

SCIENCE AND TRUTH: On Not Severing our *HUMBILICAL Chord*

By Jay B. Gaskill

I love science and I've never met a scientist whose company I did not enjoy.

I love literature, but I can't make quite the same generalization about every member of the literati I've met, particularly the cynical subset for whom only the mentally challenged would fail to see that we live in an absurd, essentially meaningless universe.

Scientists, as individuals, are intellectually humble – at least in my personal experience – because they have learned through trial and error as fieldworkers that the scientific process is an imperfect tool, especially as a single measure of human progress.

We all need to remain connected to our *humbilical chords* (our *heuristic umbilicus harmonious*¹, if you will). My invented terms describe the sense that – other than our deep ultimate moral compass – we just might be wrong, arrogant, unwilling to listen, and therefore at risk of becoming self-disabled beings, crippled in our capacity to venture outside our separate thought-bubbles. Arch materialism, the notion that matter and energy constitute all that there is, represents just such a bubble.

¹ My invented terms are whimsy, of course, but whimsy with a purpose. *Humor* is etymologically rooted in fluid and flow; *humble* is rooted in humus or soil, and both are mutually entangled in the human psyche. I'm using *humble* as in modest and unpretentious; *heuristic*, as the term is used describing algorithmic systems capable of learning from trial and error; *umbilicus* as in the navel of the developing consciousness, the source of primal nourishment; and *harmonious (chord)* to describe the fitting correspondence of constituent elements, where melody is a powerful metaphor about detection of the truth-context. The pursuit of elegance in mathematics and scientific theory are driven by the faith that harmony and beautiful simplicity are pointers to truth. My perspective is that all knowledge (including esthetic and ethical) is *discovery*; that truth is always a revealed reality-correspondence; and that intellectual arrogance makes self-disabling epistemological bubbles. We are bound together and to truth more by *chords* than cords.

The 20th and 21st centuries have elevated the role of science-as-myth, a progression from Robert Oppenheimer's "destroyer of worlds" (the atomic bomb as the incarnated Hindu deity, Shiva) to science, the Maker of Worlds and Arbiter of Meaning, (where science itself replaces deity). For too many in the postmodern culture, science has become deeply entangled with the ideology of amoral atheism.² As if empirical science has ever been capable of proving or disproving such deep truths of existence. Those who see the human condition being formed and deformed under the stresses of rampant "modernity" and "post-modernity" have coined the term *scientism* to describe the misappropriation of science as ultimate truth-guide. Scientism poses science as a moral compass, elevates science as the ultimate policy maker, and conflates the white coat of the laboratory with the garments of the priest, seer, maven or rabbi.

The overall evidence for the existence of a divine, intelligent creator is of the same general character as the evidence relied on to assert human climate forcing as the principal cause for the recent 80 year warming period. But the case for G-d³ as existential and essential Reality, whether and however named, is actually stronger.

The domain of science is powerful because it is limited. Science is the systematic search, through observation and experiment, for the hidden rules and regularities of the physical realm, the knowledge of which enables us to predict the outcomes of *physical processes*.

The quest for *explanation*, however, originates in the realm of meaning and motivation; this is outside the domain of physical experiment. Science gives us a picture of the universe, as organization gives us a picture of otherwise disparate data. As we moderns have learned to use cyber-technologies to process and manipulate data, we have also learned that information, devoid of its semantic content, is like a symphony reduced to air pressure variations and sound wave forms. Computer-assisted searches are no better than the search terms, which are in turn created (or "generated") by real minds, as these minds attempt to convert aspects of meaning into binary number strings. True semantics eludes the machine. The purely material explanations of science are as limited as a congenitally blind child's understanding of color.

On the larger stage, there are at least eight aspects of our reality that persistently defy all of the narrowly mechanical, materialist explanations:

1. The emergent, controlling order in this unfolding universe;
2. The emergent, innovative form in this unfolding universe;
3. The emergence of all conscious being in this unfolding universe;

² Moral atheism, as a stance maintained by individual atheists (sometimes called heroic moral atheism, because the stand is against the tide), is almost impossible for intellectually consistent atheists to defend as a universal aspect of reality on a par, say, with the Pythagorean Theorem.

³ My Jewish friends are familiar with the usage. The more general notion, which I wish to honor, is that ultimate deity so transcends mere human language that any name is necessarily a reduction, a fatal incompleteness of description that, when unqualified, is necessarily misleading.

4. The emergence of the cognitive ability to detect and sympathetically understand other conscious, sentient beings, leading to the capacity for empathy and the social ability to form trust relationships;
5. The emergence within conscious intelligence of the capacity for moral and esthetic apprehension and understanding;
6. The emergence of unity and integration in this unfolding universe;
7. The emergence of diversity and variety in this unfolding universe, and
8. The capacity for intelligent creatures like us to apprehend the numinous level of being without being able to reduce the experience to a materialist description.

I believe these eight aspects of reality are linked to a single, ultimately creative, ultimately integrative...Source.

In asserting this deep connection, I'm not relying on arguments from logic so much as widely shared personal insights from experience and the lessons of necessity. In the final analysis, I have simply concluded, as many others have, that there is no real alternative to *ultimate source*, save the absurd. The case for the deep reality and profound significance of the *numinous* and its ultimate source is radically simple. We choose to reject the absurd in favor of the ultimate. Similarly, the understanding that this source is linked to order, innovation, conscious being, unity, and variety in the world is deeply consistent with the reports of our deepest intuitions, guided as our minds are by a heuristic predisposition favoring unity of explanation and the rejection of the absurd.

The core miracle of this universe is that it produced us. In the great unfolding of our universe, the arrival/emergence of conscious beings in space-time was the Signal Event. When the first intelligent, feeling, motivated beings first awakened, i.e., when "personality" arrived in the universe, nothing thereafter could be the same because that Signal Event worked a comprehensive *normative* reorientation of the entire universe.

Before humans (our cousins, predecessors or other living, feeling, motivated intelligent life forms) first arrived on scene, rocks were rocks, water and plants were mere objects, mere *things*. After "our" arrival these things were *normatively* transformed; they became "*our* environment", "*our* tools", "*our* food", threats or benefits to *us*. We are the universe become awake. After our awakening, our fellow beings became "family", "friends" and even "enemies". We, the First Persons (taken in the widest sense), became the venue of conscious valuing in real time, the very center, the prime organizing principle, and the "great attractor" for all value-context among the creatures and ecosystems and environments of the universe. To describe this Signal Event as a mere accident is to judge and categorize the universe-altering event by the "standards" that obtained before standard-perceiving minds had arrived, the epoch defined by the *absence* of biological conscious intelligence, living in space-time.

Was the advent of living conscious intelligence in the universe an absurd accident ("How did I get in this mess anyway!") or was it an arrival fraught with transcendent

significance (“How dare you put me here!”). Note how the question tends to arise more in disappointment, rather than in gratitude.

A pattern of repeated accidents at a high traffic intersection with a malfunctioning signal does not, collectively speaking, describe an accidental trend, though any individual case meets the formal definition of an “accidental event”.

How should we understand such a pattern of “accidents” if the outcome of a different accident array is benign, but the “intersection conditions” are similarly likely to promote *their* occurrence? When we realize that the universe is so structured and fine tuned that the advent of living consciousness was virtually guaranteed, we are forced to reassess the “accident pattern” and the deeper nature of the “intersection conditions”.

In the great unfolding of this universe, the emergence of conscious beings in space-time who became the venue of valuing and a new venue of creating was not only a signal epoch-defining Event by any reasonable measure, it suggests a link to a common source. When we see a flowering or complex biological development in the world, we are trained by experience to look for a *seed*.

A seed is a *developmental information storage device*. Seeds are much smaller than the structures and systems whose designs they contain.

When we are able to examine the development of the universe as a whole, one in which the very structures of space-time, matter and energy, seemed to emerge as if from a seed, we need to ask: Where was the seed? A single plausible answer suggests itself: from outside space-time itself.

I am personally persuaded that the arrival of purpose and value (still ongoing) in this universe represents a seminal diffusion from an infinite domain of creation-engendering form *into* the space-time bounded domain of this universe. ...in a sound-bite: *Benign novelty represents the eternal partly realized*.

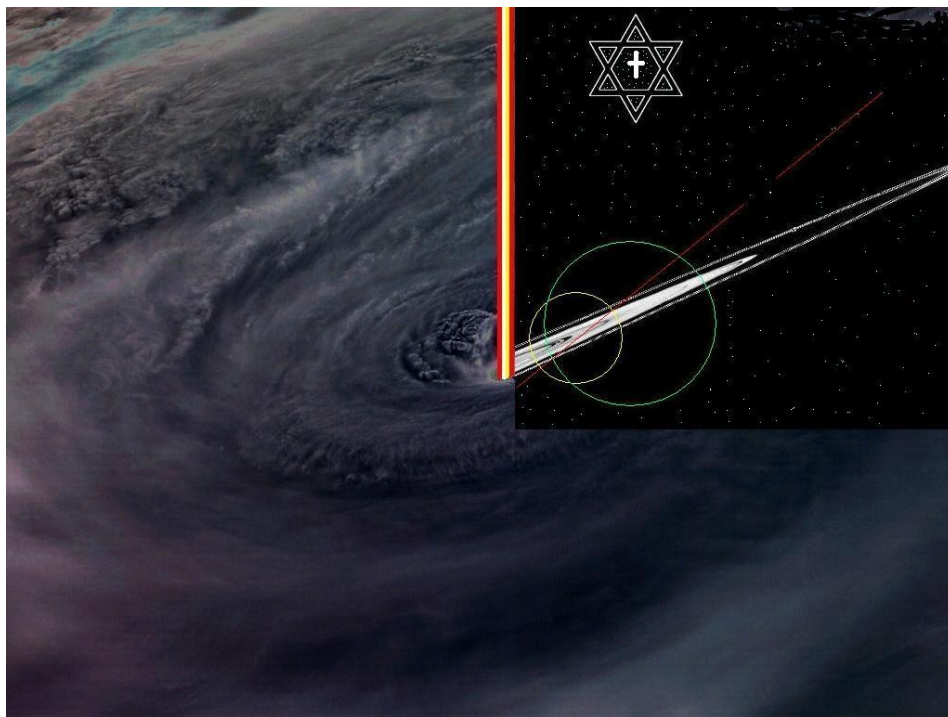
The source of creation in the universe is like a *seed* resident outside space-time, but operating within it. We can imagine this seed as infinite information storage in a point, and its creative contents as gradually diffusing into the physical domain. A pure geometric point, eternal as in Plato’s conception, would be immediate to all parts of space-time. This seed effect is a powerful metaphor that explains how the universe unfolds into more variegated complex forms. And how the most amazing exemplars of which are the living, reproducing ones, become the “creatures” who can arrive at those “I am, therefore I wonder” moments.

The most important fact of our cognitive powers is that this universe is intelligible to our minds because there is a harmony between the laws and regularities of the physical realm and the innate organization of our thinking.

I am persuaded that the simplest, most elegant explanation of this mystery is that we are the products of this seminal diffusion, the partial emergence of the center, the prime organizing principle, the relational/archetypal/*seed form* of supreme conscious, intelligent being. We are born of that the parent being who was already embedded within the universal reservoir of formation, that *seed* outside and within space-time. It therefore follows that we humans (and all other living, mortal conscious beings in the universe) represent the partial emergence (or local instantiation) of the supreme, ultimate design for personality. We are the newly scattered, reproducing local nodes of ultimate being within the space-time domain of this universe. We are reduced in bandwidth, if you will, and have a finite duration within the physical realm. As we are the “designs that are designers”, our parent being is the ultimate design that is Designer.

The Genesis model of Hu-Man in G-d’s image is as close to this insight as could have been formulated in pre-scientific terms. And I am deeply persuaded that the ancient ideas of deity captured this most important truth, to wit: that there is one supreme ultimate personality at the center of the infinite reservoir of creation engendering form. Ultimate Being (or “Beingness”, if you will) is no lifeless archetype, but the most authentically living Being of all, the One resident both outside and within space-time.

Reverence and awe are appropriate, hence the reference: the Holy One.



In the beginning, this parent being (whether named God, “ Ω ”, or altogether unnamed) was and is detectable as an emergent “formational” influence within space time, evident

in a soft directionality over huge time spans and in our private experience of the numinous.

Evolutionary processes are “stochastic” or probabilistic, but over great spans of time, the directionality of creation emerges. Local “absurdity” or “meaninglessness” is overwritten as general order develops into multitudes of local nodes of thinking and feeling order. As we humans (and possibly other intelligence creatures) have developed, we have acquired semantic or meaning-detection capabilities. Over time, many sensitive minds among us have reported being able to apprehend ultimate Being or “Beingness”. These accounts, or “field reports” come in the form of described numinous experiences, insights, storms of creative inspiration and the observation of telltale trceries of great beauty and goodness. The very cognitive faculties that enable us to detect other personalities around us, to see the “thou” instead of the “it” has enabled these reporters to apprehend the “Thou” instead of the merely “wow”.

Meaning *detection* trumps meaning invention.

THE CREATION NARRATIVES COMPARED

In the Beginning....

The Cosmological / Biological Narrative

1. Space time buds a proto-universe.
2. The First Order Creation processes appear. These mediate the emergence from the undifferentiated “sea” of pre-quanta singularity: matter / energy quanta, elements, gravity and the nuclear forces, star and planet formation processes, pre-biological systems on and between the planets.
3. The Second Order creation processes appear. These mediate the emergence of biological processes, procreating organisms, ecological cooperation and inter-species competition from the pre-biological systems. These developments inaugurate accelerated bio-adaptive evolution.
4. The Third Order creation processes appear. Bio-adaptive evolution leads to the emergence of self directed organisms whose threat-avoidance & food seeking systems adaptively acquire the critical information processing density necessary for the emergence of low order awareness.
5. The Fourth Order Creation processes appear within all neurological systems with the capacity for low order awareness. Cognitive capacity now appears as an adaptive advantage for individual organisms and becomes for the first time a special venue for the evolutionary emergence of special cognitive faculties.
6. The Fifth Order Creation processes, now firmly located in biological cognition, generate actively conscious awareness whose faculties include the capacity to recognize other minds and for communication. With these developments, the capacity for personhood is born.

7. The Sixth Order Creation processes are located in individual conscious, intelligent beings in communication with others. These processes lead to the emergence of a virtual ecology of personal interactions (called civilization). The adaptive speed of creative intelligence within civilization (which can also be seen as a social technology, in the same way that a bat's wing is a flight technology) achieves a huge innovative acceleration, outpacing all prior stages.

In the Beginning....

The Biblical / Torah Narrative (in outline)

Day One: Light (1:3-5)

Day Two: The firmament separates earth from the universe. (1:6-8)

Day Three: Land and water are separated (1:9-13)

Day Four: Sun, moon, stars; light separates from darkness. (1:14-19)

Day Five: Water animals and birds (1:20-23)

Day Six: Land animals are created, finally humans, and God is pleased. (1:24-31).

Day Seven: G-d rests (2:1-3)

Text from a Christian Narrative, the Gospel of John

“In the beginning was the Word, and the Word was with God, and the Word was God. The same was in the beginning with God. All things were made by him; and without him was not any thing made that was made. In him was life; and the life was the light of men. And the light shines in darkness; and the darkness comprehended it not.” {John 1:1-5}

Text from the Genesis Torah Narrative

“With a beginning, God created heaven and earth. The earth was without form and empty, with darkness on the face of the depths, but G-d's spirit moved on the water's surface. G-d said, There shall be light, and lightness became manifest. God saw that the lightness was good and God divided between the lightness and the darkness....” {Genesis 1:1-5.} Note: The Hebrew verb describing the action of creation is ברא, a creation out of nothing; and the meaning of ברא is also to cut or set a boundary.

Discovered vs. Arbitrary Meaning

The ubiquity of human reports of encounters with the numinous, and of cultures linking creation with a morally authoritative creator can be dismissed as wishful thinking or they

can be seen a persistently accumulating data set about the capacity of the human mind to discover latent, embedded meaning in the world.

Consider the parable of the mysterious, dark forest.

A desert community is ruled by shamans. Over the years, when many separate reports about a mysterious uncharted region are compared, certain common emerge – a dark forest, descriptions of trees, a river and of forest creatures.

But the desert shamans reject these accounts out of hand because “everybody knows” the whole world is a desert. Yet it is a reasonable inference that a new reality is being described, however “out of paradigm” it seems to those who “haven’t been there”. The shamans of meaningless are living in a self-created semantic desert.

For those who stubbornly reject the notion that the G-d reports to which I refer are “merely anecdotal”, I recommend a study of the remarkable threads of continuity that attend the “field reports” about the transcendent and numinous.



Consider this pigmy chant:

“In the beginning was god, today is god, tomorrow will be god. Who can make an image of god? He has no body. He is a word which comes out of your mouth. That word! It is no more; it is past and still lives! So is god.”⁴

So is G-d.

⁴ As quoted in *Sacred Texts Of The World*, edited by Ninian Smart & Richard D. Hecht, p 348. Crossroad Publishing 1982. ISBN 0-8245-0483-6.