

Is There Life After Death?

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John A. Gowan

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Abstract

Our sense of individual immortality is a consequence of the self-awareness of the Universe caught knowingly in the act of looking at itself through human eyes. I am how the Universe becomes self-aware and looks at itself. The immortality of the Universe is therefore quite naturally intuited to be my own. The Universe is a conservation domain: all parts of the Universe are immortal or otherwise conserved. Our true immortality is the eternal nature of the Universe itself - including its capacity to evolve and create information, life, and self-knowledge.

Human life oscillates between a generalized (gene pool) and a specific (individual) expression. The creation of a new human being is remarkably analogous to the creation of a new elementary particle: both processes require a symmetric energy state which recapitulates the original environmental conditions of its specialized domain.

Intuitive Section

Is there life after death? Do we have an immortal soul? Ever since childhood I have pondered these questions. My intuitive response has not changed in over sixty years - yes, to both questions.

Even as a child, my reaction to the question of "life after death" was to ask if there was life before birth - the symmetry of the notion still appeals to me. If one, why not the other? I still feel that it makes as much sense to worry about the one case as the other. In any event, it is life we need to concern ourselves with, not death; we have some control over life, but none at all over death.

This past July (2009) I turned 72, so the question nags at me more urgently than in my youth, and I have occasionally looked around for reassurance or rational proof of "life everlasting" in one form or another (I have no orthodox religious belief, although I obviously feel a strong spiritual connection with the universe). My work in physics and General Systems has turned up some interesting affirmative suggestions and hints, although I can't say they rise to the level of proof. I will discuss these below in the "rational section". Here I only consider my intuitive musings (and it is to answer just such questions that we have an intuition).

Instinctively, my basic reaction is - why worry? What will happen will happen and I can do nothing about it. The Universe will do with me what it will. But since the Universe has already shown its tendency in this regard, in that it has, without my asking, without my worry, without my foreknowledge or consent, given me this present life and experience, the odds are, it seems to me, overwhelmingly in favor that the Universe will do again what it has done before. That this life should be a single experience seems to me about as likely as

the chance that we are the only life form in the Cosmos. It has become apparent that life is something that the Universe itself brings forth as an emergent property of the information content of its atomic, dimensional, and energetic structure, and the more we learn about the Universe, the more it seems certain that it brings forth life abundantly.

In other words, the outrageously improbable existence of this present life is the best evidence we have for the next and/or previous life, which by the same argument was and will be not greatly different from this one - although the factor of personal, as well as biological, social, and cosmic evolution must be taken into account. My sense of the situation is this: there is a partially-conserved "I" that is unique to this life experience, and will not be repeated (nevertheless, it will be conserved in historic spacetime, or "karmic" history). But there is another, wholly conserved "I" that is not unique to this life experience, that will have many, perhaps infinitely many, more life experiences. This eternal or conserved "I" does not remember (in human intellectual terms) its individual manifestations; but it is this eternal "I" that grows with each life experience and evolves with the Universe - its "memory" is in genetic and evolutionary terms.

The partial "I" is unique to this body, and passes into history (historic conservation) when the body dies. The source of this partial "I", however, is the eternal "I", which is the life spirit of the universe itself, forever seeking to know itself through a suitable physical instrument and organized ("quantized") locus of energy and information (the individual body and personality). The eternal "I" is the universe. "I" and the universe are one. We share this eternal "I" with all life forms, everywhere in the Cosmos, but the particular physical body in which it manifests imposes a unique experience upon each seemingly separate life experience. Human life is special in that it is the most highly evolved life form (on Earth), and because of our intellectual capacities we are able to participate in and actualize a human version of the creative dynamic of the universe, thus becoming a co-creator or fractal resonance of the Life Force of the Universe. In this sense of fractal co-creator, humanity is indeed the "image and likeness of God", and we are the life form (on Earth) which is best able to understand the universe (as through philosophy), advance its self-knowledge (as through science), and appreciate its beauty (as through art). But all life forms advance the self-experience of the universe (the most intimate form of self-knowledge), and all are sacred in this respect.

Humanity is unique, however, in its creative capacity; humankind is the fractal iteration of the universal Life Force, a resonant form that completes the evolutionary purpose and cycle of the biological information realm. Humanity has taken on the divine role of controlling evolution and its own cosmic destiny. Humanity is a mirror, created by the universe, so that the Universe may see itself.

We are the Universe learning about itself through the life experience, and evolving as it does so; this self-exploration will never cease, because the Cosmos' potential for growth, evolution, and self-experience will never be exhausted.

And where and when does this next life occur? We can't know and it doesn't matter. Where and when did our previous life occur? We can't know and it doesn't matter. It may be elsewhere (and elsewhen) in this Universe, it may be elsewhere (and elsewhen) in the Multiverse. It simply happens, just as this life simply happened, because self-knowledge and growth through the information pathway of life is the evolutionary purpose of the Universe/Multiverse.

We are the eyes and ears, the emotions and intelligence of the Cosmos, the only way it has of experiencing itself, of knowing itself, of enjoying and appreciating itself, and of actually continuing to grow and evolve. Through us the Universe experiences love and beauty and new forms of creativity - through us the Universe writes symphonies, enjoys sunsets, builds rocket ships, experiences love, and creates more life. Humans are fractal iterations of the Cosmos' living, creative power. The Universe explores its creative potential through life and through us, and this is why it continues to bring forth life with ever greater powers of intelligence, creative capacity, perceptual acuity, and aesthetic refinement - the better to know itself. "Universe know

thymself!" In this sense the Universe is a narcissist. This is the real source of the notion that "God is Love": the Universe loves itself. And this suggests to me that whatever part of us may survive from one life experience to the next, the part that the Universe may wish to salvage for its evolutionary journey of self-knowledge, discovery, and growth, is the part of us that loves and celebrates life and the Cosmos in some form - whether as an artist, scientist, philosopher, athlete, or lover. It is simply inconceivable that my life experience should be wasted on me alone - completely obliterated and rendered meaningless by death - without somehow serving the larger evolutionary purpose of the Cosmos. And the best way to do this is by this life experience informing my (or the) next life experience - if only by enriching the self-knowledge of the universe. The purpose of life is therefore the experience of life - lived to its fullest potential.

Rational Section

The "[Afterlife Tetrahedron](#)" is the perhaps the best "rational" model bearing on this issue that our [General Systems work](#) has produced. In the model, we see that the "Biophysical face", which corresponds to the biological realm of the "[Fractal Hierarchy](#)" or "[Information Ladder](#)", does not explicitly contain the Conservation pole of the model, and indeed is the only face which does not. ([See the "Tetrahedron Faces" model here.](#)) It is just this lack which identifies this face as the biological face, as we associate this lacunae with death, a phenomenon peculiar to the biological realm. We note, however, that the Conservation pole of the model is explicitly connected to all three poles of the biological face. The Biological Realm is therefore completely embedded in the conservation matrix of the larger structure, but these connections are implicit rather than explicit. The model shows three conservation connections; I will examine each in turn below. (Readers should print out and refer to the "[Afterlife Tetrahedron](#)" diagram as a guide to what follows.)

1) The Conservation connection to the Entropy pole: this connection is dimensional, including the gravitational [conversion of space to time](#). The dimensions of spacetime are conservation domains created by the entropy drives of free and bound energy - the intrinsic motions of light and time. Time's intrinsic motion creates history and historic spacetime, the conservation domain of Information and matter's "causal matrix" ("Karma"). (See: "[Spatial vs Temporal Entropy](#)".) All actions and events are permanently recorded in historic spacetime. Historic spacetime is what we see when we look out in space to the distant galaxies. We actually can see only a tiny fraction of historic spacetime; most of it, including all of our own history, is hidden from our view. It is nevertheless perfectly real and the continued reality of yesterday is absolutely necessary to sustain the reality of today. All earlier cultures have understood this, as is especially evident in the practice of "ancestor worship". We are all immortal in History. Memory is one way in which we experience the reality of this temporal connection; another is the celebrated notion of "Karma". Light is connected by space; matter is connected by time; all are connected by gravity. Light is non-local, atemporal, and acausal; matter is local, temporal, and causal.

Matter is only tangentially linked to historic spacetime, the conservation domain of Information, "Karma", and matter's "Causal Matrix". We live only in the ever-moving present, not in the historic past, which continually expands "behind" us. By contrast, light fully occupies its conservation domain (space), and expands and cools as space expands and cools - light is inseparable from its entropy drive (intrinsic motion c) and its dimensional conservation domain (space), which that entropy drive creates. Conversely, it is matter's time dimension which moves and not matter itself. Matter is separate from its historic conservation domain, and does not expand or age with the expansion and aging of historic spacetime. "Diamonds are forever" - atoms simply do not grow old. (Biological aging and decay is a "systems effect" peculiar to living forms, necessitated by evolution, and genetically controlled.) (See: "[The Time Train](#)".)

The separation of matter from its entropy drive (the intrinsic motion of time), and the conservation domain created by that drive (history), is necessary for several good reasons, among them: 1) the equilibration of the entropy drive of bound energy with the entropy drive of free energy ("velocities" c and T) - the intrinsic motion of time is the metric equivalent of the intrinsic motion of light; 2) the isolation of matter's quantized

symmetry debts (charges) from the attenuating effects of entropy (note in this regard that light itself bears no charges of any kind). The metric relation between light, space, and time is gauged by c (the electromagnetic constant); the energetic relation between the spatial and temporal entropy drives (velocity c vs velocity T) is gauged by G (the gravitational constant). (See: "[Entropy, Gravity, and Thermodynamics](#)".)

The separation of matter from its historic conservation domain is the chief source of humanity's "angst" regarding our conserved status in the Cosmos. This separation, however, is actually illusory. We are very much a part of historic spacetime, but we are situated on the leading edge of its expanding domain, tangentially connected to the remainder of history by the single point contact of the "present moment". (See: "[A Spacetime Map of the Universe](#)".) The tangential "point" connection between matter and historic spacetime is why gravity is so weak. Gravity creates matter's time dimension (by the annihilation of space), but it only creates enough time to provide the required entropy drive for matter's tiny "point" connection to history - the "present moment". (See: "[The Half-Life of Proton Decay and the 'Heat Death' of the Cosmos](#)".)

2) The Conservation connection to the Symmetry pole. This is the source of information in its most basic form as the charges of the fermions, the quarks and leptons which comprise matter. (See: "[The Particle Table](#)".) Charge conservation is information's most fundamental conservation mode. Charge conservation is a temporal form of symmetry conservation, somewhat as history is a temporal form of information conservation. However, the expansion of history dilutes the causal connections of its information content via ever-branching causal networks, but quantized charges, which exist only in the present moment, are not subject to historical forces of entropic enervation (as noted in 1) above).

The charge of most interest for present purposes is the "identity" charge of the weak force, carried in explicit form by the neutrino, and in implicit form by the massive leptons (and perhaps the baryons). Identity charge is related to the elementary particles in exactly the same way as we commonly think of the relationship between the soul and the body. No elementary particle (lepton) can enter or leave the manifest Universe without its accompanying neutrino or identity charge, just as we think of the soul entering the body at birth and leaving it at death. The identity charge is the basic information bit that makes possible the birth of matter into the Universe. The "Big Bang" is essentially an explosion of energy and Identity, creating the manifest Universe. Our notion of the human soul is therefore one way in which we apprehend this fundamental physical conservation connection; another is our experience of "beauty" - which is the Symmetry conservation principle emergently expressed in biology and the Information Realm. See: "[Identity Charge and the Weak Force](#)" and "[The Weak Force as a Bridge Between 2-D and 4-D Reality](#)".

3) The Conservation connection to the Causality pole: this is the raw energy connection between light and matter, in which the free energy of light is transformed to the bound energy of matter in quantitative accordance with Einstein's famous equation $E = mc^2$. Matter is essentially an asymmetric form of light, one-half of light's particle-antiparticle form. We can think of matter as an asymmetric, massive form of light's energy transformed to rest. *The charges of matter are the symmetry debts of light.* See: "[Symmetry Principles of the Unified Field Theory](#)". It is from these charges that information and life are created. Hence life is derived from light as a conserved form of light's three fundamental properties: energy, entropy, and symmetry.

Gravity, time, and matter constitute our most direct experience of the raw energy conservation connection. Gravitation directly connects us to the rest of the Cosmos in proportion to our mass or bound energy content. Gravity, like Identity charge, is also a "hidden" connection in that its force is so weak we are only aware of it in the vicinity of very large objects - such as the Earth. But gravity is nevertheless a powerful conservation force, not only creating matter's time dimension via the annihilation of space, but also returning bound energy to its original symmetric form of light - as in the activity of our Sun. The gravitational conversion of matter to light goes to completion in Hawking's "Quantum Radiances" of black holes. See: "[Gravity, Entropy, and Thermodynamics](#)".

A conservation "subroutine" which is peculiar to biology is genetic reproduction and the conservation of genes (genetic information) through successive generations. Other conservation modes in the human sector of the biological realm and [Information Pathway](#) include memory, language, writing, and various technical and social mechanisms which specifically address the conservation of information through our generations: schools, books, libraries, etc. Besides gravity, our spiritual awareness (socially expressed as religion) is the "still small voice" which tells us of our conserved cosmic connection. "Spiritual awareness" also resides in our natural experience of the overwhelming beauty, majesty, immensity, mystery, and power of the Universe. It is also likely that the conservation of light's connectivity and unity are corollaries of the larger conservation principle of Symmetry (as formalized in "Noether's Theorem").

Hence the evidence for conservation is there if we choose to look for it. We see it in memory, historic spacetime, and "Karma"; in charge conservation, the phenomenon of beauty, and the notion of personal identity and the soul; and in gravitation and our spiritual awareness of personal connection to the Universe. Finally, we see it in the continuity of our genetic heritage through the eons of time, and in the evolutionary progress of the Universe toward self-knowledge, discovery, and the exploration of its creative potential, even as it returns inexorably to the original perfection of light from which it was born.

Our Universe of light, spacetime, and matter is the conservation domain of electromagnetic energy. We are part of the Universe, part of its evolutionary adventure of self-discovery. We can not escape the universal principle of Conservation, even if we wanted to. Is there life after death? We should ask instead: is there a Universe after our death? Of course there is. And we will continue to be part of it, just as we have always been part of it. (See: "[A General Systems Approach to the Unified Field Theory](#)".)

For a scholarly and thorough treatment of the entire metaphysical realm, including issues discussed above, see my late father's book "[Trance, Art, Creativity](#)" on his memorial website.

Questions Regarding "Karma"

Only biological life forms which experience death do not experience a full cycle of causal (cause and effect) consequences - because death separates them from karmic consequences which are still "in the pipeline". Hence death can prevent "justice" from being fully served, whether reward or retribution, and because this seems to violate natural law, we have invented "heaven and hell" to complete this normal lawful cycle in the "afterlife" - bringing by this hypothesis the life experience into alignment with all other natural phenomena in the Universe. "Vengeance is mine; I will repay, saith the Lord" (Romans 12:19 and many other biblical references of similar import). Because we know that in every other respect the Cosmos is a scrupulously conserved domain, it is a quite natural expectation and reasonable assumption that the karmic cycle will somehow be fulfilled, even in the case of biological life forms.

Of course, the "experience of life" as we humans know it, is of quite a different order of reality than the "experience" of any inanimate object or atom, and how to factor this difference into the equation is a very difficult issue. Is the biological "experience of life", because of its inherently mortal (and/or insubstantial) nature, simply excused from, raised above, or otherwise not a part of the normal physical cycle of cause and effect? Can we escape "justice" by the biologically simple and normal act of dying? Or is the karmic cycle fulfilled by all the ancillary causal connections we have set in motion before our death, and which continue after?

Summary

The universe speaks a language of conservation - the conservation of light's spatial, symmetric form in an alternative, asymmetric dimension (history); the conservation of light's energy in an alternative massive form, with an alternative, asymmetric entropy drive (the intrinsic motion of time); the conservation of light's

various symmetries as the conserved charges of matter (which include gravity's "location" charge). (See: "[A Short Course in the Unified Field Theory](#)".) The time dimension is necessary to accommodate the energy accounts, entropy drive, and causal relations of massive particles with relative spatial motion (rather than absolute spatial motion, like light). The historic dimension also allows charge conservation to conserve symmetry debts into an indefinite future. The conversion (and conservation) of light's symmetric spatial entropy drive (light's intrinsic spatial motion) to matter's asymmetric historical entropy drive is accomplished by gravity (see: "[The Conversion of Space to Time](#)". The conservation of light's raw energy takes the form of the mass and momentum of particles, and the conservation of light's various symmetries takes the form of charge conservation. *The charges of matter are the symmetry debts of light* ("Noether's Theorem"). The "non-local" distributional symmetry of light's energy is conserved by the gravitational "location" charge - via the conversion of bound to free energy in stars. Gravity also and simultaneously conserves light's symmetric spatial entropy drive (light's intrinsic motion) as matter's asymmetric historical entropy drive (time's intrinsic motion) - via the conversion of space to time. See: "[The Double Conservation Role of Gravitation](#)".

We live in a universe of mixed spatial and temporal entropy domains (historic spacetime). The secondary asymmetric temporal domain of matter is derived from, coexists with, and interacts with the primary spatial domain of light. This intimate mixture of conservation domains accounts for our universal intuitive awareness of a generative spiritual domain which stands behind and is antecedent to the physical domain of matter, and likewise accounts for the universal notion of an "afterlife", and the experience of metaphysical phenomena of many kinds. "Every jot and tittle of the law will be fulfilled"; and "Not a sparrow falls but the Father knows". Biological death is necessary so that biological evolution may occur - but our identity transcends biology, and we have learned that even the least elementary particle (the electron) bears a strictly conserved identity charge (manifesting as the electron neutrino). If even an electron can have an immortal "soul", so can we. We live in a compound conservation domain which will not let us go; we pass from one form to another as the universe evolves and grows - and we with it in an eternal and conserved cycle.

Postscript I: Musings on Easter Sunday, 2009

Life is the great miracle of the universe. The spirit of the "Living God" is the Creative Spirit of the universe that brings life in all its forms into existence: life and humanity literally raised from the atoms and dust of the earth. Life is the goal of the information pathway through which the Creative Energy of the universe intends to know and experience itself, including exploring (as through humanity) new forms and avenues of creativity and beauty. The (larger, meta-religious) meaning of the Easter resurrection is the recognition that life is greater than any one personal life experience, and the death of one individual does not terminate the information pathway of the Cosmos. Life goes on everywhere and always, and we, being part of the universal life experience, will always be part of that experience, not only historically, but in future transformations beyond our ken. The Universe wants to understand, experience, and appreciate itself, from many different perspectives, and to explore the full potential of its creative energy and capacity. We are asked to experience, appreciate, understand, and participate in the universe as only intelligent, self-conscious, and creative humans can do. To love the Universe is to secure a continuing role in its agenda of self-exploration, insofar as that is possible, for as individuals, we will not come this way again: change, evolution, and growth is the negentropic law of the Living Universe. But as day follows night, and spring follows winter, so life follows death as the great miracle of the Living Universe constantly renews itself, carrying us along in its inexorable, eternal, creative, and self-interested flow.

Postscript II: Easter, 2010

Regarding the analogy between biology (the creation and destruction of individual humans) and the weak force (the creation and destruction of single elementary particles): See:

Section IV: Introduction to the Weak Force

The Weak Force: Identity or Number Change

At death the individual "quantized" personality retreats from a unique manifestation to a much more general state of information - the species-specific ("closed") gene pool. A human individual begins at conception with one sperm and one egg - together making a single cell and a single double helix of DNA, one strand from each parent. Many combinations and permutations of the information complex contained in human DNA are allowed (are viable), representing the biological analog of the unified-force symmetric energy state of the weak force as gauged by the [Higgs and "W" IVBs](#). Hence while quarks and leptons of different flavors can emerge from the electroweak force-unity state, so also can many new gene combinations and permutations (the "blueprints" for new individuals of the species) emerge from the biological symmetry state of sexual union between male and female. Conservation (in the sense of continuity of life forms from one generation to the next) in this case operates at the level of the closed gene pool of the species, not at the individual level of personality. Humans make other humans, horses make other horses, etc., but an individual personality does not reproduce itself - at least not in the higher animals. Lower animals and plants, however, do often practice cloning (non-sexual reproduction). In cases of cloning, conservation may indeed be said to occur at the level of the individual "personality" (as in Macintosh apples, for example). Since it may soon be possible to artificially clone humans, we will have to recognize that at least the life experience of every individual is different, and must be accounted part of that individual, no less than the ephemeral cells of which a person is at any single moment composed.

Life oscillates between a generalized (gene pool) and a specific (individual) manifestation. Before my birth, "I" exist in the human gene pool only as a potential combination and permutation of DNA genes; at birth, the specific genetic combination I now experience as "me" is actualized in the world. During life, the potential of this specific genetic combination, for better or worse, is realized within some environmental context. "I" may also engender new genetic combinations (children) with various mates during this life period. At death, the specific genetic experiment that was "me" ends, but my human life continues in its generalized form (as it was before conception/birth) within the closed gene pool of humanity, which will give rise to many more individual humans, all of whom will have their own "me" experience of personal identity. Conservation therefore exists at the level of the human gene pool (generalized), and in historic spacetime (specific for each individual). We have no memory of previous lives because each unique "I" is separated by the generalized existence of human life in the gene pool, in which "memory" is carried in the molecular form of genes, not as the abstract, higher mental function of a human brain.

The creation of a new human being requires extracting a specific DNA combination from the generalized gene pool, which is accomplished by the completion of a symmetry cycle via the sexual union of male and female, which in themselves represent asymmetric halves of a single organism. The completion of this reproductively whole organism results in an energy release ("orgasm"), the inevitable consequence of the completion of a symmetry cycle. Due to the loss of energy and the partial fusion of identities, a "pair bond" between the mating adults results, just as in chemical, nuclear, or gravitational fusion. Note that in the biological creation of new life, the organism is reduced to a single cell and a single strand of DNA, one from each partner. Thus life begins from the "bottom up" each time, that is, from a single cell and molecule, just as it did in the beginning, a process which is analogous to the weak force creation of single elementary particles: the weak force must also reconstitute the original conditions of creation in the "Big Bang" via the massive Higgs boson and "W" IVBs. Only genetic "memory" can survive this constriction and restructuring between life experiences, each of which is a unique and delimited ("quantized") experience.

A transcendental or "spiritual" interpretation of this process is readily derived as an abstraction based upon the physical, genetic model (the transformation of an individual identity or "soul" from a generalized immaterial source to a specific physical state and back again).

Personal "karma" in the afterlife is thus reduced to a generalized karma of the gene pool. If you invent electricity, your descendants and other relatives will benefit thereby, along with the rest of humanity. If you make war, your descendants and other relatives will suffer the consequences, as will the entire species. In this conception, afterlife karma is largely restricted to the closed gene pool of one's own species, which accords reasonably well with what we might expect from simple cause-and-effect physics (the major effects are closer to hand). However, as we have ruefully come to realize with regard to human affairs, we must also take into account a larger sphere of influence that includes other aspects of our environment, both biotic and abiotic. In a similar vein, if life is a single force throughout the universe - a unified matrix of information and cosmic self-knowledge - then we may be entirely unaware of the vaster extent of our karmic influence throughout this Universe or even beyond, in either spiritual or physical terms, as certain interpretations of the "Multiverse" would have it.

Growth, evolution, and change must be accommodated by our biological model, as well as conservation. We want to be "saved", but we also want to become better people in a better world! Our individual, quantized, personal identity is conserved in historical spacetime, while our potential for evolution remains in the generalized human gene pool and in life taken as a whole - on this planet and throughout the Universe. Our sense of individual immortality is a consequence of the self-awareness of the Universe caught knowingly in the act of looking at itself through human eyes. I am how the Universe becomes self-aware and looks at itself. The immortality of the Universe is therefore quite naturally intuited to be my own. If the Universe is immortal, I am immortal, because I am part of the universe. The Universe is a conservation domain: all parts of the Universe are either immortal or otherwise conserved. We are naturally unaware of our previous generalized existence in the gene pool of humanity, or our potential existence in the information content of the Universe. Our true immortality is the eternal nature of the Universe itself - including its capacity to evolve and create information, life, and self-knowledge - extending even to the "Multiverse" and the Godhead beyond.

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References

Pierre Teilhard de Chardin : *The Phenomenon of Man*. French: Editions du Seuil, Paris, 1955.
English: Harper and Row, New York, 1959

[Trance, Art, Creativity](#) (book by Prof. J. C. Gowan, Privately Printed, 1975)