

A General Systems Approach to the Unified Field Theory - Part 4 (General Systems Discussion)

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(The 3 papers below form the first three "scientific" parts of this paper, to which I simply provide links, rather than repeat.)

[Symmetry Principles of the Unified Field Theory \(a "Theory of Everything"\) - Part I](#)

[Symmetry Principles of the Unified Field Theory \(a "Theory of Everything"\) - Part 2](#)

[Symmetry Principles of the Unified Field Theory \(a "Theory of Everything"\) - Part 3 \(Summary\)](#)

GENERAL SYSTEMS PROPERTIES OF THE TABLE

(See also: [Introduction to General Systems](#); and: [Introduction to Fractals](#).)

Note to readers: The author views certain religious, mythological, astrological, and occult "World Systems" or cosmologies as examples of ancient, intuitive General Systems which display relevant features of the universal 4x3 fractal algorithm, a pattern also seen in today's "scientific" or "rational" cosmologies. These intuitive systems are examined in the context of their General Systems properties only, without endorsement in any other sense.

Nowadays we are equally plagued by scientific (rational) and religious (intuitive) "fundamentalism" - people who are convinced they alone are in possession of the "One Truth". Scientists have become as bigoted and blind as the Church that martyred Bruno and persecuted Galileo - and even those people are still with us, except lately they have fastened upon Darwin and "Intelligent Design", rather than upon Copernicus, Kepler, and the heliocentric model of the Solar System.

While the scientific and rational mind may scoff at religious and occult systems of thought, few scientists would care to deny the value of the arts, which are also peculiarly human and non-rational perceptions of reality. The fact is, as science itself has forced us to realize, that our human-scale perception of "reality" is at once specialized, relative, personal, subjective, and limited. There is no greater fool than the man who thinks there is only one "right" way to see the world. Nobody knows what an atom "really" is; but apparently atoms make human beings to try to answer that very question: humans are (apparently) a collection of atoms in search of themselves. Our view of life is that it is the chemical information pathway by which the universe knows and explores itself, including new modes of creativity, new forms of beauty, and new means of connectivity.

General Systems is just another way to get at the "truth underlying reality", whatever that phrase may mean. We pile up circumstantial evidence of a certain sort (the 4x3 fractal algorithm, for example) and hope it points us toward a general understanding of our situation, toward the general principles which underlie our existence and that of the World. As a social rather than a personal effort, it is perhaps the best methodology we have at present.

A central purpose of this paper is to discover and share a glimpse of how the physical Universe works in terms of the general principles governing energy and its conservation. But because this [table](#) of our rational, scientific cosmology is arranged in accordance with the pattern and dynamics of a universal General System,

or fractal algorithm of the Cosmos, we are in a position to get more than just scientific information from it. We can compare it to other historic and traditional intuitive cosmic systems, religious and occult, which to one degree or another share this same pattern and dynamic. By this comparative means, we can actually extract some "human meaning" from all this "scientific" data.

"As above, so below": the phrase is an ancient, intuitive acknowledgement of the fractal nature of the Universe. But while it presumably works in both directions, we must realize that emergent properties of size and complexity will always prevent us from making exact analogies and transfers of logic between levels. We can expect to find general patterns, but also unpredicted surprises - quantum mechanics and black holes are good examples at opposite ends of the scale of size. "Inflation", the "multiverse", "strings" and "wormholes" may be others. We don't know what we don't know, so above all, we must keep an open mind. General Systems is an invaluable tool and guide, but it must always be supplemented by experimental scientific data and rationality, as well as by the arts and our intuitive and aesthetic faculties. Understanding the universe (in a scientific sense) is a "whole brain", open mind, social effort. Establishing a personal relationship with the universe (in a spiritual sense) is entirely a subjective and intuitive matter for each individual.

The intuitive mind is just as clever as the rational mind in discovering the underlying order of the Universe, and it has been busy at this task for a much longer time. The "Einsteins" of the intuitive mind have figured out this order in generalized, abstract terms long ago; the rational mind is only now catching up. We live in a fortunate time - even 50 years ago we could not have filled out the rational table; it would not have been possible, due to lack of scientific data, to make the comparisons we are now able to consider.

Religious Systems

The first comparison I want to make is between the cosmological story told by this scientific model and that told by the Old and New Testament of the Bible. In their larger features these stories are virtually identical. The Universe in both cases begins as light, followed by a short period of grace or symmetry, which is spoiled by a descent or "fall" into a chaotic, disharmonious state of manifestation and asymmetry. In the rational model, the weak force plays the role of Satan, the fallen angel, a principle of manifestation, a duality apparently built into the system from the beginning.

But God does not abandon his "spoiled" creation; the principle of conservation, the salvation of souls, promises an eventual redemption, a return to the original condition of "grace", the analog of the return to symmetry, unity, connectivity, and light which we have mapped in the physical model. "Heaven" is but the conservation domain (or "dimension") of spirit. Spirit itself resides in the connections of the Cosmos, and in the physical laws and principles which govern its existence, conservation, interactions, and evolution. In the rational model, "God" is embodied as the "Multiverse" - all-symmetric and all-creative, the Source and First Cause of all reality and energy.

As material beings, humans are especially aware of and disturbed by the fact that bound energy as a class is curiously separated from its conservation domain, historic spacetime. We experience instead an "Eternal Now", which is largely the causal effect of matter's historic information matrix. (See: "[The Time Train](#)".) We need to understand that this separation, while necessary and purposeful, is temporary and to some extent illusory, as the Universe is in fact a wholly connected unity in time and space, and is constantly evolving toward a more perfect realization of that central fact. We are all immortal in history; while the Universe lives, we live.

We live in the separate, manifest world of the weak force, the temporal "hell" of the physical realm, but we remember with longing an earlier time of unity, when we were but a potential for experience in the womb of

the Universe. It is to this condition of unity ("enlightenment") we hope to return, not as infants, but as adults, creative in our own right, illumined by spiritual awareness, and with a more complete understanding of reality.

The interaction of two energy states or two conservation domains is a fundamental and recurring theme in Nature and our model (space vs time, strong force vs weak force, light vs matter). The intersection of a symmetric with an asymmetric conservation domain is necessary to bring any system into manifestation. The interaction or intersection of the symmetric spiritual domain with the asymmetric physical domain is the fundamental symbolism of the Christian Cross. Such an interaction is possible only if the conservation rules of both domains are respected. Hence the death of Christ on the cross symbolizes a necessary obedience by spirit to the rules of the physical domain; the Resurrection follows as a compensating obedience to the rules of the spiritual domain. Christ's physical mortality, like our own, is the price spirit must pay to interact with the physical world. Whether or not you believe this story in its literal and religious sense, it is symbolically correct, rationally and intuitively, which is why it has endured. (See: "[A Religious Interpretation of the Tetrahedron Model](#)".)

Astrological Systems

Next I want to look at the correspondence of this [physical matrix](#) to the astrological world model, as astrology is also an ancient, western, intuitive 4x3 cosmological model, but one I would characterize as occult, rather than religious, at least as we view it today.

Astrology is a [General Systems model](#) of the human condition. What is unusual about astrology is that it models humanity in terms of a cosmological (astronomical) system. Astrology makes a fractal or General Systems statement about the relationship of humanity to the Universe: if we understand one, we understand the other; at the least, they are iterations of the same 4x3 fractal algorithm.

The constellations, stars, and planets visible to the naked eye (in essence, the Milky Way galaxy), were the full extent of the Universe known at the time astrology originated, at least 4,000 years ago. In terms of its historical origins, Astrology is a mixture of a rational and an intuitive model (as it is based on astronomical observations) and was just as universal in its intended scope as our present day Unified Field Theory. The ancients wanted more from their rational model than simply the ability to predict planetary positions, eclipses, and seasonal changes; they wanted human meaning from it as well. I am asking the same from our modern Unified Field model: what is the meaning of our modern cosmological system for humanity? What does it say about our fundamental questions? What can we learn from it about ourselves and the "human condition"?

The ancients essentially compared humanity to our galaxy, which was their observable Universe; we are extending this comparison to the limits of the Universe as we know it today (in terms of fundamental physical principles as well as cosmological observations). If Man, galaxy, and Universe are all iterations of the same fractal, the comparison should remain valid.

A test of this hypothesis is provided by mapping the ancient system on top of the modern, and seeing if there is a significant convergence of meaning. In this way we compare the thought of two kinds of genius - the intuitive genius of the ancients, and the rational genius of the modern world. The "heavy lifting" in both camps has already been done. Our contribution must be that of aligning the two systems correctly and interpreting the results with skill and sensitivity.

The astrological system can be represented as a 4x3 matrix of 3 "Qualities" vertically mapped against 4 horizontal "Elements". Again we see a symmetric, general, or spiritual domain (the 3 Qualities: Cardinal,

Fixed, Mutable) intersecting or interacting with a more asymmetric, specific, physical domain (the 4 Elements: Fire, Water, Earth, Air). (Seen also as [global vs local gauge symmetry](#).)

As the modeler, I have to decide how to assign the astrological attributes to the physical matrix, that is, choose the appropriate correspondences between the two systems.

On the vertical axis I pair "Mutable" with Energy, since energy is changeable but conserved, taking many forms; "Cardinal" corresponds to symmetry and charge conservation, the principle which translates Law (symmetry conservation) into matter (charge conservation); "Fixed" corresponds to manifestation, therefore to particles and matter. Astrology does not give us a 4th quality to fill out our 4x4 table, so I have had to invent one which I call "Motive", conveying the idea of directional action, intent, or evolution to correspond with the "agenda" or "drive" of the force fields (field vectors) in paying matter's symmetry and entropy debts, and converting bound energy to free energy.

For the horizontal axis of the elements of the physical world, I choose Fire for the electromagnetic force, Water for the gravitational force, Earth for the strong force, and Air for the weak force. Those who know astrology can now fill in the "Sun Signs" corresponding to the cells of the matrix and see if they like the fit between the traditionally described attributes of the Sun Signs and the physical characteristics of their rational counterparts. (See: ["Table of the Sun Signs"](#) and ["Combined Table of Astrology and Physics"](#).) I think in every case they will find the fit remarkably good, and fraught with meaning both old and new. Unfortunately, it is rare to find a person who is versed in both physics and astrology, so the beauty of the correspondence between the two systems may not be readily apparent to the uninitiated. I try to make them so in some of the astrological papers cited below.

In the terms of Norbert Wiener's cybernetics, the Qualities are the "inputs", the Elements are the "thruputs", and the Sun Signs are the system "outputs", a dynamic which applies equally well to the rational system.

The correspondence between the astrological and rational cosmic systems is also shown in the ["Hourglass"](#) or ["Grail"](#) diagrams (see also: ["The Particle Grail Diagram"](#) and ["The Spacetime Grail Diagram"](#)). The interpretation of the human condition as revealed by these convergent systems is shown in the ["Personal"](#) and ["Civil"](#) Grail diagrams. These diagrams are discussed in detail in two papers, the "Physical Correlates of the Astrological Sun Signs", ["The "Sun Signs" of Astrology: Part One"](#) and ["The "Sun Signs" of Astrology: Part Two"](#). (See also the ["Overview of the Astrological System of the Grail Diagrams"](#) for a synoptic and general discussion.) Although such papers are the result of years of thought, reading, and work, of course they remain purely subjective, containing in the end nothing more nor less than my personal speculations upon these matters.

Summary

Here, and in the papers, diagrams, and tables cited above, we have seen how the astrological system maps upon the modern rational system with exquisite meaning and precision. The Chinese classic "I Ching" (Book of Changes) is an Eastern example, independently derived, of an ancient, intuitive, occult system which is also based on a perfect 4x3 metric: 4 male trigrams joined to 4 female trigrams, producing 4 hexagrams. Its basic dynamic and structure are perfectly in accord with the General System features of our other cosmological systems, but I do not know enough about its elaborated form to discuss it further.

All these systems of human thought are examples of how the mind, in both its intuitive and rational mode, has grasped the fundamental pattern and order of the fractal Universe. Since we ourselves, including our brains, are part and parcel of the same fractal order, these correspondences of thought are the natural outcome of the patient process and evolution of truth-seeking. (See: ["Table of Natural Organization"](#) and ["The Fractal Organization of Nature"](#).)

It should be noted that the 4x4 matrix table is but one approach to General Systems modeling of the Unified Field Theory. Others are discussed and cited in the "introductory" papers linked near the beginning of this paper. Especially to be noted is the ["Tetrahedron Model"](#), which considers the conservation laws and principles which underlie and support the four forces, forming a more fundamental and simpler level of the universal fractal hierarchy. (See: ["Spiritual and Scientific Principles of the 'Tetrahedron Model'"](#); and: ["Synopsis of the Unified Field Theory: A Tetrahedron Model"](#).)

The Universe values symmetry, for that is the conservation principle which upholds us all (charge conservation, charge invariance). Our natural perception of symmetry is beauty, hence we are naturally led by our delight in beauty toward enlightenment. We should look very carefully at this issue of symmetry and beauty, for in this aesthetic principle is our natural path to salvation (in every sense). Einstein's strict adherence to the principles of aesthetics led him to truth in his equations, and the discovery of the symmetry conditions of light and spacetime.

We also seem to have a natural perception of symmetry in our native sense of social justice. The "Golden Rule": "do unto others as you would have them do unto you", is the fundamental and universal symmetry principle of social behavior. "Liberty, equality, fraternity"; "all men are created equal"; "one man, one vote"; "all men are equal before the law": these are all symmetry statements regarding the civil and political status of humanity. "All men are equal before God" is the equivalent expression of spiritual symmetry.

Spiritual awareness is the awareness of connection - of our connections to the fractal nature of the Universe, all the way back to its beginnings in the "Multiverse" as unmanifest Principle. Our spiritual awareness is the self-awareness of the fractal Universe: "Man created in the image and likeness of God". We are each a quantum unit of this fractal self-awareness. We cannot escape it, it is in our DNA as a genetic heritage bestowed through evolution upon our species. Let us learn to use it well, remembering that symmetry in all its meanings is our true and natural guide - Noether's Theorem is the "Golden Rule" of natural law. "Beauty is truth, truth beauty - that is all ye know on Earth and all ye need to know" (Keats - *Ode on a Grecian Urn* - 1819). And similarly, from Socrates in Plato's *Symposium*: "This is the life which man should lead above all others in the contemplation of Beauty absolute ... Dwelling in that realm alone, he will bring forth not images of beauty, but Beauty itself, and so would become immortal and be the friend of God." (c. 370 B.C.) (See: [The Tetrahedron Conservation Model and Plato's "Symposium"](#).)

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Weak Force Papers:

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[A Spacetime Map of the Universe \(original gif diagram\)](#)

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[Unified Field Table: Simple Form](#)

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[The Interaction of 4 Conservation Laws with the 4 Forces of Physics](#)

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