ESTABLISHING AN UMBRELLA PHILOSOPHY - REQUIRED TO UNDERPIN GENERAL SYSTEMS UNIFICATION IN A SINGLE ENCOMPASSING PARADIGM

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ABSTRACT

As Strickland & Reveal (John Wiley, 1995) reminded us in "Understanding the Nature of System Change: An Interdisciplinary Approach", von Bertalanffy in "General System Theory" (Brazillier, 1968) stated that the original aim of GST was 'to investigate the isomorphy of concepts, laws, and models in various fields, and to help in useful transfers from one field to another.' From its inception GST/ISSS has advanced the "embracing and ambitious" noble objective of the founders, through conversations, conferences, forums and publications.

The encyclopaedic diversity of systems, complexities, organizations and levels of behavioral existence is daunting. Physicists first hinted at the potential for discovering a grand isomorphism, by focusing on the fundamental forces as first domain for 'unification'. That has yet to be accomplished. In the meantime, Sarton, von Bertalanffy, Whorf, Boulding, Miller, Beer, Rapoport, Rosen et al, opened the spectrum of conversations to include biology, ecology, economics, sociology and more, in a grander sensibility.

And though there have been great investigations, innovative detailings of specific models and math-described ideas, such as H. Odum's "emergy", Rosen's "entailments", Hebb's "systems of systems", J Rose's "Integrity Paradigm", among others, conceptual goals have drifted from trying to identify a single isomorphism, to coping by comparing different local forms and structures and architectures. A grand convergence seems to no longer be the centerpiece of the conversation roundtable.

This author proposes that it might be beneficial, in order to refresh the vision of GST/ISSS founders, to do a deeper analysis of the philosophy of General System Theory as originally conceived. Such philosophy was not whole-born, but itself had to be a product of how the universe is organized – was encountered – was recognized – and eventually became appreciated – by human minds.

There is no intention of replacing the diverse wellspring of prior philosophical ideas and mindsets, but rather to hold true to the goal of identifying a shared seminal behavioral rule of performances among systems, to recognize an improved philosophical embracing frame of reference, as a requisite for isomorphism. An improved essential notion among essentials … rules of performance being the tangible practical aspects, but by better defining the intangible qualities … such as a re-worded 21st century framing of Aristotelian causes, might enable a quantum leap across the impasse chasm that General System (*singular*) Theory faces. Potential correlation~calibration rests on a seminal principle of requisitely defined association ~ communication. A General Theory of Systems is then achievable

The author looks to re-open that conversation, in a hopefully new way.

Keywords: Integrity Paradigm ; communication ; general theory of entropy~negentropy ; systems philosophy ; information access; new mathematic relations of dimensions

EXPERIENCING, ENGAGING, UNDERSTANDING

General Systems Theory is probably the most ambitious intellectual endeavor of human sentient thinking. I don't write this to in any way belittle or diminish any conceptual or practical discoveries, accomplishments or conscious realizations humanity has engaged in or achieved to date. Science, religious thought, philosophy, logic, imagination, artistic creativity in physical expressions and literature, military strategies and tactics, education, technologies, economics, spiritual enlightenment, cultural embellishments and mores – we are a pretty spectacular species. Languages and mathematics … the subjective and the objective .. we seem driven by some underpinning imperative of actions and thinkings. We hunger for knowledge, by way of a special appreciation of wisdom and understanding.

First – it serves a pretty fundamental and practical purpose. It is a skill for accomplishing what every entity in the universe enacts – within the scope of their own special forms or physiologies – to continue existing, to survive. Improving knowledge is qualitatively and quantitatively satisfying – because the universe exposes us to surprises and unknowns. And besides ego reinforcement accomplished through education and awareness, we also co-gain the productive capacities to cope with changes in novel situations and circumstances. The comfort of a stable environment is abetted by the comfort of having skills to survive change and varied events. And all these are derived from what we are composed of, and the rules of existence from the understood (or not) essentials of Being.

And that is pretty amazing when we consider ourselves in context to this phenomena we call "existence" … we itch to survive, to act out the essences of our phenomenological form and capacities – whatever they are – during each of our individual lives, and over the extensions of overlapping lifetimes. We are "in" existence – special as a product of its qualities and rules, even though distinct from so many other companion products and phenomena and levels of organization, and in the same sense, we are "of" existence – capable of enacting the rules and capacities and qualia, that may or may not be shared with other entities and levels of systems – enacted and inherent (yet to be instantiated) potential.

The "existence" we are aware of ourselves living and sentient within - finds us in a strange circumstance. We are "within" and part of and product of the totality of this universe, and all its rules/laws for performance, yet distinct enough to be both the reflection and what is reflected.

And what is fortunate – and a frame of reference we have to consider as valid and primal – is that the rules of behaviors and performance have enacted a primal urge "to" look, "to" explore, "to" seek the explanation of "how" all this existence integratedly "is" and performs together .. and .. to simultaneously look for the rationale "for" existence and 'being', as well.

Is there purpose for existence? Is it mathematical statistical chance? Is there a Creative Intelligence that caused the universe, and with it, humans with sentient awareness and reasoning abilities, as part of the grand production? Are there multitude universes? Are there multitudes of infinities, and if so, how do they relate and inter-enact? Are there open connections and access among the domains of existence? Are there mechanisms for access, communication and transformative associations? Are there provisional limitations? Are there properties shared among all phenomena? Are there capabilities that rely on sufficient complexity of form, to enact certain functions of interaction that are and are not equipotential to different dimensional configurations and forms of expression, depending on circumstances? What is "identity" and self? Such that behaviors are enacted vis a vis the context of other selves .. and which is the 'environment'? Are you environment to me, while I am environment to you? Are organelles and subsystems "identities"? and do those distinguishable 'wholenesses" maintain individuality while at the same time subsume their integrities to larger complexities and 'whole identifiable complexities (systems)'?

Where is the frame of reference for all these existences? Architecturally, there are pluralities and multitudes apparently. While within the same scope of circumstances – the innate universally enacted inter-involvements also press the qualitative requirement that all of existence – in order to perform and behave coherently and consistently, must have a shared qualitative Unitary, in order to function so integratedly well together. And -that- is a conceptual phenomenological "frame of reference" isn't it? A Unitary which is not a plurality – except in the sense that it exists everywhere. And it is not a multitude in and of itself – but only in the sense that it instantiates in alternative forms, even while there are no variances in the operative -relational- rules of inter-involvement and behaviors.

Counter to some intuited logic ideas such as Godel's Incompletness Theorems and Heisenberg's Uncertainty Principle, Zeno's Paradox and Russell~Whitehead's variant sets of sets. .. we have to admit that persistence, maintenance, continuance infer a universe that is both everywhere consistent and everywhere complete, despite the accessibility to specify that totality through exposition of our human mentality, language, communication tools – including currently defined mathematics. [which – as a personal thesis – I propose is an incomplete language, tool of description ; just as 20th century mathematical notions were identified and added to the body of mathematics … there are necessary notions and notations yet to be added to mathematics, no matter how intricate and extensive and inclusive it already seems to be.]

THE CHALLENGE OF SELF-EXAMINATION : SUBJECTIVELY –AND- OBJECTIVELY.

A unifying model and discussion doesn't exist yet, but many are working on it.

The question is not "are the big bang theory and evolution theory SUPPOSED to go together?" The intuition is: they co-exist (even sequentially) … so they ALREADY "go together". It is the big challenge for human beings to figure out HOW they have gone together. As maybe the enlightened awareness will teach us some improved ways to improve existence, explore new possibilities of existence, have the courage to accept it if evolutionary changes morph and change humans .. in body forms, or neurology, or relationships with other species on our planet.

Examining philosophy and General Systems Theory (GST) is a well advised approach at this time in the history of GST. Part of the challenge is that the human library of accumulated information and established concepts to date is vast, and growing with each passing moment. To come in with a new perspective and rationale, when 3000+ years of intellectual effort are already extensively in place, is daunting, some might say, fruitless and wasteful. But current scientific "realism" and competing unresolved perception bases have been hitting the same impasses for about a century – there is an intuited belief that the universe functions under a few simple shared principles and rules of performance, but none has been successfully enunciated yet. Not only do the in-place sets of ideas have to be re-examined, but any new approach has to co-shoulder a rationale to justify itself, against incompetent established models – even if the models have certain correct attributes. For even with the noble goal of identifying a unified principle of behavior and organization regardless of the level of organization of any and all systems of the universe observed and considered, no such rule of performances has been identified yet.

There has been minimal success with certain physics unifications, because the established models map certain specific similarities generally; just not at the extremes where holistic unification is sought and needed. Physics unification has been the starting location – but a huge disjuncture exists with current models, failing to unify quantum mechanics (based on statistical mathematics in the domain of the infinitely small) versus field theory relativity (in the domain of the cosmically large) – with the middle arena of human scale phenomena thoroughly adrift - including the complicated myriad theoried topics of

physiology, sociology, psychology, economics, spirituality, the arts, ecology, logics, mathematics - and dare I say – philosophy, among all the Encyclopaedic topics.

Modification and alteration of existing models won't be sufficient. A deep dissection of essential mathematics is also required, because it might harbor axiomatic misconceptions and omissions – which omissions – difficult to recognize – could be the source of unification failure. We accept mathematics as it stands as errorless, and some mystery design factor prevents unification of all systems, when the easier likelihood is that a disjunction in mathematic theory is the culprit.

Mathematics has become a spectacularly complex system, as you are all aware of it and practice it. But it is a language. And as much as we hope it is thorough, informative, useful and applicable where we want it to be and need it to be, experience has proven, especially with philosophical analysis and logic models such as Gödel's theorems, (Rose, 1995) we recognize that languages are narrow frames of reference about existence and behavior spaces and relationships.

When you are embedded in a language you've known and depended on all your life you assume it was handed to you fully tested by generations before and around you, adequate to all your needs for understanding and engaging your world, and, accept it as foundationally complete and accurate. But, just as a speaker of Swahili or Japanese or French or Chinese or English, or any others know, not all knowledge or data or comprehensions translate perfectly, or contain equal perceptions. Sometimes deeper discoveries are made – based on external encounters - that result in changes and improvements to the established 'home language'. Back in the 1930's, building on Einstein's and Reichenbach's then current expanded ideas of relativity relations describing the universe having multiple frames of reference of comparable validity, the chemist and linguist Benjamin Whorf, observed,

> "each language is not merely a reproducing instrument for voicing ideas but ... is itself the shaper of ideas, the program and guide for the individual's mental activity, for his analysis of impressions, for his synthesis of his mental stock in trade.
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> "This fact is very significant for modern science, for it means that no individual is free to describe nature with absolute impartiality but is constrained to certain modes of interpretation even while he thinks himself most free. The person most nearly free in such respects would be. familiar with very many widely different... systems. ...We are thus introduced to a new principle of "relativity", which holds that all observers are not led by the same physical evidence to the same picture of the universe, *unless their linguistic backgrounds are similar, or can in some way be calibrated*." (Whorf, 1956).

Whorf's closing remark in that sentence is of critical importance to the mathematical effort to coordinate and make sense of all dynamics in the universe. In his prefacing words, Whorf alerts us that we may be so habituated to a given accepted language that we don't recognize deficits or holes - which may be preventing knowledge awareness. His closing remark about 'calibration' challenges us to be alert to coordinating all aspects not just *among* languages, but also *within* an established language, recognizing that any missed relational definitions are a red flag of deficiency. This is critical. Right now, current mathematics does not just have diverse, not easily equalized operators and functions (field equations versus statistical equations) but it also has unresolved discontinuities (eg, division by zero; plural not-coherently associated definitions of exponents and dimensions, and negative~negation incoherent definitions).

We continue to use the large edifice of mathematics, as if all the parts validly correspond to real observations and phenomena, but, those cited internal relations (and some others) are left floating with missing coherent association. And no one is addressing those inconsistencies. This GST analyst

proposes that the only path to resolving external disjunctions will be through repairing and connecting the missing *internal* associations in the mathematics we use, besides changing the logic and criteria paradigms factors generally.

GST seeks a unitary under which we and the universe exist, but we don't want it to be categorized as an insensitive mechanism, devised as a process of behaviors without meaning, individuality, purpose, creative value for even existing, or even the capacity for free will and novelty, despite being associated with a neutral principle of behaviors and relations. A unitary that accounts for the inorganic and the organic simultaneously, comfortably, accurately.

Current logical models seem unable to synchronize the statistical with the non-statistical; and all the models have also driven us to make organic qualia mutually exclusive from inorganic qualia, even though they seem to share some scientific factors such as composition and energy. In fact, we are so fixated on "energy", that we have missed valuing and using as the shared criteria "relations" of behaviors regardless of the forms and energies involved.

Think about that statement carefully. "Relations" dominate behaviors .. through any alternative physical structures that may be involved and energies involved.

We are so committed to "conservation" laws (related to energy, momentum, and countable factors) as being essential and primal, that we miss appreciating the more primal notion that "relations" are the real essential property .. spanning all sorts of energies and physical presentations and architectures.

The universe already wholistically integrates the statistical and non-statistical; and smoothly segues the pre-organic with the organic (pre-life with life). Please note that I make a bridging paradigm here, a shift in the egotistic biased self image of our life-form selves. The only way we will even begin to open our minds to identify a General Theory of Systems Unitary, is to first philosophically shift away from the life~nonlife demarcation, and realize that life is a natural extension, not a novel invention (of different quality emergence), from precursive organizations that have qualities – certain limited relational behavior properties – that when incorporated together form living systems. But the essential properties are by necessity pre-present, and the systems, even quantum systems, are better appreciated as "pre-life" systems, from which living systems and complicated behaviors flower. Indigenous seed first – both relational forms, and relational behavior rules – then complicated and open functioning flowered forms second. With the shared thread of the unitary embodied in the least of existence, developed and functionally presented in all the intermediary forms, and present within all scales of size, and in all degrees of complication.

Despite the great enthusiasm created by Ludwig von Bertalanffy and his colleagues some seventy years ago, their sensibility for discovering universal underscoring associations among all of phenomena of existence has yet to be accomplished. Even though modern physics points in that possible direction, to extend that grand unification to all of existence is a natural logical inductive step, but there is no conceptual basis yet anywhere in human concepts spaces to achieve that goal. Scientific methodology, historical logic and reasoning practices and proofs, disparate concepts in hundreds of fields and subjects, scores of unreconciled mathematical concepts, accepted well defined ideas, accepted intuited and –not-well defined ideas in higher ordered human systems (eg psychology, sociology, spirituality, and philosophies (plural); presumptive biases and opinioned conclusions … General Systems Theory has no consensus thinking to build on, let alone offer humanity a grand self-insight to be used in advancing and evolving.

So going back to basics is not a bad idea. It is a difficult and monumentally challenging approach indeed. Because we might have to admit to primal errors in our well-established mind sets, which we have

assumed got us this far, this phenomenally far, in achievements and conceptualizations, with the presumption of 'no errors'. A deep re-examination of philosophy vis a vis GST is not meant to expose wrong thinking, errors or fallacies in human awareness. It has the potential to otherwise account for the conventional mindsets and ways of thinking – uses of languages (especially mathematics) – and enlighten humanity with a different synchrony frame of reference .. a change in the music, in the point of view, in fresh axioms and a prioris .. from ones we thought were unassailable and carved in eternal enduring titanium.

We are going around in ineffective circles using conventional rationales and mindsets. So why the terror involved in considering exploring new fresh analyses? Of course it challenges the status quo, but so what? Doing the same conceptual practices and expecting different results is no different from using old principles and logics and expecting new different improved concepts and awarenesses.

There is an ages old verbal saw: "Physician. Heal thyself". For this organization and its members, the phrase becomes: "Human being, human mind .. discern thyself, dissect THYSELF" … or, as Socrates posted at the entrance to his Agora: "Gnote Se Auton" .. "Know Thyself" … *in situ ; in vivo.*

Now there is a challenge, if there ever was one. BE the organism that requires modeling .. by being the observer -and- the observed; Dissect your own "self" in order to make sense of the what, the who, that you are. Not only 'what' you are, but also the 'how' you accomplish any and all behaviors of your existence; examine behaviors, and then describe the universal principles and rationales *behind and within* the behaviors.

Self examination is the hardest thing a human being can do, isn't it? And if it is difficult for a person, can you imagine how hard it is for a culture? Reflectively assessing qualities, skills, relationships, resources, knowledge, opinions, attitudes, beliefs, presumptions, imaginations .. and habits. Of ourselves – and simultaneously – of all the rest of the world. And if it is difficult for a culture to do anything coming close to an objective analysis of its own 'personality', behaviors and characteristics it has assumed (based on an innate positive self evaluation) – we presume are rational, valid, defensible, and accurate – in context of any and all ideals of human existence, how more intensely difficult is it to holistically and extensively 'self evaluate' the proprieties of underlying 'philosophies' of all cultures, and, even the languages they use and rely on? Where the languages are both colloquial ones developed and evolved, and, the hopefully the specially crafted neutral and supposedly perfect-objective (scientific) ones .. we call logic and mathematics?

Gnote se auton, the philosopher Socrates wrote millennia ago, challenging humanity to do, as part of each life's existence .. "Know thy self". The highest possible ideal sentient achievement. But how does one enact "examining and knowing yourself"? How, with any expectation of truth and validity? And what is the nature of 'objectivity' - unbiased unskewed assessments? If everything is experienced and contextually encountered in the physical world – subjective – vulnerable to variants and imperfections, then if the current notion of 'objective' is used (minimization of subjective influences and variants; and Heisenberg limitations on measurements puts a data boundary), then "objectivity', as an ideal, can never be reached … in the physical realm.

Unless, as we begin this refreshed expedition into self understanding, by starting using brand new essential criteria and definitions.

I dare to take the discussion in this new direction because I need you all to consider this new definition of 'objectivity'. Objectivity implies: impervious to modification or influences. And since all physicality is vulnerable to 'influences', if .. data, results, measurements are always vulnerable and therefore 'subjective' by default, objectivity must – also by default – be intangible. And the only "things" that can

be intangible are nothing physical, but are the rules, the relations, the principles - identified in existence, the patterns of behaviors and orderings.

Maybe some re-phrasings of similar challenges would help the quest:

> *Option 1*): Stay alive, alert and functioning, and using only a scalpel – dissect your own body to examine and explain how all the parts of your body and your mind function together; and explain the processes of your existence; the tangible and the intangible; the physical and the relational. [Right, not quite possible. So we dissect others, the way Da Vinci did.]
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> *Option 2*): Imagine you are a sentient fish residing in a water environment.
> *Part 1*: describe respiration and organs in a gaseous environment.
> *Part 2*: describe the *sensation* of respiring with lungs instead of gills.
>
> *Option 3*): Choose a symbolic information mechanism to process the data~information requested above. Please distinguish and describe the form(s) you employ. Do you use the same data forms internally and externally of yourself? If not, explain how the different forms relate to one another and also to the observations they are meant to correspond to.
> *Part 1*: verify that all transcriptions or translations between formats convey and map all intended data and meanings exactly ; is there data loss? ; is there information omission? Are omissions due to poor modeling, mapping, or limitations inherent to the symbol systems you are using?
> *Part 2*: How are your symbolic information transmission~handling tools related to the world or existential domain you are resident within?
> *Part 3*: Are all existential domains you are aware of accessible and amenable to symbolic information conversion? Are there existential limitations? Please discuss and explain. Are there 'work arounds' despite implied limitations?

Humanity has had it relatively easy until now – being essentially a 'product' of the universe's rules.

Set theory mathematicians though, have already hamstrung human hunger for knowledge by setting limitations on that hunger. If a sentience is not by default "omniscient", there will always be information unreachable; and with things left 'unreachable' .. 'unaccessible' .. then the effort to achieve some 'without exclusion' grand comprehension of existence is ruled out, game over, before any effort is made.

But we try anyway. And that means humanity has to establish a philosophy, a logic about the nature of nature, that does –not- preclude or prevent a reasonable grand unified theory eventually. And, it has to explain all theories and mindsets … as being compatible (for one reason or another) via the grand unification's comfort with limited and unlimited data ; with qualified relations and with all possible sets of information relations. And it has to be self-referenced so completely that even the languages of description are accounted for; why they are qualified to be produced from essential principles and form valid information processing mapping systems, concepts embracers, and self defining with a grand consistency, even if novel emerged forms and qualia are concurrently involved.

Apparently in the past ten years (***YouTube 2012 Sean Carroll Physics conference*;*** Quanta December 16, 2015 re Munich Germany conference; other forums) science is reaching limitations in physical research, and therefore limitations to scientific method testing to confirm models of behaviors (systems behaviors, as it were) and proposed laws of the universe. For a century, the scientific method has been foundationed on Karl Popper's philosophical~logical criteria of 'falsifiability'. But this has

been a weak argument, conditional on the situation that astrology is 'falsifiable', but is a well established 'non-science'.

Bayesian statistical weight has been set in Popper's place, but anything less than 100% validity verification puts -all- testings into question: what percentage is sufficient to establish any hypothesized laws or conclusions as correct?

General Systems Theory, if it is to be the expansive conception of existence it has the potential to be, has to be evaluated in a philosophical context as well. Except, the challenge is deeper, because GST is only an intuited hypothesis .. no one in 70+ years has established GST laws or principles held in universal high standing in the scientific community, let alone in academia or theories of being. It is not yet a GTS .. a General Theory of Systems, that could and should surmount physics' golden prize of a Theory of Everything – which only hopes to describe a unification of particles, energies, forces, space, time – the supposed initial properties of the universe.

If anything, GST has slipped into being a fractious community, despite plausible marching orders from von Bertalanffy and his colleagues, and proposals of possible shared rules of behavior per the ideas of Ross Ashby, Howard Odum, Robert Rosen, Ilya Prigogine and other systems modelers. The presence of power laws that seem to be applicable to many diverse systems and organizations is an indicator, but it is not an explanation model. "Entailments" – per Robert Rosen – alert us to exquisite complex causal inter-involvements – subtle, with pluralities of concurrent non-linear activities and outcomes. "Emergence" as real phenomena found arising between many different adjacent tiers of organization, is another "indicator", but it isn't an explanation either, for why it is present in so many locations (topics) as a general relational phenomena. What 'emergence' did accomplish, was to give reality to interactive open boundaried relations .. which the industrial revolution mathematical models of energies and entropy did not address. Though observed and recognized for multiple generations – the universe being "nested systems of systems" – no general model explains all the dynamics. Prigogine specified it arises statistically. Mandelbrot specified it arising through dimensional iterated non-statistics .. a wholly different mechanism

Apparently, [https://plato.stanford.edu/entries/properties-emergent/#OntEme] even Prigogine did not identify any deep associations of his discovery of complexity in entropic situations, with fundamental mathematics or primal physical phenomena.
"Adjudicating the case for or against ontological emergence outside the mental realm is equally difficult. The Nobel laureate chemist, Ilya Prigogine, has long suggested that the 'dissipative structures' of non-equilibrium thermodynamics involve properties and dynamical principles irreducible to basic physics." [*See, e.g., Nicolis and Prigogine (1977) and Prigogine and Stengers (1984)*] Which view on the topic is all the more absurd since he was president of ISSS in 1988 – ostensibly leading an organization which has its founding thesis that there ARE shared related reducible properties and dynamical principles across and among systems .. especially differential "equilibrium" properties.

Does no one admit to the ludicrousness of that? Does anyone in ISSS have a sense of humor we might be living out a self imposed farce as a scientific organization? Is there time yet to right our tilted ship of state, floundering under misconceptions filling the current bilge chambers, threatening to sink the ship ISSS "Good Intentions"?

And even with emergence, a new fundamental issue exists – little talked about. Physics is schizophrenically stuck with two different mathematics to describe phenomena: quantum mechanics (statistics) dealing with the smallest orders of organization, and causal field theory (non-statistical) dealing with the largest orders of magnitude phenomena.

That unresolved disjuncture, pointing to what should be an unacceptable split house of mathematics, holds for emergence as well. Prigogine described emergence arising through far-from-equilibrium statistical mathematics, and Mandelbrot described emergence arising from non-statistical exponentially re-iterated math equations. And to date, no mathematician is bothered by two disparate math models achieving the same relational results among levels of organization. At the very least, these discordances demand an absolute re-review of the entire edifice of mathematics, primal definitions, logic concepts and terminologies definitions. The separate mathematical approaches are not in error as they stand, in and of themselves, but the disparities point loudly to missing correlations between the functions and terms.

REACHING FOR A VIABLE GENERAL THEORY OF BEHAVIORS

I applaud David Rousseau's ISSS leadership of recent years to revitalize GST modeling efforts. The original notion that the universe is coherently -and- consistently related, through *all* tiers of organization .. despite inductive implications from Godel's Incompleteness Theorems that it could be (might be) impossible to identify any underscoring universal isomorphic quality or behavior thema. I know those theorems are formally associated only with First Order Logic relations, but as premising 'sets relations' generally, the scientific community globally has extended his conclusions to mean that sentient systems will always be limited, and some knowledge, some wisdom, will always be beyond the reach of even the most expansive sentient system.

So, part of a GST philosophical challenge is to establish a logical counter argument to the partitioning and boundaries formalized by the incompleteness theorems. We need to justify the conditions that would -allow- identification of a universal "applicable everywhere" grand theory, by a less than perfect omniscient sentience; by human beings.

What is our first hurdle toward an accurate General Theory of Systems (GTS) – of Behaviors (GTB)? I would suggest that it is what we take for granted and don't analyze … our tool of language. And I don't mean only the language of mathematics .. I mean any and all vernacular social communication, ideation – the functional information skill/tool we depend on. We don't analyze it any more than we analyze breathing. Language is the accepted environment and activity, and we assume it gives us all sentience and notions completely; just as the atmosphere gives us the necessary oxygen to keep respiring – without question.

But consider for a moment … could you exist, sustain, survive .. have a *philosophy* of existence .. if you had no language, no data, or content to process through our brains? Could we even begin to comprehend or identify judgments, awarenesses, logic modelings, principles, insights, feelings – anything *experienced* and then processed as *conceptual*?

In order to understand the "general" dynamics of systems which are obviously Hebbian by nature - assemblies of assemblies - it is necessary to evaluate how systems interact and nest. In other words, we have to recognize that Process-Rule Examples [*PRE*] (aka "systems") interact with other "*PRE*"s, and that our task is essentially to discovery how a "rule" interacts with other examples of itself, and by doing so create "product systems" which were pre-coded in the behavior and option spaces of the components and sub-sequential assemblies.

"Product (produced) systems" arise with their own behavior qualia relations in that in every different next meta-level .. new (emerged) properties, and differently encoded (expanded) symbols and presentations. Therefore, what we have are a plurality of peer and meta Gaussian Bubbles – self-coherent complex organizations (which this author labeled "integrities" in his original writings circa 1973), in processes of constant interaction, and thus, ordered states-changes and multiple interaction potentials changes. That is,

multiple different (yet coupled) energy gradients – within each identifiable 'integrity' – which may be similarly or oppositely vectored relative to adjacently nested 'integrities' (self ordered systems). For what else is 'complexity', except the appearance of energy and entropy gradients that at times run counter to one another .. but sustain in persistent ongoing interactions – not separate stepwise single phenomena, or close~bounded events. And once established, mechanisms for sustaining become dominant.

In conclusion, the goal of a General Theory of Systems is the challenge to understand and specify key universal relations and behaviors .. the principles of organization and activities .. *within* systems (ordered coherent organizations) and *between* systems (ordered coherent organizations). Not specific forms, not specific energies.

POSTSCRIPT

The author has been on a self driven quest since the beginning of his earliest alert memories in the 1950's, for a concept and explanation of an ultimate umbrella understanding of existence – all of it. Prompted by conversations and ideas from his parents, education and exposure to knowledge from teachers, family, friends and books .. and the earliest awareness of the brevity of life, he chose to reach for the highest sentient goal possible, before life ended. Something new, something fresh, for the benefit of humanity into the future. Not knowing if an almost omniscience were possible, the effort was the only thing he wanted to dedicate his life to. He developed it best starting in the early 1970's and made great effort to present it to the world from 1990 into the 2000's. Financial survival circumstances placed the effort on hiatus until 2017, and now revives with the 2018 ISSS conference in Corvallis OR.

In postscript of this SIG paper I wish to explicitly express my respect and appreciation for David Rousseau's similar ISSS based efforts of the past 4 years – for David's dedication to the same goal, the presentations and papers David produced with other ISSS colleagues, with all the public enthusiasm initiated by von Bertalanffy and his peers in the mid 20th century. Also, the author is grateful for internet conversations with David – insights, clever notions and humor he shared with me. I can only hope, that in the end, we can bring productive conceptual illumination to our fellow humans, establish a true new scientific humanitarian revolution in philosophy and thought .. evolve and expand the human conceptual environment. Bring a new level of wisdom and humility, and improve our chances for survival with all companion life-forms .. even the ones that don't even exist yet, but deserve the opportunity to exist and expand Life's possibilities.

Benking & Rose
http://web.archive.org/web/20060507123128/http://www.ceptualinstitute.com/uiu_plus/isss98/house-of-eyes.htm

I am and have always been from my earliest years in the 1950's, an observer and explorer of the nature of existence. Though I didn't find the General System Theory community until the 1990's, I began formal writing about a unified behaviors model of the universe in the 1970's, based on extensive studying our broad fields of knowledge, from the clinical, to the fundamental, to the complex and humanist – linguistics, theology, pure sciences, logic, geometric, mathematic and relational associations in all forms.

I left few stones unturned and few topics with their distinct relations unquestioned. The taste of uniformity, similarity and natural relationships seemed to be everywhere, despite the diversity of fields and topics, despite definitions that tried to document and identify different properties and associations, despite different physical structures. The physics community's search for a grand unification has been the anchor in 20th century's sciences efforts (and it still is) but the notion of a unity of existence is a

sensibility that has been expressed by humans for hundreds and thousands of years simply through observations of the interrelations of the world around us, that ancestors across the centuries have found themselves living within and intuitively aware of.

Dissection and analysis of not only vast amounts of information, but to be able to recognize shared relational properties and aspects in spite of the diversities of forms and organizations and wholly seemingly different functional systems .. whether physical or intangible or modeled representations .. has been such a daunting aspiration as to seem nearly impossible. For not only do we have to justify any correctness and accuracy of the impressions and deductions, we also have to examine the situational parameters of such efforts. That is, can we assume, can we rely on, can we define and defend, the conditional a priori notion that the universe is organized to allow for accurate self analysis?

Gödel's incompleteness theorems, though rigorously evaluated by some mathematicians and logicians as referring totally and only to first order mathematic logic, there is a large group of scientists and thinkers who extend the self-analysis limitation to every level of human analysis and thinking, and as well, to some innately pre-set limitation of the universe to be analytically self relevant, self consistent – and – self coherent. Gödel's analysis is granted the status of an absolute edict, limiting and preventing modeling the universe totally, presuming it is unbounded and open in scope, in dimensionality, in extents (spatial, temporal, relational). Even if we might want to divine a total grand conceptualization of the universe, the Gödel criteria deduces an inability of ANY SENTIENCE .. within the universe .. to make assessments of its extended domains of behaviors, let alone any contexts and meanings OF existence.

That is, a General Systems Theory grand unification – a grand modeling of shared universal properties of all tiers of existence – is precluded by certain Gödel principles of logic and information relations. Totally and absolutely.

Unless. Unless we can identify a better logic that gives systems .. inside of other systems .. the capability to understand shared principles so completely and pervasively assignable, that a given sentient tier can ascribe~describe properties *within* lower tiers, and, extrapolate with high confidence, ascribable-describable properties *–beyond-* any external designated tiers of existence … spanning the total open bounded possibilities of what can-exist, what will-exist, what optionally-exists, what could-exist, and even what can or might never exist .. based on all the action properties and arrangement properties of all known (and *possible*) systems. All forms and dynamics. Are we John Wheeler's "(accurately) self observing universe"? – the premise required to validate General Systems hypothesis and exploration, or, are we Gödel's "impossible to holisitically accurately model" universe?

Such as .. if we propose a multiverse with all sorts of co-existing architectures .. we have to logically define a most grand umbrella domain where perfectly ordered relations can locally exist –simultaneously – with perfectly dis-ordered relations.

A supreme landscape of existence where all interaction interfaces have to be accounted for, and all possibilities in between. And collaterally it includes that we recognize that interfaces are not *boundaried separators*, but are communication *interfaces* where interactions and interaction relations are the key to behaviors; not specific forms or energies or spaces or domains of duration. The important aspect is the qualia that are embodied *in* the forms. For example, is there 'action potential' where we never considered looking before – *within* dimensional topological space itself?

Grand geometries include such qualia, such as the notion of "equidimensionality" [https://en.wikipedia.org/wiki/Equidimensionality] – as exampled by Cartesian geometric smoothness and

uniformity between any point and any other; there are other spaces in mathematics that fulfill such a notion~definition.

I propose a fundamental within my Integrity Paradigm, that equidimensionaltiy in geometric space is tantamount to equivalent to "maximum entropy" concepts – [http://web.archive.org/web/20060507123921/http://www.ceptualinstitute.com/uiu_plus/UIUcomplete11-99.htm] *equidistribution of content* (defined by physics as equiseparation of energy particles). Unclustered. Without variances, without local stresses … whether broadly or locally.

And if there are dimensional spaces with dimpling, those differential spaces embody real tensor phenomenological stressor potentials, even if caused by masses at dimpled locations. This is how spacetime back~acts and affects any co-present matter that has been defined as deforming spacetime away from equidimensionality. This back-action, from dimensional spacetime onto matter, has not been fully discussed and designated.

Searching for, let alone finding, a viable, proof defensible, grand theory of systems, demands a whole new search philosophy – algorithm, if you will; a fresh perspective and set of criteria – "related to" by necessity, but totally different from, all the scientific testing criteria you have been taught to use.

The 1960's generation read and took to heart Thomas Kuhn's "Structure of Scientific Revolutions" and the weight of disparities and unresolved questions when using conventional established assumptions, concepts and models, that should press humanity to recognize different patterns and paradigms, in order to get satisfying answers, unachieved by using old concepts.

Since then apparently, the generations of scientists, thinkers and academics who came after, forgot Kuhn's premise. Sure, some physics theorists looked for possible new patterns – multiple spatial dimensions, supersymmetry, M-brane theory. But the rest of science clung to cherished energy criteria of entropy. Howard Odum mapped the entire energy cascade and inorganic and organic interconnected systems and environments with his modified model of energy he named "emergy". Which was basically a wide accounting map for how energy distributes through the Earth's gaian biota, describing the sun's solar centralized energy through organic complex open systems in a convoluted justification of entropy, despite the products being more ordered and complex, rather than less ordered and less complex.

I looked at the observed~defined energy models – the 4 fundamental forces; I looked at general thermodynamic equations and locations where identified, and I looked at diverse behaviors of many levels of dynamic synchronized organizations .. systems. And what occurred to me was the question .. if all these organizations .. different in structures, different in architectures, different in levels of presentation in the universe .. and they all seem to have entropic qualities, despite their differences, then what is more likely … that statistical randomness of qualities result in –all- these systems having entropy related dynamics, and anti-entropy (negentropy) properties, or, is it more reasonable to suggest that entropic relationships are the a priori qualia that propagate and get displayed and incorporated in all the emerged systems and dynamics organizations?

To me the second seemed the more reasonable situation, and that is where I established the foundation of the Integrity Paradigm. The defined essential property of entropy – equi-diffusion, equi-distribution .. regardless of the energy components involved, is easier to identify and model .. even in intangible geometric dimensions relations. So the hypothesis stands .. a grand unified model of universal relations .. rests on positional relations, and associated stresses that arise, based on density markers, not energy markers. Energy markers are the secondary product of dimensional properties.

Establishing an Umbrella Philosophy

The Three Newtonian laws are educed –from- entropic architecture in dimensional systems and domains. Gravitational attraction is a by-product of distressed spacetime attempting to regain equidimensionality (deformed and stressed by 'masses'), where a collateral proposition is that energies are congealings of spacetime dimensions, and mass is next-step congealing of dimensional energies. It is this correlation that accounts for the communicationally related – the "feedback everywhere" affect that mass deforms spacetime, and deformed spacetime (which entropically reacts by enacting toward re-smoothing, and re-establishing equidistribution of its architecture, actions) produces gravitational masses attraction.

Thinking "general systemically" what other things could all of this additionally relate to? I can mention that I looked at other dimensional~topological relations and identified that real forces, real action fields, are innate with and present among, what for three thousand years humans have presumed have no energetic properties at all – essential geometry. We have treated it only as computable spatial associations for 3000 years. Instead, this re-organization of relations and properties is hinting that dimensions – as real entities phenomena known otherwise as spacetime – are not just 'inert' inactive 'models' or replicants, but embody dynamic force properties.

Forces are resident in spacetime first .. and are not found ONLY when masses and particles are present. Particles are not 'carriers' of forces, dimensional architecture of spacetime dimensions are co-qualitatively action potentials, real forces, also. And what does this notion lead us to? It leads us to a clearer understanding of 'dark matter" and "dark energy" … as not being some detectable or not "other particles", but rather, other relational architecture associations of spacetime dimensions .. which architecture relations contribute real additional forces fields.

THAT, is the wonderful and astounding implication educable from reconfiguring multiple co-present general entroepic *distribution relations* and properties within the totality and levels of existence, as the primal fundamental relations operator (qualia) - having presence in many different (all) forms and architectures - but always and effectively present everywhere.

Energy properties of 'entropy' is only one presentation. "General Entroepy" – distribution relations - are present everywhere, in many forms. In forces fields (curvature densities differentials; in dynamic interactions (exchanges of energy); in information~communication interactions (activities "coupled" via random –and- intentional wider distribution of data and experiences and effects potential).

The "Jugglers" demonstration during my presentation of this ISSS SIG Philosophy is KEY to how the universe enacts complexity and negentroepic order building.

For those present during my talk, watching and understanding the effects and enactions of coupling, decoupling, proximities, communications - demonstrated by "3 Dimensional White Board Troupe" jugglers; the ability to 'see' phenomena but recognize its presence in alternative forms and systems and mechanisms – was (as many told me afterwards) an illuminating and mind-opening presentation. For those of you reading this paper, who were not present, seek out those who were, and ask them to describe what they saw and experienced: the interaction of separate but related "nested tiers" of multiple entropic distributions. I had the presentation video taped and am in the process of formatting it for presentation in an ISSS available link.

The "philosophy" of general systems thinking is the capacity to understand fundamental principles, recognize the relations and actions irrespective of silos, topics, forms, architectures, presences .. and then apply them to your own specialties and work and tasks.

Establishing an Umbrella Philosophy

The universe is a dynamic multi-leveled nesting of distributions and communications. There are TWO essential isomorphisms … co-present and perpetually interacting in THOUSANDS of forms and physical~conceptual instantiations.

One is the within-tiers capabilities to sustain and maintain and function … juxtaposed to wide ranges of action events .. composed of any system's own material form –and- conditional environmental factors they face and can sustain, endure, and prevail through after the encounters.

The other is the interacting entropies between the tiers of ordered forms and structures … the 'juggling" communication~distribution interactions of several local entropies .. behaving inversely at times (creating ordered coupling) and otherwise behaving directly *when* coupled. This is the universal isomorphy that needs improved mathematical description, but is –the key- the universal Unitary that allows the production of complex negentroepic order building in the universe, and, will be the key philosophy and concept for future humanity to conceptually and physically and pragmatically 'navigate' the many levels of order and organization of the universe.

These two isomorphies will prove to be the great insight that will make the General Theory of Systems the premiere accomplishment of human sentience, for generations to come.

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APPENDICES

POST POSTSCRIPT

Why "The Integrity Paradigm"? (October 10, 1997)

Justifying the philosophy of J.N. Rose's "Integrity Paradigm"

In this closing decade of the 20th century, when notions and theories abound about the nature and structure of our universe and existence, what is so special or different about this Integrity Paradigm? What could set it apart from other competent notions about complexity, dynamics, relationships, life, energy and information?

Its significance doesn't rest in its "unusualness", but instead, in its over-riding "commonality". It uses the rudimentary notion that all systems have -- being made of universal natural components *having shared characteristics* -- the *integrated* ability to completely enact the capacities that their structures allow. And, humans represent one system which is sufficiently self/else integrated to note and communicatively codify its place-in and relationships-with the totality of holistic existence. That means *every* human, to one degree or another.

I assume, therefore, that I am a substantial *representative* of those skills and abilities, not necessarily someone absolutely unique or unusually qualified. The thoughts I think, the sensations I have, and the abilities I have to process information are shared-capacities. In fact, I rely upon this important notion - that other people have had similar thoughts, similar cognitions -- now and throughout history. My mentality -- *our mentality* -- is built on the foundations of past generations' efforts to cope with *being*. And as they did their job well, each succeeding generation had and continues to have the opportunities to bring along old wisdoms and so add to them. The body of knowledge is open to all successor minds. So it should come as no surprise that each generation produces duplications of shared insights and new-cognitive appreciations.

In one sense we might see it as Life's way of ensuring its perpetuation and growth. Parallel identical events or exemplars can arise in time/space together and provide alternative opportunities to insure system and social advancement. Liebnitz and Newton for example. Darwin and Wallace for another. Individual minds looking at the same world and coming to similar new understandings.

In this light, the Integrity Paradigm is one-among-many, albeit a formidable one. It is indicative of the way the universe is organized, proving *self-consistency* and *innateness* at its very best. Therefore, you'll be able to find ideas similar to the Integrity Paradigm being co-expressed in many fields and areas of study. But even as it's possible to note and refer to other concepts as being Integrity Paradigm parallels and comment, "Well, that particular Integrity idea is not so special, this-or-that other person has also asserted the same particular notion, (or some other one).", ... no other reflective theory or perception of existence combines so many aspects, all melded together. That is the strength and uniqueness of the Integrity Paradigm.

It asserts a special criteria in our human search for meaning and understanding about our place in the schema and flow of existence ... which is, any Holistic Philosophy -- to be worthy of that name -- must be open enough, capable enough, and strong enough to *allow for* anything and everything that can or could possibly *exist* -- even other theories or perspectives. That is, it can never encounter any event or idea and assess it as *wrong* in its mere existence. A phenomena may be *conditionally* incomplete or inappropriate, but never *unallowed*. A formidable holistic philosophy must be able to account for parochial conditions,

special schools of thought, perceptive differences, ideological options, and any forms or sets of information modelings and organizations possible. It must be wise enough to accept that, given one set of assumptions and data, it becomes *reasonable* to formulate, for example, a Ptolemaic model of the universe. And, in the natural course of accumulating and assessing *other* information and considered dynamics/relationships, it becomes *reasonable* to develop a Copernican one; then Newtonian, then Einsteinian, and so on... .

In our current era, with so much information and so many diverse relationships to deal with and to relate together, the challenge becomes even greater -- and yet simpler -- in one fell swoop. Can a proclaimed holistic model or perceptive philosophy talk competently about *any* and *all* other systems? The fully competent holism can. That is the hallmark of holistic competence. Period.

That is not to say that such a holistic paradigm will know or specify all the *details* of any given field or subject. It isn't required to. It doesn't stand as omniscient god-knowledge. It does not stand or fail on lack of specific example-information. A viable holistic paradigm deals with relationships - which local mechanisms and processes simply *illuminate and exemplify*. Therefore, a holistic paradigm will even have the ability to assess comparable viabilities between competing regional views and models.

"Complexity" is the current leading contender in this regard. It has many adherents, many innovative thinkers. Originally enunciated about 3 decades ago with the discovery of unusual mathematical functions, the abundantly observable relationships are being found in many -- actually *all* -- fields of study. That is not to say that those *relationships* weren't perceived by others even before then . They were. Particularly in fields of biological and organic systems. It's just that the "definition makers" -- the mathematicians and physicists -- had not provided any models to generally map the behaviors of organic systems. At this point -- confirmed by presentations at the first New England Complex Systems Institute's conference in Nashua , New Hampshire, USA, September 1997 -- conceptual groping is still going on. Newly discerned models of fractal math and Zadeh logic are just now being applied, and, even co-ordinated with Boolean systems and other in-place computational models. Struggled copings and adjustments to theories are being explored by many leading edge thinkers like Penrose, Prigogine, Kauffman, Grossberg, Baars, Pribram and others. But they haven't achieved holism yet.

This is partly because of proprietary intellectual competition. And, partly because they are cautious, having championed prior notions which were adequate and successful in their original local milieus. The Integrity Paradigm has leap-frogged them. Not because it is *different* in any substantive way, but because it takes the same information and organizes it more competently and completely. Fractal Complexity is retained, but plays a smaller role within the larger schemata.

Integrity's edge over fractal Complexity can be shown in a simple example. Where the fractal-eigenspace biologist S. Kauffman is only just now {1997} recognizing the fact that his general autocatalytic model for organic systems is really Carnot's Engine in another guise -- this was an evaluation I was able to do in 1993 (and so include in "*Understanding the Integral Universe*") -- after reviewing Kauffman's "Origins of Order" shortly after it was published {Critique of "Chaotic Autocatalysis"}. Using dimensional information analysis and local entropy regimes as understood via Integrity principles, the isomorphic parallels were more than obvious.

At the 1997 NECSI conference Kauffman openly begged for conceptual assistance in formulating a computational model that might supply a "work" factor, requisite in order to keep his autocatalytic model viable. Earlier this year he had proposed a related notion he calls the "adjacent possible", still being formulated. In contrast, a similar but more extensive notion -- one fundamental to the framework of Integrity -- was developed 20 years ago and had been offered to SFI in 1992. {Notice #2}

Establishing an Umbrella Philosophy

From the formal outset of the Integrity Paradigm [Rose 1972,1973] it was clearly specified that the *behavior* of *any* system is *co-dependent with its function-space* -- the physical and temporal options *open to it* at each moment during it's functioning competence. And that function-space has to be permitted to run far off any computational scale, into conditions of behavior dynamics, into *transfinite* "quantities". That is, *potentia* doesn't pertain only to next-step options. It pertains to the *full* set of *all* subsequent options. Not adjacent-possibles, but extended-possibles. This is because it is only by contemplating all potential eigenspaces that *patterns* become apparent ... including the absolute importance of *indeterminancy*. The more complicated, the more *complex* a system is, the more degrees of freedom - open and unused options - are required in order for it to remain functionally competent! Systems endure and survive *not* because they are locked into *predictable behaviors* but because they have latitudes of behavior options and have the flexibility to deal with *panoramas* of events ... on all the coordinated levels of assembly.

This requires that *information* be open to transductive alterations and to codings as it ascends or descends the hierarchy of universal organization. Mappings of diverse *infinities* onto one another. There is nothing restrictively *adjacent* about it. "Adjacent" information is too cautionary and limiting. Full *stochastic-potential* is not just a computational "random walk" done in small stepping-stone Boolean fashion between so-called "fitness landscapes". It is Josephson's *quantum jumps*, it is Bohm's and EPR's *non-locality*, spatially and temporally binding distant option-spaces together. It is my opinion, therefore, that computational models will probably be formulated eventually. But only when Greg Chaitin's *Omega Function* is understood and disseminated to future mathematicians. Chaitin's is the latest generically applicable mathematical tool to competently manipulate varieties of *infinity* since Calculus was originally developed four centuries ago. It will turn out to be a crucial mathematical mechanism, able to help humanity with future computational needs.

Integrity Paradigm embraces and enthuses over all these infinities. This, in contrast to standard physics which has typically seen *infinities* as problematic, as factors to be cancelled out. Not so vis a vis Integrity. Any addition of a single bit or unit of information not only automatically changes and enlarges a system's local "Gödel limit" (it's definable "set-boundary"), but, the relational-information -- the function-space *potentia* at that moment and at all subsequent configurations -- leaps quantumly off the scale, factorially *and* exponentially. To try and keep track of that in some inductively methodical step-by-step fashion of *adjacency* is not only not practical, it's not parochially reasonable. The process will outrun the evaluation technique. Quite like ancient Zeno's runner, who ably and casually blasted right through Zeno's conceptually disjointed, restrictive and conservative framing ideas.

The universe is a thriving expanse of environmental and behavioral *potentia*. Not just an *adjacency*. It is its *openness* which provides vitality and continuance, not its *determinism*. The Integrity Paradigm is strong because it recognizes this fact and accepts the applicability of it to every subject, every topic, every field --- everything. There may be determinable patterns of behaviors in systems, but *missing* information is just as important. It bears on each and every system's openness to achieve unimaginably wonderful potentials, new states, new relationships, new possibilities. The universe *thrives* on achieving new-ness, *exploring* its organizational futures, not just *acting specific ones out*. It is environments fulfilling environments.

A modest increase in a DNA codon (or delay of an *off* codon) chain, for example, which sends a hormonal message to permit slightly longer active growth-time for certain brain tissue in a developing fetus, which tissue then encroaches into the brain case and forces co-developing circulatory tissue to shift its path slightly, and so alter and *improve* blood flow, which in turn leads to affective improvement of the animal's reaction time and thought processes and postural formation once the adult stage is reached, and therefore has behavior repercussions for the animal in its social and environmental context, is but one

example of the *real* working nature of "complexity" in the world. This scenario did in fact happen (see: Falk/Integrity). It was one of the seminal events which diversified our Australopithecine relatives into Gracile and Robustus specie-lineages some several million years ago. Variability in the option space of biochemical *and* metabolic configurations, having impacts on intervening complex assemblies, and having most *profound impacts* on the evolution of our species -- all the while in the mix of a whole planet full of co-evolving life forms and *their* enduring in individual and shared option-spaces. Infinities impacting infinities. A typical *complex* scenario, quite easy to understand with a perspective like the Integrity Paradigm.

RELEVANT HISTORICAL QUOTES

Thomas Jefferson: Letter to Henry Lee ; May 8, 1825.
Discussing the rationale for writing a specific statement of reasons that constitute the American Declaration of Independence.

> *"When forced, therefore, to resort to arms for redress, an appeal to the tribunal of the world was deemed proper for our justification. This was the object of the Declaration of Independence. Not to find out new principles, or new arguments, never before thought of, not merely to say things which had never been said before; but to place before mankind the common sense of the subject, in terms so plain and firm as to command their assent, and to justify ourselves in the independent stand we are compelled to take. Neither aiming at originality of principle or sentiment, nor yet copied from any particular and previous writing, it was intended to be an expression of the American mind, and to give to that expression the proper tone and spirit called for by the occasion."*

Jefferson's analysis and logic holds more important and of equal value in expressing a General Theory of Systems, as I have attempted to do so during my life. In his situation, Jefferson was more humble and generous of sentiment. He deferred from claiming he was describing ideas new, special, different from the conventional.

I feel with all the circuitous talk surrounding explication of complexity, systems generally, and a general theory of systems, my Integrity Paradigm ranks as a true new frame of reference and conversation. But, I hold to Jefferson's core remark in his letter to his cousin Henry Lee, that the challenge, for me, or anyone in this endeavor, is "to place before mankind the common sense of the subject, in terms so plain and firm as to command their assent, and to justify ourselves in the independent stand we are compelled to take."

Albert Einstein:
" 'Wisdom is not a product of schooling but of the lifelong attempt to acquire it.' Such a process is lengthy and arduous, which teaches the pursuer patience and humility. Seldom is a person unchanged by such a trial. When one finally uncovers a connection or insight that he or she believes to be universally applicable 'truth,' it often inspires awe - akin to a spiritual experience."