

Sustainability Defy: Life Quality Courses

Rinaldo Michellini Di San Martino, C.

DIMEC, University of Genova, Italy

***Correspondence to:** Dr. Rinaldo Michellini Di San Martino, C., DIMEC, University of Genova, Italy.

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Received: 12 March 2022

Published: 27 April 2022

Keywords: *Human Knowledge; Creative Fulfilment Global Ecology; Over-Depletion; Over-Pollution; Global Village; Frugal Innovation*

Abstract

The civilisation challenge entails our awareness of the current situations: over-depletion and over-pollution, with entropy on the backdrop. The issue is odd belief, labelled as «anthropic principles», when dealing with the «*life and intelligence*» earth's singularities. Progress requires the notably complex scenarios of operation dualism, developing *life* and *intellect*, by gene evolution and meme fruition: *biology* involves duplication and spreading; *cognition* carries culture and ethics aims, rooted in *relational* setups and *social* frames. Indeed, some *relational* spinoffs, idiom, trade and authority, offer hints, qualms and guesses, e.g. the success of split-sovereignty political setups. The ideas depict intricate societies, with solidary citizens in competing nations, riven authorities with total autonomy and *native* political settings. The earth is limited space, with finite resources and mutual dependence. The *global* economy shows wealth distribution and necessity margins. The *global* ecology appears to be alarm: we understand that disposal and pollution require recycle and recovery processes involving all the earth inhabitants. The split-sovereignty is nonsense; the thriftiness is the only way we can build (residual) progress, should we share «frugal innovation» ideas.

Introduction

The economic frame deals with *social*-arrangements and *technology* tools. The law ordinance ponders about the citizens' home activities (*oikos+nomein*), looking after the interpersonal ruling of the current

transactions. The *social*-arrangements entail the *private* family and business ranks; the *technology* tools involve the *individual* education and proficiency. The economic frame is odd men's peculiarity, not shared with other living beings; it helps charactering the *civilisation* against the *wilderness*. The narration of the events of the universe, typically, quotes a few points:

- the *cosmic* information, supplying the background to devise <natural laws> patterns;
- the *life* weirdness, providing the foundation of the <genomic evolution> hypotheses;
- the *intelligence* data, giving the basis of the <relational fruition> towards cognizance.

The tales are men's inventions, enjoying more or less consents; they allow justifying the history of the known occurrences, at least, once <thinking folks> start existing and propose queries about their development. The explanations shall distinguish typical frameworks, such as the following:

- causal bases, to model the cosmos' changes due to the acting bodies and fields;
- agentive organisations, to depict the gene evolution towards new species setup;
- rational institutes, to implement the meme fruition with culture and ethics issue.

The universe widely enjoys *determinism* images, to account about the cosmology models or the usual physics and chemistry make-ups. The <life>, via Darwinism and lately molecular biology, aims at genomics' automatisms to explain the lifeforms by evolutionism. The <intelligence> is end entry, to describe the extension to the intangible mental reality, conceived and shared by the human species, instigating communication, trade and authority. The abstract worlds allow creating the interpersonal understanding by simulation and emulation tools, supporting [1-5]:

- the languages, with vocabulary, sentences and syntax, to identify clans and nations;
- the exchange, through the market invention, to buy/sell ideas, goods and services.
- the governance, providing hierarchy and legality backup, to the sovereign institutes.

These three deployments exist within mind codes, carrying *relational* meanings; the intellectual puzzles are conventional and no limit may inhibit creating figurative ideas, duplicating tangible or intangible events objects. The mind worlds specify the <human knowledge>, say, what shared at the intangible range, according to provisional and working dualism. The <knowledge> has a factual running consistency, imagined as mind pieces taught at interpersonal extension, which supplies acting explanations of the reality, but is looking after cogent accounts. The <cognizance> is peculiar happening, toiling the *abstract* culture and ethics issues. The *abstraction* is attitude hard to justify, showing odd <realities>, further than what perceived. We shall not stop at meek views; we need to <know>, i.e., to understand the situations in which we live. Only this way, we are aware of our sort and we can choose should several ways open in front of us [6-11].

The ideas of complex <realities> are awkward, however supported by odd coincidence, such as:

- the cosmos causative self-running of material processes, with inner logics;

- the men intelligent self-ruling, with creative solutions leading to progress.

The «laws of the nature», perhaps, exist; if detected, they become men's knowhow. In the first case, *monism* is self-sufficient guess, supporting already *immanent* reasons and accounts. In the second, the future is open to changes, depending on human plans and decisions: *dualism* looks at intangible backings, with actually non-physical origin. We cannot sense the *spiritual* reality. We are aware to observe processes and to explain some of them by models, as cause/effect outputs. The analyses recap the myth of the «progress»: «the tomorrow better than the today». We are from the beginning compelled to discover how to bypass the *entropy*, otherwise the «progress» is deception out of limed parentheses [7,12-17].

For sure, we just have the bounded viewpoints of earth inhabitants in in ancillary solar systems, without clear-cut links to auxiliary completions. We have figured out the harmony of the universe, with stars and gravity and we have devised composite nuclear/atomic fields to set in big-bang/big-crunch options, until comparatively steady periods. Living in these ages, we collect the said sample ideas, causal schemes, agentive organisations and rational institutes, together forming the backup bases, not the direct elements of evolution or fruition changeovers.

Operation Dualism Framework

The «dualism» separates an *intangible*, from a *tangible* reality or, mainly, says that the abstract aids add necessary complements, at least, when formal deductions occur and thoughts follow. We look at our thinking as if the ideas exist without matter and their sharing can limit at a mind range. The culture and ethics in the civilisation create these ways value-added options, diversifying goods and services to exchange. The current parting can remain operational, at nominal range; the value of the lifespan is conventional figure, enabling valedictions with suited updating. The pictures have many readings, with the *material* reality opposed to the *spiritual* one and the *psycic* worth easily handled as anthropic complement [18-22].

The «monism» distinguishes from «dualism» because we just face a single reality, showing *inner* logics and *immanent* justifying reasons. The all has whole management by material relationships, even when the coding may help controlling some details. The «dualism» has *transcendent* reading, supposing *upper* level *divine* spheres, to handle ideas and plans. The imageries quickly add details: the account of facts follows typical bases, repeating the known guesses on our understanding:

- the «laws of the nature» have *causal structure*, justifying the current upshots;
- the «life course» follows *gene evolution*, enabling *agentive* innovation *biology*;
- the «intelligence way» is *meme fruition*, allowing *rational* assortment cognition.

These facts are, maybe, «truths» or just *mind models*. Our appreciative exploration deeply differ when we deal with *causal logics* to describe the «laws of the nature», or we look at organised *gene evolution* for biology or skilful *meme fruition* for cognition. In the actual reality, the role of culture and ethics deployments bring about immaterial outcomes, carried by material stuffs: in «monism», a single flow describes the two: the *biology* and the *cognition* deterministically build fallouts, due to the extant *inner logics*. The «matter»-embedded «information» is *true*, if the «cosmos» collects sets of phenomena, say: the «laws of the nature» *causal structures*,

the *gene evolution* and *meme fruition* paradigms. With ‹dualism›, the trust moves to *upper* ‹truths› by easy clues, but their proof is out of the human reach. However, a ‹factual dualism›, as well, may develop.

The ‹matter›-embedded ‹information› of ‹monism› shows how changes follow even ensues by inner *causal structures*. The discrepancy with the earth's *biology* and *cognition* processes is sharp anomaly, even if we may accept that several *inner logics* may integrate, each one adding further details. The ‹total dualism› exploration refers to *upper* ‹information›, not corrupted by ‹matter› links, instead sharing ‹divine› opportunities. The ‹operation dualism› proposes distinguishing the hardware backdrops, from the software evidences, as if ‹spirit› or ‹intellect› modify the enabled real engagements. The parting occurs to be peculiar, as the ‹mater› opposes to the ‹immaterial›, ‹godlike› or ‹mental›, which processes results from what directly seen. The connections between total *truth* and human *knowledge* need further deepening [23-27].

Our attitude face to ‹monism› or to ‹total dualism› brings to believe in the ‹laws of the nature› and in ‹absolute truths› even if our grasps of what is happening around us ruin at rough levels. The idea that our comprehension is richer than the mere perception is complex chance, imagining that corruptive traits are absent and, instead, we share ‹relational intellect›, perhaps, ‹godlike› signs. The brainpower and the discernment, apparently, provide automatic access to ‹truths›, as if the ‹knowledge› is common explanation, mechanically shared by the existing thoughtful folks. The ‹spirit› is ‹pure intellect›; the attribute ‹divine› is, maybe, misleading; the ‹dualism› tells that fit abstract *cognition* exists and operates to generate *culture* and *ethics* by-products. The ‹godlike› character of the ‹upper truths› is conventional figure, possibly, a bit forceful. The picture avails of unfailing certainties, showing the ‹laws of the nature›, unfolding the *biology* drifts and telling the *cognition* construal. With ‹monism›, *life* and *intellect* are ‹natural› event, having *inner* steering.

With ‹operation dualism›, the ‹human knowledge› swaps absolute truths; it is invention of the earth's inhabitants, with, both, guesses and checks fully planned and made at humankind range. Our understanding is what reaches shared comprehension, making evident that given readings are accepted and communicated. The ‹cognizance› cue is not ‹divine›: it is ‹intellectual› construal or ‹mental› reading, because not simply linked to material stuff, instead related to intangible tracks. The ‹dualism›, thereafter, may develop without referring to ‹godlike› ranks, instead cultivating and remodelling the brainpower, to devise empathising, fathoming and communication linkages at the clan extension; in conclusion, the *transcendent* and *operation* layouts describe:

- the ‹spiritual› defines as *upper* range, compared to the surrounds' transformations;
- the ‹relational› states as *interpersonal* frame, creating mind's build-up and teaching.

The *operation* ‹dualism› entirely relays on phenomenic transformations, without ‹divine› hue; these link to the *interactive* social abilities, created through education and training of the young members in the human families and tribes. The ‹personal› hue establishes at the communal range, on *meme fruition* options, once coaching and learning allow developing typical political, civic and social interactions. These are mind's inventions and, surely, do not have transcendent status. The ‹nation's laws›, then, are routinely not ‹upper truths›. Their settings ripen as empirical results, based on series of data and theories, after checks and updating. The *spiritual* setup is ‹faith›; the *relational* one is tentative ‹guess›. Accordingly, the *operation*

⟨dualism⟩ has contingent sanction on our earth and the ⟨relational⟩ construal is peculiarity limited to the changes of ⟨mind⟩ setups.

The point merits attention. The *operation* ⟨dualism⟩ deserves appropriate specification of, both, the current ⟨progress⟩ and the backdrop ⟨cosmos⟩, compared to the *immanent* ⟨monism⟩ and the *transcendent* ⟨dualism⟩. The ⟨inner logics⟩ of the former exist with inserted force and the ensuing *gene evolution* and *meme fruition* shall develop on deterministic bases, leaving no space to open choices. The ⟨upper truths⟩ of the latter are obvious fact and the linked *spiritual* setup progresses as complement of the extant material reality. The *operation* ⟨dualism⟩ cannot trust ⟨inner logics⟩ or ⟨upper truths⟩; instead, it relays on the singularity of human ⟨intelligence⟩, within, however, contingent worth.

Human Civilisation Oddities

The earth is negligible planet, in a secondary solar system, within a standard galaxy setup. In that insignificant location, a series of singularities happens, making possible supporting:

- ⟨life⟩ conditions: physics/chemistry milieu, granting agentive self-reproduction;
- ⟨cognitive⟩ settings: education/training, aimed at scenery thoughtful modelling.

The two facts are weirdness, since, in the average, the ⟨life⟩ conditions and ⟨cognitive⟩ settings are local exception, very difficult to trim to such critical figures. The investigations up-to-now done across the universe could not make possible discovering locations, maintaining ⟨biology⟩ wanders and ⟨knowledge⟩ marvels. The championing and strengthening of the linked processes do not give hints on how simply sustaining or usefully standardising them. The cosmos quite possibly reveals suited ⟨laws of the nature⟩ to rule wanders and marvels, but these keep their oddness and we are unable normalizing ⟨biology⟩ and ⟨knowledge⟩. The disproportion between the universe's layout and the earth's occurrences is so huge that worthy accounts confine ⟨life⟩ and ⟨cognizance⟩ into the exceptions, when the cosmology has to list the qualifying phenomena, forces and fields.

The anomalies affect the explanations; their omission would make impossible telling what has current relevance, in the cluster of galaxies around us. Our testimonials, significant or not, are the bases of descriptions and portrayals and these build on ⟨cognizance⟩ procedures. In like time, the theories exploring the details about ⟨cosmology⟩ and, in particular, our ⟨civilisation⟩, lead to:

- absolute dualism: the ⟨laws of the nature⟩ are ⟨upper truths⟩, with total worth;
- absolute monism: the ⟨laws of the nature⟩ routinely fix the trend ⟨inner logics⟩
- operation dualism: the ⟨scientific guesses⟩ currently suggest contingent plans.

The first and second propositions resort to hard-to-prove ⟨truths⟩; the third addresses empirical lines, with updating schemes. The parting between ⟨matter⟩ surrounds and ⟨concept⟩ mind world establishes *a posteriori*: the ⟨cognition⟩ flow is *relative* construal, not *absolute* transcendent or immanent quality of the cosmos. The *relative* construal is human *operation*, made possible due to especial men's abilities, which accomplish

interpersonal sophisticated links and communication by immaterial mental procedures. The ‹mind› yields a problematic brain array, working on views, perceptions, feelings, assessments, etc. and creating sets of data, encoded into shared wordings or sounds and shared by conventionally allocated meanings [28-32].

The ‹mind worlds› exemplify the *operation* dualism setups, with creation of shared awareness and comprehension, of interactive business and commerce and of communal authority and rules. The intangible interpersonal layers integrate series of emulation and simulation procedures with understood coded meanings, covering sets of implications, notably:

- idioms: coded *words* for actions, facts, emotions, objects, stuffs, jobs, crafts, etc.;
- trade: relational outlines for craft employment and exchange accomplishments;
- legality: official law infrastructures for the clan, country and nation governance.

The personal intercoursings established among men are very peculiar arrangements, with jobs at the individual and at the collective ranges. Indeed, the negligible planet ‹earth› is the seat of local processes, sustaining ordered reproduction and buttressing planned discernment by:

- the ‹*biology* course›, which resorts to *gene evolution*, towards *agentive* self-breeding;
- the ‹*knowledge* way›, which discovers *meme fruition*, instituting *rational* perception.

The *biology* carries fit duplication and propagation paths, using the ‹*gene* codes›, which assign the instructions to replicate the living beings. The ‹life› has material consistency; its shaping has to use the *genomics* (a written book), to copy the life forms and to proliferate the animation. The mix *creature-and-genomics* modifies by *gene evolution*, along combined *adaptations* of the animals, to earth's data. The *knowledge* depicts by abstract contents and immaterial consistency; its trimming follows mind processing, through *meme fruition*, performing emulation and simulation, aimed at *relational* setups and fostering *social* frames for local *economic* and *political* improvements.

The ‹*biology*› and the ‹*cognition*› peculiarities establish on our planet: the conditions sustaining the ‹life› are studied and we may tell that they may repeat somewhere again, in the universe; the settings sustaining the ‹intellect› are weighty, notably, looking if the two earth marvels could link. The merging occurs by (materialistic) Darwinism, via blend of *gene evolution* and *meme fruition*. The connection deals with just material reality and with ‹*absolute monism*›, in which the ‹laws of the nature› deterministically affect what happens everywhere, earth events included. The picture opposes to the matter/spirit split of the ‹*absolute dualism*›, in which the ‹intellect› is the sign that our *mind* can reach the transcendent *truths* of the godlike reality. The two schemes require ‹faith›, since both the propositions cannot have proofs. In the survey, the third proposition is preferred; the ‹*operation dualism*› posits the occurrence of two *singularities*, ‹life› and ‹intelligence›, from which the *gene evolution* will mark the animated world and, in the after, the *meme fruition* can affect the humankind along with perceptive or discerning *relational* schemes, rooted on:

- communication: invention of words and sentences, having colloquial meaning;

- interchange: design of the market with money aids, keeping economic import;
- governance: creation of the authority control, granting political consequence.

The interpersonal discoveries are *abstract* upshots; when performed by civic clans: idioms keep local nuances; trade holds home bounds; rules retain nation's validity. In all instances, the human civilisation goes on by *operation dualism*, via bottom up construal, based on a *posteriori* courses. The *civilisation* is, indeed, odd wonder, when assessed in the cosmos' total order. We may derive the event, from *anthropic principles*. The *strong* form believes in *absolute dualism* or *monism*, which shows our *faith* in top down facts, based on a *priori* truths. The *weak* form takes account current occurrences: the men's civilisation has *operation* worth and the *anthropic principle* limits to argue the *progress* marvels as *intelligence* by-product. In conclusion [33-37]:

- the *strong anthropic principle* assumes the *faith* in *absolute dualism/monism*;
- the *weak anthropic principle* benefits from the *operation dualism* intelligence.

The *human civilisation* has simplistic proof in the *strong* form, telling that the feats are codes written in the stars or contained by the genomics. The *human progress* keeps strength also by the *weak* form, when fit decision mechanisms are steered by *intellect* abilities, once the *cognitive* settings begin. In the current analyses, the attention on *people's progress*, with deployments of *culture* and *ethics*, has uneasy explanations. The *human civilisation* focuses what concerns the earth negligible spot; the allied settings show the huge frame of the *laws of the nature*, with *causal structure*, telling the cosmos' logics, still, not justifying further details, leading to *life* and *intellect*. The *anthropic principle*, instead, says that men are part of the cosmos and we may somehow explain the connection. The *absolute faith* simplifies the trust in transcendent truths or in material Darwinism, but it does not replace effective proofs of connections. The *operation dualism* offers very different backing, giving centrality to the *human civilisation* results, just, on a *posteriori* issues, not asking *causal* trust. The *contingent* worth of the *weak anthropic principle* figures out the *human civilisation* this way and the *progress* does not enjoy *absolute* faith, but *conditional* assessments [38-42].

Progress: Gene/Meme Paths

The *human civilisation* develops on the *earth*, an irrelevant planet in the universe. The fact is off base until when we are fully not aware of the disparity amid the galactic and the anthropoid actualities. The gap entails the force/field ranges and the mental consciousness: apparently, only the trifling hominid species reaches the comprehension of what occurs in the cosmic reality. Then, the universe is totally useless, because unknown its changes and feats. Instead, the humankind deserves relevance, since its actions ensue cognizant planning. The interpretation leads to the *anthropic principle*, markedly, the *weak* form, when dealing with *contingent* assessments and the *progress* is obvious choice, since every different preference is far from *rational*. In the *strong* reading, the *progress* is *faith*, say: God will or genome pre-setting. Then, the earth's changeovers follow *operation dualism*, depicted by *singularities*:

- the *biosphere* patterns: using *gene evolution*, modelled by molecular biology;
- the *intellect* paradigms: via *meme fruition*, creating clever decisional choices.

The *biosphere* patterns do not contradict entropy, even if: the current opening out involves the arraying outlines; the self-reproduction machineries permit scattering the effect in the surrounds. In reality, they are *open* courses: they entail processing matter and energy, with the total entropy increasing. The adaptation may turn impossible and several species already extinguished. In the *gene* cycle, at last levels, the steps occur with greater decay, ended by ultimate death and rotting. The lasting body running and repairing are exacting duties, using many replacements. To build a new body, the genome needs to duplicate hundreds times; the skin cells need lifelong replacing; even cells, without fast substitution, need several times to be renewed. The «telomerise» marks the copy system: the DNA replicas omit extremities; thus, idle parts attach. The ageing takes over, when handy data are no longer present. The eighty-year-old men suffer some three-eighth drop. Anyway, also at the species range, the fitness is far from *absolute* adaptation (today, even *species* definition is questioned occurrence) [43-48].

The early Darwinism looked at a simple «fitness» norm, which explains the «natural selection»: the genotype originates candidate phenotypes; the *gene evolution* allows fit «filtering», extracting the *better*-matched series. The filter helps to combine *evolution* and *development*, *evo-dev*, path, to speed-up alterations and corrections, doing multiple regulation levels. Resort to development (ontogenetic) routines modifies the phenotype selection; the genetic drift is not just random: gene turnover can adjoin by molecular drive, inversion, crossing-over, duplication or transposition of genes. The on-process constraints show up also as entrenchment, to fix collective features, and as pleiotropy (multiple direction trend), to affect many genetic traits. The «gene patterns» make the «fitness» a not linear and not gradual process. Moreover, the «eugenics» could become powerful heightening of given genetic characters. Today, the majorities reject the legitimacy to plan facts of the personal sphere. Besides, the ecology groups distrust also the scientific bases of most *evo-dev* paths, namely if these operate gene handlings, as the polemics on «frankenstein» manipulations show. In any case, the «telomerise» moves the reproduction cells off, from safe configurations.

The *intellect* paradigms are different affair. With the *operation dualism*, the variations entail the «*intangible* plans» and «*knowledge* spheres». The naming, teaching and learning of emulation and simulation processes do not alter the entropy and stay conservative. The same processes, for sure, bring in decay. In men, the «intelligence» singularity creates «*coding* ability», say, the faculty to associate *intangible* labels, to *tangible* acts or facts. The picture, finally, addresses:

- the «*naming* job», which fixes *words* and *signs* to specify items, acts, moods, etc.;
- the «*coding* ability», which identifies *symbols*, instituting conventional depictions.

The series of jobs (naming, teaching and learning) exists (in embryonic form) in many animals. A dog (or orangutan, etc.) recognises objects, selects things out of blocks, evaluates quantities, or distinguishes assigned engagements and so on, because the «references» in the brain are sufficient to shape the outlines owned by the original items. The «*naming* job» does not replace hardware by «sounds» or *abstract* replicas: it relates *words* and *signs* to identify the implicit items. Besides, the animals do not (directly) recognise him at the mirror (*indirect* training involves series of links). The «*coding* ability» is different issue: it allows establishing equivalences, similarities, connexions, links, etc., through *symbols*, without limits on what sensed at the interface. The ability is odd: the *coding* does not simply assign an identifier; it duplicates the item by

loose bonds and the likenesses builds by conventional arrays, understood carrying current meanings. The coexistence of mental imports and actual objects (and images) becomes evident, when the men's *relational* faculty stabilises.

The *coding* ability is hard to justify, when the *gene* evolution has *serial* characterisation. It is useful looking at *parallel* depictions, to try investigating if apt *relational* faculty could begin. The *fitness* norm links with the surrounds, not with coupled genomics; the *relational* faculty does not enjoy material connections, but it entails intangible relationships. The symbol coupling needs having emulation and simulation processes by *indirect* training, to fix collective skins. The mimicry and rivalry look at facts, acts, plans, etc., studying results and forecasts. With the *meme* fruition ideas, we look at how the interpersonal views could become dominant, enhancing imitation or challenge vs. backdrop *fitness*. The competition and cooperation turn into gaining dealings, if the civic, social and administrative institutes transform into main tools, but the *relational* faculty cannot occur, unless the *coding* ability exists [49-53].

The *life form* course, *gene* evolution and *fitness* norm are coherent setup. The *relational* way, *meme* fruition and *rationality* rule are connected array, if *biology* and *cognition* move parallel. The universe seems characterising by unified laws, shared all-over the space; the *biosciences* run scattered processes, with locally *agentive* autonomy; the *knowledge* is outcome of interpersonal management of abstract ideas, once communication tools (idioms), evaluation outfits (trade) and authority gears (edicts) are accessible. The *progress*, firstly, relates with the *fitness* norm; it is, however, clear that the surrounds' *suitability* does not means *upgrading* and we cannot chose the life quality, out of the natural evolution. It, next, switches to the *rationality* rule; it links with the fulfilment of promotion choices, for improved life quality achievement, within human emulation and simulation abstract handling fruition. *Biology* and *cognition* are marvels, though, suitably linked to *gene* evolution and to *meme* fruition options: these provide opening hints.

The cues advise that *progress* is imaginative plan, having *knowledge* backing, with *relational* structure. The foundation of the *intellect* paradigms moves from the *inventions* devised by men for improving their efficiency. These arrange along two tracks: the organisation of communities having shared establishment; the theory/practice underpinning of the used sciences/techniques. The tracks mark the switch out, from *biology* adaptation, to *knowledge* discovery, once the abstraction leads to develop *mental* worlds, shared within the singled-out groups. The people is factual formation, with interpersonal communication, interactive business and unified authority: its creation has *relational* make-up, based on men faculties, which allow exploiting competition and cooperation abilities, not existing in other living beings and, roughly, identified as *intellect*. The analyses cannot identify the origin of *life*, but can figure-out the *gene* evolution machinery by the molecular biology of the animals; similarly, they cannot identify the basis of *intelligence*, but can devise the *meme* fruition mechanisms by the intellectual contrivances of human minds.

The Civic Establishments

The humankind, compared with all other animals, developed a *civilisation*, i.e., the people has *civil* organisation, permitting to distinguish local, regional, ethnic, cultural, ethical, etc. divisions, which assemble given individuals and exclude some others because of properly stated qualities. The grouping follows acknowledged traditions, with characterising features:

- interpersonal communication: spoken/written language, with precise fetishes;
- interactive business: shared market, keeping communal economic regulations;
- authority conventions: public governance, granting unified political managing.

The assemblage resorts to *«intellect paradigms»*, never conceived by animals, instead quickly taught by elders and learned by young human people. The listed features are not *genetic*: suited languages exist; the markets settle around the local needs, as the *economy* looks at the involved house (*oikos*) ruling; the governments improve hierarchies, under recognised leaderships. They are *memetic*, using *«mimicry»* opportunities in the training and spread routines, without material transfer. The fact is already clear: the *gene* evolution involves entropy, not the *meme* fruition. The *memetic* fulfilments does not aim at *fitness* norm, rather at *rational* coherence for promotion.

The *rational* coherence entails rather amazing accomplishments, such as language, market and legality, to uphold *consistency* when speaking, *soundness* when trading and *wisdom* when ruling. These qualities, i.e., the *«rationality»*, build within the involved communities and connect to local conditioning requirements. In the world, we invented myriad languages with numberless dialects, we dreamt ineffable markets and countless moneys and we fancied untold states and uncountable leaders. We cannot say that idioms, coins and countries enjoy standard progressions and ordered attainments; on the contrary, the *rationality* promotion occurs follows composite trails, with sets of *«social breakthroughs»*, linked to the timely involved anthropoid communities. The survey of the topics advises that the collective sponsorships turn into shifting biased driver; the *civil* setups are human *«brainchild»*, with primary orders from the devised *«language»*. The civilisation brings in the political sceneries, characterised by competing countries, either, a hegemonic empire. The overall layout goes critical at globalisation, when the populations engage the world's resources. We have:

- spot societies, organised into scattered gatherings, with idiomatic specialism;
- imperial assemblages, under the supremacy of central leaders (and dynasties);
- split sovereignty of local nation-states, with kingship or parliamentary ruling;
- cross-dependence of the world people, bearing global economic contingency.

The listed *civil* orders enjoy example relevance, each one with *rational* consistency along given epochs. The idiomatic specialism societies mark ages, in which the group efficacy builds on direct personal understanding. Along the following periods, the muster effectiveness points towards fit political arrangements, which distinguish *citizens* from *foreigners*. The contrast helps fostering the *«solidarity»* amid the formers. The *«legality»* identifies its officialdom by headship and entitlement, rulers and governments, regimes and by-laws, in other words, heads of countries and established constructions. The all is fairly complex and the *«political setups»* require comparatively elaborated justifying foundations. The traditional approach avails of *«absolute dualism»* and *«king by grace of God»*, granting the *divine* origin of the power. Lately, the *«parliamentary democracies»* give to the people the authority's source: the split sovereignty obliges *genetic* or *memetic* reasons; the *racial* motive moves from Darwinism, but without proofs [49-53].

The analyses on the *civil* orders show that clever *«civic breakthroughs»* occur when the current *relational* settings are, really, enhanced by *rationaly* modified appointments. In ancient eons, the men were dispersed over huge lands and started grouping to take profit from cooperation; mutual comprehension is winning tool, limited to the local clan or tribe. The past epochs gradually display the benefits obtained by bigger gatherings, ordered as *«nation states»*, countries or empires, with inner legality, binding the subjects. The future opens queries; after the *«idiomatic»* and *«political»*, the *«globalist»* breakthrough becomes next challenge. The *colloquial* capabilities, first, supplied the way to start *«civic orders»*; the *legitimation*, then, offered suited forms, to devise rival institutions with administrative power; the today cross-dependence requests the *globalist* breakthrough.

The *«colloquial-legitimation-globalist»* humanities keep the split-sovereignty orders, in centre. It follows the initial transient, creating effective communication and it look at establishing enduring hierarchic setups for ruling purposes. The *godlike* backdrop is simple choice. The *people* option is current choice, requiring the partition foundation and *«constitution laws»*. The severance by *idiom* was thought entailing natural cause; it is cultural issue of the nation-state, with *legal* allocation of the *«citizenship»*. The *legitimation* is fulfilled through referendums and is managed with the aid of *«tax systems»*, which institute *social* or *public* responsibility, based on *nationality* or *residency*. The split sovereignty is *practical* institute; the nation-states efficiency becomes competition figure and, at world scale, the competence and dominance repeat amid individuals and countries, with richer and poorer entities: the profit or harm makers recur, due to their proficiency. The *natural* course of events include rivalry and war; the legitimacy links to authority and power and we shall accept the lack of evenness, fixed by influence and justified by supremacy and control. After the sketched *political* setups, the *economy* rationalisation requires swapping to the *«globalist breakthrough»*, as the available resources will, in any case, decrease and the total decay shall increase. The situation describes as *«ecology globalisation»* and thefts, robberies or conquests are useless.

The Tecnical Backdrop

The *«globalist breakthrough»* is innovation to come, made necessary by the ecology wants. The changeovers have to warrant *rationality* requests. Men identify suited scientific explanations and technical contrivances, to face the future and they select the coherent planning of goals and tasks. The series of *«civic breakthroughs»* does not complete the human advance options; the technology discoveries can contribute specific improvements. The fundamental achievements already possess acknowledged characterisation, leading to the definition of *«technology revolutions»*:

- agriculture revolution, if selective biology aims at fit flora/fauna mass-production;
- industrial revolution, if synthetic energy operates along the production processes;
- intellection revolution, if artificial life/intelligence joins to natural handling tracks.

We mark by *«revolution»* the fact that *«non-natural»* new processes insert. The choice aims at including the perceptive capabilities and reasoning habits of the humans, to broaden the way we pick new food, transform wild assets and obtain alternative resources. The *«agrarian revolution»* collects archaic attainments, making

evident the cognitive talent of tribes and the rational mind of individuals along the centuries and out of *gene* evolution routes. Lately, the 'industry revolution' is adding the abstraction upheavals of manmade theories and techniques, to manage the energy for manufacturing, but pollution becomes explicit and pressing constituent. The mental helps shall replace material transformations by equivalent paths, achieving useful results, but avoiding trash or offsetting contamination. The 'ecology revolution' is alternative label, when the tangible spare replaces biology and mind, with resource production capabilities: the *artificial intellection* supplies innovative processes and the inventions are enabling tools of the quoted '*globalist* breakthrough'.

The analyses, as already pointed out, suggest that the humankind establishes and distinguishes from the other living beings, because of the *relational* capabilities. These allow changes, perceived as 'progress', mainly, due the endorsement of edicts to organise the society and the discovery of theoretic accounts to justify the surrounds, i.e.:

- community establishments, through public setups and men's *enacted* laws;
- scientific description of the cosmos, through the statement of *natural* laws.

The former '*colloquial-legitimation-globalist*' line functions at the interpersonal extent, starting at domestic or tribal spans. The country width standardises for a while the split sovereignty rulings and formalises the legality patterns of the competing countries and the takeover wars. The 'laws' have men's formulation and validation. God inspiration could be welcomed; otherwise, wisdom is almost *absolute* worth, with equivalent people ratification. The latter '*science*' line, as well, works at interpersonal extent, but now implemented by qualified experts. The (inspired) boffins attain to the outright *natural laws* or properly effective models, which allow correct reading of the cosmos, at least for current purposes. The 'laws' appear enjoying *total* worth, because entrusted by upper or inner causes or supported by undying testimonials. The '*science*' line suffered *corrections* in the past, always keeping its out-and-out explanations, from which deriving valuable models [1,54-57].

The 'technology revolutions' are aftermath of the '*science*' line. The 'agrarian' one marked the changeover towards human habits, founded on work scheduling and interpersonal planning. This defines the end of '*wild* practices', enabling routines having the '*colloquial* capabilities' efficacy of settled idioms. The 'industry' one reaches the completion of '*civic* customs', allowing *productivity* in manufacturing and *efficacy* in behaviours by *artificial* energy. This specifies running conditions in keeping with suited '*legitimation* setup': split sovereignty means differences in laws and taxes, in administration and economy, in governance and ecology and so on. These dissimilarities exist, because enacted, thus (previously) included in a 'constitution law' voted by the people.

The 'people sovereignty' principle authorises fairly flexible setups: the nation-state can start or dissolve through a *referendum* and contingent drives. The earlier foundations exploit *upper* spurs (religion) or *inner* reasons (genome), to assemble people, on neutral outright motivations. Today elucidations drop out-and-out causes; the colloquial talent and *meme* fruition, instead, persist as worthy support, on conditional strength. Then, religion wars and racial fights do not justify unless as explicit supremacy conflicts of given nation-states, reproducing contests and powers amid men at *wild* stage (and animals). The *wisdom* shall modify conflicts to aim at behaviours, which improve the general life quality, making use of focused stable

«legal agreements». The «rationality» is *meme* fruition complement, adjusting the *gene* evolution outcomes by accepted *legality*, under common authority and/or ratified control. Until today, «legality» and «authority» join with «sovereignty», i.e., with «nation-states» and «constitutions» passed by «referendums» [58-63].

The approach is illusion: the «*natural* laws», perhaps, do not enjoy *absolute* truth, but are surely not men's «*enacted* laws» and never deny the cosmos' dispositions. Decay and contamination are regular occurrences; entropy is inborn constraint; native selection aims at surrounds' adaptation, not at progress. Only planned assortment may choose improvements; intelligent behaviours need to reach awareness of the situation, to value good vs. bad prospect and to elect betterments. The «intellecion revolution» is complex achievement, including new procedures:

- artificial life aids, to exploit self-reproduction through parallel synthetic processes;
- artificial intelligence tools, to manage computer logic as human mind replacement.

The *intellecion* joins awareness, evaluation and selection skills. The new «synthetic processes» are men's creations, emulating natural practices, but via artificial means; the revolution to come shall organise the selection of the material transformation and procedures in such a way, to pick *intangible* equivalent changes, when they may replace given *tangible* makeovers. The swap aims at obtaining products and services in the desired quantities, sparing on falloff and pollution, so to lower the entropy increase. The «intellecion revolution» avails of technology innovation, after the «industry» one: next to the *artificial* energy (and labour), the *artificial* life/intelligence gears allows improving the upshots: *productivity*, in early dates; *saving* and *protection*, from now on. However, the technical innovation is not sufficient to assure future progress; the «*globalism* breakthrough» is parallel request, altering the social framework, to enable worldwide uniformity.

Global Economy/Ecology

The split-sovereignty looks at multiple political orders, with local «*enacted* laws»: nation state's rivalry requires regulation maximising *productivity* and *throughput* without concern on *saving* and *protection*. If «autonomy» exists, an *intellecion* revolution with *globalist* innovation cannot start.

Yet, how can we justify the «autonomy» of multiple sovereignty? The «God's grace» or the «*gene* diversity» needs proofs. The split allocation due to lifestyles and traditions has provisional stability, replicating the factual build-up of the tribe, from the domestic allotting. The division by «home» or «family» enjoys ethic regulations from pre-history, by religion principles and civic rules. The legality of monogamy vs. polygamy in *wedding* owns sharp details, included *divorce* rights or partners' sex. The domestic allocation regimes change: the countries' enacted laws depend on the social habits, religious tenets, political rubrics, and so on. The regulations involve the links between buddies and with children, plus the instructions about the allowed and financial obligations in time [11,13,64-66].

The private law includes the interpersonal relationships and it varies due to peculiar practices at current *home* (oikos) ranges, to include from the economy to the ecology establishments. The public law completes the rules to manage the bonds with the country, to contain the fiscal onuses and the solidarity duties. The

former connects to general culture and ethics canons; the latter links to dependent conditions, with the engaged countries' political settings. The domestic span entails individuals and families as *private* entities; at such marginal rank, they look at the *market* to reach balanced situations. The *trade* means cooperation and *rational* backdrops, to keep active stability, when the autonomy does not exist. The same citizens, if *richer* than the average ones, feel upset if their government enforce high solidarity charges. The dismay repeats among nation-states, if the richer need to contribute in favour of poorer countries, but, this time, the sovereignty authorises avoiding extra burdens, if suited *independence* is agreed precept.

In the study, the *relational* abilities owned by men appear inducing a series of civic innovations, which promote organisations of the humankind societies, namely:

- the *«colloquial breakthroughs»*: refined communication enables worthy cooperation;
- the *«legitimation breakthroughs»*: sovereign control allows enforced political setups;
- the *«globalism breakthroughs»*: outcome's coupling inhibits operation independence.

The build-up of political institutions with legal authority is *invention* permitting efficient human planning and acting, under lawful safety, i.e., averting *«homo homini lupus»* blocks. At nation-state range, the resources' *saving* and surrounds' *protection* become critical constraints, as the earth is confined space. The supply management requires worldwide plans; the pollution increase links to the industry age productivity, with entropic effects (global warming, etc.) not manageable only at the multiple *legitimation* forecasts. The world authority shall everywhere control the ecology data and trends and the local onuses ought to have uniform impacts all over the earth surface, not to yield biased economy situations, with profit of given resorts and damage elsewhere. From now on, the *«rationality»*, issued by the relational abilities, requires the *«globalism breakthroughs»*, with an upper *«authority»* ruling the world *ecology* compulsions and *economy* directions.

The *«social breakthroughs»* bring far-reaching lifestyle changes, always overlaying the behaviour lawfulness as mandatory obligation. The *«colloquial-legitimation-globalist»* parting is conventional, to single out the periods with explicit *public* and *private* laws, to rule the state or home spheres. In primordial eras, the interactions are weak and the domestic regulation scopes can have trimming, which prevents noxious couplings. The future regulations require innovation: the split-sovereignty with centred ruling is needlessly complex, once unified strategies ought to be compulsory. Today, the domestic allocation regimes face dynamic *«family»* setups, maybe, not far from the *colloquial* ones. The *«state»* ranges cannot optimise *fiscalism* and *solidarity*, since the local higher efficacy has forbidden biasing effects. The *globalist* planning ought to be locally adapted, but aiming at strictly uniform life quality; the planning needs to look at *altruism*, granting that everywhere the citizens enjoy standard conditions [67-73].

With global ecology and economy, the *fiscalism* vs. *solidarity* nation-state planning transforms in the *charges* vs. *altruism* earth scheduling, which affects the world citizens. The scheme is, along the sketched designs, consistent with the *«communist»* or the *«capitalist»* ideologies at the citizen's front-end: the wealth accumulation, actually, can mature, only, at personal or familiar scale. Then, the countries' competition is pleonasm abstruse to rationalise, as already pointed out. The *public* law does not face multiple sovereignty

problems and cross-citizenship questions. The *private* one is, surely more complex, but changes are due to *social* behavioural updating, only indirectly linked to the *globalism* breakthroughs.

The *ecology* defines the status of the *earth*, our *home* (*oikos*). If our acts make it infected and deadly, the humankind history stops. Recycling and recovery are necessary, to avoid or minimise contamination, in view to remove the pernicious trends. In parallel, the *intellecion* revolution will look at reinvent the *injurious* industrial through better-balanced procedures. This nasty *ecology* begins, when resentful and noxious poisons affect the *global village*. The *economy* connects to the rules dealing with the domestic span of individuals and families; apparently, it has nothing to do with pollution or contamination, but the *relational* spheres, again, limit to interpersonal trade. In conclusion, with global ecology and economy, the *public* law is ineffectual complication, since the *political* compasses of the nation-state shall not occur or remain hidden. The ecology checks are recent imperative; the *global village* has to face diseased surrounds and global warming, with tasks directly distressing all the citizens; fairness requires modulating the financial charges at the same range, with *altruism* spirit, not simple *solidarity* limited to the tribe or country.

The *global* economy is occurrence, showing the bounded resource (wealth) distribution on earth: the *nation-state* autonomy does not exist face to supply and effluence. The necessity margins ask uniform *legality* all over the *village*: the *altruism* is the *rational* choice, not to allow privileges. The *global* ecology appears to be logical consequence: the principle of a political hierarchy between countries cannot exist, but, amid the *village's* citizens, the alternative *communism* vs. *capitalism* may occur. Moreover, the *global* ecology shall deal with *matter* and *information* entropy, total issue, not eluding exceptions. It is possible to play with the *intellect* and to explore intangible sidetracks. Nonetheless, *global warming* will extinguish *life*: we might only delay the event by *frugal economy* procedures. In the meantime, the life quality shall follow careful programming; the men's *cognizance* has to settle the future along suited *rationality*, if anthropoid tends are main be objective.

Conclusion

The *life quality* improvement is standard human target, linked to the *progress*, a belief built on the *cognizance* processes, developed through interpersonal teaching-and-learning of earth's inhabitants. The outcome combines with the *life* and *intelligence* earth's singularities, to enable:

- natural self-reproduction, to propagate the concurrent biology processes;
- native disposition, to learn through emulation and simulation procedures.

The *molecular biology* is present *science* description of the *life* phenomena. The *relational intellect* is useful explanation of the *cognizance* happenings. The account involves the mind and shows that, through it, we get awareness of extant situations, i.e., we can justify setups and goals, i.e., we may *rationally* choose improvements and avoid pitfalls. The capability to modify the drifts for the better defines our odd trust in the *civilisation* and validate refusing *regress* and electing *progress*, on condition than the humankind has decision and operation freedom.

The effective picking requires the notably composite scenarios of the ‹operation dualism›. With the ‹total dualism›, only have to have *faith* in God's goodwill. With the ‹monism›, the *inner* rubrics establish the evolution and fruition patterns and the ‹progress› is out of the men prerogatives. In the analyses, the ‹men's civilisation› links to ‹anthropic principles›, as if *cognition* carries culture and ethics aims, because the *relational* setups and *social* frames are ‹anthropoid marvel› starting deployments based on intangibles. Yet, these ‹civilisation› scenarios enjoy *contingent* consistency of the interpersonal ‹human knowledge› within ‹operation dualism› frameworks.

The cosmos' frames suffer ‹entropy›: the ‹matter› and the ‹information› do not stop decaying. The *contingent* ‹human knowledge›, only, builds as mind *relational* spinoffs, forming fit *intangible* value added in communication, trade and legality. The quality and quantity of created wealth does not directly affect the entropy: for a long while, ‹civilisation› and ‹progress› are equivalent and the agrarian revolution grants suited expansion. Recently, the industrial revolution allows productivity enhancement by *artificial* energy; lately, the connected pollution becomes acute threat. Recovery and rescue are necessary helps: the intellection revolution permits worthy aids by *artificial* life and intelligence processes. The technology innovation evolves parallel to the *social* formatting, moving from the preliminary *colloquial* setup of scattered populations, with actually autonomous policies. Then, the history of the human civilisation characterizes by current *legitimation* settings, by which multiple countries organise according to split-sovereignty doctrines. Lately only, the over-pollution is the new entry, requiring the *globalist* setup, due the cross-dependence of the earth inhabitants. The ‹progress› is obvious choice of an ‹intelligent› operator, if the option is open.

With ‹monism› or ‹total dualism›, the choice is out of men's spheres; with ‹operation dualism›, the selection has provisional worth: the mind by-products include intangibles; *technical* clues and *social* setups deploy intrinsic wealth, but the invented means have immaterial consistence. Surely, they need to organise substantial accomplishments and the entropy affects the related processes. The *agrarian* epoch exploits *natural* intelligence, to deal with the systematic utilisation of *natural* life sources; the *industrial* one aims at boosted productivity, by *artificial* power and *synthetic* fuel. We move from ‹green habits›, to ‹business practices›; the tangible contrivances are two-side aids, with pollution falloffs, when permanent reversibility does not work. The *global warming* is coming and brings high fears for the future: the human life is at risk. The ‹intellection revolution› aims at replacing the transforming of substances and the manipulating of devices, with the processing of constructions, obtained by mental handing out of notions about reality. The emulation by *artificial* life and *artificial* intelligence expedients is result, permitting to face the ‹globalism breakthrough› requirements [74-80].

The ‹intellection revolution› shall accomplish recycle, recovery and reclamation duties, to lower the earth's contamination and effluence. The entropy's increase is hard to fight, if we shall protect the life quality; the recuperation and salvage of the environment are, instead, permanent priority, to assure by direct and subsidiary measures. The ‹globalism breakthrough›, moreover, is matching accomplishment; the shared village is common home to save and a subset of citizens shall survive, when the all environment collapses. The *altruism* is necessity, if the defense the comrade or well-wisher concerns our safeguard. The nation goodwill or solidarity transforms, from selective choice, into needed coercion, the *shared village* over: the split-sovereignty profits do not anymore ensue. On the contrary, the earth's contamination and warming do

not know boundaries: they spread all over, with effects poisoning the common home. The «globalism breakthrough» is today difficult to conceive, when the country's plurality is palpable truth, with acknowledged traditions. However, if we try to justify the sovereign independence of limited citizens, the «selfishness» is the only strong way: with «operation dualism», the *gene* evolution and *meme* fruition are matching. They justify by the latter the human «rationality» and «civilisation».

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