

Our Emergent Universe

~ Modeling Emergence ~

How can mindless mathematical laws give rise to aims and intention?

This question has two possible starting points. Axiomatically, *a changeless state alone cannot give rise to a changing state*. If you start with only a changeless mathematical realm, it appears to lead to a rational dead end. Obviously, pursuing the other point is suggested. What can we say about ‘aims and intention’? They are a part of the universe’s evolved ability to *reflectively model* itself. As a human being, we inherited the ability to imagine. Imagination creates perspective. Since processing relationships can be objectified, a sense of self-awareness emerges. Therefore by relating to this process, we exist. How can imagination emerge from changeless mathematical laws? This solution requires a new model involving the phenomenon of emergence. Historically, mankind’s imagination has used a reductionist approach to organize phenomena. From this methodology, our standard model evolved. As a process of understanding, it has been very successful. However since it is not whole, *we are probably missing too many pieces of a greater structure for clarity*. My following presentation defends my new philosophical model for the emergence of existence.

The foundation of reality appears to be built on a realm of pure relationships. Mathematics is our language describing allowable relationships and their structural consequences. Mathematical ideas including *relations*, *identity sets* and *fields of relationships* are important concepts defining existence on all levels of complexity. The act of viewing a movie provides a simple illustration of how changeless states can be used to create the illusion of vitality. Changeless reels of movie film alone cannot give rise to the illusion and the enjoyment

of an interesting picture show. The structure of a movie theatre, or some other playing device, must be factored into creating the illusion. However, a movie theatre playing the film to an empty house does not affect vitality. An audience, of at least one person, is needed to reflectively emerge the illusion. The 'movie magic' is created by sequentially projecting a fixed field of relationships onto the movie screen. It is accomplished one changeless frame at a time. However, a model building imagination is needed to collate and give meaning to these relationships. Similarly, the emergent process of existence may require more than just the physical universe and the laws of nature.

As an observer, it is not out of reach to conclude the ability to imagine is an evolutionary improvement over any exhaustive trial and error method. Life itself could be a result of an improved method of organizing and processing relationships to achieve perspective and navigate complexity. Our ability to imagine has elevated the act of processing relationships to abstracting and to organizing our subjective, objective and external realities. Probably, this process evolved simply from a 'me / not me' model. *My contention is we have missed something because we have been too embedded in the process.* Our ability to reflectively model is the key focus in understanding emergence. I believe they are connected. The next step generalizes an understanding of the creative process.

Creativity: synergy as a part of emergence

The idea of synergy is attributed to Aristotle (384-322 BC) in *Metaphysica II*. Simply stated...*The whole is greater than the sum of its parts.* In the language of Attic Greek, synergy means *working together*. Over two thousand years later in the twentieth century, Kurt Koffka restates the idea of synergy as... *the whole is something else than the sum of its parts.*

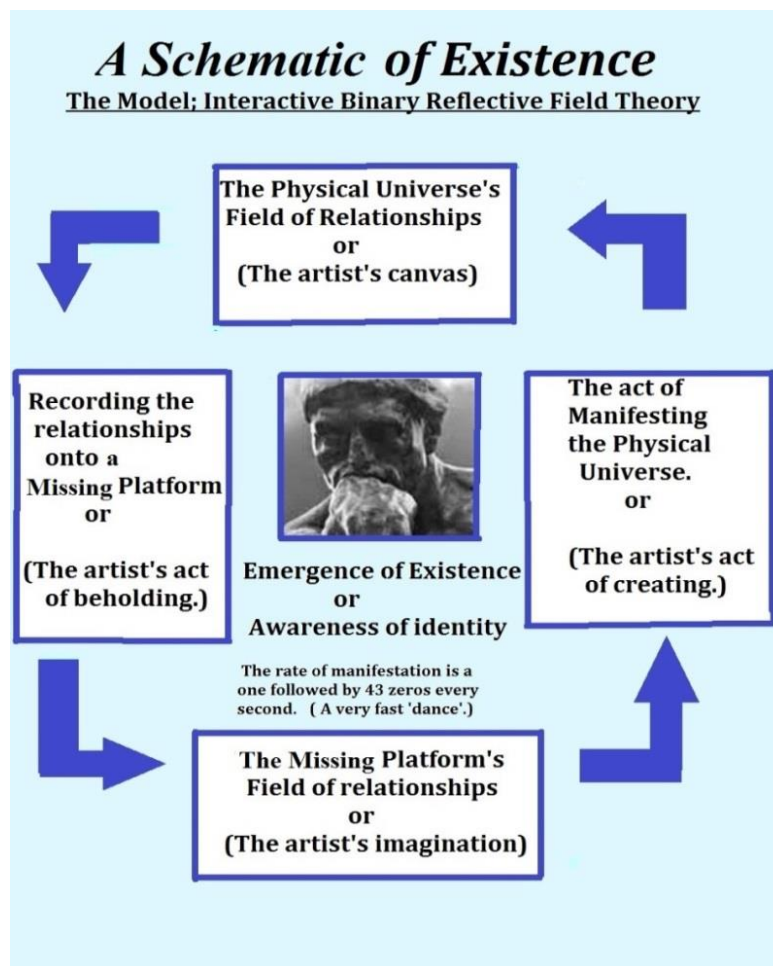
Being of the internet age, I could not resist searching the web. I was pleasantly surprised by the Physics Dude's 'Best Answer' on 'YAHOO's Answers'. It reads... *the parts are organized in a certain way that creates order. When the parts are arranged randomly, they don't do anything. The entropy of the system is the same. But now you re-arrange the parts into some kind of structure that is highly ordered and allows for complex interaction. Then the entropy of the system decreases! So it is not the parts that are so special. It is the organization, the structure, the information that's required to be there for the system to have sustained order and complexity. Hence, the equation is Whole = sum of parts + **information** (working together).* We are now discussing the language of relationships and new rules (laws) abstracted as information. However to my knowledge, no one has ever presented a platform supporting any *laws*.

According to the Physics Dude, Whole= sum of the parts + **information**. He defines information as, *you re-arrange the parts into some kind of structure that is highly ordered and allows for complex interaction... it is the organization, the structure, the information that is required to be there for the system to have sustained order and complexity.* Although an interesting idea, what does it exactly mean? By what method does this order become a rule or a law? How does 'law and order' get projected as a new structure? I propose the answers to these questions are connected to a missing platform of emergence. It is part of a greater process. I call my model Binary Reflective Field Theory. Based on my theory, I believe this missing platform of interactive relationships is essential for emerging the sense of existence in the physical universe. In my model, the missing platform pre-manifests the physical universe reflectively between each of the Planck's moments. The idea of law and order is enforced by means of restrictions on how manifestation can occur. My model settles the question of how all these rules impose order upon the physical universe. They reside in a missing platform as filters or restrictions on

manifestation. I believe synergy is a process in this missing platform's interaction manifesting the physical universe. Emergence is the process of discovering the consequences of synergy within the physical universe. If viewed together, they are the fundamental creative properties for evolving complexity.

My model Binary Reflective Field Theory is a philosophical schematic representation. The missing platform I call a 'co-field of relationships'.

For illustrative purposes only, the words in parentheses are references to the relationship between an artist and a canvas as they function within a binary reflective field. A model is useful to demonstrate specific 'necessary' relationships. Obviously, I make no claim of 'sufficiency'.



Reinterpreting Anomalies in Modern Physics

My ideas offer interesting and useful new interpretations for science. Since our *common sense* lacks true perspective, anomalies in logic result. This change in perspective is radical. My Binary Reflective Field Model challenges science's assumption that we exist in a single platform called the physical universe. I will focus on ten anomalies implying reality is not intuitive. My model's new perspective eliminates these problems in our logic.

- i) **The Speed of Light as a Maximum** - My Binary Reflective Field Model is very different from either Newton's or Einstein's models. The standard model representing the physical universe is of a platform created almost fourteen billion years ago. In opposition, my model is a field of relationships recreated 10^{43} times each second. If you combine this morphing field of relationships with the smallest unit of space, it becomes similar to a fixed and pixelated frame of a digital movie. This makes the universe extremely large. However, the universe may not be infinite. If my theory is correct, a maximum ability to manifest change within the changing field of relationships would be predicted. I believe this maximum ability to manifest is the speed of light. Einstein's mathematical model of space-time fabric could just as well describe restricted relationships concerning how the physical universe can be manifested. The outcomes of both models would *almost* be in agreement. The main difference is a manifested universe model would predict a reason for a maximum ability to represent change.
- ii) **Space-time Continuum** - My model replaces a bending space-time fabric with consequences of a maximum ability to manifest a large but finite universe.

- iii) **Distortion of Time... My Interpretation of the Twin Paradox** - The spacecraft, the environment, the objects and the people contained inside the spacecraft have a maximum ability to be manifested. As the spacecraft accelerates, the maximum ability to manifest must be shared between two different connected manifestations. First is the act of manifesting a change in the speed of just the spacecraft. Second is the act of manifesting changes within the spacecraft (i.e. time, people and objects). The distortions, slowing of change and compacting of space, are explained as consequences of a maximum ability to manifest. Additionally, my model explains the incompatibility of relativity and quantum theories. The two theories describe two entirely different platforms or realms.
- iv) **General Relativity** – This theory currently predicts black holes have a pole singularity at their centers. My model predicts a removable singularity due to time distortion. Manifesting the black hole is distorted in time. Information about the core of a black hole is preserved within the universe's co-field of relationships.
- v) **Energy and Matter Being Related Only by the Speed of Light** - Einstein's model states, on a fundamental level, energy and matter are only different manifestations of each other. They are related by $E / c = m \times c$. Interestingly, the relationship is so simple. Both sides of the equality only use the symbol c ...the speed of light. Why the speed of light? There must be a connection between the act of manifesting and the fastest change that can be manifested in the physical universe.
- vi) **The Physical Universe Being Quantifiable** – If you assuming my model is correct, the universe would need to be quantized. Manifesting infinities would be impossible. In the quantum foam, the idea of a space and time continuum loses meaning. It is outside of the field of relationships defining the physical universe. If there is only one platform of

existence, where and how does the order emerge that tames this monstrous abyss? At this point, my model proposes a possible solution to the problem. Building blocks of random complexity seem to pop in and very quickly out of existence. These are called virtual particles. A Binary Reflective Field Model would interpret these particles as background noise of a manifesting universe.

- vii) **Heisenberg's Uncertainty Principal** – His principal states the universe cannot exhibit or manifest precise information about both complementary variables at exactly the same time. As one attempts to measure one of these properties, the other property becomes predictably fuzzy. The reverse is also true. One cannot bring both exactly into measurable focus at the same time. If unable to manifest information exactly, what does this 'whack-a-mole' characteristic say about a larger structure manifesting the physical universe? This window into the 'nuts and bolts' of existence is a clue. The physical universe might be a manifested projection of a larger system. The Heisenberg uncertainty might just describe the fringes of its ability to manifest competing relationships.
- viii) **Schrodinger Wave Interpretation of Quantum Physics** - The Binary Reflective Field Model provides a more intuitive interpretation for *a probability of being*. My contention is quantum physics has crossed a transitional boundary between realms. The realm of quantum physics explores both the indeterminate possibility of manifesting and explores the limits of the deterministic measurable aspects of manifesting. These variables, interpreted as *probabilities of being*, now makes sense in a pre-manifested state.
- ix) **The Double-Split Experiments** - *One cannot separate the experiment from the experimenter. They are both connected.* The illogical interplay of morphing solutions to these series of experiments begs for a model of the physical universe being manifested.

My model provides a clear understanding of what it means for pre-manifested things to be both particles and / or waves. In models of the physical universe having but one platform, the idea of things morphing requires magic. A photon is either a wave or a particle. It seems impossible to say the fundamental relationships are conditional on how the experimenter tries to trick the universe. The electrons, the equipment, the experimenter and the intent are all factored into the act of manifesting. My manifesting model allows the outcome to change.

- x) **Space Being Non-local** –Based on the experimental result of space being non-local, how can we rationalize Einstein’s requirement that nothing (including information) can travel faster than the speed of light in the physical universe? If the explanation is restricted only to the physical universe’s platform, there can be no explanation. However if the physical universe is manifested, the information pertaining to entangled particles does not have to travel from one particle to the other in the physical universe. The transference of information takes place in the binary reflective fields or co-field of relationships. Both statements are correct. Information cannot travel faster than the speed of light in the physical universe. Entangled particles instantaneously manifest changes to their states. Since this information is processed outside of the physical universe, the first statement does not violate the second statement.

Further Implications of a Binary Reflective Field Model

- i) The emergence of self-awareness, on many levels of complexity, is more than assumed. The act of restricting relationships by rules, information and laws creates

complex structures. This occurs both in the physical universe as generalized colonial organisms and in a co-field of relationships as corresponding new relationship categories. These categories form nested hierarchies of relationships.

- ii) The physical field of relationships has consequences of structure. The co-field of relationships mirrors the physical. This allows freedom to explore relationships without the same consequences. From this interplay, emerges the ability to imagine.
- iii) In this interpretation of co-existing, everything has existence on both platforms. From this creative process, emerges the unexpected. All relationships are preserved within a co-field emerging from a universal hierarchy of identity sets. (Reference work on Rupert Sheldrake's Morphic Field Theory) The creative process grows complexity and new category realms. It might not *just be your imagination* anymore. The imagination organizing relationships in the physical universe, *to be more than the sum of their parts*, could possibly be an important part of a universal creative process exploring relationships. If complexity emerges a sense of vitality in the physical universe, perhaps a sense of vitality may co-evolve upon the co-field. This raises the possible interpretation of a living universe. The concept of personal identity could be interpreted as curatorial and serve an organizational purpose within the preservation of all relationships. This possible function could be construed as an afterlife. The frameworks of my model provide the bridge between other seemingly disconnected phenomena. For many reasons, I believe in my model. However, they are outside of the scope of this essay and length requirements.

This is my abbreviated (nine page) proposed explanation, Graham W. Cookson (2017).