

Epilogue

Biographical Reflections on an 'Emperor's New Clothes': The Imminent Completion of the Tools of Epistemology

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Abstract

Galileo is credited with bringing us from the age of Logic and Reason to the age of Empiricism. This article describes the next step which also completes the tools of epistemology - That of the utility of transcendence (or noetic insight as ancient Greek Philosopher Plato termed it) as a tool in scientific theory formation. An example of this controversial concept is illustrated here giving birth to an 'Empirical Metaphysics' that was used to open the door to large-scale additional dimensionality and in the process allow access to a 3rd regime of reality (Classical Newtonian - Quantum - Unity) founding the field of Unified Field Mechanics.

Keywords: Empirical metaphysics, epistemology, noetic, Plato, transcendence.

I fully agree with you about the significance and educational value of methodology as well as history and philosophy of science. So many people today - and even professional scientists - seem to me like somebody who has seen thousands of trees but has never seen a forest. A knowledge of the historic and philosophical background gives that kind of independence from prejudices of his generation from which most scientists are suffering. This independence created by philosophical insight is - in my opinion - the mark of distinction between a mere artisan or specialist and a real seeker after truth [1]. - Einstein.

How does it happen that a properly endowed natural scientist comes to concern himself with epistemology? Is there no more valuable work in his specialty? I hear many of my colleagues saying, and I sense it from many more, that they feel this way. I cannot share this sentiment. ... Concepts that have proven useful in ordering things easily achieve such an authority over us that we forget their earthly origins and accept them as unalterable givens. Thus they come to be stamped as 'necessities of thought, a priori givens'. The path of scientific advance is often made impassable for a long time through such errors. For that reason, it is by no means an idle game if we become practiced in analyzing the long-commonplace concepts and exhibiting those circumstances upon which their justification and usefulness depend, how they have grown up, individually, out of the givens of experience. By this means, their all-too-great authority will be broken [2]. - Einstein.

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The last great age of discovery happened about 100 years ago with the advent of quantum theory. It is this Noeticist's opinion that the next age is imminent and that this age of discovery will also bring us from the current 'modern age' to a new age of mind or consciousness additionally completing the tools of human epistemology -Which began in the dark ages of myth and superstition; then entered the age of reason and logic until logic failed for example in terms of demonstrating whether a heavier object falls faster under the influence of a gravitational field. If one were to read the ancient texts as to why a heavier object should fall faster the logic is so appealing and elegant that even today knowing otherwise one is inclined to believe it. Galileo is credited with instituting the modern age of empiricism at that time. But now empiricism has also become troubled. Some experiments are said to require an accelerator the size of the universe or a computation the age of the universe to complete. Most pertinently to our thinking, as well known a Nobel Prize was given for the discovery of Big Bang cosmology. Critics said this award was given 20 years too early. Hubble discovered redshift not a Doppler expansion of the universe. The issue here is not bad experimental data, but erroneous or biased interpretation of that data as "proving" the Big Bang.

The ancient Greek philosopher Plato said, 'no matter how great one's intelligence, or vast the breadth of one's wisdom, noetic insight was beyond the self; it was transcendent - coming from the cosmos'. Transcendence is the third and final tool completing human epistemology. It has been shown that transcendence can be used as a tool in scientific theory formation [3]. This is not something to be taken without the usual scientific insistence on rigor. The usual entry ticket to the profession of science is the PhD which takes from 8 to 10 years of university study with often another 2 years in post-doc research. The utility of transcendence does not come automatically to the natural man and thus seems to require a minimum of about 5 years intensive study in a 'spiritual' discipline - a semblance of the effort required to achieve entry level virtuosity as a violinist or pianist for example. Regarding the philosophy of physics, centuries ago the study of causality and the fundamental nature of space, time, matter or the universe (cosmology) were part of metaphysics. Until recently it was said, '1st comes speculation, then speculation squared, then cosmology'. Now cosmology is a hot arena of research.

I will repeat this statement once more later on in this document: Before Einstein came along relativity was considered metaphysical and outside the domain of natural science. Man is a spiritual being. We anticipate with the imminent discovery of mind (Basis of the observer) [3-5] that transcendence is imminently reaching the end of its classification as metaphysics as a form of 'empirical metaphysics' will arise; and a first test of that challenge is offered here.

The Vigier symposia are assuredly first in history to utilize transcendence as part of an international physics symposium; making this volume a truly Galilean or Copernican class document! With this introduction regarding this matter I will first set the stage by relating to you an unusual incident regarding Jean-Pierre Vigier's past because although the incident itself is transcendent it elucidates the context for describing the transcendent path to new physics following eight years later and included as a seminal part of the development of a chapter in the Vigier proceedings [6-8].

I consider myself Vigier's final student and colleague; during the last decade of his life I went to *Pierre et Marie Curie Université* in Paris to collaborate with him 2 to 6 times a year. Perhaps

because he was older or perhaps because he was indelibly cemented in his role as “*L’hérétique de la science*” not so many ‘bothered’? him; but the weekly large box of papers and books he received from all over the world suggested otherwise. Vigier was a powerful soul; he reminded me of a blast furnace his light was so bright. Even in his 80’s most scientists half his age did not seem to have half his intellectual strength and dynamic erudition. I had mentioned to Vigier that a main interest of mine was consciousness or the role of the observer in physical science. He emphatically told me he had absolutely no interest in the subject. About a year later I brought a copy of my 1st book on the subject to show him [9]; not entirely because it was a book on the mind-body problem but an attempt to show him that I was actually doing something of substance, as he had made the comment to me once ‘that it was not necessarily easy to tell if a person was intelligent or not by sitting down with them in discussion’. Much to my surprise we spent most of the remainder of the day discussing consciousness and the work of all the natural philosophers of any merit throughout history. When we finished I commented, ‘I thought you weren’t interested in Consciousness/Metaphysics’. He said unequivocally, “*that doesn’t mean I don’t know about it...*”.

On a related note, I had told Jean-Pierre that I was a High Priest in the LDS (Mormon) church. As is the case in much of Europe and probably more so in France Vigier typically informed me he had little interest in organized religion. Jean-Pierre told me he grew up as a Calvinist which according to Vigier was a sect that believed God put dinosaur bones in the ground to trick mankind into believing the Earth was older than the 7,000 years as literal biblical interpretation suggests. He mentioned his visit to the Natural History Museum at 5 years old and at the next Sunday school that he exclaimed loudly, ‘*I saw the bones, I saw the bones*’. Apparently he made such a disturbance that they or his parents kept him from attending Calvinism from then on, ... he smiled broadly. I loved that the child was still very much alive in Vigier.

Three or four days after Jean-Pierre passed away on May 4, 2004 as a result of hitting his head on a brass cornice at his bank in Paris the year before, I was house sitting for some friends in the Oakland, CA hills. I had dropped my friends off at the airport by 6 AM. I had brought tons of work but as I often do on the 1st day in that environment I turned on the SciFi channel and watched it junk or not continuously until 10 PM that night when I finally turned it off in disgust at myself for wasting a precious day. I was sitting on a couch in their idyllic family room where often I could see deer amble through the canopy of fir trees. I closed my eyes and meditatively queried, ‘should I go to bed, should I turn the TV back on, or should I finally start working. At that moment I had a vision that lasted no longer than it takes to say, ‘He will help you’. The voice was clear but the faces were dim and appeared smaller than normal size. I immediately recognized Vigier. The speaker was one Steve White, both a physicist at Lawrence Livermore National Labs and my former stake president (regional LDS leader). I only recognized him because of the unique way he jerked his head which I will explain later, as he had done when I visited him on his death bed in the hospital some years earlier.

I was quite surprised as one might imagine at this unusual occurrence. I knew with some assurance that Vigier knew no other Mormons besides me and that in France there were very few LDS people or religious people at all for that matter. As I pondered this I realized it suggested something about the nature of the ‘spirit world’ that in 3 days Vigier who died in Paris not only was able to find my deceased stake president and make arrangements to come and visit me across the world in California but have a ‘transcendent experience’ arranged for me also.

Jean-Pierre and I had been in the middle of several projects and in my initial arrogance I assumed he was somehow going to help me move this work forward. I had gotten to the point in life of developing my transcendent abilities with sufficient decades of hard work (an LDS charge) to where I could upon occasion, mostly in the sacred Mormon temples sense the presence of a deceased spirit. But this usually took the form of merely a simple emotion like gratitude during performance of a proxy ordinance. That was all I was capable of discerning. Mental content - words were much more challenging. During those initial days and weeks, I felt Jean-Pierre's presence almost constantly. I tried to listen. Eventually I even waved my arms around exclaiming, 'OK I'm ready' all to no avail. Then I sardonically thought perhaps a Ouija board could work scoffing in frustration. This was 3 or 4 months later. Finally, embarrassed in retrospect at my myopic and arrogant perception, the 'ah ha' moment finally arrived - Jean-Pierre didn't appear in order to offer help to me; he wanted me to help him! It is Christian doctrine that proxy ordinances performed for deceased friends or family members lead to security and privileges in the spirit world [10]. Since de Broglie never married and had no other family I decided to perform his proxy ordinance work also in case it gave them some special association in the spirit world.

Vigier continued to be around from time to time with diminishing returns probably because I was paying less attention. I relate two pertinent additional anecdotes to embellish this history in preparation for what is to come (and note the commonality of such occurrences in some circles) as I am not sure when such an opportunity will come again for me to promulgate such experiences in an open arena.

The 1st relates to the late husband of my close friend and colleague Elizabeth Rauscher. After William Van Bise passed away I told her the story about Vigier and asked permission to perform Bill's proxy ordinances. I didn't sense his presence during the ordinances as I did when performing Vigier's; but 3 or 4 months later I was awoken by a bright red-orange ball of light larger than a person about 4 AM. It was a visitation from William and I was bowled over by the force of his gratitude. To me this was another lesson in the nature and happenings of the spirit world - The difference between when a proxy ordinance is boldly requested and when an emissary is sent afterwards to 'sell' or proselytize the ordinance to the unsuspecting recipient.

The other incident occurred recently in Budapest, Hungary near the end of a visit with colleagues. The old building was both an institute and home of its director. I was busy packing a small duffel bag in the large room with about a 20 foot ceiling where I slept during my visit. His young daughter had a day earlier made a present of a small plastic bag of seeds, saying she thought I'd enjoy them. They were so good I kept the bag in the hopes that on a future visit I could find more. I pressed shut a small zippered pouch on the side of the duffel. At that moment the bag flew about 10 feet straight up in the air. I paused frozen. I am a physicist, I thought - That is impossible. There couldn't have been sufficient air in the plastic bag; in fact, chances are there was virtually no air in it. If it did somehow inexplicably fly out it certainly couldn't have gone so high. As I continued to think looking up to gauge the distance again I heard two guys laughing. Peering into the space I immediately recognized one of the guys who 'punked' me as my father who had been quite a tease in life and to whom I probably owe much of my sense of humor. The other person kept recognition from me for some unknown reason for 2 more days. It turned out to be Vigier! Vigier also had quite a sense of humor but more than that I was delighted and nonplussed that he had made friends with my father in the spirit world. I wondered also if due to the nature of the 'veil' between Earth

life and life in the spirit world it took the two of them to perform such a prank...

Now we come to the incident at the core of and profound reason for the delineation of this document. I attest to the veracity of these anecdotes; having no purpose other than the advancement of human knowledge to relate them, especially in the face of embarrassment to myself or colleagues. This and the other incidents of this type I have related here are foreign to most people; and those who have them hold them sacred and keep quiet about them and in fact this is generally what the authorities of Mormonism earnestly suggest. But for me it is different; it has become part of my profession to 'open the door' to transcendence. Finally, true transcendent or noetic abilities are no more difficult to acquire than developing virtuosity in a musical instrument, i.e. at least 5 years of very hard work. Man is inherently a spiritual being and such 'gifts' come naturally with a little effort.

It was early May, 2012. I had just returned from a lecture tour in Gramado, Brazil a few days before. Vigier was around but I didn't pay much attention to him as circumstances had given me a troubled mind, along with the weariness of 40 long hrs of travel door to door to California from remote Brazil. My excuse also was I had never been able to go beyond recognizing his presence, in any case, and had no idea what he was able to read from my mind. And I had an 18 hour drive ahead of me that day in an old Honda Civic which did not improve my mood.

Typically, when I receive these visitations from the dead they occur as lit spheres about one third the size of a normal head in an inner space I assume near mine in proximity such that I can sense some information as I mentioned, like who they are and an emotion. That is how such incidence are for me, for another variance occurs. The apparitions always glow to greater or lesser degrees. This time Vigier's image turned dark after a while starting just before I began driving. In my tired funk I still ignored him. After finally arriving in the Escalante Desert I rested for a moment sitting at my desk in the small 5th wheel trailer, I was relaxed enough finally to realize Vigier was ticked at me. I would have at this point finally tried to listen; but in the interim probably frustrated he had enlisted the aid of Steve White again. At that moment I had one of the most profound transcendent experiences of my career.

I was very very surprised; it turned out Vigier wanted me to write a paper for the conference proceedings on 'tight bound states (TBS) in the Hydrogen atom'. I knew the quote from LDS prophet Brigham Young who had said, 'all scientific discovery comes as revelation from God'; and felt this was a true metaphysical principle like action of the poetic muse, but that most scientists denigrated spirituality and thus wouldn't experience this directly, although there are a few anecdotes in the history of science. However, I did not think that direct interventions of this type occurred; and if one is not aware of the 'open faucet' of transcendence, as, seems to be the case for the typical scientist, the transcendent aspects of theory formation would be subconscious in any case. I pride myself as having a very open mind; but I have had absolutely no interest in TBS because I myopically denied their possibility out of prejudice (more Bohr orbits below the ground state orbit?) - firstly as Vigier tried to use them to explain cold fusion and secondly because during the 2000 symposium at UC Berkeley, the 1st I organized and 3rd In his honor, he gave his keynote address on TBS instead of a paper on CMB and Redshift we had been preparing together for months. So I felt slighted and was puerilely miffed at him in this regard. I had given absolutely no thought to TBS in the intervening 12 years.

This vision was different than any I had ever had; instead of a glowing word, paragraph or graphic image, a dream, or voice in my mind - something like a pillar of light was put over me and I suddenly 'knew stuff' - I was infused with knowledge! Much new physics was infused into my mind by Vigier in this regard with the aid of Steve White or by other methods invisible to me during my stay in the high desert. I was able to find a copy of Vigier's seminal TBS paper [6] on the internet. Between these two occurrences I soon realized TBS were profoundly significant to developing and possibly experimentally proving a basis not only for my work on Multiverse Cosmology, but as a boon to M-Theory. See the two TBS chapters in the proceedings volume.

I am not arrogant enough to think the following incident could have anything to do with this but the coincidence like planting a flag is obtuse enough to include - on the day I arrived in the desert there was an eclipse of the sun near sundown, a couple weeks later on the day I left there was an eclipse of the moon on the opposite horizon near dawn. Why mention it then? The reason is because of the apparent importance of the TBS scenario. There are now 14 experimental protocols that could demonstrate HAM cosmology. The TBS experimental design was the 12th; it is by far the simplest and least expensive of the fourteen. So? Demonstrating TBS will also 'prove' the existence of Large Scale Additional Dimensions (LSXD) and more importantly open the door to the next age of discovery, i.e. Classical, Quantum and now Unified Field Mechanics!

I decided not to include Steve White as a coauthor of the paper but I credit him here as an important facilitator. This is where his unusual head jerk comes in. When I visited Steve on his death bed (cancer of the spleen, rarely detected until too late) with a woman friend, Pauline, we did not know beforehand that he was to die. When he told Pauline, she immediately began to weep. He had been looking at her. He turned his head very quickly with a surprising jerk and gazed into my eyes. I was startled inside but as a man I held firm deciding to show no emotion other than a note of sadness on my countenance. Steve was a big man (overweight) but also had a presence larger than life. He had no reason to care anything about me overtly, I was one of thousands in his 'flock', but I loved him because he was the type of person that exuded warmth and made one feel like they were a best friend.

Well here's the rub, a couple months later (not after his death but after the Escalante Desert TBS metaphysical infusion) back at my home then in Oakland, CA early one morning Steve appeared to me and did a few of those (now famous to me) head turns in a row trying to tell me something. I had been pondering a putative protocol for demonstrating TBS (see papers in Vigier volumes); this head jerk scenario led to what I call as a working nomenclature a 'couple punch'. Vigier talked often of spin-spin coupling or spin-orbit coupling etc. This so-called couple-punch has become part of the experimental strategy - to set up the resonant coupling in conjunction with a kick at various phase nodes in the hierarchy of the continuous-state cycle [4] as an aid to exploring the possible relation of TBS to additional dimensional (LSXD) parameters in HAMs unique version of oscillating Poincaré Dodecahedral AdS5 Space M-Theoretic Calabi-Yau mirror symmetry.

There you have it. My mind has been taken to an empyrean realm and my entelechies ebulent. I attest to the veracity of this experience in the hopes that it provides indicia to help usher in a new age of epistemology. There is nothing to gain in wasting an effort if this were a fabrication of fiction. There are not overly many similar incidents in the history of science. Descartes 'revelation from God' as he called it of the distinction between *res cogitans* and *res extensa* is a prominent

case. Another is Friedrich August Kekulé von Stradonitz's dream of the structure of benzene in the shape of a ring with alternating single and double carbon bonds as a snake eating its tail. There are levels of inspiration. There is a saying among those trying to develop transcendent abilities concerning a threshold experience, 'How do you know the insight wasn't just the warped action of the pepperoni pizza you ate recently'. Where to draw the line between imagination and transcendence is a difficult challenge.

Plato talked of 'noetic insight' as beyond the individual. Transcendence as a tool in scientific theory formation has the ability to save billions and enormous amounts of time. Einstein said he owed a portion of his success to 'remembering the future'. It is not to take the place of empiricism, only to facilitate it! If Einstein used a form of it; why not try to formalize it?

A salient purpose in recording this record is to bring a strong scintilla of evidence of reintegrating science and theology, not as mutually exclusive but as opposite ends of the long spectrum of human epistemology. We give a preliminary formula for developing transcendent abilities here [3]. One of the symposium delegates following my commentary on the TBS transcendent insight scenario politely brought me a poster he made during my discourse time; it said "Mysphyt Mystic Physicist" (short for MYStic PHYsicisT). I smiled in acknowledgment but he said he was serious. What is your opinion? Such radical advances are rarely met without formidable resistance initially. Perhaps at this stage such a position can only be strengthened in retrospect...after the TBS experiment is performed. Note: When I mentioned to him my thoughts of including his barb in the forward he said, 'The 1st time I used this was in a class with Fritjof Capra who said I should learn to spell'.

We have made an initial foray into completing the tools of epistemology in relation to the TBS scenario. We have stated that the seed of comprehension began in the dark ages of myth and superstition. The ancient Greeks are credited with introducing logic and reason. Analysis and reason brought the birth of science and a Golden Age. It is curious that Aristotle was strongly opposed to experiment. When logic was found to fail in certain circumstances those like Galileo instituted the current age of empiricism. But now there are problems with empiricism, misinterpretation of data and suggestion by some that a supercollider the size of the universe is needed or a computation the age of the universe required to obtain some results. What remains to complete the tools of epistemology [3]? It may come as a surprise to some and meet with resistance by others; but it was the ancient Greek philosopher Plato who hinted at the answer. Plato suggested that no matter how great one's intelligence or how vast one's wisdom, there was what he called a 'noetic insight' that was beyond the self and came from the cosmos. This of course is transcendence. What will make it unpopular for a while is that it is based on anthropic principles.

That the universe is designed for intelligence seems and that some form of unified field regime teleological action principle exists that proffers guidance and insight seems obvious. The proof of course will be the rabbits pulled out of the hat -breakthroughs that can't be easily understood or developed without a causative transcendent action involved. We have given one such example here in relation to TBS in the hydrogen atom. We realize the difficulty of using that as a proof of transcendent intervention in scientific theory formation. How does the reader accept a testament of someone saying they were incapable of making such and such a discovery on their own efforts when for all practical purposes to the observer the evidence suggests (the fact of doing it) that that

can't be true because here it is and they have done it...

"Every great advance in science has issued from a new audacity of imagination." - John Dewey

Writing the two TBS papers [7,8] required and led to in an interesting manner an understanding of the geometric topology of LSXD which I can't resist relating a portion of narratively: If you are traveling an uncommon path considering today's population of 7,051,664,961 billion souls at the time of writing heading North from the ancient homeland of the Kawaiisu people now called Tehachapi (Kawaiisu language for "difficult path") toward Mojave on Hwy CA 58 just past Love's Travel Stop (curious because my surname means full of Love) you might want to put your vehicle into neutral at the crest of the hill and coast off the highway at exit 156, Sand Cyn Rd. down the off-ramp and pull off the road at the bottom of the hill coming to a stop in the dirt area on the right. That's what I did on Sept. 9th 2012 when the 'timing belt' on the old Honda Civic I purchased for US\$ 50 suddenly broke.

When you look up out the front windshield you will see hundreds of wind generators on the Mojave mountain range a few miles ahead, unusual but less and less uncommon in today's climate of the burgeoning proliferation of wind power; but bearing straight ahead there is an obvious group of generators in a row. Counting in to the 6th generator one finds a pair of generators very close together, one a little behind the other. The trefoil propeller rotations one to the other seem chaotic; but periodically in the cycle there is an apparent momentary coupling of four of the blades giving the appearance of the face of a cube (see below and additional Figs. In [7,8]).

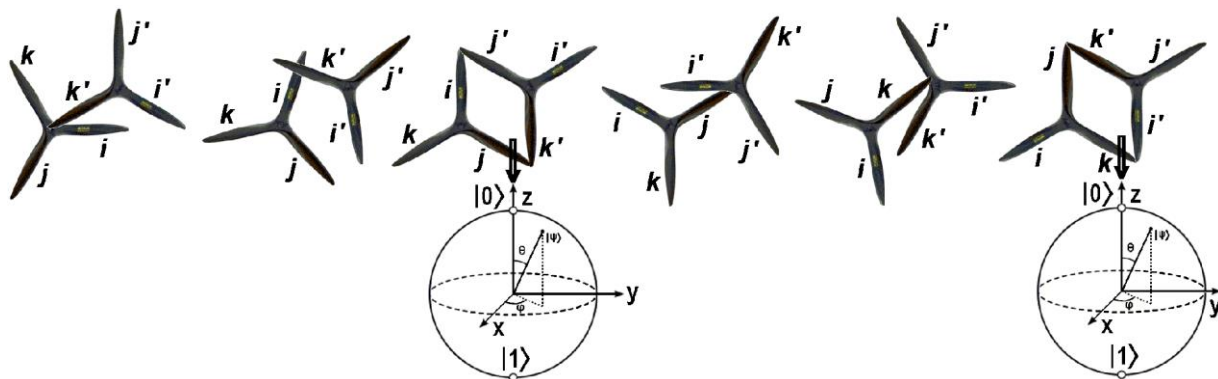


Figure 1. Locus of HD mirror symmetric Calabi-Yau 3-tori (here depicted trefoil knots) spinning relativistically and evolving in time. Nodes in the cycle are sometimes chaotic and sometimes periodically couple into resultant quantum states in 3-space.

I had already been working on a dual quaternion representation (i, j, k vertex or singularity that could be visually represented as a rotating trefoil propeller in its cyclic permutations) of HD Calabi-Yau mirror symmetry. I work best when I can visualize geometric structures and this wind generator incident solidified my ruminations. So now I had an HD nilpotent [4,11] potentia in my cosmology [4] that resulted in a 3D Copenhagen quantum state correspondence. Carrying the model all the way back to the UF , the Calabi-Yau symmetry has a second doubling or complement to its duality such that this nilpotent totality of still higher dimensional potentia has a resultant of which now is a fully realized 3-space Euclidean cube (see [7,8]).

Could I have derived this essential symmetry another way? Perhaps, but I tell you outright I don't

think I was capable of telekinetically snapping the timing belt in the vehicle and be stranded in the middle of nowhere which is the last thing I consciously would have wanted but now after the fact gladly embrace. Many troubles and expenses came with this incident that I will not relate here. In general I have pledged allegiance to and given myself over to the 'yoke' of this particular 'Zeitgeist' which leaves me to wonder if this incident wasn't by design! Curious coincidence, Love's Travel Stop, 'difficult path' or design, I'll let the reader decide, I'm just extremely happy to have the indelible required insight...'to open this door' to additional epistemology at long last. Since much of this forward will not be perceived as 'politically correct' I will first undergo the folly of putative justification. Let's begin with an editorial in the 12 October 2012 issue of Science. Noted physicist James S. Langer, past president of the American Physical Society and numerous other exceptional achievements says speaking about the special section in that issue focusing on physics in developmental biology (Biophysics) in his essay "Enabling Scientific Innovation" [12]: "...our ability to take advantage of...opportunities has been eroded in an environment where innovation and interdisciplinary research are systematically discouraged".

My first precession, not a crime, is under the umbrella of biophysics. Before we go further let's review what is meant by a science of "Physics" and see if there is any wiggle room to do something not necessarily popular but perfectly legal. The etymology of the term physics comes from the Greek, φύσις *physis* meaning nature, which in the broadest sense is what the discipline of physics charges itself to do - analyze matter, motion, space, time, energy, force in order to determine how the multiverse behaves by understanding natural phenomena, Physics is the oldest, and because it is also the most fundamental discipline, most other sciences are based on and constrained by its principles.

Before Einstein relativity was considered metaphysical. If the TBS experiment and any of the other 14 experiments actually end up demonstrating LSXD or teleological anthropic *UF* effects as divined for this noetic researcher from the utility of transcendence as a tool in scientific theory formation [3] then what has been claimed here will no longer be considered metaphysical; and a new regime for investigation (as has happened many times before historically) will be added to the natural science called physics!

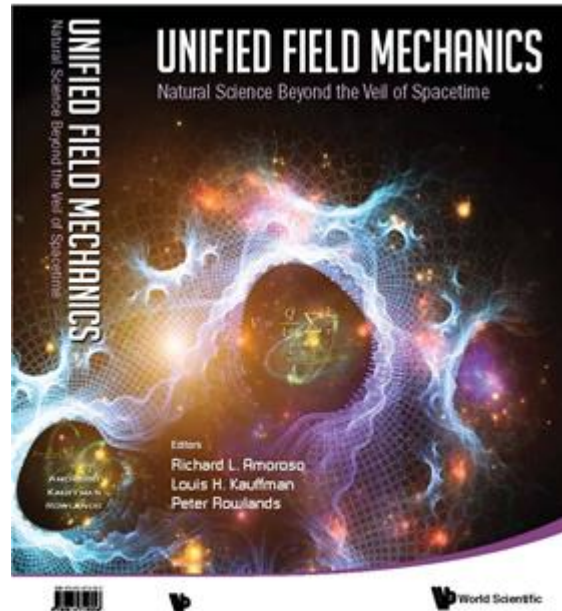
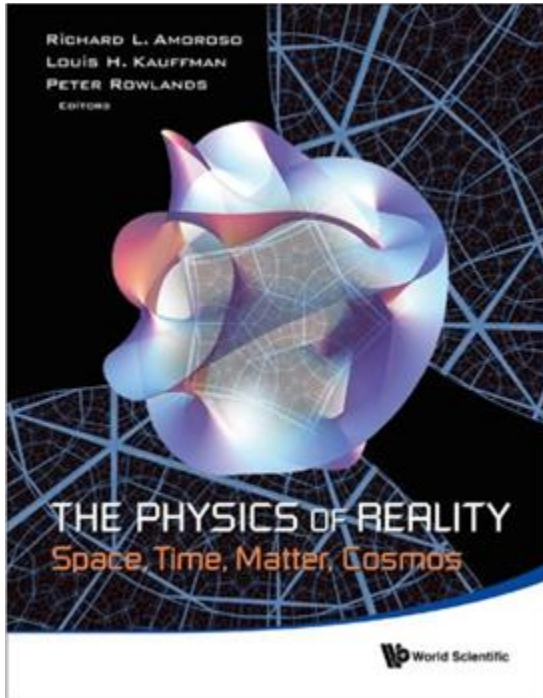
Appendix: An Imminent Age of Discovery

The last age of discovery occurred over 100 years ago at the turn of the 20th Century; the next perhaps, might be called the 'Age of Awareness' which introduces a 3rd regime of reality in the progression Newtonian Classical Mechanics to Quantum Mechanics and now to Unified Field Mechanics, which will finally provide parameters to solve the Mind-Body problem. The author has been hosting an ongoing series of symposia modeled after the same format used in the famous Solvay Conferences which founded Quantum Mechanics over a period of several years.

The 1st two proceedings are:

- 1) The Physics of Reality: Space, Time, Matter, Cosmos, *Proceedings of the 8th Symposium Honoring Mathematical Physicist Jean-Pierre Vigié*, and can be found at:
<http://www.worldscientific.com/worldscibooks/10.1142/8794>.

- 2) Unified Field Mechanics: Natural Science Beyond the Veil of Spacetime, *Proceedings of the 9th Symposium Honoring Mathematical Physicist Jean-Pierre Vigiér*, found at: <http://www.worldscientific.com/worldscibooks/10.1142/9757>.



Cover images, courtesy World Scientific Publishers, Singapore.

Book Description 1): A truly Galilean-class volume, this book introduces a new method in theory formation, completing the tools of epistemology. It covers a broad spectrum of theoretical and mathematical physics by researchers from over 20 nations from four continents. Like Vigiér himself, the Vigiér symposia are noted for addressing avant-garde, cutting-edge topics in contemporary physics. Among the six proceedings honoring J.-P. Vigiér, this is perhaps the most exciting one as several important breakthroughs are introduced for the first time. The most interesting breakthrough in view of the recent NIST experimental violations of QED is a continuation of the pioneering work by Vigiér on tight bound states in hydrogen. The new experimental protocol described not only promises empirical proof of large-scale extra dimensions in conjunction with avenues for testing string theory, but also implies the birth of the field of unified field mechanics, ushering in a new age of discovery. Work on quantum computing redefines the qubit in a manner that the uncertainty principle may be routinely violated. Other breakthroughs occur in the utility of quaternion algebra in extending our understanding of the nature of the fermionic singularity or point particle. There are several other discoveries of equal magnitude, making this volume a must-have acquisition for the library of any serious forward-looking researchers.

Book Description 2): Unified Field Mechanics, the topic of the 9th international symposium honoring noted French mathematical physicist Jean-Pierre Vigiér cannot be considered highly speculative as a myopic critic might surmise. The 8th Vigiér Symposium proceedings "The Physics of Reality" should in fact be touted as a companion volume because of its dramatic

theoretical Field Mechanics in additional dimensionality. Many still consider the Planck-scale zero-point field stochastic quantum foam as the 'basement of reality'. This could only be considered true under the limitations of the Copenhagen interpretation of quantum theory. As we enter the next regime of Unified Field Mechanics we now know that the energy-dependent Einstein–Minkowski manifold called spacetime has a finite radius beyond which a large-scale multiverse beckons. So far a battery of 14 experiments has been designed to falsify the model. When the 1st is successfully performed, a revolution in Natural Science will occur! This volume strengthens and expands the theoretical and experimental basis for that immanent new age.

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