rather how a non-biological universal order and structure, achieve biology?**

Before Charles Darwin's revelation, people didn't recognising the question of lifes complexity. The question was beyond a ready supplied answer, God made it that way. Not so for many of this day, for having elected out of religious view. I say this to motivate people, suggesting they personally have skin in the game. And emphasised for **scientists, or those who hold pride in their scientific mindedness, the question of complexity is an open test of our deduction.** There is an astonishing amount of observational progress being presented in the near future, which will test conventional and novel ideas. Odds are, the complexity and fine tuning issue will be resolved. **I suggest you might want to be opinioned on the thoughtful side of the complexity issue**. Do you believe in the complexity issue? How ridged are you on the subject of allowable remedies?

Problems

Aims and intentions, a facet in the complexity issue. The first step in finding resolution, is understanding nature of a problem.

Assumption Toward Resolution

Presume simplicity
Presume everything universal of a common origin and explanation
Presume complexity arises from simpler configurations
presume a universal organisational principle
Presume the observed correlations of nature are entirely non-coincidental clues
Presume the simplest interpretation, but anticipate a story full body textured and flavoured. The universe is grand nature

A theory that - does not answer complexity - answers complexity but nothing else - attempts to dismiss the issue of complexity altogether - **Is a theory bland as watered beer.**

Making Something New of Observations

Space is observed to possess an expansive quality (Auv), and this expansion is thought to be undertaking "work" on the universal state. It has occurred to me that we may be right about dark energies work capacity, but our theories may misinterpret where that capacity is being directed within the universal system? **Auv and Tuv share close value equality, so perhaps dark energy flows**

to mass Tuv, enabling mass as a form of "work" performed by photons. That the capacity to perform this work that is mass requires continual input, that originates with the continual emergence of space. A tidy explanation for Auv = Tuv.

In this respect Auv is a measure of the rate of emergence of a space born regenerative field, and its subsequent conversion into work Tuv. A simplest interpretation of an energy potential, and conversion to force. **This explanation honours the equality known to exist between universal expansion rate and universal value of mass.**

This might seem radical, but it's a justifiable. **Two of the most spectacular measures that can be performed of this universe, share an inexplicable equality.** Deciding they are unrelated might be considered a radical view.

Why then would this system arise in nature? whereby a space born regenerative field would come to give up its energy content, enabling photon animation toward acts of universal work? **That photons would then direct that work towards building atomic and cosmological structures**, such that we observe in the universe today, elements, molecules, planets, stars, galaxies?

It is the nature of a regenerative entity that generational exchange allows for incremental change. **A regenerative field of space being generational of nature, allows for Darwinian of nature.** Darwinian evolution is the only driver of articulated fine-tuned purposefulness known to science. Does our physical world demonstrate an articulated complexity? This may be the complexity problem in search of a natural explanation. **Are peoples eversions to Darwinian physics rational, or is it simply because no reasonable self-consistent hypothesis has been put forward?**

Life on Earth is enslaved to Darwinian progression. If you're not evolving in a competitive environment, then eventually you're going to fall to disadvantage of a something that is advancing its scope for survival and resource. This is essentially the reason life relies on systems of mortality, enabling healthy generational exchange and evolutionary progression. So what I am alluding toward the wider universal circumstance?

Speculating the universe and everything within it **has one original cause, emergent from a simplest configuration and progressed towards a more advanced state.** The space born regenerative field will have emerged first, and at some point within its growing population body it will have experienced self-imposed crowding. It will have needed a solution for clearing prior generations for renewal purposes, facilitating generational exchange for benefit of evolutionary advancement. **The photon emerges from the Auv field for a first time, and becomes a retained adaptation for evolutionary progressive reasons**, providing this universal mortality function. The role of photons will have become important in advancing the regenerative fields evolutionary state.

A real world observation, Auv dark energy is an energy value that is growing in extent. Presumably it's physics and not magic, but what type of physics? Could it be a field exploiting (metabolizing) a natural energy potential of space, perhaps the vacuum? I couldn't know, but let us use vacuum potential as speculative place holder. **Anything capable of regenerating itself could be speculated as doing so via Darwinian replication.** Couple this with the observation of **quark separation, that is**

known to replicate quarks, conceivably new protons, a process of matter synthesis. Clearly it is **easy to implicate both Auv and Tuv, space and matter in processes of regeneration, replication, renewal.** How can this be consideration unremarkable, that quarks display a capacity analogous to biology cellular division via replication? Life having spent time refining singled celled organisms, at a certain level of advancement graduated to multicellular organisms, employing modular efficiencies for building structure. Consider a comparison with quarks building composite protons, that build composite elemental atoms, that build composite molecules and cosmological structures, planets, stars, galaxies. Could this be a comparable example of nature exploiting modular efficiency for structure building? **Auv, Tuv and life each a replicable entity which undergo generational incremental change and progression, in a Darwinian Co evolution with one another.** If the question can be posed, and not immediately dismissed, then the remarkable possibility deserves inquiry?

Auv field and Tuv photon force carriers begin a symbiotic Co evolutionary relationship, whereby the proficiency of one, benefits the other. Photons preform the role of field clearance, metabolize the Auv field and direct its energy potential toward acts of usefully employed work. **They don't stay the same, as photons progressively evolve structure with enhanced roles within the universal system.** The better photons perform their role, the healthier the field, the healthier the field, the more field energy flows back to the photons. **A feedback loop that drives toward ever increasing universal energy levels and fine-tuned purposeful structure**. Properties of matter, mass, nuclear bonds, molecular bonds, heat, chemistry, are various activities that point to photons as cause, building the animated universe we witness.

An interaction whereby one entity draws off another, brings with it various efficiency considerations. Energy density, and crowded loading etc. Could the comparable themes of natural that bring mandelbrot sets to mind, atom compared with solar system, molecule compared with galaxy, have a single cause that transcends extreme universal scales? **Could photons have evolved for building optimised structures, for reasons of process efficiency between space and matter?** Gluons do manifest the property of mass which maintain orbits, solar systems and galactic structure. Electromagnetism does build atomic bulk, spreading atoms across 100,000 times the volume of nucleonic parts. **Could it be that photons have evolved these structures for reasons so humble, essentially the same reason we hang washing out to dry, spread out for increased atmospheric interaction?** Enhanced atmospheric interaction between Auv Tuv, for the purpose of gravitating efficiently. If photon purpose of existence is to metabolize Auv field, then this prescribes a dynamic not encapsulated by (matter informs space how to curve, and space informs matter how to move). An **interaction between space and matter that has implication toward anomalous galaxy motions.** A discussion for another time.

It cannot be said that conventional theory is not brave! **It openly confronts most extraordinary circumstances, that space everywhere is growing in extent.** Furthermore, convention acknowledges something of energy content, for the nature of its kinetic interaction with the material universe. Occasionally you hear question toward energy conservation, no energy created or destroyed within a closed system. Dark energy a cause without prior cause, an intractable issue of physics? **In what respect could the universe be expected to be A CLOSED SYSTEM?** How does this cloud not hang over current interpretation of energy conservation? How many methods of energy creation might it be expected the universe has in its employ? Could it be a multi fauceted system, big bang and dark

energy both? Speculative, but **isn't it worth considering that the universe might only ever have possessed one mechanism for energy creation?** If we observe fundamental emergence of energy in space, then might this not give theorists pause for thought?

What I will attempt to do, is have you view the potentials for dark energy in a fresh light, and realize **there are very few fundamentals required for a system to engage Darwinian principles.** An entity requires an energy potential to exploit, and direct that energy potential towards replicating itself. That's about it.

Darwinian Principles Applied

I attempt to bring people along in abstract reasoning, a Darwinian explanation for our universe.

The broad holistic overview.

Possibly once having had nothing of physicality within, into this space emerges a self-replicating Auv field, which it must be exploits a natural energy potential of space. As a convenient place holder, for now we assume vacuum potential. **The field being replicable, it is automatically Darwinian of nature**, and as it colonizes the extraordinary potential of space, consecutive generations refine their ability to metabolize this natural energy potential that is vacuum. If this was the case, then how might the process unfold? Might there come to resemble the universe we observe? To lead through these considerations, I employ analogy of earth biology. Specifically, a microbe population in a nutrient dish, which trains our mind to Darwinian principle**. I will identify a range of primary Darwinian principles, and make the argument they are likely themes within any case of Darwinian emergence**, not because they are necessarily fundamental themes, but because they are imperatively useful.

Envision an agar nutrient dish that stretches in all directions to infinity, and the nutrient inexhaustible. Into the dish place a single microbe. This scenario serves analogy to Earth habitat, but also to my hypothetical scenario of Auv field embedded in vacuum potential.

Metabolism

The microbe might start out less than ideally suited to the agar specifications, PH for example, however the nature of a Darwinian entity will be to adapt its metabolism to suit. So too Auv field would evolve proficiency.

Divergence of species

The microbe population would eventually be large, extreme points effectively isolated by the distance. Species on Earth which come to be geographically isolated on islands, or continents, leads to divergence of species, as generationally compounded changes accumulate. So too would hypothetical Auv field.

Mortality

Before long the microbial population has grown to such extent, the largest sum of microbes exist within the confines of a population body. Even on an infinite nutrient dish this cannot be avoided. The microbes experience is then of a finite habitat, which equates to the same circumstance of finite habitat and resource on Earth. The problem being, if there is no room for population growth, stalled generational exchange stalls evolutionary progression. **Assuming a competitive evolutionary progressive environment, it is an organism which maintains a healthy state of inter-generational exchange, which advances its adaptations and survival responses**. In a circumstance of finite habitat like the Earth, it is the mortality mechanism that becomes an imperative adaptation. And as I point out, even a microbe living on an infinitely expanded nutrient dish, would not be exempted from this consideration. Therefore neither is a hypothetical Auv field existing within confines of its own population body. **Darwinian systems require a mortality mechanism.**

Life on Earth is made of elaborate molecular DNA, which is comprised of billions upon billions of elemental atoms. So when early life invents mortality, then continues to advance its physical state through eons of evolutionary progression. The result is life on Earth, biological systems employing elaborate body clocks that not only regulate end of life, but billions of cellular deaths and renewals throughout a life time. My point being, life has many mechanisms to govern diverse process, but **a prospective Auv field might be presumed of simpler nature. How would it solve for the mortality function when it doesn't have complex machinery within individual units?**

A Darwinian system without individual unit mortality, might evolve other ways to govern life cycle. A hypothetical Darwinian field might retain an adaptation, that is predecessor of the photon. Original photons might have achieved nothing more than reactioning, extinguish Auv field, enabling field renewal and generational exchange. Now we consider two universal elements Auv and Tuv within a symbiotic Co evolutionary progression. **This hypothetical inter-relationship between space and matter, will undergo efficiency selected evolutionary advancements.** The photon purposed for metabolizing field, so is natural to presume it might evolve structure for directing field energy potential towards useful acts of work. Resulting an evolved photon as universal force carrier.

Do we correspond to the universe observed? The atomic properties of Gluons and atomic electrical structure, the property of heat, the property of mass bringing cosmological structures together. **Nuclear fusion rate seeming perfect calibration, so as to provide enough heat, not to much, to provide stellar buoyancy against gravitational collapse.** Will theory prefer to ascribe such a thing to chance? Rather, perhaps Auv field enabled Tuv photon work functions, naturally selected for efficiency of interaction between space and matter. **Universal structure and action can be prescribed cause and purpose.** And thus we can deduce there is a universal elemental field of space, underlying and enabling the physical reality we experience.

Why a Dirty Wet Chemical Universe?

Wondering towards a Goal, mindless mathematical laws giving rise to aims and intention. **Darwinian evolution cannot be said to be intellectually conspiring towards goals.** However its ability to

eventually achieve aims and intention is not entirely chance, as it actively selects for criteria which can lead to them. This would be true whether talking about biology, or my rather more speculative evolution of universal physics.

You will appreciate my seemingly impossible challenge. Intelligence can only arise if life can arise, and life can only arise but for very particular properties of matter and universal circumstance, exampled in part by elemental chemistry, the bonds that form molecules, **the role water plays for biology on wet worlds**. We understand the process of evolution and the reach for resource that eventuates a giraffe's long neck, or bird's ability to fly. But what possible explanation of Darwinian physics might make wet worlds seem likely in hindsight? **What could possibly be said in evidence of Darwinian physics to forecast this end game?** It would need to give meaning and purpose based on non-trivial selection criteria, that represents a whole and intact story of beginning, intermediate stages, and current state of being. **What it is actually observed to be doing must be what it evolved to do within a Darwinian universal context.** It must be an explanation that makes a natural kind of sense, and not have a feel of being forced.

To this end, why would a Darwinian universe come to express such a pervasive theme for elemental and molecular bonds, and chemistry, **why a wet universe? Because the potential for life is entirely a subject of the pre-existing potentials, that are these bonds of matter.**

If Auv = Tuv corresponds to a Darwinian regenerative field of space, from which the photonic universe emerges for evolutionary progressive reasons, for the purpose of clearing Auv for continual field renewal. Then the purpose of the material universe will be to gravitate and gravitate efficiently. The Tuv photon universe evolving in a Co-evolution with Auv field, forever refining ability to metabolize field energy potential, direct evolving work functions toward useful structure building, optimised for space and matter interaction. **Then why chemistry, why bonds, why a wet universe?**

Assume for a moment, that the macro structures we observe in the universe, galaxies, stars, planets, are optimised for this space and matter interaction. **Then consider the role chemistry and bonds play within the context of building and maintaining these structures**. Rocky planets built of the precursor bodies of comets, glued together with van der bonds, ice water molecular bonds, and general elemental molecular bonds. If elements and molecules could not express bond potentials, then these small bodies would be solely reliant on weak gravitational bonding to maintain structure. Solar systems are far too kinetically energetic to allow this, so if these bodies couldn't be maintained with a more substantial glue, then planet formation would not initiate.

So kinetically energetic is our universe that even planetary bodies benefit from cohesion. Planets form molecular bonded crusts, which are subjected to continual meteorite bombardment, and weather erosion. If the Earths geology is viewed from the presumption that **rocky planets are evolved optimised Darwinian purpose, then the ways in which Earth geology employs chemistry to continually rebuild crust becomes interesting.** Does rock and planetary crust formation enable cosmological bodies to maintain persistence? Continental subduction and obduction processes continually re-forge Earth,s crust in fire. But far most interesting because of possible relevance to life in the universe, the role that water plays in the chemical rebuilding of molecular bonds that cement sedimentary rocks, repair the earth. Seemingly not dissimilar to your repairing cut or grazed skin.

Consider what water is, and what it is capable of doing within this context. **A universal solvent which can impart the lightest of molecular bonds on various elements and minerals.** Pick them up and carrying in suspension, then place them where they solidify sandy rocky aggregates. Or even impart a more aggressive chemical process in the mediation of acidic and alkaline chemical processes, capable of dissolving and resolidifying minerals. The solvent interaction between water and minerals is so exquisite of nature, it is responsible for **mediating the extraordinary array of water enabled chemical bonding's and bond dismantling's, that allow the functions of life to occur.** Life, a most telling example of the levels of complexity, of chemistry and molecular bond forming, enabled by this universal solvent that is water. The implication is, wet rocky worlds like Earth are not contrived with intent, nor purely happenstance, but rather are a preferred universal state within a Darwinian context, the universe has likely spent a great deal of time refining. **Wouldn't it be such a shame to have a dry universe full of chemical potentials, no water lying around to express them.** Or looking at it another way, **could it be mere coincidence the universe is made up of such chemical potentials, and water in abundance capable of expressing it**? Atmospheres, weather, precipitation? We thank rain for its benefit for farmers crops, but could the universe have evolved rain for farming rocks?

It is not reasonable to think that the universal properties we observe are purely chance of origin and purposeless, entirely charactered in but an instant of blinded happenstance. **It is evident for deduction that this type of complexity requires an organisation principle, and there is but one of which we are aware**. The universe progressed photon chemical processes, and bonding potentials to such a high level of advancement, for reasons other than creation of life, but none the less life became possible. **Life came to express aims and intention, in a universe of compounded complexity neither contrived not chance, but Darwinian.**