

How Might we Actively Escape the Entropic Traps of the Industrial Era?

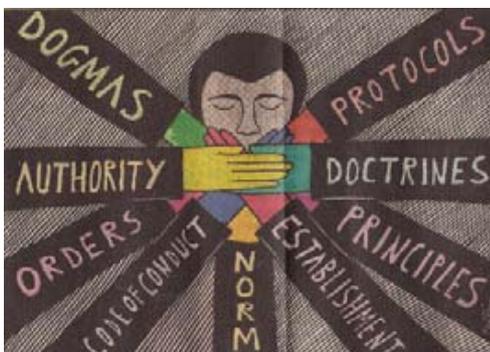
Dr. Charles M. Savage¹

What is the Black Hole hidden within the core of the Industrial Era? Inspired by the possibility of an ever increasing “Standard of Comfort” (later changed to “Standard of Living”) we have sought to use science and technology to mine the resources nature has stored up for many millions of years so that we all can live in more and more comfort in the NOW. Generally we’ve been successful in this undertaking, at least for some of the globe’s population. Yet in the very centers of success do we not find a growing epidemic of depression, obesity and diabetics, stress and conflict, among other things?

Besides the physical impact, we are facing profound environmental issues, among others we’ve just having passed the 400 ppm of CO₂ in the environment. Do we know that if the pre-industrial level of 280 is doubled our global average world temperature may go up three or six degrees Celsius? Which number – it does matter, as with six degrees it is likely to be “all over” for us and sooner than we expect.

We are facing an extra-ordinary challenge of moving as swiftly as possible to post-growth, decoupled and dematerialize “low-carbon economy.” We will not get there with just a few more windmills and solar collectors. It will take another sense of TIME and a boldness of spirit to reground life in our inner “vital energy.” Moreover, instead of just trying to “fix” the PAST, we are going to have to envision a much wiser FUTURE and let it pull us in the right direction. Hence this dialogue between Entropy and Syntropy is absolutely critical for the future of humankind and I am most thankful to Ulisse Di Corpo and Antonella Vannini for their pioneering efforts to bring Syntropy back into focus, building on Luigi Frantappiè’s insights of 1941.

This is even more critical as our computers, software systems, the Internet, Big Data, the Cloud, the Social Media and a globalized world are making it possible to produce more with so many fewer persons employed. So what future do our youth really have, especially as we are adding another billion people ever twelve to fifteen years? Must we not think in terms of a radically different foundation for our economy?



Why do so many graduates of our universities know so much about things “out there” but hardly know anything about what’s “within themselves?” It is as if they have all been given Galileo’s telescope to “discover the world,” yet denied a microscope to “discover their own souls.” Why?

Are we not caught in a confusing and contradictory web of assumptions, principles, norms, dogmas, paradigms, and believes? This incoherent fog seems to have immobilized much of our inner creativity. What do we really do?

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Preoccupied by the PRESENT, yet ...

Are we not focused so much on the “space and place” of things in the PRESENT, that we fail to understand the true gift of life and the context in which we find ourselves? It’s not been that many years ago that we dated the Big Bang at 13.7 billion years. And now we know our own solar system was formed about 4.7 billion years ago, with our earth being dated 4.5 billion years. As our sun is an orderly third generation sun, we know it will last about ten billion years; so we are almost half way there. Does this mean we have another five billion years on this planet? Not really! But how long might we be here, especially if we were to do everything right? Life in its simplest forms seems to have begun to emerge perhaps about three billion years ago along with the wonderful gift of DNA coding. Prof. Joe Thornton of the University of Chicago has just discovered that about 500 million years ago there was a tiny but terribly significant shift in the DNA coding of life.

Evolution, it seems, sometimes jumps instead of crawls. A research team led by a University of Chicago scientist has discovered two key mutations that sparked a hormonal revolution 500 million years ago. ...

"Changes in just two letters of the genetic code in our deep evolutionary past caused a massive shift in the function of one protein and set in motion the evolution of our present-day hormonal and reproductive systems," said Joe Thornton, PhD, professor of human genetics and ecology and evolution at the University of Chicago, who led the study.²

Of course, we humans emerged many millions of years later, yet this shift has benefited us in profound ways. And as irony might have it, humans may well last on this planet for another 500 million years, or perhaps 800 million years, but not much longer as explained by astrobiologist Jack O’Malley-James of the University of St. Andrews in Scotland.

While increases of carbon dioxide in the atmosphere have people concerned about the planet's future, the scientists say it will in fact be a lack of the greenhouse gas that will bring the end to life, the Daily Telegraph reported Tuesday.

In less than a billion years, as the sun ages and grows hotter, and greater evaporation and chemical reactions with rainwater take away more and more carbon dioxide, its levels will be too low for photosynthesizing plants to survive, they say.³

In short, the big picture is that we humans have benefited from an amazingly long and yet favorable evolutionary process. And the big question we face is whether we can usefully and wisely use the next 500 million years to enhance and deepen the very dynamics of life itself? Can we, ourselves, make some choices and establish an upgraded operating system so that these years will be rich in meaning for all? Or will our human foolishness bring down the curtains in a few hundred years, also a very real possibility? Those who are working to name the next age the Anthropocene Era are doing so to remind us that “we” are the ones impacting the very process of life itself. Could the warning not be clearer?

² Staff Writers, “Two Mutations Triggered an Evolutionary Leap 500 Million Years Ago,” Environmental, *TerraDaily*, June 28, 2013, http://www.terradaily.com/reports/Two_mutations_triggered_an_evolutionary_leap_500_million_years_ago_999.html.

³ Staff Writers, “New Date Set for End of Life on Earth -- in 2 Billion Years,” *TerraDaily*, July 2, 2013, http://www.terradaily.com/reports/New_date_set_for_end_of_life_on_Earth_in_2_billion_years_999.html.

The Entropic Traps of the Industrial Era

What does this all have to do with the “Entropic Traps of the Industrial Era?”

Could it be that the intertwined web of paradigms, assumptions, norms and our language itself has imprisoned us in a condition that is hard to break free from. Paradigm Prison has very strong walls and the Word Jailer has subtle and varied ways of keeping us confined.

Over the years I’ve discovered at least three entropic mindtraps:

- The **Industrial Paradigm and Education** - how entropic?
- **SPACE** and **TIME** – does sight really blind us?
- **Human Greed** - suffering the fallacy of misplaced concreteness?

We understand well how friction plays an important role in the dissipation of physical energy. Do we understand that poorly chosen paradigms can also dissipate our human energy, especially when we hardly pay any attention to the dynamics of this energy within ourselves? To understand how I’ve come to these conclusions, I’d like to share a brief overview of the evolution of my own thinking over the years.

Confusion, Discoveries and the Weaving of Various Insights

“What do you think about entropy?” asked a Czech scholar in 1965 while I was a visiting theological student in Prague. Scratching my head, I admitted I’d never heard the word and was totally puzzled. Soon I realized that as my hot cup of coffee was cooling entropy was choreographed into the process. As coffee, so as life I began to wonder?

Entropy, the dissipation of energy, but what might its opposite be? So began a many year process of seeking entropy’s positive reflection. I was never really satisfied with “negative entropy” or even “Negentropy.” How could a positive be described by a double negative? Only recently, after almost a 50 year search, I discovered Ulisse Di Corpo’s wonderful website on “Syntropy” and the 1941 inspirational insights of Luigi Frantappiè.

Gradually, the many fragmentary thoughts I’ve accumulated over the years in my personal “big data” treasure chest began to take on a new meaning. Aikido, the way of the binding of the “KI” and Japanese art of self-defense is something I studied as a youth while growing up in Hawaii and it began to take on new significance. Henri Bergson’s concept of the “*Élan vital*” started to interconnect itself with “KI,” “Chi” and “Prana.” [It is exciting to see how many of the speakers at our conference are focusing on this theme, using such expressions as life energy, life force, Chi, Prana, soul, vital function, entelechy, vitalism, orgonomy. Even John Reed’s phrase “unexplained phenomena” is an important co as well. And the wonderful spirit is that that we might be able to rebuild our economy upon a syntropic basis, as Ivan Klinec suggests.]

My doctoral studies in philosophy challenged me to ask, “how might we bring meaning back into the work world?” Using Edmund Husserl’s phenomenological approach I asked, “What is work?” After a lot of confused wandering, yet inspired by Husserl’s “Lectures on Internal Time Consciousness,” I began to understand how “meaning is constituted over time and within time.”

[This is what Antonella Vannini is referring to in terms of the difference between sequential (clock) and unitary time where the Past, Present and Future overlap.]

The Industrial Paradigm, How Entropic?

Any study of “work” leads one back to Adam Smith’s *Wealth of Nations* of 1776 and his famous description of the pin-making factory, based on the division and subdivision of labor [with its “boxes and lines” hierarchy] in the first pages of this large work. Only by “fragmenting” the steps could “productivity” be increased. So let’s fit talented persons into little boxes where they just do one tiny step in the process. Of course even if the steps were relatively simple, we could not trust they would always be done correctly, so we put supervisors to check on the workers, managers to check on the supervisors, executives to check the managers, a CEO to check the executives, plus a Board to check the CEO. And the chain is still not at an end. We also have needed an auditing firm to check on the whole is honest. Alas, the whole system has not been built on “trust” and “valuing?” To the contrary, distrust and devaluing are the built-in norms of the Industrial Paradigm along with fragmentation, miscommunication and conflict. Any of us who have worked in a large corporation are well familiar with “office politics,” blaming the other department and even mobbing. What is this type of friction, entropic or syntropic?

Interestingly enough, Adam Smith, himself, recognized the “entropic” nature of his model, even if he was writing well before the 1850s when Rudolf Clausius gave us the term *entropy*. Most felt they understood Smith by reading the first twenty or thirty pages. It seems few ever ventured back to page 840 to find Smith’s blistering critique of his own model:

In the progress of the division of labour, the employment of the far greater part of those who live by labour, that is, of the great body of the people, comes to be confined to a few very simple operations, frequently to one or two. But the understandings of the greater part of men are necessarily formed by their ordinary employments.

The man whose whole life is spent in performing a few simple operations, of which the effects are perhaps always the same, or very nearly the same, has no occasion to exert his understanding or to exercise his invention in finding out expedients for removing difficulties which never occur.

*He naturally loses, therefore, the habit of such exertion, and generally becomes as **stupid** and ignorant as it is possible for a human creature to become. The torpor of his mind renders him not only incapable of relishing or bearing a part in any rational conversation, but of conceiving any generous, noble, or tender sentiment, and consequently of forming any just judgment concerning many even of the ordinary duties of private life.*

Of the great and extensive interests of his country he is altogether incapable of judging, and unless very particular pains have been taken to render him otherwise, he is equally incapable of defending his country in war. The uniformity of his stationary life naturally corrupts the courage of his mind, and makes him regard with abhorrence the irregular, uncertain, and adventurous life of a soldier.

It corrupts even the activity of his body, and renders him incapable of exerting his strength with vigour and perseverance in any other employment than that to which he has been bred. His dexterity at his own particular trade seems, in this manner, to be

*acquired at the expence of his intellectual, social, and martial virtues. But in every improved and civilized society this is the state into which the labouring poor, that is, the great body of the people, must necessarily fall, unless government takes some pains to prevent it.*⁴

What do these conditions do to the “life energy” of the workers, the supervisors, the managers and the executives? If “little boxes” and “case-hardened silos” persist, how can the vitality of human energy and insights even reach the light of day? Here’s a brief summary of the key points in the paragraphs above:

Consequences for workers:

- Loses understanding of whole
- Unable to invent (i.e. no innovation)
- Loses ability of rational conversation
- No generous, noble or tender sentiment
- Cannot form judgments
- Loses courage & dislikes the irregular
- Routine corrupts body and saps strength
- Loses intellect, plus social & moral virtues
- And is incapable of defending country in war

*Adam Smith, Wealth of Nations, Bk. V. Ch. I, Pt. III
Edwin Cannan ed. edition, p. 840.*

Notice that all that is needed to fit into a box is a little bit of smarts and the ability to follow instructions. Feelings, intuition, imagination, envisioning, empathy, etc. are hardly needed. It’s best to let them lie dormant in the typically repetitive industrial environment which Charlie Chaplin captured so well in the classic “Modern Times.” Is there any syntropic elements to be found in the Industrial Paradigm?

Does this build energizing and reflective resiliency into the firm or does it not effectively drain most of the natural creativity that could be there? Is this model entropic or syntropic?

Unfortunately, we are taking huge chunks of the Industrial Paradigm thinking into the emerging digitized world. Here we need just the opposite ways of thinking, feeling and working so that we can bring agility, reflecting and environmental responsibilities into the operations of our companies. Interestingly enough, Smith did understand some of the key characteristics of a syntropic company. If he could envision what is negative about his model he would have had to envision how it could work in the right way.

⁴ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of Nations* (Chicago: University of Chicago Press, 1976).

Done right, workers:

- Understand the whole
- Are inventive and innovative
- Develop the ability of rational conversation
- Are generous, noble & of tender sentiment
- Able to form judgments
- Show courage & welcomes the irregular
- The non-routine builds the body & strength
- Grow intellect, plus social & moral virtues
- And are capable of defending country in war

*Adam Smith, Wealth of Nations, Bk. V. Ch. I, Pt. III
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What if we, by choice, recomposed the work environment, inviting those there to use not only their intellect, but their feelings, intuition, memory, imagination, empathy and visioning to work in a trusting and valuing community together, while responsible for one another's development and the stewardship of the environment?

As we noticed the small but profoundly significant shift in two DNA genes about 500 million years ago, might such a shift as Smith is proposing help us to live a richer human existence for the next 500 million years? Would this not be eliminating much of the "human friction" that seems to be engendering more than an adequate supply of zombies (if one takes Hollywood seriously)? Wouldn't it be nice if future generations do not have to accuse our irresponsible ways for the genocide they face because of the ways we've use and used-up earth's resources in just a few hundred years?

Perhaps a shift to this more positive view of the organization is more critical than we realize, as we find fewer in the west are involved in manufacturing. Recently I saw that in the US only about 13% of the workforce are in manufacturing, while about 23% are in banking. Whatever the figures might be, it's clear that the dynamics of the work world are changing from the boxes and lines hierarchy to a more open and dynamic digitized organization with a whole range of other tools and resources and where good questions and quality reflection are badly needed.

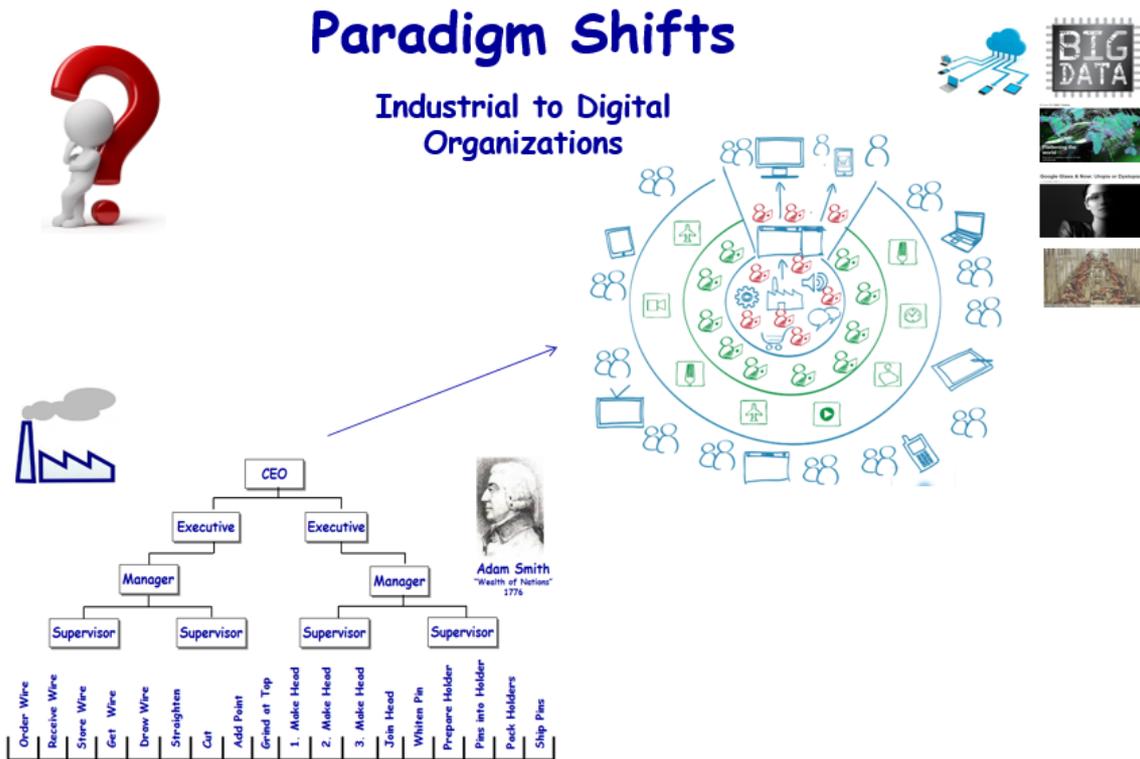


Figure 1: The Transition from the Industrial to the Digital Era

Where this to be the case, perhaps we need to upgrade our approach to education as it may or may not be preparing our young for the challenges ahead.

Education, Industry’s Entropic Feeder System?

If we step back and take an honest look at our educational world, we find an unfortunate echo of the Industrial Paradigm. Simply put, we seem to do a good job of killing curiosity in about the third grade (pretty much around the globe). We ask our students hundreds of questions, but never teach them how to ask good and powerful questions. We “talk at” them as they dutifully sit in rows in the class. We expect they will “follow our orders,” preparing them for the ‘command and control system” in industry. We test them on what we have said or asked them to read and punish them for all their mistakes. Is grading really a “punishment system” to get ready to accept fewer increases because of the mistakes they have made in work?

And of course, we use “competition” as a “motivator,” not realizing that natural curiosity and the ability to use all of our inner abilities (thinking, feeling, intuition, etc.) are essential and natural and more than enough of for our motivator.

Perhaps even more tragic is our focus on “the facts and the numbers” that can be validated by science. This seems to eliminate whole aspects of learning what we need to enliven our “inner energy.” Moreover, our teaching focuses on the KNOWN with hardly a word about the UNKNOWN. How often does a professor ever say to her students, “I’ve just told you most all I know about the subject, might we now explore what I do not know. Here are some questions about the unknown, could you help us discover some answers?”

Andreas Brandner, head of the Knowledge Management Academy in Vienna commissioned a three meter high sculpture from Prof. Helmut Margreiter to explore the dynamics of the KNOWN and UNKNOWN.

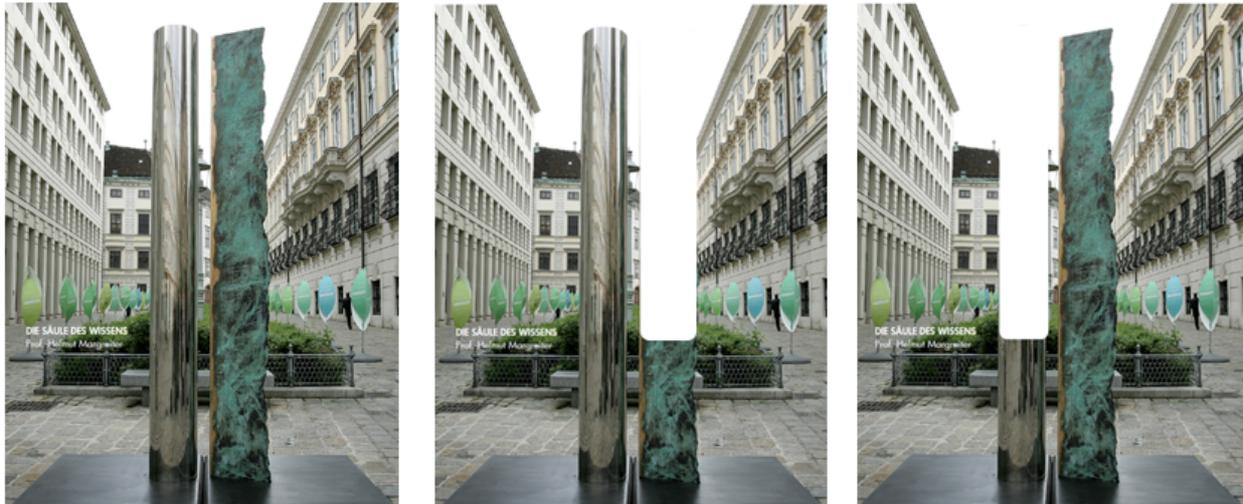


Figure 2: The KNOWN and UNKNOWN Sculpture

What is fascinating about Andreas Brandner’s sculpture is that it allows and enables us to begin to ask a whole new range of questions. For example, do we know most things and just have a little more to discover, or is there still a lot yet to be discovered? If so, why do we so focus on the known (validated by the past). Have we no courage to wonder and explore the possibilities and even the “unexplained phenomena” which John Reed suggests? And if we were to explore Antonella Vannini’s notion of “unitary time,” might we realize that we need to involve not just our heads, but our hearts and bring our thoughts, intuitions, inspirations and creativity into a vibrant inner dialogue?

Which is More: The Known or Unknown?

Do we Repair the Present or Co-Create the Future?



A

B

C

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Figure 4: Discovering the Relative Presence of the KNOWN and UNKNOWN

When asked, most people say that option C is the right one. In fact one person said the KNOWN is like one meter and the UNKNOWN may be closer to a kilometer. What does this tell us about Entropy and Syntropy?

What if we take the next step and ask, what are the KNOWNs and their parallel UNKNOWNs? And how do they interact with one another, thinking not in terms of “either/or” but with an appreciation of the power of “both/and” thinking/feeling?

Complementary or Clashing Elements?

How do we understand and sort out these various elements?

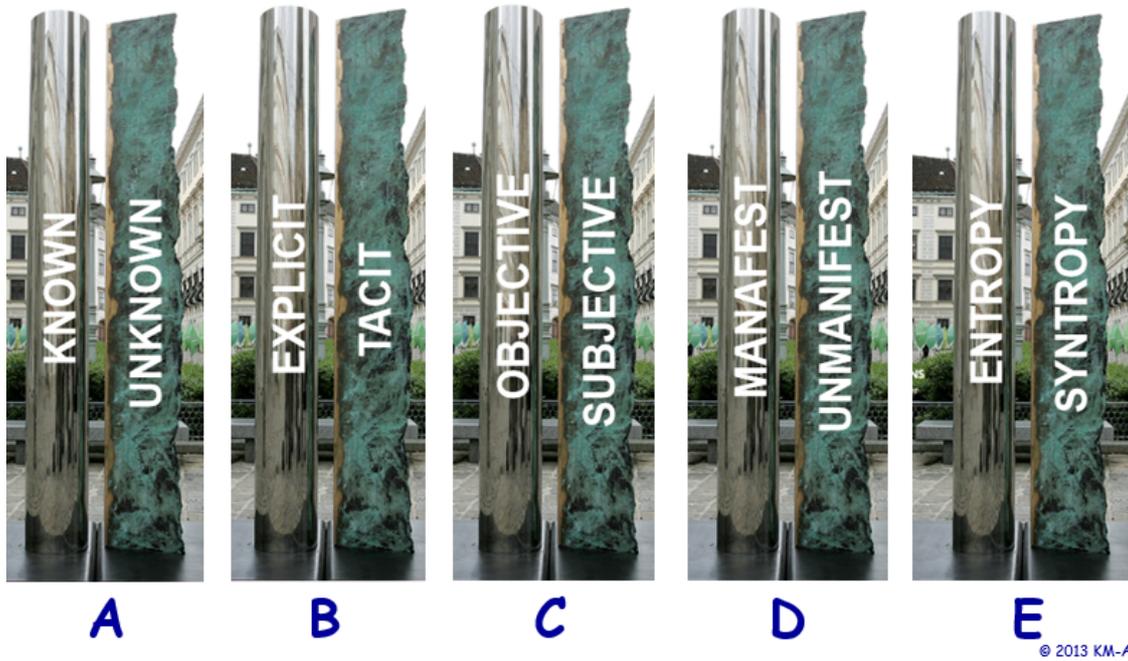


Figure 5: Dynamic Conversations

How much of what we are trying to bring out in our exploration of Syntropy touches on the UNKNOWN, the TACIT, the SUBJECTIVE elements of life and the UNMANIFEST and how do we reground them with the KNOWN, the EXPLICIT, the OBJECTIVE and the MANIFEST. Moreover, it is only reasonable to expect the healthy tension or better, the vibrant dialogue between ENTROPY and SYNTROPY. I discovered some of these dynamics while giving a presentation in Bangalore in March of this year while using the graphic below.



Figure 6: Three Unique Living Beings and/or One Life Force?

Upon first glance, it's clear the perspectives are qualitatively different. Each sees the other two through different eyes and senses a different meaning. Next, as I was in an Indian context, I shared a few lines from the Isha Upanishad:

4. The Self is one. Ever still, the Self is
Swifter than thought, swifter than the senses.
Though motionless, he outruns all pursuit.
Without the Self, never could life exist.
5. The Self seems to move, but is ever still.
He seems far away, but is ever near.
He is within all, and he transcends all.
8. The Self is everywhere. Bright is the Self,
Indivisible, untouched by sin, wise,
Immanent and transcendent. He it is
Who holds the cosmos together.

Suddenly, I asked myself, how can the Self be “Swifter than thought” yet “motionless?” And how might it be “move” yet be “ever still.” These are powerful contradictions that challenged my thinking to the core. Does the UNMANIFEST have such a manifest presence in our lives even if we are mostly ignorant of it? And is it that our desire to “see objectively” that which “blinds” us to this deeper and richer reality.

At this point I returned to the three, the cat, fish and child and saw clearly, perhaps for the first time the commonality of the three. Each in its own way is a manifestation of the same “life force” so common to us all. And yet this life force has the amazing ability to manifest itself so profoundly differently in each of us living creatures. There are no true “carbon copies” of any living organization. Might this mean that in our differences, we have to power (and perhaps duty) to nourish and inspire the common life energy within each of us. Is not life itself Syntropic at its very core?

If each of us is motivated, inspired and nourished by this inner life force, yet totally unique and special, perhaps it is time to rethink our approach to education and our broader economy. We have grown up with the typical classroom layout where we are focused upon “learning about” the KNOWN. If we want to awaken the range of talents of the students, we can ask them to work in small teams to discover more about the UNKNOWN. In doing so, they may be even more open to beginning with what's known.



The Industrial Approach echoed in Universities



The Learning / Discovery Classroom



Figure 7: Rediscovering our True Learning Context

Over the last few years I've been experimenting with the Learning / Discovery Classroom approach in Germany, Sweden, India, Dubai and Saudi Arabia and find that it works well in all locations. Even after a long day, stretching from 9 am to 5 pm, the students still have energy and interest. Any why? The excitement of discovery is Syntropic? And as they are both authors and owners of their own learnings, they feel a sense of inner pride. Moreover, I ask them to reflect on the challenges of the PRESENT, than look for wisdom from the PAST, so they can co-create a wiser FUTURE, i.e. an example of "unitary time?"

In essence, they are integrating the three elements of time into a robust dialogue in the present that gives them the needed vision and energy to begin to master the future. We will look more at this in the next section on SPACE and TIME. But before we move on, we need to conclude this section with a brief look at the language and paradigms that hold us captive.

When humans discovered ways to tap the wonderful riches nature has provided, the hydrocarbons, the metals and even the rare earth metals, it was as if they started to live off "nature's cookie jar" and became intoxicated with the "sweet life." Might this be another reason for obesity and diabetes?

Interestingly enough, along with the Industrial Era, certain concepts began to dominate our thinking patterns. As we needed to "command and control" the processes, we began to master "either/or" thinking, often initiated with the big BUT. This assumes always a right and a wrong way. Of course our academic world reinforced this pattern of thinking. Just think of how many emerge from business meetings with bruised egos thanks to all the BUTs that are thrown at each other. Naturally our "competitive" mindsets reinforce this pattern. And as each is competing for the attention of the meeting boss, they want to negate the other so they can shine. Unfortunately, the turbulence in these meetings often leads to inaction and indecision – expensive for many companies, even if this behavior never shows up explicitly on the balance sheet.

Is "either/or" discussing Entropic or Syntropic? And is this a change we, as humans, can make in terms of our patterns of interaction? What would it take to move towards "both/and" discussing, where the big AND shows we are able to appreciate and build off one another's thinking. And were we to hear more comments like, "Wow, that was an interesting idea! Please tell me more" as one

colleague turns and addresses a remark of another in a meeting. Would such a comment release Entropic or Syntropic energy?

Besides “toxic language” we have “toxic concepts” in the Industrial world that cause profound problems. Certainly, our one-sided focus on “competition” cause us to look for weaknesses in the others to exploit rather than discovering their strengths upon which we can build. Sure, there’s a lot of talk about teaming and collaboration, but unfortunately these stay mostly on a superficial level. Another of the toxic concepts is our simplistic view of “individual ownership.” We have anchored this in are legal systems as it seems that those who have title for proper, a resource or other items should have absolute control of how it, when and why it is used. Certainly in an economy based on scarcity, this approach seems only rational. And we would not really dare to think of ownership as trusteeship as Gandhi has suggested. We would not want to move from “either/or” to “both/and” logic would we. Yet, which approach might release more Entropy or Syntropy?

Interestingly enough, human came into this world without an “operating manual” or even a “warranty.” Over the years there are those who have tried to assert they have the correct manual. Alas, perhaps a bit more humility would help us understand we are a long ways from a robust and resilient, not to mention fair, operating manual. Again, if we are so burdened down by our lack of wisdom, does this mean Entropy will win in the end?

Summary:

Escaping the Entropic Traps of the Industrial Era Paradigm

- Might we rebuild our organizations based, in part, on Adam Smith’s own critique, using the positive version of this to release the syntropic energy in our organizations?
- Might we rebuild our educational approach to reawaken the students’ curiosity and the ability to ask powerful questions? Could we invite them to co-discover, co-learn and coteach with one another and let them be motivated by the joy of discovery rather than just by competitive grading? As the students become aware of their own inner abilities and talents, might we have the beginning basis of the next economy which will likely be more culturally intense than today’s model?
- What will it take to identify the toxic concept and paradigms and put them on trial for their entropic tendencies?
- And how might we realize that “work” is a “meaning-rich form bestowing activity” that “informs” and “forms” those doing the work – so there is personal growth in community as people work with one another in an organization? Might this suggest that all those working begin to be able to use all their talents: thinking, feeling, intuiting, imagining, etc.?

SPACE and TIME: A Confused Paradigm

Our senses put us clearly in the world of SPACE and PLACE. And we orient so much of our lives with SPACE, be it our office space, our living space or how we cloth our personal physical space. Yet, our life energy lives so much more in TIME, yet it's so easy to overlook this.

The nature of TIME has not been easy to sort out. Over the centuries it has been explained in different ways.

Aristotle defined time, saying, "*Time is the calculable measure of motion with respect to before and afterness.*" (**Physics**, IV, 11, 219, b1)

St. Augustine includes his famous quotation in his **The Confessions** of 397: "*What is time? If no one asks me, I know, but if I wanted to explain it to one who asks ... I plainly do not know.*" To explain his dilemma, he began to speculate as to whether time is these hundred years, this year, this month, this week, this day, this hour, this minute, this second, and had he wanted to continue, he could also have asked whether it is this nanosecond, this picosecond ... (or Planck's time – 10⁻⁴⁵ seconds). By dividing the present into ever smaller units, it is possible to show that the PRESENT is so short it is not even trivial. Were this to be the case, then do we actually live either in the PAST or the FUTURE?

In addition, we remember how Newton asserted SPACE and TIME are absolute and separate. And along came Einstein saying, no, they are relative and interact together which has left us with the notion of SPACE-TIME. But is this truly adequate?

In spite of the large number of books on TIME, most of us would run out of time trying to read them all. And the Scientific American, not that long ago, had a lead article saying we still really do not fully understand TIME itself. In spite of this, there seems to be a conventionally accepted understanding, built upon our simplistic notions of Clock Time, that the Arrow of Time is the way things work. Anything that might put this into question is often dismissed out of hand as we've seen with the "Syntropy" discussion in some quarters.

In the early 1970s I was inspired by the works of both Edmund Husserl and Viktor Frankl. Husserl's 1917 *Lectures on Inner Time Consciousness* were an early and important clue for me that there is more to TIME than what our Industrial Era assumes.⁵ As Husserl explained it, when we listen to or "attend" to music, as we hear each note, the previous notes still stay in our consciousness. That is, we "retend" them. So we hear each note not in isolation, but within the context of the previous notes. In this way we begin to pick up the meaning of the piece. In addition, we anticipate or "protent" what might be coming and part of the excitement of music is seeing whether these "protentions" actually happen. Of course, in listening to a piece, we bring with us a lot of knowledge from our previous experiences with music. And we may also be listening as we anticipate to play the piece ourselves or conduct an orchestra playing the piece.

⁵ Edmund Husserl, *Vorlesungen zur Phänomenologie des inneren Zeitbewusstseins* (Tübingen: M. Niemeyer, 1980); Edmund Husserl, *The Phenomenology of Internal Time-Consciousness*: Edmund Husserl: Amazon.com: Books (Bloomington, IN: Indiana University Press, 1971), http://www.amazon.com/Phenomenology-Internal-Time-Consciousness-Edmund-Husserl/dp/B002MAWIMY/ref=sr_1_fkmr0_2?ie=UTF8&qid=1374077281&sr=8-2-fkmr0&keywords=Edmund+Husserl+Lectures+on+Internal+Time+Consciousness.

In essence, it is impossible to listen to music just in the PRESENT, but we need to actively involve both the PAST and the FUTURE. Interestingly enough, Husserl began his initial phenomenological work on TIME inspired by a phrase in William James’ *Principles of Psychology* of 1890.

James was interested in the question of “how long is the present?” Interestingly enough, he came up with two insights, first that it is probably about twelve seconds (our span of attention) and more valuable is that the “past flows with us.” In other words, the PAST does not leave us in the way “back there.” It was this notion of the past flowing with us that seems to have given Husserl his understanding first of retention and then protention as we attend to a piece of music, or any other aspect of life for that matter. In essence, Husserl was bringing the three, the PAST, the PRESENT and the FUTURE into the present and into an active dialogue with one another.

In essence this is what Antonella Vannini has done in her wonderful writings in her notion of “unitary time.” Moreover, she also suggests that it is our human engagement in time that bring life its meaning, especially as we bring our inner capabilities into active dialogue, our “emotional life, intuitions and creativity” and more. In this way, we can feel and sense an inner energy of excitement in both discovery and expression and we engage in the complex richness of life itself.

Nevertheless, we know most still see time affixed within the Arrow of Time (stretched out over space). This notion was developed in 1927 by the British astronomer Arthur Eddington and suggested a one-way direction of time:

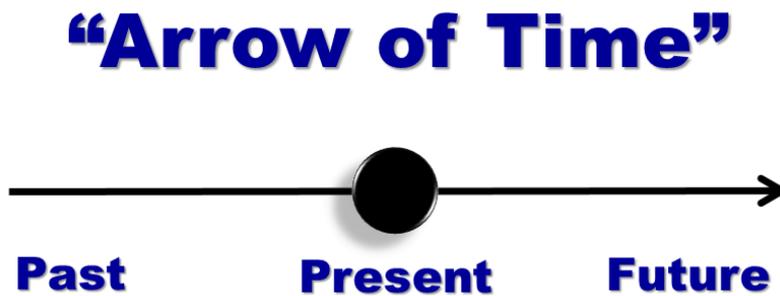


Figure 8: The Seemly All Pervasive “Arrow of Time”

Notice how this view assumes SPACE separates the three elements of TIME. We might picture this in the following manner:

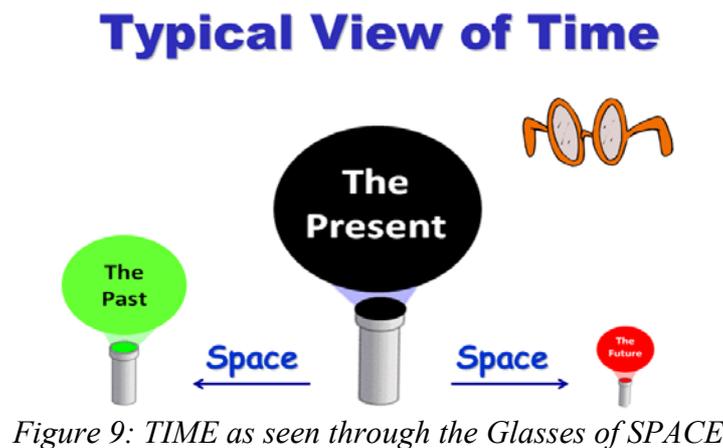


Figure 9: TIME as seen through the Glasses of SPACE

Is it really logical to assume there is physical SPACE between these elements? Or is this due to our inability to actively hold the meaning and insights of the past within our present vision, and act of volition (and effort)? Might it be that to see in TIME takes more effort on our part than seeing in SPACE?

What if we were to take SPACE out of TIME?

Rethinking TIME Removing Space

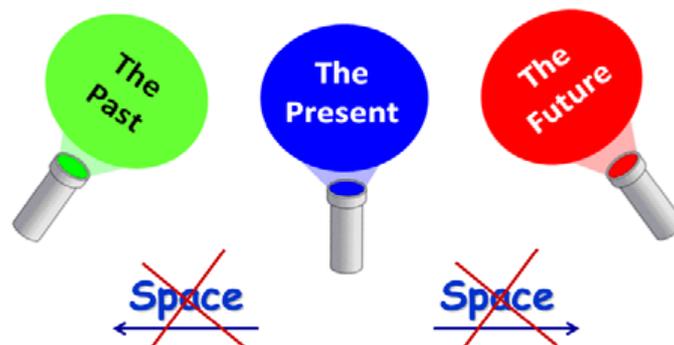


Figure 10: Removing SPACE from our Understanding of TIME

And suppose we bring these three elements together, using Additive Color Theory as a metaphor?

TIME free again!



Figure 11: Discovering TIME's Profound Richness

In this figure we do not see three but seven colors, with white at the center. Might this suggest that powerful and clear insights that can inspire and motivate come at this nexus? And could it be that as really live more in TIME than just SPACE and PLACE, we need to awaken this synthetic ability within ourselves and one another?

Interestingly enough, even Einstein assumed SPACE has three dimensions and TIME but one. Has he confused us along the way? Supposed that both have three dimensions:

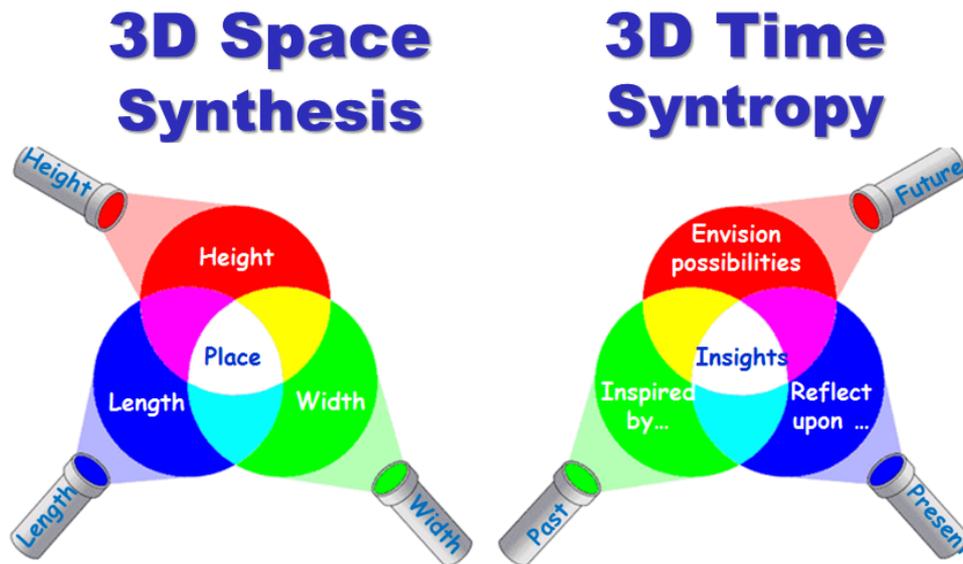


Figure 12: 3D SPACE and 3D TIME – Powerful in their Complementary Natures

As the inner dynamics of human TIME emerge, we begin to understand that it is only a matter of human effort to develop and enhance this ability. And as we begin to master the 3D nature of TIME, we may well discover a much lively inner self, our own unique life energy? Moreover, please notice how we've moved from the Industrial Era's linear line and the "boxes and lines" to a VENN representation of the dynamics of TIME. In essence, when we grasp and internalize this major paradigm shift, might we find a new source of VENNergy?

Perhaps one of the most promising aspect of this shift is that we will move from a focus on just being "smart," and realize that "wisdom" is a wiser choice. There is a growing literature about Aristotle's notion of "*Phronesis*," wise judgment. Prasad Kaipa and Navi Radjou have just published "*From SMART to WISE, Acting and Leading with Wisdom*."⁶

Could it be that this could become the foundation for the next economy, one that is profoundly low-carbon, but rich in culture and abundant in wisdom?

What if our working challenge were to become the task to co-create a global social and economic organization were we can:

Live Lightly, Lively and Wisely

We seem to want to fill our SPACE with a lot of "things" to show who and how important we really are. This approach continues to catapult us into an unsustainable carbon intensity and moves us to an unwanted precipice in terms of long term sustainability. It would be a pity were we to awaken too late to this reality.

However, if we were to realize that through the continual efforts to work in human TIME, 3D TIME, we would be gaining an inner richness and the ability to respond to others and other situations in wise and wonderful ways. In essence, this would be bringing the jazz notion of

⁶ Prasad Kaipa and Navi Radjou, *From Smart to Wise Acting and Leading with Wisdom*. (New York: Wiley, 2013), <http://public.eblib.com/EBLPublic/PublicView.do?ptiID=1157713>.

improvisation into everyday life. And we would begin to realize that we are not “fixed beings,” but we are continually developing, discovering, expressing, learning and bringing out the best in one another. Would this not begin to tip the scales in favor of Syntropy?

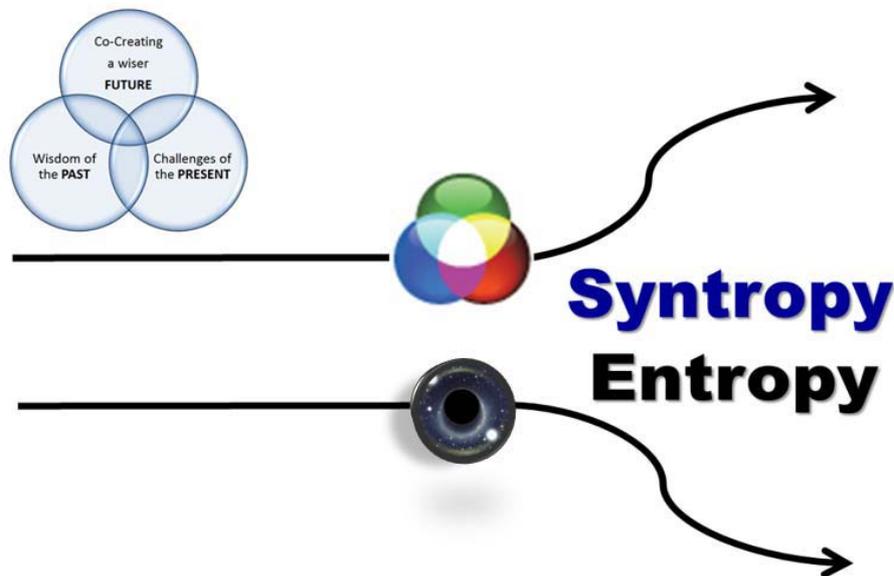


Figure 13: The Choice is Ours – Which Way?

As we know, our educational system does relatively little to awaken this capability within ourselves. Instead, it seems content to leave us captive to the PRESENT where we seem to fall into a black hole of meaninglessness, depression and more!

Summary: SPACE and TIME – does sight really blind us?

- What is stopping us from discovering the three dimensionality of Human TIME, as Antonella Vannini suggests in her concept of “unitary time?”
- Once we understand how to bring the three dimensions into an active dialogue, it’s likely we will find a new source of energy, perhaps more fundamental than all the “alternative energy” sources to date?
- Were we able to make the paradigm shift from the “Arrow of Time” to its truer VENnergizing essence, might we find a whole new range of entrepreneurial possibilities opening up?
- And were we to able let the call of an economy where we can “Live Lightly, Lively and Wisely” dawn upon us, might we approach the next years with new vigor?

Human Greed - suffering the fallacy of misplaced concreteness?

What really keeps us captive of the PRESENT? Certainly our Industrial Era paradigm does a good job, along with our misunderstanding of the nature of human TIME. Perhaps the third key element is our human desire to want it all now. For many, “more is never enough!” So we find ourselves on the perpetual treadmill of GNP growth, in spite of the fact we really know that this is a big catastrophic bubble!

Is human greed so well programmed in our human DNA that we cannot transcend it? Perhaps, but perhaps not. We know it's been around for a long long time. For example, the Kurukshetra War between two part of the same family was one fought over the greed of ownership about 100 KM north, north east of New Delhi perhaps 9,000 BCE. In the eighteen day battle, an estimated three to four million persons died.⁷ This monumental event is captured in the Mahabharata, of which the key dialogue is contained in the Bhagavadgita.

We know that closer to our era, a Dutchman, Bernard Mandeville, trained as a medical doctor, who moved to Great Britain in the early 1690s, wrote a brief twelve page doggerel poem entitled “*The Fable of the Bees, Private Vice, Publik Benefit.*”⁸

As we will remember, William Harvey, the Royal Physician, had discovered (at least in the West) the circulation of blood in the human body in 1628. Mandeville posed a very interesting question, “What is the blood of the body politik?” His answer is contained in the Fable of the Bees did not please many in England, yet Adam Smith seems to have been intrigued enough to have let it influence his notion of the ‘invisible hand’ mentioned in passing the *Wealth of Nations*.

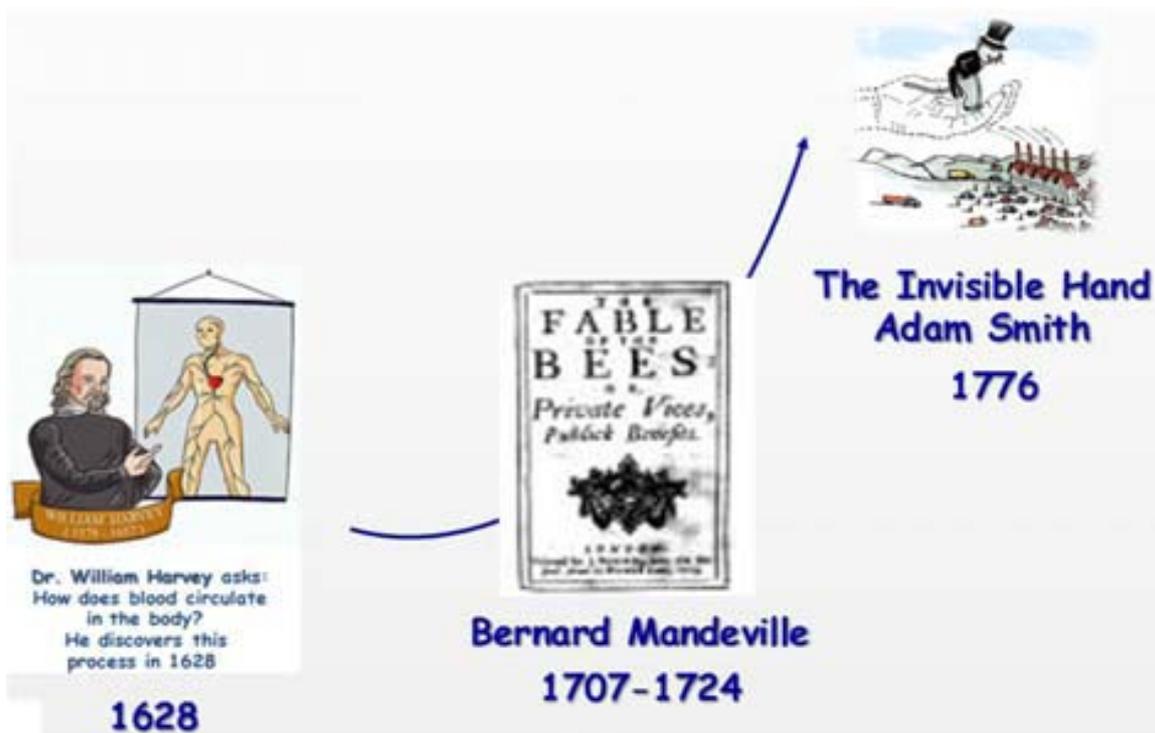


Figure 14: Harvey to Mandeville to Smith – Enhancing or Degrading the Circulation of Blood in the Body Politik?

Below are a few phrases from the Fable so that it might be compared with Smith’s actual language in describing the “Invisible Hand.”

⁷ Kurukshetra War,” Wikipedia, the Free Encyclopedia, July 15, 2013, http://en.wikipedia.org/w/index.php?title=Kurukshetra_War&oldid=558790511.

⁸ Bernard Mandeville, “The Fable of the Bees,” Wikipedia, the Free Encyclopedia, April 28, 2013, http://en.wikipedia.org/w/index.php?title=The_Fable_of_the_Bees&oldid=550421510; Bernard Mandeville, “Fable of the Bees (The Brumbling Hive: Or, Knaves Turn’d Honest),” 1705, http://maartens.home.xs4all.nl/philosophy/mandeville/fable_of_bees.html.

Bernard Mandeville - *Fable of the Bees*

"Private Vice - Public Benefit" (Adam Smith's "Invisible Hand")

Bernard Mandeville:

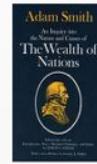
- **Physicians** valued Fame & Wealth, Above the drooping Patient's Health,
- **Envy** it self, and **Vanity** were Ministers of of Industry;
- Their **Crimes** conspired to make 'em Great; ...
- The Root of evil **Avarice**, ... Was Slave to prodigality, ... whilst **Luxury** employ'd a Million of the Poor, and odious **Pride** a Million more
- Thus every Part was full of Vice, Yet the whole Mass a Paradise;
- And ever since the worst of all the Multitude did something for the common Good.



1724

Adam Smith:

- It is not from the benevolence of the **butcher**, the **brewer** or the **baker** that we expect our dinner, but from their regard to their **own self-interest**.



1776



- ... and by directing that industry in such a manner as its produce may be of the greatest value, he intends only his own gain, and he is in this, led by an **invisible hand** to promote an end which was no part of his intention.

Figure 15: The Connections between Mandeville and Smith

The conclusion of the Fable is most telling:

The MORAL

Then leave Complaints: Fools only strive
To make a Great an honest Hive.
T' enjoy the World's Conveniencies,
Befamed in War, yet live in Ease
Without great Vices, is a vain
Eutopia seated in the Brain.
Fraud, Luxury, and Pride must live;
Whilst we the Benefits receive.

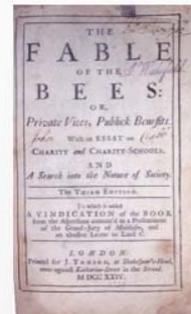


Figure 16: The Moral of the Fable of the Bees – Have we Accepted this Blindly?

In other words, were a society to have richness and abundance, it would embrace greed and corruption. Perhaps Mandeville simply reinforced the greed section of our social DNA, or so it seems. Think of how many times Smith's "Invisible Hand" was referred to as some kind of justification for the irresponsibilities in the 2008 banking crisis in the US.

At the beginning of this paper, we wondered about the Black Hole hidden at the core of the Industrial Era. It seems it's been composed of the ill-conceived nature of the organization, the pin-making factory, reinforced by the quest to increase the "Standard of Comfort", aided by our misunderstanding of the dynamic nature of Human TIME, and further undergirded by Mandeville's Fable. Together these are pretty strong forces pulling us over the event horizon into the Black Hole.

What might be a way out of this dilemma? Could we, as humans, have accomplished an enormous amount of progress over the last 50,000 years or so, but find ourselves with a fatal flaw? Could it be that we've been so dominated by our own bodily senses in that connect us in SPACE and PLACE and tend to want to "objectify" everything? Might we not have yet grasped the dynamic flow of life over TIME? In short, are we truly caught in the Paradigm Prison of our own construction?

Unfortunately, it seems as if we've succumbed to the shallowness of our own thinking. There is some indication that we as humans thrive best in a community where we are valued and trusted. We are energized by discovery and expression. We welcome the encouragement of others to help bring out the best in one another. These are "natural dynamics," perhaps lived by the Australian Aborigines for over 40,000 years. So we have examples from the past of societies low in carbon but rich in culture and wisdom. Might we have the humility to bring their wisdom and insights into the present so that we might co-create a wiser future?

Summary: Human Greed - suffering the fallacy of misplaced concreteness?

Perhaps we need to reflect on Alfred North Whitehead's notion of the "fallacy of misplaced concreteness." He developed this notion in a discussion about the location of spatial and temporal objects alone or in relationship with other objects. In a real sense, he is asking us to see the whole context, rather than fragments of it.

If this is the case and if we are both Objective and Subjective, Explicit and Tacit, Known and Unknown, Manifest and Unmanifest, then perhaps we can begin to understand and develop ways to live with both Entropy while nourishing Syntropy. Were this to be the case, it is within our human ability to reformulate the dynamics of human organizations. We can begin to grasp the paradigmatic shift from 3D SPACE and 1D TIME to 3D SPACE and 3D TIME. And we can greet Mandeville with a smile, realizing that human greed is a form of self-imprisonment because it blocks the nourishing flow of human energy among and between us.

Could it be that when we understand life from the 3D TIME perspective, the unitary time view, we will understand that each of us is involved, together in community, if the process of letting our inner life force express itself both for ourselves and the community? This is what will add richness and meaning to our lives, our work, our conversations, our projects, our poetry, our art, our drama and so much more.

We all know the question, "Is there life after?" Most almost naturally quickly insert the word "death." What if we were to insert the word "birth?" "Is there life after birth?" Of course comes the quick answer, but upon second thought, how do we spend our time and efforts in this life, to acquire or to express, to compete or to complement, or to dominate or to discover? Perhaps like in no other time in human history we have the challenge to re-ground our economies and societies on an abundance of appreciation for the gift of human life, to our inner human energy and for the possibilities that we can, living in human TIME (unitary time) discover whole new vistas of the dynamics of life itself. In so doing, we might realize, finally, that the "life" is not a NOUN, but an active VERB and the more we can live it the more meaning we will have both for our generations and many generations to come. In this way, may the Unmanifest *Élan vital* of our lives become Manifest in all we do?

As we begin to emerge from the fog of profound confusion, might we begin to resonate with the deeper elements of life, perhaps connecting with the Forth Point, the *Turiya*, in the OM symbol? Could we consider bringing the four elements of the *Purusharthas* in Sanskrit thought together, the *Artha* (wealth and pursuit of meaning) and *Kama* (desire) with *Dharma* (sense of the right and righteousness) and *Moksha* (liberation)? The *Dharma* may give us our inner keel back so that we are better able to sail the complex and confusing seas ahead while rediscovering our inner gyroscope to give us stability in these turbulent times. Certainly the growing interest in quantum entanglement suggests some are ready to look way out of the box into new horizons.

Alas, do we really know what we might call the next economy, the green economy, the blue economy or perhaps the “valuing economy” as we may be learning to again value ourselves, one another and the richness of nature and its amazing processes in energizing and resonating ways? Could it be that we can again rebuild our societies upon trust and valuing, rather than to skink into the swamp of profound distrust that seems to be emerging as conversations are being monitored on a global scale?

With our rich conversations, might our new insights enable us to innovate not more of the same in our Industrial Model, but to step beyond our fascination with mining and producing products from earth’s resources, and shift to a “cultural economy” which cultivates and nourishing our human spirits? This may mean we’ll need to realize the gap or profound the “discontinuity” awaiting ourselves. Yet, as we begin again to work in 3D Human TIME, it’s likely we can make the transition into the “wise era” or whatever we might end up calling it. Honestly, there could never have been a more exciting and challenging time than today to participant in the regrouping of human society.

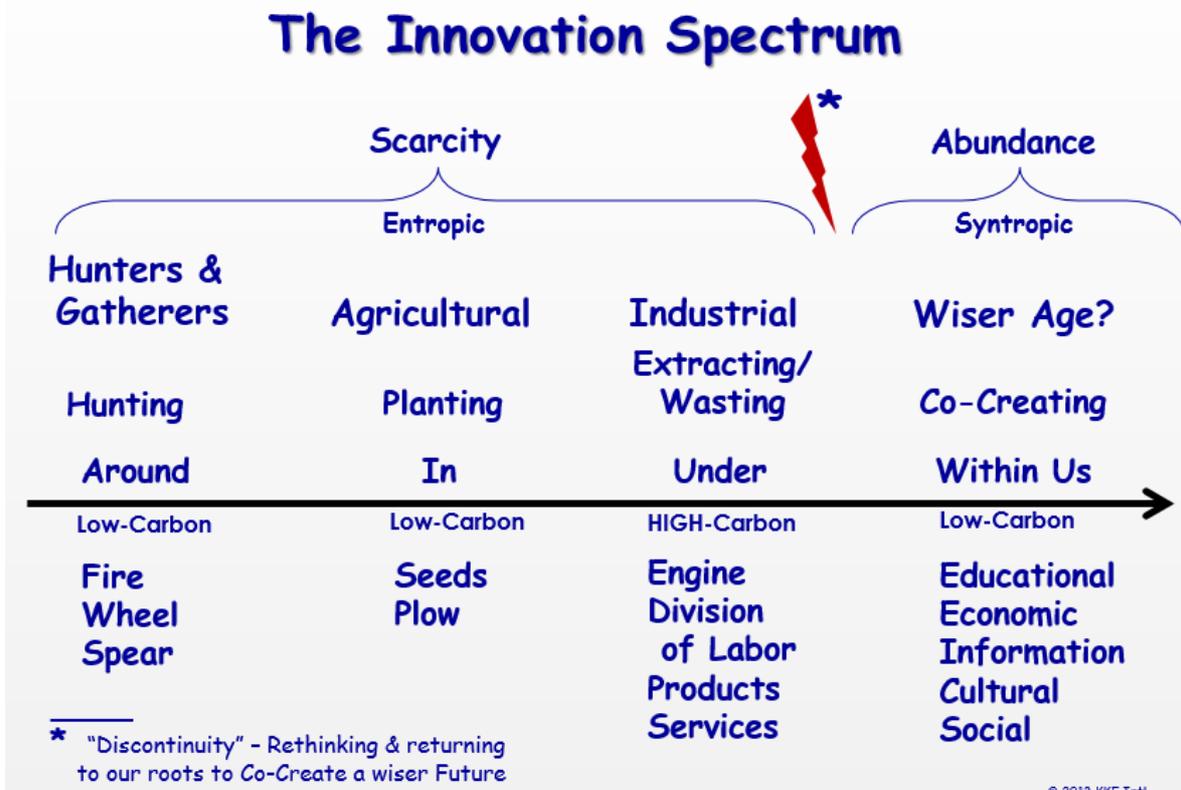


Figure 17: The Innovation Spectrum – Might the Source of our Future Wealth be “Within Us?”

It is likely we'll find ourselves moving from the greed of "Self-Interest" to a more robust and yet humble "Interest-in-Selves," our own and that of one another. This may open the dynamic where in our human interaction, we step out of the Black Hole of the PRESENT and in resonance with one another discover whole new dimensions of life that make it possible indeed to:

Live Lightly, Lively and Wisely

In short, if Copernicus and Galileo brought about a revolution in the ways we see ourselves in SPACE, helping us move from the geocentric to a heliocentric perspective, is it not time for a similar profound shift in the ways we perceive human TIME? It seems that only by altering a few of the letters in our thinking DNA code (similar to what happened 500 million years ago), might we be able to live lightly and lively on our planet for the next 500 to 800 million years? Perhaps our Syntropy Conference will help move us towards an even more significant paradigm shift that that of Galileo to help make this happen. Might this be possible?

A Personal Note: In looking over the backgrounds and themes of the participants for this "First International Conference "Life Energy, Syntropy and Resonance" I've rarely seen such a remarkable community of visionaries. I know I'll be learning a tremendous amount from all and come home so much richer in insights, energy and drive. Our thanks for pulling it all together go to Antonella Vannini, Ulisse Di Corpo with the support of the World Institute for Scientific Exploration.

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