Irreducible - a book report

The title of the book is actually *Irreducible: Consciousness, Life, Computers, and Human Nature.*

Introductory material

One of the best books on Quantum Physics issues of consciousness and related topics comes from Federico Faggin in his new book, *Irreducible*.

[It seems the more we see of our contemporary physicists, the more they are coming into alignment with *The Urantia Book* text. This book, published in 2024, is by an outstanding scientist who is challenging current quantum physics concepts. Refresh too.]

The author offers a fresh perspective on today's ideas and concepts of quantum physics, exploring their connection to consciousness to a new level. To me, this approach reflects a more realistic view than some other authors on the subject. It does this by taking us to the very core of consciousness to explain these ideas.

For example, in his introduction, he says, *"If we start from consciousness, free will, and creativity as irreducible properties of nature, the whole scientific conception of reality is overturned. In this new vision, the emotional and intuitive parts of life—ignored by materialism—return to play a central role. Aristotle said: 'To educate the mind without educating the heart means not educating at all.' We cannot let physicalism and reductionism define human nature and leave consciousness out from the description of the universe."* (p. 16-17)

His thinking, which is reflected in the book, started with an idea: Could a computer be a conscious thing? Then reflecting on the nature of the attributes of awareness, he *"… recognizes the big obstacle: the complete lack of understanding of the nature of sensations, feelings, and emotions, what philosophers call qualia. No matter how hard I tried, I could not find any way to convert the electrical signals of the computer into qualia, because qualia belong to a different kind of reality with no apparent connection to symbols. It was like trying to transform the feeling of love one feels for a child into a computer program."* (p. 8-9)

A sort of epiphany hit him in 1990 in which he realized, suddenly, that as he felt a powerful rush of energy that emerged from *"…my chest like nothing I had ever experienced before and could not even imagine possible. This alive energy was love, yet a love so intense and so incredibly fulfilling that it surpassed any other notion I previously had about love. Even more surprising was the fact that the source of this love was me. … Then suddenly that light exploded. It filled the room and expanded to embrace the entire universe with the same white brilliance. I knew then, without a shadow of a doubt, that this was the substance out of which everything that exists is made. This was what created the universe out of itself. Then, with immense surprise, I recognized that I was that light!"* (p. 10-11)

This experience held an unmatched truth because it felt sincere at every level of his being. … It represented a form of direct understanding, more compelling than the certainty given by logic; a knowledge arising from within rather than external sources, engaging all aspects of my consciousness: physical, emotional, mental, and spiritual. (p. 11)

From this beginning, he began to synthesize his ideas into a coherent concept of consciousness that penetrates, not only all of science, including quantum physics, but all of

life, as broad as it can be understood and beyond. *"As I progressed in my study, I gradually realized that, if we hypothesized that consciousness and free will are irreducible properties of nature, the scientific vision and narrative of reality would radically change and legitimize a profound spirituality, with unexpected consequences for both science and spirituality."* (p. 43)

One of the greatest paradoxes in quantum physics is that reality's existence is revealed through interactions with observers, who are inseparable from the same reality. Additionally, the notion that reality exists independently of observation (realism) is false." (p. 44)

Famous physicist, Werner Heisenberg, Whose quantum uncertainty principle is "apparently a fundamental limit on how much we can know about the world." (Richard Webb, New Sceintist website) said: *"The idea of an objective real world whose smaller parts exist objectively in the same sense as stones or trees exist, regardless of whether we observe them or not…is impossible."* And John Archibald Wheeler, a prominent American physicist known for his contributions to general relativity, nuclear fission, and quantum mechanics, and he popularized the term "black hole," tells, *"The term 'observer' should be replaced by the term 'participant."* (p. 44)

I like this term because it embraces every sensation of our bodies and mind, and can include spirit.

The author asks us, *"What proof do we have that we perceive reality as it is? How do we decide that something exists and has certain properties worth exploring? How do we determine that a particular search makes sense? … It always starts from our conscious experience of the world and from our inborn desire to understand and to imagine, together with our ability to reason. This allows us to make assumptions about what the "objects of reality" are and how they interact. We do this by replacing physical objects with mental abstractions, and then constructing theories that attempt to explain our experience by making predictions that may or may not be verified. In the event that the predictions do not correspond to the experience, we must go back to where we went wrong and change something. Discovering and fixing anomalies is what often allows us to make progress."* (p. 44)

The Classical notion of the world is that it is **materialism** that controls the mind. *"The mind … is considered epiphenomenal because only matter can influence reality.* ***Idealism****, on the other hand, is a philosophical monism that supports the idea that the mind is fundamental and that matter derives from mind. Hence, the mind 'commands' matter."*(p. 44-45) This lines up with *The Urantia Book*.

There is another perspective where mind and matter are seen as two inseparable aspects of the same reality, akin to two sides of a coin that cannot be separated. This view aligns with a form of panpsychism. It resembles the wave-particle duality in quantum physics, representing two complementary, irreducible aspects of a single entity. The author believes that the universe fundamentally contains the potential for both mind and matter. (p. 45) This is another parallel with *The Urantia Book.*

Our reasoning is formalized through an axiomatic system like Euclidean geometry. This method allows us to logically prove a sentence's truth from a few axioms or postulates. In mathematics, the objects and axioms are based on our intuition, which remains a mystery. *The Urantia Book* tells us our intuition comes from our Universal Mother Spirit. *"The axioms are statements assumed to be true without proof, because they are held to be self-evident. But would an axiom be self-evident to a monkey or to a computer? When we believe that 'A' is self-*

evident, we assume that the way we imagine or perceive A corresponds to reality. This is an understandable position, but it could also be wrong." (p. 46)

The author goes into a chapter on the nature of machines, specifically computers, and follows up with a chapter on the nature of information, which is worth studying.

Information meets consciousness

The core concept of Information involves a relationship between an 'observer' and an 'event' conveying 'information'. An event is a sign carrying new knowledge, but if the observer already knew the event, it only confirms existing knowledge. If the event enhances understanding, it transmits information. Hence, the conveyed information depends on the observer's current knowledge. (p. 78)

Information isn't a physical thing that we can easily measure, like the mass of an object. So, it's generally impossible to talk about the amount of information an event transmits in absolute terms, because it depends not only on the event but also on the observer. In fact, the same event can mean different things to different observers. Additionally, even for the same observer, the meaning can change based on their circumstances.

Meaning, to an observer, can be "*… the subjective nature of the meaning arising from objective events, and it also highlights two types of meaning: objective and subjective. The objective meaning is the formal meaning of a sign, i.e., the meaning that is conventionally shared by a community, by agreement. On the other hand, the subjective meaning is the specific meaning that the sign carries for a particular observer. The transfer of subjective meaning is conditioned by the perception and recognition of the conventional (objective) meaning of the sign."* (p. 79)

The author introduces us to the idea of "**live information,**" a new concept suited for the kinds of transformations that happen inside cells, where matter, energy, information, and meaning are interconnected.

"Currently, we mainly know the function of coding DNA, which is about 1.5% of the total human DNA and specifies the structure of about 21,000 proteins. The remainder, or 98.5% of it, was until recently called "junk DNA," because it seemed to perform no useful function. How is it possible that life has been so wasteful and unintelligent as to maintain such a cumbersome and useless legacy in every cell?" (p.91)

He makes the case that consciousness and free will are quantum properties of nature that cannot exist in a classical computer system, because they emerge from the quantum entanglement that does not exist in classical physics…. Attributing consciousness, comprehension, and free will to robots and AI systems is, therefore, misleading and dangerous.

In a section on page 99 called *"information meets consciousness,* our author tells us this story.:

"… [O]n 26 September 1983, in the midst of the Cold War, the world was saved from nuclear disaster thanks to Lieutenant Colonel Stanislav Petrov, who did not trust the data sent by the satellites announcing the imminent attack of atomic missiles launched by the USA against the Soviet Union. "I was an analyst, I was sure it was a mistake: my intuition told me." Convinced it was some error, Petrov did not communicate to his superiors that an attack was imminent, and he saved the planet. "Maybe I decided this way because I was the only one who had a civilian

education, while all the other employees were soldiers used to giving and following orders." (p. 99)

The author goes on to say, *"When a human being behaves unconsciously, he seems to act like an automaton, but with a fundamental difference: there is a subconscious 'presence' that can intervene and involve his full consciousness when he recognizes that the body is about to make an important decision."*

[As an aside, this story cropped up in Jim Cleveland's book, *The Teaching Mission: A New Foundation of Spirituality for a Quickening Planet* (page 446), same date, same person. I quote:

"In September, with alerts heightened after the Korean airliner went down, the Soviets had launched a brand new eye-in-the-sky surveillance system called OKO. It was very new, and when it indicated on September 26, shortly after midnight, that the U.S. had fired its intercontinental Minuteman missiles and a nuclear attack was underway (as expected), it posed a frightening dilemma for Lt. Col. Stainslav Petrov, the duty officer in charge of the surveillance satellite.

"Petrov waited for several agonizing minutes without signaling the alarm, painfully waiting for radar confirmation. It did not confirm, and the duty officer decided on his own that the new system had malfunctioned and given a false warning. Those few minutes of nuclear nightmare ended Petrov's military career with a nervous breakdown. He reportedly received a small retirement home outside Moscow and did not have to wait his turn to get a telephone."

The book goes on in detail regarding the circumstances around this episode and its connection to the Urantia community, whose players included, at that time, George Bernard of the 11:11 Progress Group, Buzutu, a secondary Midwayer, and Vern Grimsley, who had received messages from his, perhaps, superconscious (i.e., his Thought Adjuster, perhaps, or other celestial being) to "*Be prepared for World War III*." It was this event that created a schism between the Chicago-based Urantia Foundation and the Grimsley's California-based Family of God organization, a split that has yet to be healed.

This information became unclassified much later.

Jim's book goes into great detail regarding these early times of The Teaching Mission's history.]

In the chapter on the nature of life, we read, *"To explain the remarkable autonomy and the intentional and intelligent behavior of living organisms, we must assume that each of them is 'connected' with a conscious entity with free will. Consciousness is the ability to have an inner experience and know oneself, while free will is the ability to choose how to act in the world.*

The concept of free-will action involves both subjective and objective facets, similar to live information. The subjective side reflects the intent, purpose, and experience of the conscious entity guiding the organism in external reality. The objective facet results from the organism's learning process, which is 'supervised' by consciousness and free will, leading to the

development of stereotyped behaviors. These behaviors become part of the organism's autonomous repertoire and occur with a certain likelihood that can be predicted by an external observer. Nonetheless, the presence of consciousness and free will enables the organism to modify learned behaviors creatively and unpredictably when necessary. (p. 116)

In the chapter on The Nature of Consciousness, we read, *"True intelligence is intuition, imagination, creativity, ingenuity, and inventiveness. It is foresight, vision, and wisdom. It is empathy, compassion, ethics, and love. It is the integration of the intuitive mind, the empathic heart, and courageous action. In other words, true intelligence is not separable from the other properties that make us human and that require consciousness and free will. It is the ability to comprehend and make unexpected, creative, and ethical decisions. Machines will never be able to do these things …."* (p. 151)

A good portion of the book deals with the differences between living intelligences and machines, such as computers and artificial intelligence.

Having laid a groundwork for discussion, the author, in Part Two, then addresses the more difficult aspects of our consciousness. He begins by summarizing "… the fundamental problems that are still unanswered ….:

Fundamental problems of quantum consciousness

1. The problem of creation: Why does something exist instead of nothing? Where does the universe come from? Has it always existed? What is its purpose?
2. The problem of order: Why is there order instead of chaos in the universe? How has the universe evolved and why?
3. The problem of life: How did life emerge and why did it evolve?
4. The problem of consciousness: How did consciousness appear in living beings, and what is its purpose?
5. The problem of free will: Does free will exist in conscious organisms? If so, how does it fit with physical laws, and what is its purpose?

And then tackles each one.

As to the process of evolution, the author finds that there are four nested levels: First, the emergence of the inanimate world; second is "inside the first," all living organisms; the third is "inside" the second, all conscious eneities; and free will consitutes the fourth, which is "inside" the third. *"And a similar structure also applies to the laws that govern each level. … I think the only problem of the five that can never be solved is the problem of creation. The beginning of the universe, assuming there was a beginning, is something that is beyond the reach of our minds…."* (pp.159-160)

Carlos Chagas Filho, medical doctor, biologist, and scientist, states: *"I think science is starting to stumble when it comes to what we call the first cause. The scientist who is sincere and who wants to go to the bottom of his rationality knows that there is a moment in which he cannot go further. This is the moment of intertwining between science, philosophy, and therefore theology."* (p. 160)

Our author continues: *"As for the second problem, … physicists believe it can be solved by assuming that the inanimate universe evolved according to immutable laws that describe what happened. Therefore the laws are a second miracle that is even more problematic than the first because the nature of laws is completely external to what they regulate. In reality such laws*

‘command,’ because nothing can happen that is not ‘described’ or ‘predicted’ by them.” (p.160)

As for the issue of the creation of life, *“… it actually consists of two mysteries: How did inanimate matter self-organize to form the first living cell out of which the entire ecosystem emerged? And, how did cells manage to self-organize into a variety of multicellular organisms of unbelievable complexity? I point out that, in both cases, life went in strong countertendency to the disorder that is evident in the inanimate world, as consecrated by the Second Law of Thermodynamics.”* (p. 161)

Our author *“… it is hard to believe that consciousness and free will could emerge from organisms that are devoid of them. In fact, between unconsciousness and consciousness there is a qualitative leap so gigantic that it cannot be bridged by the gradualism of neo-Darwinism, especially in a world that is fundamentally quantum.”* (p. 162)

His example is that the electrical charge of an electron is a quantized property with the same value for all electrons. An electron with an arbitrarily small charge does not exist. Protons have the same magnitude of charge as electrons, but with a positive charge. The electrical charge of any large object is therefore an integer multiple of this elementary charge. Therefore, for consciousness to arise from inanimate matter, there must be at least one elementary particle with a minimum 'quantum of consciousness.' Without accepting this hypothesis or an alternative explanation, the shift from unconsciousness to consciousness requires a fourth miracle. (pp. 162-163)

Miracles upon miracles, which is okay, understanding that a miracle is but something we have not yet understood its mechanism for coming into manifestation.

Free will? It appears to conflict with the idea of immutable laws—fundamental to any physical theory—leading most physicists to believe it does not exist. This makes the fifth problem especially complex. Furthermore, if free will isn't essential for the development of life and consciousness, why does it exist in humans? All of this contradicts our strong intuition that we have free will, despite it being heavily limited by physical laws. (p. 163)

Physicists address the problem of creation by proposing the existence of a Field with all the necessary properties to transform itself into matter-energy and spacetime through a fundamental Law. This Law, also postulated, governs the interactions between the Field's emergent parts. This approach resolves the issue of order via this Law, considered the second miracle. According to quantum physics, the Field is ontological, and the immutable Law explains the dynamic interactions within it. Despite recent scientific progress, however, we still cannot dismiss the four miracles described earlier.

Here, the author thinks we need a new paradigm. And, here also, the author comes up with a new word: **Seity**, a special quantum system.

The Seity

The author describes a seity as a self-aware entity capable of free will. It possesses a distinct and lasting identity because it recognizes that its conscious experience is uniquely its own, allowing it to control its experience. Self-awareness goes beyond mere consciousness without identity. I refer to quantum entities that are conscious but lack self-awareness as thoughtforms. Thoughtforms are unaware that their experience is theirs, so they cannot steer their actions and experiences with free will. (pp. 171-172)

According to our author, a seity is a pure state field existing within a larger reality beyond the physical world that contains the body. It exists independently of a physical body, which is a vital point because it indicates our existence doesn't rely on the body's presence. The body merely enables the seity to perceive and interact within the physical realm, which is just a small part of her broader reality. While the body can be described by matter-energy within spacetime (3+1 dimensions), the seity goes beyond this form of matter. The physical universe, as we understand it, is a 3+1 dimensional projection of a quantum reality that encompasses many more dimensions than spacetime. (p. 172)

Free will involves choices from within that cannot be predetermined by algorithms or mathematics, only understood afterward. Experience isn't a mathematical equation or simulation but known through firsthand living. In the quantum realm, each seity perceives the world differently and freely chooses which symbols to interpret and communicate, making each subjective experience unique. This also impacts the objective description of reality, as each observer's frame of reference influences their perception, causing descriptions to vary with shifts in perspective. (p.173)

Free will

The author thinks a new postulate is in order. How else to explain what reality and consciousness and free will are, and how they work together?

This new postulate is from *"… the hypothesis that the holistic Whole contains not only the seeds of the inanimate universe but also those of free will, consciousness, and life. This is the first miracle we must accept and, in this framework, it is also the only one." He calls this "Whole, One, to distinguish it from the unified field of physics, because from One emerge the conscious fields with free will, the elementary seities …., rather than the inanimate fields of the elementary particles of physics that interact in accordance with preestablished laws."* (p. 175)

While the author goes on for a considerable time talking about the seities and all the stuff that relates to them, which we can forego at this point, and move on to more valuable information as it relates to our lives and *The Urantia Book*.

"Everything we perceive in the universe was initially envisioned in the consciousness of the seities because classical reality follows quantum reality, not vice versa. And quantum physics follows quantum information, which in turn represents the thoughts, desires, and conscious experiences of the seities. … This new starting point can also solve the problem of order (the second miracle of physics), because the laws of physics must emerge from the core properties of One, which include consciousness, free will, and the creation of the CUs (consciousness units, or seities). Thus, we can eliminate all other miracles from physics." (p.176)

The existence of free will presupposes that physical laws arise from the agreements between the seities that communicate. These laws act as constraints on free will, yet their existence does not negate it, because without free will, forming the agreements that created these laws would have been impossible.

This conceptual framework suggests that laws develop organically, similar to how we, as children, created games and then followed the rules we set ourselves. Obeying these rules does not oppose free will, as they were intended to allow space for the participants' creative choices.

The existence of free will depends on the extraordinary property of quantum entanglement, which enables a becoming universe where the future is shaped not solely by laws but by the free will and creativity of interacting entities. Entanglement creates instantaneous nonlocal correlations between two distant entangled systems, so that no signal traveling at the speed of light could account for these connections. (pp. 176-177)

Because entangled quantum systems show nonlocal correlations, quantum entanglement definitively proves that classical states cannot exist before quantum processes create them. This is precisely the condition needed for free will! As a result, the universe governed by quantum physics must be open and not entirely predetermined by preexisting laws. Considering the nature of quantum information, the universe is continually and unpredictably evolving, contrary to classical physics. (p. 178)

A new reality model

Our author then proposes a new model of reality

"In the model I propose, as I have already anticipated, consciousness, free will, and Life exist from the very beginning as constitutive properties of the holistic Whole (One) that also contains other properties that allowed the evolution of the inanimate universe. According to this model, the inanimate universe did not come first but derives from a deeper quantum reality inhabited by seities with consciousness and free will that communicate meaning with each other. That process has gradually created a symbolic reality that contains live and classical information. This symbolic reality is a "physical" correlate of the ever-increasing self-knowing of the seities that has given existence to stars, planets, and living organisms when it is perceived through the quantum-classical information system we call the human body." Then: ***"I am convinced that, as soon as we realize that quantum physics does not describe outer but inner reality, it will cease to be absurd!"*** (p. 182)

If we assume that consciousness and free will have always been properties of One, they must also be present in the quantum fields that emerged from It. If we describe the Field as also conscious and possessed of free will, then the Field essentially represents One. There should be a reason supporting the existence of seities; the most plausible one the authors sees is that One desires to know Itself. Each act of self-knowledge by One creates a new 'portion' of Itself that has come to know Itself. In essence, knowing results in bringing into actual existence something that was once potential, containing what is not yet known. Therefore, knowing is ontological, and each new existence — what he calls seity — will be a part of One with the same desire, capacity, and freedom to know itself that One possesses.

Erich Fromm said, *"The main task in everyone's life is to bring himself to light."* And this happens only by knowing oneself. This concept embodies a fundamental human desire that has been acknowledged since ancient times. When you entered the Temple of Apollo in Delphi 2500 years ago, you would see the inscription: *"O Man, know yourself, and you will know the Universe and the Gods."*

Our author is on to something wonderful here: the reason creation occurs is because of our Creator's Love for everything He makes. Creation is the expression of One's ongoing effort to understand Itself better through … each of His creations." *"[T]o know is to love, and to love is to know."* Paracelsus said, *"Greater knowledge is indissolubly linked to love."* The more we know of ourselves, *"… the more love increases."*

For years, I have reminded everyone who listens that when we say “thought, word, and deed,” these words reflect the initial directive of all the sources of Creation. That is, God, aka our Father, the First Source and Center– starts with a thought, and that thought is “Love.” What else could it have been? The Word is also Love and springs from the Second Source and Center. The Deed is the expression of Love that spreads throughout the entire universe by the Third Source and Center.

“Saying that reality contains consciousness and free will from the beginning implies the existence of a Creative Principle that gives purpose, meaning, and direction to the universe. I think this Principle could be the following: One wants to know Itself to fulfill Itself, and thus to enjoy and love Its own existence.” Our author reminds us that Matthew Fox, in his book, *The Reinvention of Work*, tells us, *“All creation exists for the ‘pure joy’ of God. The work of creation was a work of joy, the purpose of which was to instill more joy into existence.”* (pp. 185-186)

Free will and life are essential properties that enable One to know itself. The holistic and dynamic nature of the Field, combined with consciousness, free will, and the Creative Principle, defines the fundamental and indivisible qualities of One. (p. 186)

From this point on, the book delves into a substantial amount of theory, far more than can be adequately covered in this paper. To sum up this section of his book, a few more significant quotes are in order. One is this, *“In my* [author’s] *opinion, the main reason nobody understands quantum physics is because it describes the inner world of private experience and free will, when it was expected to describe the behavior of material objects in spacetime. The quantum formalism is telling us that Nature has a private interiority which is the source of the public exteriority we observe. With this elegant interpretation, quantum physics can finally become comprehensible.”* (p.205)

The Nature of the Seity

Plotinus told us we all had a divine nature which is our essence, and our job is *“to bring the divine that is in us back to the divine that is in the universe.”* But, as our author says, we are potentially infinite beings that cannot be fully defined, as defining us imposes rigid boundaries and limits. Defining requires attributing certain properties and excluding others. *“Man has no limits and when he realizes it, he will be free even here, in this world” (Giordano Bruno). Yet many would like a reality in which everything—including us—can be cataloged, classified, defined, and placed in a box. … However, to become aware of our greatness, we must reconnect with our deepest feelings which are the source of our personal power and vastness.”* (p. 206)

Hang on, now. This gets tricky. I will paraphrase as best I can.

Our author argues that materialists believe everything in the physical world should be "objective," but this idea of a single objective reality is an outdated bias that should be rejected. Quantum physics presents a different picture, one that supports the existence of consciousness and free will. Therefore, there is no single objective reality independent of consciousness and free will; instead, multiple overlapping subjective-objective realities coexist and influence each other.

Alternatively, one might argue that at any moment, there is only one objective reality because each seity chooses which part of it to observe. However, free-will choices by seities about what to observe and which symbols to emit non-algorithmically alter reality. Thus, reality can change through symbol laws and seity decisions—decisions unpredictable by any laws.

The development of the “objective” universe reflects growth in self-awareness among seities. The universe is a symbol of a broader, semantic-symbolic reality governed by free will. Each seity perceives reality uniquely based on her perspective, experience, and intentions.

No observer can perceive the “objective” reality as described by the laws of physics because these equations can only be solved when the observer's reference frame and initial conditions are specified. Therefore, solving the equations depends on each observer's perspective and choices, resulting in different realities. (pp. 214-215)

A Vibrational Universe

Pythagoras: *“Even what seems inert like a stone has a certain frequency of vibrations.”*

We know everything is made up of vibrating quantum elemental particles. In the one thousand octaves that make up our universe, we see only one octave with our eyes. Some animals can see parts of other octaves. Music consists of several octaves. We also know of X-rays, Gamma rays, magnetic frequencies, radio, and television, to name a few. If we consider a radio station as a source of radio waves, it emits them in all directions, not just one. This is more consistent with the idea of a FIELD, whereas some transmissions can be but a single wave from one place to another, such as a laser beam.

In all discussions that focus on Quantum Physics and even the many books of Dr. David Hawkins, the concept of the “field” plays a huge role in our lives, whether we are aware of it or not. Or I should say them, because there appear to be many fields of all kinds. For example, in David Hawkins’ work, we learn that levels of consciousness operate from an attractor field of a particular level of consciousness. Those who are drawn to that field of a particular level of consciousness exhibit similar qualities in their thoughts, thus intentions, thus actions.

Dr. Hawkins, in the Original Preface to his book Power vs. Force, tells us this, *“The calibrated scale [of the various levels of consciousness] has been examined here in light of current discoveries in advanced theoretical physics and the nonlinear dynamics of chaos theory. Calibrated levels, we suggest, represent powerful attractor Fields within the domain of consciousness itself, which dominate human existence and therefore define content, meaning, and value, and serve as organizing energies for widespread patterns of human behavior.”* (p. 11 in eBook edition)

And here is one of his paragraphs having to do with spiritual struggles. *“Spiritual work, like other intensive pursuits, can be arduous and frequently requires the development of specific tools for the task, including an extremely focused intent and unfailing concentration. The difficulty of inner work results from the great effort required to escape from the familiar gravity of lower attractor fields and move to the influence of a higher field. In order to ameliorate this struggle, all religions issue proscriptions against exposing oneself to the lower energy fields; it is only from an authoritarian viewpoint that such error is depicted as “sin.” A more liberal viewpoint accepts man’s dalliance in lower energy fields as pardonable “failings.” But attitudes, emotions, and behaviors characteristic of the energy fields below 200 do, in fact, generally preclude spiritual experience.”* (p. 115 in eBook edition)

Get the idea?

Also, we are now familiar with the concept of waves and particles, including how collapsing the wave manifests the appearance of a particle, and so on.

First, what is a field in the context of author Federico Faggin's work? He tells us, *"The concept of field is the only one we currently have available to describe entities that have no boundaries and exist everywhere in the same spacetime. However, to also represent the interiority of the seities, the fields must be conscious and have free will."* (p. 217)

Now, instead of getting bogged down in the complicated discussion that comes next, it is better to move on. I am bringing to your attention that fields appear in various areas, including consciousness and quantum physics, suggesting a common underlying source.

Our author does say this in the last paragraphs of chapter 10: *"Seities are fields that share the same dynamism, holism, and Creative Principle with One. Their properties have no definable boundaries; they are unlike any classical object, including many of the mathematical abstractions we have invented. Identity, free-will agency, and consciousness are inseparable and coemergent properties of seities. This means that identity could not exist without consciousness and agency, and the same is true for the other two. In other words, these are indivisible and irreducible aspects that are an integral part of each seity."* (p. 222)

A powerful statment arrives at the end of Chapter 11: *"[I]f we start from the hypothesis that CUs* [consciousness units] *and seities existed before physical reality, the concepts of space, time, matter, and energy, which are considered primitives in physics, must be reconceptualized as deriving directly from the nature of the seities' interactions with I-space.[1] This new vision requires a complete rethinking of what we have hitherto accepted as fundamental axioms. The result will be an immensely significant new science that unifies our inner and outer realities. I believe the union of science and spirituality is the necessary step to solving the outstanding problems we are facing at this critical juncture in human history."* (p. 238)

Of course, *The Urantia Book* does this.

The origin of life, consciousness, and free will

Paper 12, "Knowing, Life, and Information," begins to address the core issue between physicists and their struggles to prove what they seek to prove — that reality does not necessitate a supernatural being or a god.

"The dream of contemporary physicists is to be able to find a theory of everything that explains all phenomena, starting from a unified field and a universal law. "This is not very different from the materialistic assumptions of classical physicists who tried to explain everything starting from elementary particles which were thought to be the simplest possible objects. Now the objects have become states of quantum fields, a more abstract concept, but the essence of the new plan is a physicalist assumption not much different than materialism since it assumes that the universe is an information-processing system, i.e., an abstract machine ruled by an algorithm. Therefore, everything contained in the universe is another abstract machine. … In my opinion we are still too influenced by classical physics which tells us that the world is made of separate parts, and comforts us by saying that at the macroscopic scale the world works perfectly well as described by it. … [I]n quantum physics, from which classical physics emerges as a subset, tells us instead that there are neither separate parts, nor particles as objects; nor does probability exist as we imagined it in classical physics." (p. 239)

Well, crap!

"…[T]he union of quantum physics with an adequate theory of quantum gravity, as now proposed, would still not be able to explain the origin of life, consciousness, and free will—and therefore it would not be a theory of everything—unless these properties were incorporated into the properties of the unified field, which would then become what I call One. Then the evolution of the universe no longer needs to be dictated by impersonal laws with 25 predetermined fine-tuned physical constants whose origin cannot be explained." (p. 240)

The current proposal to unite quantum physics with a suitable theory of quantum gravity still falls short of explaining the origins of life, consciousness, and free will. It would not qualify as a theory of everything unless these qualities were integrated into the properties of the unified field, which I refer to as One. In that case, the universe's evolution would no longer be governed solely by impersonal laws with 25 predetermined fine-tuned physical constants whose origins remain unknown." (p. 240)

Life poses a significant challenge for science. As it remains one of the biggest unresolved mysteries. If the universe operates solely according to the laws of physics, it should be inanimate, like the other planets in our solar system. The presence of life on Earth is a profound anomaly that has yet to be fully explained. Moreover, with a deeper understanding of quantum physics, it seems increasingly unlikely that life could have emerged through natural self-organization out of natural phenomena." (p. 244)

"I think that life is both a quantum and a classical phenomenon, with new and unsuspected properties that will lead us to a deeper understanding of the nature of reality. To me, life is the fundamental strategy with which One can know Itself, for self-knowing must be a "lived" experience, and life is therefore the process through which each seity progressively comprehends the meaning of her own experience and knows herself." (p. 244)

Probablity

George Boole tells us that *"Probability is expectation founded upon partial knowledge."* [2]

Our author tells us, *"The concept of probability, which most physicists consider objective and which underlies not only classical statistical physics but even more subtly quantum physics, has never been satisfactorily resolved."* And may not exist at all. *"I think that probability is a human concept, inextricably linked to the degree of knowledge of a conscious observer who wants to act based on his predictions of the next state. This concept makes no sense for an unconscious, deterministic (classical) system which has no way to change its future state."*

Probability cannot be considered entirely objective because it is inherently connected to the expectations of a conscious observer with free will. Knowing is a property of consciousness, and understanding probability without the ability to act on that knowledge doesn't make sense. In essence, probability is mostly subjective.

Viewing probability as an independent, objective physical variable—outside the consciousness and free will of the observer—is, in my view, a significant misunderstanding. This misconception has greatly contributed to the difficulty in understanding quantum physics, where probability plays a key role. Probability pertains to knowledge, and only consciousness can possess knowledge. Therefore, probability only matters if consciousness exists!" (p. 248-249)

Information Makes Sense Only if There Is Consciousness

Now we get into the metaphysics of *The Urantia Book*. Faggin says, *"The concept of information makes sense only in connection with the concept of open-ended knowing, never completed, concerning conscious observers with free will. Omniscience would spell the end of consciousness and the end of existence because there would be nothing more to know! Moreover, the existence of a universal consciousness without the existence of other conscious entities, each with their own individual consciousness, would not make sense because in this case there would only be One observing Itself and no other. But this hypothesis cannot be true because we are here and we are conscious. And each one of us is a part-whole of One, and One is also 'within' each of us."* (p. 252)

We can say that God is omnipotent, but is that true? If so, then why create all these sentient will creatures and other beings if there was not something else to know and experience?

We are reminded that knowing can only happen through lived experiences that shape the seities into what they know. Organic life exists to help seities gain new experiences by means of living organisms, which, in this perspective, are creations of the seities themselves that coevolve alongside their self-awareness. This creates a virtuous cycle where each new understanding leads to more complex symbols, enabling even greater knowledge. This process is infinite, as it constantly approaches an unreachable infinity."

Meaning

Symbols that carry meanings are the starting point of understanding. However, before symbols, there is the meaning that created them, and this meaning is far more complex and extensive than any symbolic form can fully represent, especially regarding emotions and creative ideas. We are holistic beings, which explains why each symbol can have multiple meanings. When we put many words together in a sentence, the possible interpretations increase dramatically with each additional word. Choosing the correct meaning among these possibilities requires understanding. Without comprehension, verbal communication would be impossible. Additionally, we tend to interpret poorly worded sentences poorly because understanding the meaning takes priority for us. (pp. 256-257)

However, symbols alone cannot generate new meanings because meaning is primary. Nevertheless, we frequently prioritize symbols (form) and overlook meaning (substance). (p.259)

Meaning cannot exist in a purely physical reality defined solely by symbols and symbolic laws without inherent meaning. This is what current physics describes. In this apparent reality, consciousness, life, and free will are merely epiphenomena. We must distinguish between symbols and their meaning. Information's purpose is to communicate meaning and can only exist when meaning exists. (p. 259-260

Life and Living

Chapter 13 starts off with a big idea. *"The initial goal of science was to explain natural phenomena, not life or consciousness. When scientists convinced themselves that mathematics alone could give us a detailed description of reality and that our sense-based intuition was fallacious, the ideas that life is mechanical, consciousness is epiphenomenal, and free will does not exist became widespread. This is exactly like saying that the universe is without meaning and purpose. Moreover, some even proposed that the mathematical description of reality is reality,… even though it is a creation of our human minds. … But how can empty symbols replace lived experiences? For example, the word 'compassion' cannot replace the 'experience*

of compassion.' True compassion is the 'descent into shared suffering' (Pope Gregory the Great). The meaning is in the lived experience, not in the words or other classical symbols that represent it, and the experience belongs only to those who live it." (p. 264)

The author reminds us that Descartes told us, *"Reason is nothing without imagination."*

He went on to say, *"The need for ever more complex mathematics to describe our world has increasingly distanced us from our lived experiences—the only true source of knowing—and led us to consider rationality the only mental capacity useful in the study of reality. For example, we have tried to understand quantum physics using only our rational minds without the creative inputs of intuition, emotion, and imagination. If quantum physics primarily describes the interiority of reality, as I propose, mathematics alone can never lead us to the necessary comprehension."*

"I am convinced that our intuitive mind and emotions have access to a fundamental meaning that can lead us to the truth when guided and combined with all our other capacities, which include rationality of course, but a rationality inspired by the heart. If it is true that One wants to know Itself, it would be inconsistent to think that we, as seities, lack the capacity to do so. By not trusting our intuition and our heart, we tend to mainly use our rationality. However, for as long as our knowing remains only at the symbolic level, it will only be knowledge, and cannot be complete. … Facts and rationality are only the first step, absolutely necessary for sure, but not sufficient for full comprehension." (p. 265)

Infinity is beyond conception because the infinite section outside any finite part is always vastly larger than that part, regardless of its size. Given that reality is entirely interconnected, the mathematical theories we employ to describe it should also be interconnected. In other words, each theory should be able to influence the others, even if only slightly. (p. 266)

Mathematics is a valid mental construct; however, if it consists of separable parts, it cannot fully represent a holistic reality. ... The mathematics used in physics cannot eliminate the mystery of a universe that evolves through free will. (pp. 266-267)

*"*The *"… expression of meaning is not governed by any physical laws, and therefore the laws cannot describe the lived experience, which is what matters most to us and to all the innumerable seities created by One."* p. 268)

Albert Einstein told us. *"It is possible that everything can be described scientifically, but it would not make sense; it would be as if we were describing a Beethoven symphony as a variation in the pressures of the waves."* (p. 268)

Faggins's A New Interpretation of Physical Reality

"I think that a complete theory of information should start from the general principle that the purpose of information is to communicate meaning, " (p. 269)

"In this new worldview, matter reflects the symbolic aspect of conscious entities that communicate meaning with each other. Symbols and meaning are the two irreducible aspects of a holistic reality. … At some point the place of honor that belonged to meaning has been given to symbols, together with the idea that the laws of symbols must predict all of reality. This is profoundly misguided because symbols alone will never be able to predict the evolution of meaning that is open and creative. The current laws of physics can only predict that the

symbolic expression of any new meaning will not be contradictory with the symbolic expression of any previous meaning. However, new meaning may create new laws since meaning is not algorithmic, and the complex symbols needed to represent it are just as creative and unknowable prior to the emergence of the new meaning." (pp. 269-270)

The author gives us an example, *"… [T]he laws of physics did not predict the invention of the computer. The computer is simply a human creation, allowed by the laws of physics, but originating from the imagination, creativity, love of knowledge, and commitment that has always inspired and guided us from within."* (p. 270)

"To create an invention, we need to start from an idea. However, the idea is not enough by itself. Only if it is sufficiently articulated can the inventor begin to build the object of his invention. Through the construction of the object, the inventor refines his idea, which in turn allows him to refine the construction. … "[A]ny creation must always start from a general idea before arriving at any specific realization, and not vice versa." And an "… idea is often born from a desire." (p.272-273)

To invent something, one must start with an idea. However, having an idea alone isn't enough. Only when the idea is clearly articulated can the inventor begin constructing the invention. Building the object helps the inventor refine the idea, which then leads to improved construction. Any creation must always originate from a broad concept before moving to specific details, not the other way around. Moreover, an idea often stems from a desire. (p.272-273) The overall meaning of the invention was already contained in the inventor's imagination at the moment he first conceived of the idea. (p.274)

"The same process also applies to life. It is absurd to think that simple organic molecules, which represent an infinitesimal fraction of the complexity of the simplest known bacterium, could naturally self-assemble to form an organism capable of reproduction without any guidance and any idea of the intended result. … How can we expect the first living and self-reproducing cell to have emerged by chance, without the prior existence of a conscious and intentional idea? How can a hierarchy of precise subsystems self-assemble and form a living organism of incredible complexity through natural and random events that have a natural tendency to disorder?" (p. 275)

Just as One created us, we have collaboratively 'invented' and developed biological life and the human brain in accordance with our understanding, aiming to improve them. However, our scientists believe that nature relies on a mindless process to generate the mind. Faggin thinks every creation begins from a broad idea motivated by desire. By merging this idea with the will and resources to realize it, we can gradually bring it to life through variation and selection. No complex structure, like a machine or a cell, can be constructed without some level of conscious intuition about what is needed. So, how can a living cell self-assemble via natural processes without any awareness of its purpose? (p. 276)

"One of the main purposes of physical life, then, could be to understand the origin and the "shape" of the distortions that exist within each of us, a prerequisite for eliminating them. In other words, evil does not exist as a fundamental reality, but only as a distortion of reality—a misunderstanding that is not reality. Thus, its elimination reveals the native reality that is free of any "evil." Part of this "purification process" needs to take place through experiences lived in virtual realities, allowing us to discover and experience the unknown origin and the nature of the misunderstandings we accidentally carry within us." (p. 279)

One primary purpose of physical life might be to understand the origins and the nature of the distortions within us. This understanding is essential for removing them. Essentially, evil is not a fundamental aspect of reality but a distortion— a misunderstanding that isn't true reality. Removing this misunderstanding restores us to our true, pure state free of "evil." Part of this "purification" involves experiences in virtual realities, which help us explore the unknown origins and nature of these internal misunderstandings we carry.

Rumi said, *"The moment we accept our problems, the doors of solutions open wide."*

Bit by bit, the ego comes to see that the reality it inhabits is not the ultimate truth; through experience, it realizes that it is more than just the body. Such experiences are essential to break the ego free from the illusion of self-identity with the body. That's why purely intellectual understanding of reality cannot fully set us free.

The Evolution of Scientific Thought

William James famously reminded us that *"[e]ach new theory is first attacked as absurd; it is later recognized as true, but obvious and insignificant; finally, it is considered so important that its adversaries claim to have discovered it themselves."*

A *"… small portion of humanity is ready to move away from the materialism of classical physics to the new holistic vision offered by quantum information. Quantum information is compatible with the existence of a profound spiritual dimension of reality that in the past has fueled myths and religions. … [W]e are beginning to realize that the behavior of the whole cannot be explained only by the behavior of its parts, because reality, unlike what we imagined, is not made of separate parts and is not as objective as we thought."*

The Tao Te Ching starts with this verse:

> *"The Tao that can be told*
> *is not the eternal Tao."*

Quantum physics has revealed that the smaller the parts, the more inseparable from the whole they become, and therefore, the whole must be invisibly present in all of its macroscopic parts. Nothing is closed and separated from the Whole. (p. 281)

A key aspect of our semantic, inner, and private reality is that it cannot be fully explained abstractly, as its meaning can only be genuinely understood by those who experience it subjectively within themselves. (p. 282)

There is a metaphor: *'We are a whole made of **heart**, **head**, and **gut**,' [that] serves to describe the type of union … described in the Introduction. I believe it is necessary to integrate and harmonize the "head" with the "heart" and the "gut," i.e., the intuitive and rational thinking with our deepest unitive feelings and with our capacity for courageous and right action. These three centers are metaphorical, of course, and are neither separate nor separable, because each of them also contains a portion of the other two. Therefore, even an intellectual person who appears to only live inside his head cannot be completely disconnected from his heart and gut."*

*"If we examine the **head center,** we can recognize that the intuitive and creative powers are our highest mental abilities. We also possess a rational mind, i.e., the ability to reason logically on the basis of the presumed validity of assumptions (both explicit and implicit). The choice of*

assumptions, however, is mainly based on the level of our conscious comprehension of the whole."

*"As for the **heart**, it is the center of our feelings, desires, intentions, empathy, love, joy, passion, curiosity, honesty, ethics, and self-fulfillment. Its highest expression is unitive, because no fundamental distinction exists in reality between the observer and the observed when all the "parts" are parts-whole. At the level of our ordinary experience, our feelings are generally neither too strong nor particularly vivid, though they are aware and present. Finally, there is the "mechanical" aspect of the heart, represented by the quasi-automatic, habitual emotions and feelings that have limited awareness and depth, and include the usual sensations of shape, color, sounds, smells, and tastes associated with the physical world. Therefore, the experience of the heart ranges from the habitual semi-automatic level of ordinary feelings to the occasionally vivid and extraordinary feelings enlightened by the sense of unity, love, and fulfillment."*

*"The **gut** is the focus of our physical actions, and it is the least understood of our centers. Its mechanical aspect is expressed by those physical acts that we perform almost unconsciously, for example, when we walk or ride a bike. The next level contains ordinary, intentional, and free-will actions. Finally, the highest level includes behaviors guided by deep comprehension, ethics, love, and courage; thus they contain the comprehension of what is right, the love that comes from the heart, and the courage and determination of the gut to act with integrity. The union of the heart with the head and gut is manifested in just, loving, and courageous actions."* (pp 282-284)

*"Head, heart, and gut may also refer to three different types of knowing, because we can learn mentally, emotionally, and interactively. The **interactive knowing** is based on physical action, knowing "from without" by interacting with objects and observing the actions of others…."*

*"**Emotional knowing** is mainly knowing 'from within,' based on the sensations and feelings … we experience by observing the world and ourselves. At the ordinary level, this experiential and empathic knowing can lead us to superficial judgments, while at a highest level, when the knowing is direct, it makes us become what we know. Direct knowing also involves mental knowing and inspires right and courageous actions."*

*"**Mental knowing** is knowing both from 'without' and from 'within.' The "without' from books, watching television, listening to the radio, from the internet, listening to teachers, parents, and peers, and so on and on and on. The 'within' through the "comprehension and creativity that is based on intuition and imagination,"* which is the superior of the two. (p. 284)

Concluding comments by the author, summarized - knowing must be lived

"…[C]onsciousness is the North Star that guides us through the paths of life."

Unfortunately, much of humanity is currently in a self-created trance that blocks awareness of Love, the fundamental Law that governs and unites all parts of the universe. *"The love that moves the sun and the other stars'"*(Dante Alighieri)*.*

"The heart is the symbolic center of intentions, emotions, and intuitions that informs and unites the head (rationality and creativity) and the gut (courageous and right action), allowing us to achieve virtue and knowing. Only the heart makes it possible to unite the inner and the outer

worlds so that being and knowing become one; a world in which science and spirituality will finally be able to integrate, allowing humankind to comprehend what love is by becoming love and joy and peace: 'The ultimate meaning of everything that surrounds us…is the joy that is the source of all creation' (Rabindranath Tagore). And that is what ultimately matters." (p. 286)

"Scientific knowledge, whose object of study is the outer world that can be known through the measurement of physical quantities and their mathematical relationships, is absolutely necessary, but it is not enough to lead us to lived knowing. In my thinking, the ultimate goal of knowing—to which science has made a fundamental contribution—is realized only when the observer lives the experience of himself and of the world in an integrated way, because true knowing goes way beyond knowledge, the symbolic aspect of reality." (p. 287)

Scientific knowledge, which focuses on understanding the outer world through measurement and mathematical relationships, is essential but insufficient for lived understanding. Faggin believes that the true aim of knowing—achieved significantly by science—is fulfilled only when the observer personally experiences themselves and the world in an integrated manner. Because true knowing transcends mere knowledge, which is just the symbolic aspect of reality. (p. 287)

"I believe that feeling superior to Nature is the primary source of our distortions, and the root cause of our suffering. In my experience, becoming aware of our primary responsibility about what happens in our experience is the first fundamental and indispensable step on the road of healing, because our awakening depends on this crucial self-awareness."

Scientific knowledge reveals what is factual and possible. However, making the right decisions requires not just science but also the understanding and values that only the heart provides.

Rita Levi-Montalcini observed, *"The absolute evil of our time is not to believe in values. It does not matter whether they are religious or secular. Young people must believe in something positive and life deserves to be lived only if we believe in values, because these remain even after our death."* (pp. 287-288)

"The World can only be known when it is observed, acted, and lived, for we are an integral part of the World and the World is also within us. The reason we limit ourselves to looking at the World only from the outside, as if we were not part of it, may be because we feel superior to it. And this need is also implicit in the principle of the survival of the fittest that allows us to blame Nature and others for our lack of love and respect for others."

"… [T]his 'wanting to be the first' the hardest obstacle to achieving union, especially since in our society strong competition is considered a desirable thing. In fact, the entire economy, public education, our sports, and most institutions rely primarily on strong competition. The evolution of the species is also exclusively attributed to win-lose competition through the "survival of the fittest" principle that provides a natural justification for our selfishness and aggression." But, "… "there is a type of friendly competition that is indeed desirable and promotes personal excellence when it stimulates in us the desire to be "superior to the person we were until yesterday…." (p. 289)

This 'desire to be the best' is the biggest obstacle to achieving unity, particularly because our society values competition highly. The economy, public education, sports, and most institutions depend mainly on fierce competition. Additionally, the evolution of species is largely credited to win-lose competition under the "survival of the fittest' concept, which naturally justifies our

tendencies toward selfishness and aggression. But, *"… "there is a type of friendly competition that is indeed desirable and promotes personal excellence when it stimulates in us the desire to be "superior to the person we were until yesterday…."* (p. 289)

The foundation of competition lies in the desire to feel "special." The issue occurs when someone aims to be more special or unique than all other perspectives of themselves. This craving for superiority distorts the natural, legitimate pride in being unique—that is an inherent part of our identity. *"We are divine, and we must live not by the survival of the fittest, but in a way that supports everyone and everything on this planet"* (Bruce H. Lipton, The Biology of Beliefs).

The concept of separation, reflected in classical physics' reductionism, should be replaced with the sense of union and inclusion that is already apparent in the holistic nature of life. *"There is not a single isolated fragment in all of nature, each fragment is part of a harmonious and complete unity."* (John Muir)

Footnotes:

1. **I-Space**: The author tells us that "Since 2010 I have deepened the study of consciousness as an irreducible phenomenon and developed the CIP framework (acronym formed by the initials of Consciousness, Information, and Physical). In this conception, the nature of reality consists of two complementary and irreducible aspects: the semantic space of conscious experiences, called C-space, and the informational space of symbolic forms, called I-space. Symbols are created by conscious entities to communicate and explore their inner meaning for the purpose of knowing themselves ever more. Physical space, called P-space, is a virtual space experienced by those conscious entities that control living organisms. The organisms are symbolic structures that interact with the other I-space symbols and generate within themselves symbolic representations of I-space that are perceived as 'reality' by the conscious entities. In this framework, consciousness exists only in C-space." So there!

2. Regarding probability, the partial knowledge that probability is based on is not the same as having no knowledge to base something on. See the book The Black Swan by Nassim Nicholas Taleb.

3. *Irreducible:* Consciousness, Life, Computers, and Human Nature
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James Leese
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