

**LIVING IN THE SHADOWS OF THE SUN: REALITIES, PERILS AND ESCAPADES,
MAN, PLANET AND THE KARDASHEV SCALE
MAKING THE GREAT TRANSITION.**

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ABSTRACT

With the current global human population surpassing the 7 billion mark, energy requirements exponentially rise (shift) with demographics. Living in a planetary system of finite natural resources the Biosphere in turn overstretched. Humanity has to think outside the box to satisfy / quench this first for energy within our technology means. I herein apply the notion of harnessing the energy of the sun (star using green Biomass as the only efficient means that not only 'cleans' our planet of a biotic factors upsetting the planet's climate, but provide sustainable energy to power the rising population while also promoting biodiversity but providing all life forms on planet suitable Biomes for we all need one another for successful co-existence. The reader of this work is left with the meditative task of answering on where we lie on the cosmic energy scale (Kardashev scale) our obligations, where we should be. The leader should derive methods which he/she can personal apply in life making the best out of the scenarios within, with the ultimate goal making the planet for all life (not only humans) with one foot on earth and the other in the heavens(Cosmos) we set forth.

DEDICATION

To the memory of Nelson Mandela. A man whose struggle eventually revealed the beauty in the varsity of harmonious human existence.

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Taking care of our planet, our environment is something like taking care of our own home. This blue planet is our only home - Dalai Lama

INTRODUCTION

In as much as humanity would like to steer the future. The notion, noble though grand and highly plausible can be elusive a concept. Optimism should be fitted into the picture a tinge of pessimism, should garnish the offering to make it achievable. The proverbial glassful of water as half empty knowing very well its half full, also half full when we know its half empty. This paradox enables us to always be on our feet up to something positive guided by hope. Before we embark on such a feat it is unwise to set foot without asking. What is humanity? What is the future? What is the universe? And our place in it? Which of our obligation in the nature should not be deluded by our aggressive conquest? By knowing our place in nature, relationships within and how we can harness ecological benefits to achieve futuristic progress at the economical expense of a dime, solving vastly complex challenges imparting largely an every aspect of life in the planetary system this 21st Century in a single .It is utterly useless, futile, highly expensive much like buying furniture for a house whose rooms you have no idea about. It is on such a note that I find it logical that we first answer these questions. The rest lies within.

THE COSMOS- SECRETS OF THE UNIVERSE

A physicist's view working in the field of Astronomy, the telescope is an indispensable optical tool. The simplest a refractor when used to view the cosmos magnifies the large scale of the physical universe, reversed – the same telescope suffices as a compound microscope, the microscope is used to observe the miniature world in detail. With modern reincarnations, of the concept in the large radio and space telescope, the likes of the SKA, Hubble, Chandra etc, the most powerful microscope to date is the LHC, everything we perceive or experience lies in between. These views combined enables physicist have undue views of our place in the universe.

The physics theory in a Quantum setting as such the whole of string theory, in particular the gem in the Tiara, M-Theory, refined and rare field help predict phenomena highly complex as nature. Generalizations have been crafted that currently fit everything including man, planet and its star in the ensemble... it is worth noting that our ancestors looked into the skies astronomically e.g.: Stonehenge and used metaphysics to maneuver their civilizations. The human species existence is primarily hinged unto the universe (nature). Understanding these metaphysical laws, invoking them practically will enhance sustainable technological advancement. Some ancient societies over delved too much into societal anthropic niceties neglecting nature. The abuse of nature, ignorance of relationships between man and planet led extinction. Much of these can be seen in the ruins left behind for example the pyramids in Sudan, Egypt and Mayas and much of what we

term. The seven wonders of ancient world, leaving in their wake vast man-made deserts. Our current civilization if not balanced with nature light not be an exemption.

PHYSICS AFTER THE HIGGS

Over the past year, physics has undergone a quantum leap: 20th Century theoretical physics put forth the Higgs Boson. Any doubts cast forth on the existence were confirmed at CERN'S LHC in 2013 and dispelled by its detection. 20th Century theoretical physics too came across a 21st century venture in calculus, a mathematical behemoth which refined is the only sure find to describe the universe in entirety. With an anthropic principle within, physics doesn't get that close; limitless the possibilities are wild, impossibilities null.

PHYSICS OF THE 21ST CENTURY

Dr. ED Witten of Princeton College in 1995 described a theory called M-theory it was said of the theory as 21st Century physics that had fallen by chance into 20th century physics. With vast advances in technology since then, theoretical physicists in the field can be said to be just horsing around saying it's untreatable, with the cosmos- the largest laboratory already having much of the proof. Though rigid laws of physics have high degrees of freedom if perturbed within the physical constants that nature puts forth. I gladly ascribe to the statement that M-Theory is ready for takeoff. Having a solution on geometric that has been lying unnoticed right under our noses.

M-THEORY- SNAPSHOTS OF A GRAND ENSEMBLE

M-Theory works in eleven dimensions, in these the universe is made up of 10^{500} unique Quantum mathematical spaces. We only see $10^0=1$ of these scenarios due to the processing output of our brain-that is the world we inhabit, a complex mathematical setting down computed by the brain to Biological perception of our five senses, to make life easier. The M in M-Theory may also stand for man, as the theory highly uses anthropic selection in a Quantum scenario, bringing out a highly refined anthropic theory, even Medicine, a fundamental base for analytical evaluation of complex biological processes at the Quantum level. M-Theory solves complexity in natural 'tight corners' where Ockham razor riddles persist. The planetary system (Biosphere) in all aspects is as such. The first application of such lies here in.

THE NUMBER ELEVEN – THE PHYSICS WITHIN THE 11th DIMENSION

Eleven appears in Newton's Gravitational constant abbreviated $G 6.672 \times 10^{-11} \text{N/M/K}^2$ as a superscript, Gravity is very important in cosmology. The planet's star- The sun follows an intrinsic eleven year sunspot cycle and has a 220 million year cosmic orbit (note 220 is a multiple of 11) or 1 cosmic year about the galactic core. In the Judea Palestinian gospels. The Great Man Jesus lives up to 33 years. His ministry in the Eastern Mediterranean lasts 3 years one relevantly of his life. Initially he had 12 male apostles, at the time of his resurrection- They are eleven. In climatology the net induced natural temperature by desired levels of green houses, is ambient placed at 33° degrees centigrade again 33 is a 3rd multiple of eleven. Nature/universe too is eleven dimensional.

UNIVERSE, MAN AND THE FUTURE

From M-Theory the conclusion holds, the universe and all existences are one large cycle, - a circle, we live in these. Living in a reality as such calls for a lifestyle synchronous to this reality, living in moderation. The universe past, at string level on both spatial and temporal views is much like its present. With the future not much different. The universe is self sustaining eternally converts –interconvert's, matter energy and Quantum information. With the second law of thermodynamics bringing out an attribute of the universe. The universe was not created neither can it be destroyed. Man too being part of the universe should intelligently emulate this by 'playing' along beautifully to the tune called nature. Nature is part of us. We are also entirely delivered from nature. M-Theory is not just calculus. A physicist working on the pet subject delves deeply in practice into the vast applied multi-disciplines in Maths, Biology, Chemistry, Geography, Sociology, Arts, History and much more. If any or all of Clarkes three laws of prediction holds as put on Wikipedia that. When distinguished elderly scientist states the possibility of something, he is certainly right, when he states it's impossible he is very wrong and the only way to discover possibilities is to venture a little way into the impossible. Any sufficiently advanced technology is indistinguishable from magic. Then in The Grand Design 2010 Stephen Hawking and Leonard Mlodinow. The great physicist places a high bet on M-Theory as the only complete fundamental description of the universe. Using available physics M-Theory helps humans draw technical details of universe hence tabulate plans to maneuver within it, a large population of Cosmologists too give credence to the theory.

GOODBYE BIG BANG-THE REALITY OF THE UNIVERSE.

The legend of St. Augustine and the seashells tells a story of the Bishop of Hippo encountering a young boy drawing water from the sea using a shell to fill a hole dug on the shore, the young boy tells the saint that he wished to empty all the waters into the hole, the saint says it's impossible, the child too tells off the question in the learned man's thought and mind. The universe is fully Quantum mechanical, explored through the scope of the Big-Bang model, too skimpy revealing very scant details of the reality. The universe is too vast. The Big- Bang theory though modest, through inflation can only show us only an interconversion process, never a birth. Together with all other nascent theories by men violates the fundamental law of Thermodynamics; energy cannot be created or be destroyed but can only be converted into other forms. Contemplating the nascence or demise of the universe is akin to using a sea-shell to empty all of the Oceans waters into a tiny hole. A lurid dream, materialistic even the most graphic accounts could have nothing to describe if the universe had not always existed. The reality at hand at these levels was not created neither can it be destroyed, within confines of physical law, all else emanates. Necessarily existing we can describe empirically its mechanical principles using (M-Theory).

The universe stands unfazed, knocking perceived idealisms off their pedestals and making simpletons, our utter disregard of simplicity. What is called universe is not just anything.

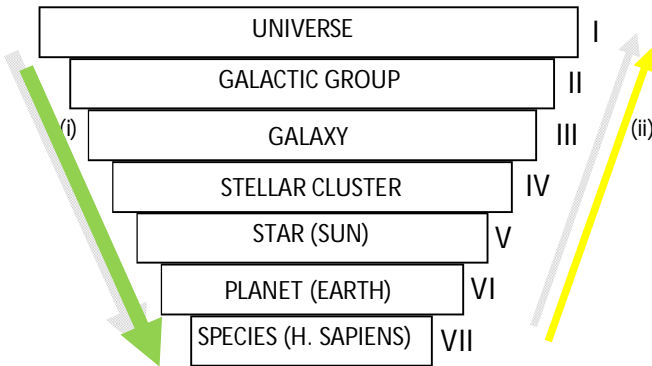
KNOWING YOUR WAY AROUND-Our place in the universe / nature on the radio.

If you happen to tune your TV set or radio, there is the characteristic hissing (white noise) background. A large chunk of that comes from the universe. This to us in M-Theory is the entropy of the M-Brane at 2.73 Kelvin, hypothetically on a 0-9 metric scale, its peak at 3K. It is the sum total energy lost as Quantum string state. The universe is not only cool, thermodynamically. We can even colloquially term it cool (beautiful) as all life forms exist freely in it.

ZOOMING IN ONTO HOME

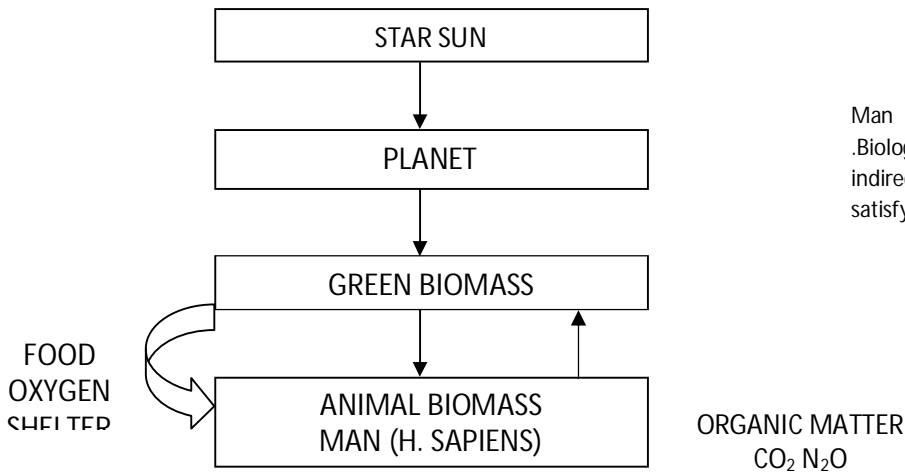
In the vast number of galaxies in the universe, amongst the immense Dark matter and dark energy. In the Virgo super cluster lurks a spiral barred elliptical galaxy. The Milky Way its 100,000 L.Y.R.S across (33,000 parsecs). At only 33,000 LYRS (8400 parsecs) from its galactic core earth in a Keplerian orbit at 1 Astronomical unit. The sun has an 'uncanny' relationship with the galactic core. It does keep neither with nor, of orbital mechanics and has a un-Keplerian orbit.

HOW WE RELATE TO COSMOS



The arrows dictate energy flow it is easier to use route 1 than route 2 due to entropy. It's logical for lower members e.g. vii to use energy from higher members v directly/indirectly to power needs not vice versa.

HOW WE RELATE TO THE SUN IN THE ECOSYSTEM



Man (H sapiens sapiens) is an animal .Biologically powered by food, man relates indirectly to satisfy this to Green Biomass to satisfy this to nutritional requirements. II

WHAT IS HUMANITY? WHO ARE WE?

Humanity is the totality of biological existence of the Hominid Species Homo sapiens sapiens, Life is the sustained display of displacement of any existence about its mean position, evidenced by flow of matter, energy of Quantum information at any level in the universe, from cosmic fluctuations to ionization any existence having an 'excited' state has life, spontaneously generated by the universe and occupying unique bands in the spectra called existence. The species did not evolve from apes, for by now the areas would have invented fire. The species is primary to the planet and co-existed side by side with all other Hominid subspecies, in Africa, outliving them. The member of the species use speech to communicate ideas internally also use limbs to draw and sketch ideas (art/literature) an available materials-stone, wood paper. The male is called man, female is woman, female has a higher pitched voice than the male due to anatomical configuration of the vocal chords, when generating speech ideas are thought patterns generated by the human brain that enables the species relate to others and nature in general, enhancing a species survival in its Biome. Transmission of ideas is key within a

species hence the need for vocal framework which we call language. Speech mediated by the species, highly formed brain further conjures these ideas, rhythmically to create music. H. sapiens loves these rhythmic ideas and gyrates to the notes physically in what is called dance. Ideas which the sapiens its limbs to write or draw, when rhythmically produced are called art. They are pleasing to the audio & optical receptors of our species.

A STELLAR CIVILIZATION

Living a terrestrial lifestyle on a planet called in orbit around a star called the sun. The star 'calls the shots' on the planet. The species is a Biological entity in the Kingdom Animalia. The planet and everything in it is a progeny of the sun. So too is the entire solar system but for the moment we restrict ourselves entirely on our home planet –earth. The star is nuclear reactor using fusion and fission processes to power itself and anything within it's bound from within its core. Everything in gravitational orbit around the star is made up of these products of a nuclear reaction in short we are made of stardust. All elements in the periodic table-known or unknown are synthesized in the sun. The entire solar system makes up a meager 0.002% of the 'suns' mass. A whopping 99.098% a credit goes to the systems core the sun. Only one astronomical unit away from the earth. It's indecent to say " we are not part of the sun." if mass, were anything to go by. By all means this amounts to sheer denial. It's like having a hair on your head refute the claim that is a part of you. All physical processes 'mimic the sun' too in synthesizing copies of their species. Biology employs meiosis and mitosis in both sexual and asexual reproduction to procreate (sustenance & species perpetuations and improve quality. These are analogous to the nuclear chain reaction of fusion/fission in the sun whereby the simplest and most abundant element, Hydrogen is split/combine into more complex elements. The female of Homo sapiens is entirely responsible for replication. Having an oestral cycle coinciding with the orbital period of natural satellite called the moon, Fertilization is internal. Occurring in a cavity called a womb, akin to chain reactor biological processes involving gamete formation to fusion with male gametes, cell organization, differentiation and specialization take place; output is existence at the multi-organ system level. After 7-9 lunations' (months). The young one is introduced into the planet by its mother. Man is primarily a social animal, the basic social unit is called a family, and parental care to juveniles is norm. Lately inter-species social mesmerisms (memes) have gradually depleted moral ethics of the species at the basic level- The nuclear family endangering life in the Biosphere.

AFRICA, ORIGIN & CONFLUENCE OF THE TRANS CONTINENTAL SPECIES – PALEOANTHROPOLOGY& CONTINENTAL DRIFT

Homo sapiens is the Hominine subspecies that we are. Long ago before Pangaea, all the earth's land mass sat centrally-like the iris in the pupil of the eye: Natural denudation processes later made irregular the edges, within the land mass were all life forms existent today. H.sapiens sapiens larger brain volume hence higher intelligence enabled the race survive. The law survival for the fittest carried the day. H.sapiens sapiens originated in East Africa (cradle of mankind). In the mountainous regions between, Ethiopian Vantage Highlands, Mt. Kenya and Mt. Meru. The species made its home, these high lying equatorial areas were favored for security (offered by views) and also for their ambient climate that provided abundant food necessary for species perpetuation. As continents drifted they did so with all life forms within cutting off some populations. As populations grew conflict migrations were the order of the day. Migration is as old as humanity. Walking over rugged terrain (up and down hills) proved tedious and inefficient. Moving inside natural troughs-(River & rift valley) proved a solution, in transit until they found a place fit for survival and built settlements. Others moved along the coastlines. The species used either or all these routes to move along to move on the planet then. In Africa the 7200km long rift valley with Eastern and Western arms extended from Mozambique in the south to Jordan in the North, Great River valleys like the 6700km Nile basin and the Sinai Peninsula. These transit routes into and out of Africa, Northwards or southwards. Interconnecting Africa to Eurasia. The species body obeys homeostasis via skin, the 39th edition of Gray's anatomy says of the skin- 'The skin forms a self renewing interface between the body and its environment, a major site for intercommunication between two. Being warm blooded, too much heat loss or heat gain to environment +- 37 Oc, impairs physiological function. Biologically inclined to compensate migration, to mitigate irradiative heat loss/gain, moving to higher latitude (cool climates) over time is interpreted phenotypically and over time the species got a light skin over time to reduce heat loss, the tropical species are darker (note darker bodies lose heat equally as fast as they gain it). As chameleon adapts to its chromatic environment, so does H.sapiens sapiens also change to thermal environment. This probably explains the diversity in skin hue and tone amongst the species. The migratory species further intermingled and interbred with other Hominid subspecies in the new geographical regions creating diversity. All man on the planet is a sense a version of the African species. Man is omnivorous and diurnal with a hormonal circadian clock using serotonin and melatonin in the cortical regions of brain and gut to regulate sleep-wake cycles synchronized with the sunrise / sunset. Each morning the planet is lit and warmed by the rising of a star called the sun over the Eastern horizon. Early members revered the vigor and vitality it bestowed amongst all life on the planet, a concept so real to date. The star was responsible for controlling on nature the human brain figured out means of relating to this reality and everything else above, facing East each morning. The reverence and awe led to the invention of theism. Theism in all its scents and flavors, poly/pan/mono-theism took root. The theoretical construct of the human brain bred deity/ies whose grandeur man relates to what he considers biggest in his limited view of nature. When theism met human societies it spread like fire, on a personal level it worked but on a large scale due to diversity in ideas-opiate highly polarizing a source of separation, intolerance and orthogonal relationships with reality. On a social scale it makes us forget we are human, providing unwarranted psycho-social support, a leap before you look philosophy. Applying psychological trauma in form of fear of the unknown. The beautiful concept has been defiled and reverse engineered to inflict undue pain for selfish personal gains. We should never kill the gift of curiosity; curiosity should precede necessity as the mother of invention. Inventions that should be shield at all costs from bearers of thoughts and minds bent on destruction of planet and fellow man for the age old insatiable appetite of greed. The future has no room for such characters. A large part of the early 21st century will see collapse of such social structures, no matter their size; they are self annihilating and should harbor no blame for their

implosion. If you build a house on quicksand its kind to contemplate all the pros & cons. With the in tray full. Violence in its illegal or mechanical means is not the resolution, silent exits- the only means out. If it's not good for nature, then it's not good for you. Governance will not be about oversight but foresight. With more of the species inhabitation same Geopolitical regions, demands grows- a natural effect. Systems must intelligently compensate internally to affect to such effects, efficiently. Nelson Mandela's life taught us we are all one. Acceptance of the diversity of humanity, truth, justice, forgiveness and reconciliation must form the basis of our moral-ethical, social fabrics, ideals so revered in Traditional African Society. Diversity should in no means be ideologically abused to satisfy greed and ill advised conquest. We have to learn from the past, and live for the future. Throwing overboard quite a lot of negative social mannerisms, thought patterns and ideals employed by ancient localized societies that are hollow and simply fanatical, an unknowingly carry with them the suicidal risk of social collapse. Confucius (552-479BC) said "Never do to others what you would not like them to do to you." A good said confusions "does not worry if his goodness is not noticed, he is more concerned with seeing goodness in other people. Buddha (560-480 BC) in his Eightfold way stresses the need for right knowledge, right effort. Right mindfulness, right speech, right concentration, right conduct, right intention and right means of livelihood. Right simply means ethical not detrimental to fellow man and nature. Jesus of Nazareth (1-33 CE) in a theistic setting in the Gospels stresses the need for love. He says "love your neighbor as you love yourself." Jesus lays down love as the cardinal concept of positive (fruitful) human existence. if we thought along the wise words of these Great men adopting ideas on a personal level, majority of our society woes will be fully solved or at least on their way to a solution. We should always think about not what society can put into us, but what can positively put into society as an individual for the universal benefit of all.

THE POTENCY OF THE HUMAN BRAIN & NATURE

Humanity is a biological stage of existence in the universe. It is by no means static; vastly dynamic it is prone to technological advancement. This enhances a species conquest of nature, sometimes the species does the irresponsibly, eating too much into nature. If we insult nature, she too fights back giving us lemons instead of lemonade. A gentle treatment extended to nature is likewise returned favorably to the benefit of the species. If conquest of the universe is our eventual goal. A journey of a thousand mile begins with a single step'. We must first 'secure' our home – planet earth, our ecosystem. In nature all life forms interdependently rely on one another. Making the grand ensemble. Man too is not exempt from this. The bee, plankton or even the burrowing worm-whose presence we underestimate, each play an unequivocal role in the general physiology of our biosphere their absence would impart negatively on human life increasing the risk of extinction. To conquer the universe, we must first conquer our own inner self. The most powerful tool nature has granted our species is the brain. Abject misuse, disuse or both of this potent resource has put us at crossroads with our Biosphere. Local Abiotic and Biotic factors take on extreme values (too much or too little) endangering life. To overcome ourselves largely entails pacification of the ego. We are not masters, neither slaves of nature. If nature understands us, then we too should understand her, much of our problem are due to sheer ignorance, arrogance of the beauty and elegance Mother Nature displays. Nature has everything we can ever need to the benefit of all, the panacea to all our problems; which ironically we are so adept at creating and escalating.

THE FUTURE – PROSPECTS, PROSPERITY

No one saves us but ourselves. No one can and no one may we one saves us but ourselves must walk the path. -
Buddha (560-480BC).

The future lies in our hands; the future is the next second, next minute, hour, day. We shall all dread extinction in a self sustaining planet the greatest threat to human existence lies not largely on an astronomical strike by an asteroid, the greatest enemy to life is the human species itself, fond of self inflicting casualties and causing undue peril to other life forms. With a clear mind we can take on the climate change issue, taking the negative effects, eliminating and turning them around into avenues of prosperity for all life not only man , achieving the ultimate goal, A clean healthy planet and intelligently propelling ourselves higher up the Kardashev scale with minimal risk of extinction inexpensively. By employing the vast array of technical knowledge in the science, arts and sociology in the public realm. A higher population means a bigger workforce in achieving this.

THE POWER OF INFORMAL-FORMAL SECTOR HARMONISATION

An anthropocene period calls for cutting the balance to avoid messing up, discarding social notions of formal and informal economies/education. These are mesmerisms that are psychologically employed to condition society, they are vastly lock out extremely useful talent that requires very little empowerment to achieve fantastic results at expense of development. It is painful to contemplate the fact that informal economies provide a lion's share of the global GDP. In education the same applies. It would be wild to contemplate the fact that one of the greatest 20th century inventions came from the informal sector. Wilbur and Orrville Wright in 1903 were bicycle repairs with a big dream that forever changed human history through aviation. The computer was once gigantic laboratory contraption members of the informal intellectual sector adapted it for humans starting Microsoft and Apple, these humble chaps have virtually 'put the computer in everyone's pockets resorting to increased computing power for the entire human race. Harmonizing informal education/economies with formal ones remains key for effective harnessing of this in human capital. With the world more connected using the internet, education from well defined sources e.g.; Wikipedia, free open courses, open institutes, e-print archives provide a vast treasure trove of knowledge to help humanity tackle global problems on a local level. Interlinking global focus with local action and global action with local focus provides a diverse economic macrostructure, relaying diversity of the whole and uniqueness at the local level. I simply refer to it as "The Galapagos island effect." If such local model flops, the large scale outfit is not prone to effect as such, the converse is also true. Using the ecological to produce goods and services is also true. This is eco-communalism. In the universe there is no formal or informal nature

applies the cardinal rule end justifies the means. In biology there is nothing as a formal/informal life. Life is simply put existence. Any system not intent on adopting the informal sectors is just "clipping its own wings."

HOMOSAPIENS, PLANET & KARDASHEV SCALE

Wikipedia defines the Kardashev as a hypothetical method of measuring a civilization, level of technological advancement based on 3 levels, type i, ii and iii. we live in the cosmos. Our beautiful blue planet is a giant natural spaceship in a bubble hurtling us in a perpetual dance around a star, galaxy and in the universe. In this bubble self sustaining fluid cycles involving fluids e.g. The Hydrological, carbon and Nitrogen cycles keep us alive harnessing energy from a perfectly spherical G2V star to power life. The holographic universe is made up of Dark matter/energy making it bulk of late Dark matter has been found to peak on earth every march-let's wait to see how the story unfolds. They say that space is the final frontier of the future. Our spaceship planet is part of space-time. It so follows that we are part and parcel of the future and the future is here with us. Whose control is ours to gain or lose? Nature is entirely capable of infinitely catering for all our needs when deployed on the Kardashev energy scale we currently lie as a Type I civilization with higher population the full transition to a type ii is inevitable and in the offing. On the civilization scale the extension put forth by John O. Barrow according to me holds much water, currently we are moving from Type IV minus to type Omega-minus (manipulating the basic structure of spacer-time). This assumption made from the current level at which string (M-Theory) has. After studying the entire page on Wikipedia with all variations postulated on the Kardashev scale (http://en.wikipedia.org/wiki/Kardashev_scale) it resounds like that on planetary boundaries. Futuristic scenarios put forth by Dr. Michio Kaku, Freeman Dyson, Roger Penrose, Sagan, and Frank Tipler. May as of this moment been reached by nature at present without the knowledge of the populace. The planetary boundaries concept states that the fitness of the planetary system has its ecological limits. It's easy to discern that increase in quantity of human population has led to a decline in the species individual life quality. With quantity compromising quality we need to rethink the art of making babies; embracing reproductive planning methods. Using resources available and their holding capacities as criterion. By minding the prosperous future of one's offspring, it is unwise and abuse of the wonderful gift procreation to irresponsibly think of filling the planet. A temporal spacing of the gap between parents and offspring is necessary; life is genealogical succession in an infinite long chain or cycle of existence. Its justice knowing of the fact that the planet too has a peak holding capacity of every biological population, that if it spirals out of hand it intelligently controls using the fluid cycles, though a nasty experience for man.

MOVING INTO THE FUTURE-EXPANDING OUR INTELLECTUAL FRONTIERS

Facing challenges which are being accelerated by population growth humanity needs to positively align ourselves with nature, using science we can harness opportunities created by climate change to restore order and intelligently turn around our destiny. The energy transition from a type I to ii comes with immense benefits for man and environment. Applying the use a thief to catch a thief concept. I herein put forward the easiest means of doing this. This idea is adopted and embraces in tandem and firmly takes into account, concepts, concerns and the work and findings of the global scenario group, planetary phase of civilization, climate change, planetary boundaries and limits. Working within these bounds I invoke the Kardashev scale on a cosmic footing (planet earth is part of cosmos) to mend the current mess.

THE FEASIBILITY OF THE KARDASHEV SCALE DRAWING ENERGY FROM THE STAR

We are a type I transmitting to type ii civilization. In fiction a typical type I civilization is able to control weather, in the fiction book-Gears of war humans of sera are type i using adaptive atmosphere manipulator to generate hurricanes. On a reality scale climate change on our planet is caused by anthropocene activities. H.sapiens sapiens like the fiction humans of sera is capable of climate manipulation. By harnessing a type i method- Harnessing renewable energy, by converting sunlight (insolation) to other forms of energy. Using a man made structure to coat the surface to capture energy. The possibility is achieved by artificial increase of Green Biomass (plants) these utilize photosynthesis to effectively convert sunlight to palatable energy forms. With this we are a type ii civilization using a method- drawing energy from stars.

THE DYSON SPHERE/SWARM-Type ii method.

Our planet lies in a Dyson sphere (within the bounds of the Heliopause). The solar system (excluding the sun) is taken as the Dyson swarm having gravitationally stable orbits. All planets including earth in the solar system, each individually are energy collecting surface in orbit around the sun meant to enclose a star (s01) completely and capture most or all of its energy output (Wikipedia) in the near future a type iii method is very probable bearing in mind the proximity of other class G2V stars in our neighborhood and the non Keplerian orbit of sun around our galactic core. In the Dyson swarm each of the planets use natural means to draw solar energy to satisfy their needs. Earth uses green Biomass to capture and convert solar energy (insolation) to other forms. Planet employs plankton in sea and plants on land, the sea (water) surface increase effective area.

SEVERE ERRORS IN ENERGY POLICY FORMULATION

In the classification of renewable or non-renewable energy forms. The physical law on energy state, that energy cannot be created or be destroyed but can be converted. Anything in the "fluid cycles of the planet "is renewable as the cycles themselves. **BURSTING THE BUBBLE.** We have made our beautiful planet sick, that has sickened us too Hippocrates once described epidemiology in terms of a species environment. He put that the ailment of an individual is a replica of its environment. A clean environment means healthy inhabits. A lot of talking has been done, the walking minimal. We need to develop a global blueprint (working model) for the next 100 years. Employing natural processes to hasten the cleanup venture, converting the scum we have created into useful forms. The largest mammals namely the Whale and Elephant reside in Aquatic & terrestrial green ecosystem respectively. It's awesome to imagine the sheer power

of green Biomass in ecosystem to nurture life, while at the same time balance the Hydrogen, carbon Nitrogen cycle using only solar energy.

CLIMATE CHANGE & GREEN HOUSE GASES

Abrupt global warming / cooling is mainly caused by water vapor 36-70%, Co₂-9-26%, methane 4-9%, ozone 3-7%. The accelerated rise is totally due to anthropocene activities. By not developing means of replacing the gaseous oxides of Hydrogen, Carbon and Nitrogen back in their sources as fast as we exploit them these end up in the thermally insulated creating a 'greenhouse' effect to micro climates. Winds water current are fluid patterns moving from high pressure regions (cool) to low pressure (warm) regions. The green house effect causes the pressure gradient between low and high pressure regions to be larger. By further warming the low pressure regions and cooling high pressure. This makes fluid Dynamics (mechanics) very intense-having higher velocities (gusts) the mete untold grief, such as was the case in the recent Typhoon Hainan. At present, we may be experiencing a maunder minimum (lowers solar sunspot activity) its kind to note how sensitive our planet is to even solar energy variations of the order 0.05 – 0.1 % to surface temperatures on planet, see also inverse power law. Last experienced in the 17th century in the higher latitudes (cool climate due to our planets orbital tilt). This mimics a "little ice age." With the green house gases having a 'lensing' effect winters are bound to be colder, summer a bit unbearable. Human culture in the 21s century will be determined by Global climate trends and policy formulation.

FORGING ON

The global climate model (nature) is self sustaining (depleting / replenishing) the pine island glacier a large ice stream is testament to this. Nature entirely or parts of it can be employed to inexpensively remedy threats to humanity procedurally. The greatest risk is warming in seas that cause glaciations largely due to co₂. If unchecked melting glaciers may abruptly release methane gas they'd safely locked within themselves in the past. Methane a product of digestion in ruminants. High CH₄ levels in ice sheets/ permafrost tell the story of a planet highly populated by such animals, in the adopted animal power to propel civilization. Abrupt release of CH₄ is catastrophic, unchecked present CO₂ levels at 400 ppm – highest ever in 4.5 million years, projected levels by 2100 at 541-970ppm. Lowering PH levels below Biological optimums, cell physiological functions become severely impaired or impaled. It is said "mundu mugi ndamiaga kiraro." Translated it means a wise person does not soil his habitat. High levels of green houses gases are waste productions of our lifestyles. Having turned toxic, they've upset our Biosphere, the time to act is now or else we have other planets- (Venus & mars) as models to tell our fate. The remedy- short long term effects. The planet at present is a greenhouse; the ugliness can be converted to beauty. With the ecology as natural resources, the 7+ Billion hands (human capital) can positively and effectively turn around the climatic scenario and its adverse effects. Increasing terrestrial green Biomass remains the only way out. In a natural system, chipping in one cycle has a domino effect on all the others. If we use natural resources (greens) to positively adjust the carbon cycle hence lower CO₂ signature. Feedback mechanisms in the ecosystem also help us control all other cycles effortlessly. With immense payback services, the ecology gives back much more than expected. Plants participate in the Hydrological, carbon Nitrogen and more cycles so modify microclimates intelligently and if on large scales, the macro (global) climate, putting to decent levels all the environmental challenges. Green Biomass occupies the procedure level in ecosystem, we get more food, create suitable Biomes enhancing diversity. Increasing terrestrial green cover ease the stress on the oceans systems (acidification) reducing warming in the waters, hence continuing polar glaciations. Having two as opposed to one carbon sink more efficient. The green Biomass cover needs to be permanent (all year round) economies generated by adopting such a system are a kin in bulk as to the giant mammals. The whale & Elephant. Peripheral economies of life in the ecosystems inhabited by the two grandiose creatures. Adopting such methodologies calls for drastic reduction in nocturnal activities, for man is naturally diurnal.

While plants clean up these toxic gases we generate by day-During photosynthesis plants require copious amount of Co₂ to make food giving us oxygen in turn. Programmed by nature, at night they require O₂ giving out CO₂ as we sleep. It is polite to reciprocate the kind gesture by giving them time, this by resuming high CO₂ generating activities by day break; doing away with CO₂ generating activities by day break, doing away with unnecessary competition for respiratory gases.

CONCLUSION

We have to jettison the parasitic mindset (Asymbiotic) relationship we exhibit to nature. Adopting symbiotic life. Give and take. take and give ideology. The resources at our disposal are infinite. Living in the vicinity of a Nuclear reactor (sun). It's high time we learnt to behave at par with the reality always thinking along how little is the much we have? Or how much is the little we have. Increasing green terrestrial Biomass in direct proportion to population increase means taking advantage of the fact that the planet is a green house-conditions fit for accelerated plant growth. Being at the production level the output is phenomenal. Proper, efficient distribution mechanisms of products must be enhanced. Produce must reach consumers in the shortest time possible and at minimal cost.

Food-an essential resource to power human population is such, global trade policy adjustments and extension to fit mass population will play a vital role in this. It is a pity to note that due to poor distribution chain, Billions of tones of wood went to waste in superstores, worldwide. Yet ironically on a global scale vast numbers of human beings are underfed. Ignorance and arrogance are immoral ideals sired through poverty of thought that our species should jettison into oblivion. These make the mind impermeable to critical reason and analytical thought. When high on these immoral ideals any Biological life form is a disciple of denial, stupefied. The inability to adopt to change ensures making the organism susceptible to even the cheapest form of ridicule. Having killed the intellectual power of the brain the only way out is extinction. The species and its environment is a product of its thought. What you think you become. The greatest gift we can bestow upon our

offspring is a clean, beautiful planet. To bestow beauty, to nature now, upon all future generations, man animal, plants (all life on planet) external goodness will always flow.
Remembered over countless generations in future maybe as the 21st century civilization that reverse gloom into joy.
Transforming the planet Earth into a haven-An abode where all life forms exists resiliently. Suitability way past into the future, beneath the shadows of the sun.

REFERENCES

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A brief History of Time,-Hawking, Bantam 1988.

Life in the universe, Jackson, Moore, Routledge, Paul, Pg 19. The nature and origin of living organisms, p83. Myths or men. Introduction to cosmology, Narlikar J, Cambridge press. Visual encyclopedia of science, Dorling Kindersley, Space, Pg 310-315 what is the solar system, solar energy and its influence, p 316-317, scale of the universe pg 272. Fascinating facts about the solar system, Walker J, Allodin books. The making of mankind, R Leakey, sphere books, 1981.p18. The human animal, p 31 the changing face of the earth, the future. Language use and social change, whitely, oxford press 1971. The ascent of Man-Jacob Bronowski. Dorland's Grays pocket atlas of anatomy 39th edition pg 225, Neuro anatomy. The story of Art, Gombrich E.H, Phaidon, 1972.

Unveiling man's origins, L.S.B Leakey, V Goodall, Methuen & co 1970. Olduvai George, my search for early man. Mary Leakey. The origin of species, Natural selection, Drawinc, Faber & Faber 1979. Ancestors of Adam Leakey Methuen & co. we are made of star dust www.scientific American.com>. All about atomic energy, Laura Fermi. The selfish gene, Dawkins R, OUP 1976. Grays anatomy-The anatomical basis of clinic practice 39th edition pg 23-27- cell division & the cell cycle, mitosis & meiosis. Pg 185-embryogenesis. Pg 1331- female reproductive system, implantation, placenta ion, pregnancy, parturition. Introduction of sociology, Giddens, Mitchell, Appelbaum p61. The development of human culture. The original continents and oceans, Wegener Alfred, Dover & co 1996. Rifts and volcanoes, Celia Nyamweru, Thomas Nelson & sons 1980. Gray's anatomy, 39th edition pg 155. The skin and its appendages. The invention of Africa, Gnosis, philosophy and other of knowledge, Mudimbe v.y 1988, Africa systems of thought. The God delusion, Dawkins Richard. Essay on the origin of human knowledge, condillac, Cambridge press 2001.

Crippled minds, an exploration into colonial culture, susantha G, Vikas publishing 1982. Chambers dictionary of beliefs and Religions-Vernon Mark. On ideology, centre for contemporary Cultural studies, Hutchison & sage publications 2007. Theory of the global state, Globality as an unfinished revolution Cambridge press 2000. Reforming international institution, another world is possible Ubuntu forum secretariat, earthscom 2009. Our ocean our future, IWCO, Cambridge press 1998