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Future as Emergence:
Paradigms, Patterns and Processes

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Abstract

Paradigms for creating Utopias based on "Human Agency" as the sole driving force, far from actually obtaining them, are the direct cause of the Mega Crises that threaten the very survival of humans as a species. This essay seeks to show that the survival of our species requires an orientation that Humans as "Active Walkers" are but one input to a complex interactive process in multiple dimensions that causes the future to emerge.

There is general agreement among scholars that Humans are now in what is defined as the Anthropocene, best described in The Encyclopedia of Earth[1] as follows, "The Anthropocene defines Earth's most recent geologic time period as being human-influenced, or anthropogenic, based on overwhelming global evidence that atmospheric, geologic, hydrologic, and other earth system processes are now altered by humans. The word combines the root "anthropo", meaning "human" with the root "-cene", the standard suffix for "epoch" in geologic time, starting at the end of the last Ice Age.

The Anthropocene is a starting point in terms of a major revolution, in terms of humans moving away from being Hunter-Gatherers to Farming and Agriculture and for all intents and purposes the onset of evolution of what can be described as "Civilization" and "Societies" inclusive of varieties of Politics, Economics, Religion, and Culture based on philosophies, concepts, and ideas, or Operant Paradigms. These operant paradigms can be traced to human attempts to understand, define and act on three major relationships viz. Humans and Divinity, Humans and Nature, and Humans vis-à-vis Humans.

Civilizations, Eastern and Western, have in a broad sense operated on two such paradigms or philosophies, describing the nature of the three relationships named above. The first one, namely the polytheistic paradigm, is distinguished as a new period either after or within the Holocene, the current epoch, which began approximately 10,000 years ago.

Eastern Civilization, which predates the Monotheistic Western Paradigm by Millennia, is based on the ideas that Humans and the Divine are inseparable, Humans are part and parcel of Nature, inextricably connected and interdependent, and all life including human life is one and the same. This philosophy is best articulated and synonymous with what is termed as the "Sanatana Dharma"[2] in Hindu philosophy, as opposed to the ideas of Western Civilization, that postulates that Humans and the divine are wholly separate, God has given Humans dominion over Nature to understand and use for human progress and Human life is sanctity personified over and above all other life.

Both of these paradigms are operating to this day, even though the Eastern paradigm is steadily receding into the background, even as recent realizations seem to be forcing humans to reconsider returning to it, notwithstanding the fact that the Western Paradigm has now emerged as the dominant one over the last two millennia. A major difference between these two paradigms is that the Eastern Paradigm pursued knowledge for knowledge's sake, and in the process obtained profound understandings of the external world but was primarily preoccupied with knowing the inner human self, based on inner-directed explorations to obtain release from the human condition, as in Moksha, Nirvana etc.

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The western paradigm moved forward within the framework of what is best described as the "Baconian Method", directed at the external world (including using the ones discovered by the East), thus obtaining discoveries and inventions to apply and use for human progress. Progress is deemed to be limitless based on understanding and exploiting nature for meeting human material needs.

An important distinction needs to be made with respect to the inherent nature of the two paradigms. The distinction is with respect to the scope and extent of human "agency" in obtaining desired outcomes and futures. Implied in the Western Paradigm is the assumption that human agency, as ordained by the divine, is the sole determinant of desired outcomes and futures. The Eastern Paradigm on the other hand, while not eliminating human agency, is much more fatalistic and demands human agency be used within the framework of broader ideas and values described above.

Given this background it will now be appropriate to assess the state of the Planet and the general condition of humans on it and more important to examine whether the idea of Human Agency as the sole determinant of desired outcomes and futures is valid and sustainable.

The dominant paradigm operating for the last two millennia, based on human agency as the sole determinant of desired outcomes, has developed and implemented a plethora of ideas to create "utopia". While it is important to acknowledge that the accomplishments are fantastic by way of improving the material condition of humans, uneven as it is, it would be fair to expect that Utopia would have manifested long ago. Needless to say, however, anyone looking dispassionately at the human condition and the state of the planet today, one would have to conclude that "Utopia" is nowhere near to being achieved, and actually, in many respects, we are confronted with the stark reality of "dystopia" and unintended consequences. Human populations have burgeoned from 100s of millions to billions, poverty, disease

(pandemics), war, destruction of the natural world, extinctions of species, climate change, impending exhaustion of natural resources, etc. are there for all to see.

At this critical juncture, it is imperative therefore that we take a second look at how the future comes about. In order to get to such an understanding, it is necessary to first attempt to describe a model, a construct, that will best illustrate the process in action that causes the future to come about. It is important to first acknowledge that the paradigms and models we have used thus far have failed to be predictable because our models for managing our futures and the structure of the model of the real world in use have been completely unrealistic and do not come close to reflecting the structure of the real world. As noted by James Gleick in his book *Chaos,*[3] "The degree to which the model (our current model!) reflects reality depends entirely on how the logical structure of the model and the logical structure of the real-world observable match".

The following is an attempt to outline the framework of a model that more closely approximates the logical structure of the real world. The model can be described as follows:

It is a three-dimensional matrix. The first axis is humans as participants, individually and collectively, concurrently functioning as agents at eight different levels of identity, continuously attempting to optimize their multiple interests, viz., individual, family, neighborhood, city, state, region, nation, and the planet. The second axis is the world around them in the natural realm, viz. the Hydrosphere, the Biosphere, the Lithosphere, the Atmosphere, Space and Beyond all in a constant state of flux, naturally and otherwise. The third axis is the varieties of systems that humans have initiated and have then evolved into the current forms viz. Social, Economic, Political, Religious, Cultural et al., similarly in a state of constant flux. This complex three-dimensional matrix, mathematically speaking, equates to a mind-bogglingly huge number of dynamic interactions taking place sequentially and simultaneously every second, every minute, every hour, every day and so on. Humans act as agents between themselves, interacting with elements of the second and third dimensions. Similarly, interactions within and between the elements of the second and third dimensions. All resulting in outcomes and consequences that one can reasonably argue would be beyond any currently known means of managing toward a desired outcome and destroy the smug and misplaced notion of humans managing and obtaining desired outcomes and futures. The evidence to support this conclusion abounds all around us.

Scholars around the world are suggesting that humans are at a critical juncture as to their future, and that survival of the species is at risk if course corrections are not taken.

As it relates to course corrections, recent scholarship has given rise to ideas and concepts that enable a better understanding of how the future comes about, human agency notwithstanding. A complete and comprehensive presentation of them is beyond the scope of this book but a list of them with brief definitions is as follows, along with a comprehensive reading list.

1. The idea that the "Earth is Being" or "Gaia."[4]

"The Gaia hypothesis, also known as the Gaia Theory, Gaia paradigm, or the Gaia principle, proposes that living organisms interact with their inorganic surroundings on

Earth to form a synergistic and self-regulating complex system that helps to maintain and perpetuate the conditions for life on the planet." (Lovelock,2005)

2. The seven principles underlying all life as outlined by Guy Murchie[5] in 1981 are as follows:
   a. The principle of abstraction: There is something intangible behind life in physical bodies—indeed behind all matter—and the immateriality (energy, if you will) is revealed by the flow of time, which literally makes things into events. All forms of this mysterious noumenon are abstractions.
   b. The principle of interrelatedness,[6] which geneticists tell us, is a measurable fact among all members of a species (including humanity in all its races) and on deeper investigation, it turns out to apply as well to whole kingdoms of creatures, not to mention interrelations between kingdom and kingdom or between world and world without end (by Christian De Duve).
   c. The principle of Omniscience of life,[7] which denies that an impervious boundary has ever been found between any of the kingdoms, or for that matter between life and non-life, leads to the inescapable conclusion that all rocks, seas and worlds, and consequently the entire universe, must in sense be alive.
   d. The polarity principle,[8] which recognizes the balance and mutuality of the opposites that we see everywhere, things like light and darkness, good and evil, male and female, predator and prey, matter and energy—all of which, by their contrast, give definition to life and make it work.
   e. The principle of Transcendence,[9] which refers to the development of our perspectives on time and space as we grow older, as well as the progressive absorption of self into a wider awareness as one matures spiritually, all such factors ultimately revealing themselves to be, in effect, tools of learning in the inexorable drift from our ever-present earthly finitude toward some sort of infinitude far beyond.
   f. The germination of worlds:[10] A critical event that seems to happen once to every celestial organism and after billions of her billions of years of slow evolution, is occurring right now on Earth as evidenced by many fundamental changes during which we call modern times—things that, as far as we know, never happened before and can never happen again on our planet.
   g. The Divinity Principle: The greatest mystery of all, the ultimate mystery of divinity[11] or whatever you choose to call the unknowable essence that leading thinkers have long believed somehow exists beyond creation and maintenance of all body, mind and spirit—not to mention behind every other known or unknown wonder of the universe.

3. The Future as Emergence: Based on the description of the complex model given above, it should be easy to see that the Future "emerges" out of the interactions, with human inputs as "active walkers" (as opposed to "passive walkers")[12] (Lui Lam, 2005). Some processes that are inherent in the emergence are the elements of Complexity, The Butterfly effect, Catastrophes, Tipping Points, Self-Organization, etc. All of these have become relatively

new fields of study and are producing critical insights that should be availed. And they will show that a retroactive look at how things have evolved over the millennia is more closely linked to the above-mentioned processes at work. A brief look at the processes is warranted.

a. Complexity:[13] (Neil Johnson, 2007) Simply defined as the study of the phenomena which emerge from a collection of interacting objects. Neil Johnson defines it as such "Complexity characterizes the behaviour of a system or model whose components interact in multiple ways and follow local rules, meaning there is no reasonable higher instruction to define the various possible interactions. The term is generally used to characterize something with many parts where those parts interact with each other in multiple ways, culminating in a higher order of emergence greater than the sum of its parts."
b. Catastrophes:[14] (Gleick 1998) The Catastrophes occur when, as we move in a continuous way through the family of parameters, usually by smoothly changing (incrementally—my word) parameters describing the system, a stable fixed point of the family loses its stability. This change of stability forces the system to move abruptly to the region of a new stable fixed point.
c. The Butterfly effect:[15] According to Edward Lorenz, in chaos theory, "The butterfly effect is the sensitive dependence on initial conditions in which a small change in one state of a deterministic non-linear system can result in large differences in a later state." (Wikipedia)
d. Tipping Points:[16] (Gladwell 2001) "The critical point in a situation, process, or system beyond which a significant and often unstoppable effect or change takes place."
e. Self-Organization:[17] (Yates 1987) "Self-Organization, also called spontaneous order, is a process where some form of an overall order from local interactions between parts of an initially disordered system. The process can be spontaneous when sufficient energy is available not needing control by an external agent."

The totality of what has been presented in the foregoing by way of models, concepts and ideas is essential for new approaches to the study and understanding of ourselves and the world around us; thereby, humans as agents, as active walkers, play a role as an enlightened participant in the emergence of the future with thought and respectful consideration given to the idea of the Planet as our only home, a system inclusive of the Biosphere, the Lithosphere, the Oceans, the Atmosphere, and Space and cognizant of the fact, as documented by Evolution, that we are not exempt from extinction, aware of the concepts and processes described above.

So, a desirable future that emerges will essentially be because of human agency employed in an educated, informed, bottom-up process of inputs to the complex system described above. What it requires is a shift in what is described as the *Overton Window* from the current operant paradigm and the approaches that are circumscribed by it. An approach first laid out by Joseph P. Overton (1960-2003), named after the American Policy Analyst. It is an approach to identifying the ideas that define the spectrum of acceptability of government

policies. Politicians can act only within that acceptable range. Shifting the Overton Window involves proponents of policies outside the window, persuading the public to expand the window. The public here are the human agents.

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