

# INTENTION & THE CAUSAL HEART

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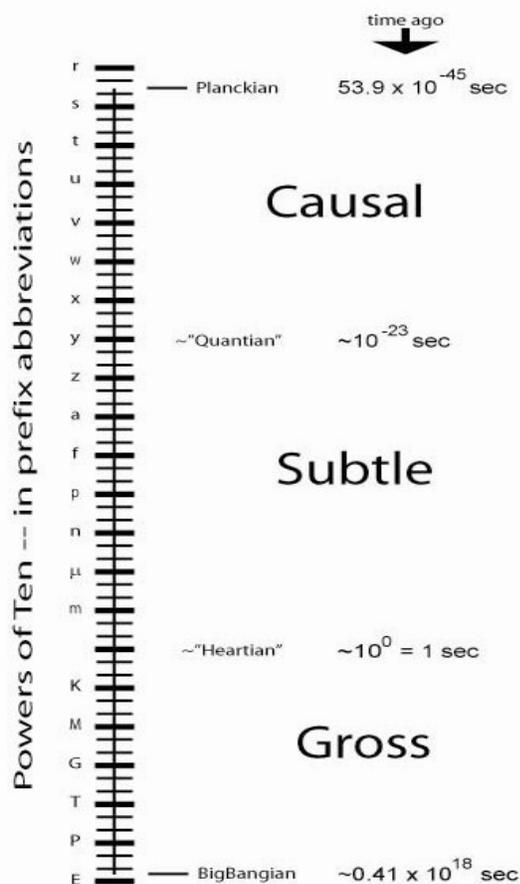
## PROBLEM

There is no consensual scientific definition of “subtle energy.” This hampers growth and development of wiser human sciences and technologies.

Since the term “subtle,” as used here, originates in esoteric spiritual traditions where it is commonly coupled with two other terms – “gross” and “causal” – I have aimed to explore all three together.

What follows is a brief status report on my effort over 40 years to “come to terms” (technical and scientific) with “gross, subtle, and causal.” My aim is to share what I have found thus far, invite critical comment, stimulate discussion among others better qualified to develop the approach technically, and serve a deeper integration of science and spirituality for the benefit of all.

## THE SUMMATIME SCALE



If phenomena are arrayed by characteristic time (CT) – reflecting either average age or process duration – a time line is generated. I have chosen “time ago” (for reasons detailed on my website) as the basis for a “SummaTime Scale” (STS).

The STS reaches from universe age estimated at 13+Byr (“BigBangian”), to the human heart beat at  $\sim 1$  sec (“Heartian”), on down through the photon-proton transit time of  $\sim 10^{-23}$  sec (“Quantian”), to the Planck Time of  $\sim 10^{-45}$  sec (“Planckian”). Converted into standard scientific logarithmic (“powers of ten”) format, units, and notation, the STS spans 60+ logs.

Examination of this STS *as a whole* reveals a striking feature: it divides rather neatly into three domains of  $\sim 20$  powers of ten each: an outer part comprising CTs of the vast majority of material processes; a middle part comprising the vast majority of the electromagnetic spectrum, and an inner part comprising CTs of the sub-quantum (or sub-photon) domain of mathematical physics.

I propose that these three *objective* domains of science correlate with the *subjectively known* gross, subtle, and causal domains of esoteric spiritual teachings. This is my principle “finding” to date.

Note that any given phenomenon exists in time and exists in all three domains of time *simultaneously*, regardless of its CT. There are no *isolated or pure* gross, subtle, or causal phenomena, however one or the other aspect may *predominate with CT*.<sup>1</sup>

### THREE DEGREES OF COMPLEXITY

The three STS domains appear to correlate with distinctly different types of processes or systems dynamics and associated “division algebras.”<sup>2</sup> This suggests that there are three distinct *degrees of complexity*. “Dissipative” complex systems are characterized by complex number dynamics, “autopoietic” hyper-complex systems by quaternion number dynamics, and “reflexive” ultra-hyper-complex systems by octonion number dynamics.

Degree of Complexity	Realm	STS Domain <sup>3</sup>	System	Algebra
complex	gross	BB – H	dissipative	complexion
hyper-complex	subtle	H – Q	autopoietic	quaternion
ultra-hyper-complex	causal	Q – P	reflexive	octonion

### COMPLEX – GROSS REALM

A vast body of technical research has been directed toward “complex systems” over the past century. For example, astrophysicist Eric Chaisson has analyzed the entire span of cosmic evolution using “dissipative systems.”<sup>4</sup> His in-depth work makes a strong scientific case that self-organizing material systems predominate in the “outer domain” of the STS. The dynamics of such systems are described using complex numbers (one part real and *one* imaginary).

### HYPER-COMPLEX – SUBTLE REALM

The electromagnetic spectrum predominates in the middle section of the STS. Maxwell originally published his equations in 1873 in quaternion notation using numbers with one real and *three* imaginary parts. Quaternions were not easy to work with and Maxwell’s contemporaries favored the simpler vector notation taught since. With his untimely death, Maxwell was neither able to elaborate nor advocate the advantages of quaternions. There are efforts underway now to revive the quaternion formulation.<sup>5</sup> Most of these focus on potential

<sup>1</sup> I view this is a direct extension of Mach’s Principle.

<sup>2</sup> For this key insight, I credit systems philosopher Kent Palmer – see especially his “Reflexive Autopoietic Dissipative Special Systems Theory.” Wikipedia has an introduction to the division algebras.

<sup>3</sup> BB = BigBangian; H = Heartian; Q = Quantian; P = Planckian

<sup>4</sup> See especially his Cosmic Evolution, 2001 Harvard U.

<sup>5</sup> See for example the (independent) work of physicists Tom Bearden, Doug Sweetser, and Tony Smith.

new sources of electrical energy. However, it seems likely that new and “subtle” features of electromagnetism may yet be discovered of significance to biology and psychophysiology.

## ULTRA-HYPER-COMPLEX – CAUSAL REALM

The next division algebra uses octonion numbers composed of one real part and *seven* imaginary parts. Of the limited amount of work done with octonions, most is in mathematical physics. However, it has been suggested that *reflexivity* is inherent in octonionic structures. This may yield insights into sentience: what is a thought? Is it just “a complex pattern of electrical impulses in the brain,” or does it have a deeper structure? Perhaps octonionic? The two giant steps taken thus far along the STS suggest that the innermost domain of time is where we will find the objective correlates of the causal realm “at the root of thought.”

The recent article in Bridges by Mark Comings – “The Quantum Plenum: the Hidden Key to Life, Energetics, and Sentience” – I think points in this same direction. Mark stresses the finding that “empty space” is actually profoundly *full* of energy – that matter itself represents but a miniscule portion of this energy “condensed from emptiness.” He points out how this “plenum” aligns with traditional concepts of Spirit as the “ultimate source of all that temporarily arises into form.” He argues that “the inner light” is beyond the reach of our present understanding of electromagnetism and suggests that it “is actually higher dimensional light and has a physics to it which can be elucidated mathematically.” One approach may lie in the shift from the quaternionic dynamics of electromagnetism to an octonionic dynamics – a step that indeed adds “new degrees of freedom to our equations.”

## HEART INTENTION

I predict that intention will eventually be found to have the ultra-hyper-complex dynamics that predominate in the causal region of the STS. These dynamics will be increasingly “non-local” and “entangled” as we move deeper toward the Planckian limit where entanglement becomes universal.

There exist both progressive and radical paths of esoteric spiritual practice, traditionally and active today. Progressive paths lead the practitioner from gross, to subtle, to causal and eventually (in some but not all cases) “off-scale” entirely into an ultimate merging with or dissolution into Timeless Source.<sup>6</sup> In Chapter 43 of *Autobiography of a Yogi* titled “The Resurrection of Sri Yukeshwar,”<sup>7</sup> Yogananda’s guru reappears after death to give him an extensive teaching about the astral (subtle) and causal realms, describes how “dream-souls” progress, through many stages of embodiment (physical, astral, and causal), eventually to awaken and merge with the Infinite.

Radical paths, in contrast, stress that we may, at any point we find ourselves prepared to do so, awaken from this entire scheme of time and “pass directly” into Timeless Source, Jewel, or Infinite, even as outwardly we may seem to remain exactly as we are. These paths stress that we

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<sup>6</sup> For example, see in Elmer Green’s Planetary Field of Mind diagram the “Jewel” level at the top of E7.

<sup>7</sup> Online @ <http://www.crystalclarity.com/yogananda/chap43.html>

are never, at any time, *really separate* from “the timeless goal,” or literally “in time” at all. Such paths can be found in the nondual traditions among various schools of Buddhism, Taosim, and Sufism. They could perhaps be understood as making the point that time and all its myriad processes, from the Big Bang to the Planckian, are, in effect, illusions, dreams, and that we are always already one with Timeless Source no matter where or when we think we are. As Mark Comings says, “ultimately we ARE the plenum!” Presently, as well!

Practical instruction directed to spiritual growth typically revolves around one of these two approaches. The two can, of course, be applied artfully together: when and if we find ourselves unable to simply be present as Timeless Source, there are always methods we can apply that will serve our further growth. An example of such an approach that may be of interest to ISSSEEM participants is that given recently by James Lyricus in his series of articles: “The Energetic Heart,” “Art of the Genuine,” and “Living from the Heart.”<sup>8</sup> These articles elaborate practical instructions that resonate in many ways with the structure of time that I’ve presented here inspired by traditional esoteric spirituality.

## CONCLUSION

The correlations presented here may suggest fruitful avenues for further scientific and technical characterization of subtle energies. By situating them in the mid-range of the STS between gross and causal energies, we may get a clearer picture of both the outer and *inner context* and intentionality of subtle energies.

In closing, I’ll echo the sentiments of Mark Comings’s recent article: “I hope that we can start to put the power of science in the service of the spiritual and emotional awakening and liberation of our species.” A “post-materialist science of abundance” – “a new spiritual-scientific synthesis” – is sorely needed in our time. Let us work together to bring it into practical reality for the sake of all.

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<sup>8</sup> The first two articles are available for download @ <http://www.wingmakers.com>, the third is @ <http://eventtemples.com>.