

On pragmatism, life, and evolution

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Abstract: Positive epistemology represents processes as happenings, random as the case may be. Yet process proceeds rather than happens, which implies a drive (potentiation) under it. Potentiation cannot be random but is created by work (effort), either on the thing or by the thing on itself, making it a living thing. Life drive is an ectropic effort whereas death drive is entropic. Life carries with it a lot of dead mass, thereby the regularities of death drive are not entirely alien to it, but mitigated and eventually surmounted through evolution. 'Pragmatic' existential philosophy as well as 'pragmatic' epistemology confuses life drive with death drive which is scarcely pragmatic.

Keywords: Evolution Theory, Pragmatic Philosophy, Existential Philosophy, Life Definition, Progress of Life Definition, Thermodynamics

*The fire that on my bosom preys
Is lone as some volcanic isle.
Byron*

1. Introduction

Once upon a time it was thought that people are excessively pragmatic by nature, having to be taught loftier intangible values in the first place. Perhaps this was overdone. Anyway, contemporary philosophy teaches the opposite: how to be even more pragmatic than nature prescribes.

Pragmatic teaching is not entirely new: ancient Cynics hold the copyright of it, but their pragmatics was a marginal teaching, for slaves mainly (Diogenes was not against slavery as a modern liberalist may think; on the contrary, he considered being slave the most pragmatic social status for philosopher. Protagoras, a freedman, has founded positivism when, asked if gods exist, responded with I don't know).

Yet technological revolution drags philosophy from intellectual heights to earth. Philosophers encounter the reality of struggle for life. Those survived soon realize that teaching pragmatism is far more pragmatic than instructing against it. They invest a lot of enthusiasm and brilliance in explaining why to be pragmatic. They made pragmatism (dubbed American because most prominent representatives of the school are US citizens) the most if not the only successful

contemporary philosophic school. They sought and found support of natural science, in particular the Darwinian evolution theory they in turn endorsed. Good? Not at all.

2. What is Pragmatic

Pragmatism is here considered to be an existential standpoint from which life is seen as a problem solving activity recognized as successful when its utility is reaffirmed by practical use. This includes both the 'philosophic pragmatism' of *a posteriori* validation adopted on methodological grounds and the common sense vulgate of it, intuitive foremost.

It is not for me to go into the subtleties of distinction between the American pragmatism and several dozens of directly or indirectly related philosophic concepts, the more so that their impact on practical implications is next to zero. When applied to any intellectual stimulus to action, pragmatism embraces all European philosophy as distinct from oriental passivism. However, the neglect of theoretical inquiry, the instrumentalist reduction of episteme rendering it indistinguishable from doxa or belief, the aversion of doubt and reliance on practical usage while subordinating logic and truth to utility and success are the specific features clearly defined by the founders [1,2] and persistent in modern writings.

The pragmatists represent themselves as a comprehensive

school of deep historic roots and far reaching ramifications [3] with an impressive body of followers and even more imposing list of contributors and allies, from Emmanuel Kant to Orman Quine. No philosopher of repute is neglected (except Rene Descartes of course, as it seems the only legal opponent). Even Henri Bergson who considered himself anti-pragmatist is half-heartedly co-opted.

Yet once there was a vast empire comprising a sizable portion of humankind in which the incessant chant on historicity of truth and on practice being the only criterion of it has accompanied all citizens from Kindergarten to nursing house; and what? No mention. Sure it is scarcely pragmatic for vindicators of democracy to recognize ideologists of totalitarian state as their confederates. But this easily explained omission reveals that the distance between philosophic pragmatism and the political/common sense varieties of it is shorter than commonly supposed.

All kinds of pragmatism declare their purpose to be making life better and people happier. Such goals are above universal truth, non-existent perhaps, and beyond the reaches of formal logic that is a hindrance rather than facility. In the language liberated from logical pedantries, 'better' is identified with 'better off' while 'make sense' is equalized with 'make use'. As for 'happiness', the opinions differ, especially in respect to mass happiness vs. individual happiness, but consensually it means not to be unhappy.

A few examples from various fields of pragmatic problem solving activity would show what typically comes of it.

Physical science. The mass – velocity equation was developed by Leibniz, Coriolis, and Einstein, who have sought to substantiate with it the ideas of élan vital, kinetic energy, and relativity, respectively, but the only memorable issues of pragmatic application are Hiroshima, Nagasaki, and Chernobyl so far.

Biological evolution. That bacteria still persist is taken as evidence against evolutionary progress, because if so called higher forms were higher indeed they would get rid of bacteria through natural selection. On the logic of it one is strongly recommended to use 'later' instead of 'higher'. The admittedly higher cognitive capacities are not an evolutionary advancement because it is fairly possible to survive in the struggle for life without cognition or with a bare minimum of it.

Archeology. The animalistic prehistoric cave painting is pragmatically interpreted as a visual instruction for the beginners showing the animals to be targeted. Young jackals do well without den painting however, which leaves cave painting (and all the derived activities thereof) without obvious purpose.

Historiography. A high frequency anomalous X chromosome morphology in Asiatic populations allegedly marks the descendants of Genghis Khan, who compensated for his genocidal practices by contributing his superior genes to the progeny.

Politics. Soviet Union fell apart under the pressure of centrifugal nationalistic drive, but pragmatic politicians had interpreted this as their victory in the forty year Cold War. Now they activate the victorious Cold War mechanism at the

slightest suspicion of their leadership being jeopardized; apparently on assumption that grotesque juggling on brink is the most pragmatic solution for political crises.

Literature. Hemingway has explained the world-wide success of 'War and Peace' by the fact that Tolstoy was artillery officer who knew what he was talking about ('War' of the title stands for life, whereas 'Peace' means death, only indirectly related to artillery, but this passed unnoticed). In the same vein he (Hemingway) has secured Nobel Prize for the 'Old Man and the Sea' through his vast if but amateurish experience in fishery.

Art. The singular effect of Van Gough's painting is commonly ascribed to the artist's color blindness in the first place; and so on.

3. Pragmatism and Absurdism

So why instead of making us happy pragmatic drive buries us under heaps of nonsense like this? Because utility is not what you think. For many years sacrificial rituals were a pragmatic means of bringing rain, and what? All those beauties were killed for nothing? Not quite so, because killing most attractive girls was in fact a pragmatic population growth rate control practiced under the guise of sacrificial rituals. Or it was done in order to moderate male conflicts. Or the priests just boosted up their rating this way; does not matter. The essential thing is that people endorsed sacrificial rituals, persistent thereof. The utility would transpire; sooner or later is not the point. Pragmatic is the endorsement (success) as such, with utility lurking at a deeper layer or not lurking at all (one may think that human sacrifice cannot be of any utility *a priori*, but this is just what pragmatic epistemology forbids). Successful people (theories) are liked, and likable people (theories) are successful. Pretend to be successful for the beginning and make the most of it. To be or to appear is not the question anymore: to appear is more pragmatic. Life is a game in which a few win. This is natural selection. But anybody can appear as a winner. This is democracy, the most pragmatic of all social systems.

Recent rise of pragmatism is not the triumph of existential philosophy as represented by the adepts, but a backwash of the XX century crisis of it. For a long time, but more emphatically after the WW I and then after WW II philosophers vied with each other in stating and re-stating that life is absurd. One may think that they did it in hope of making it less absurd in response. This is not quite so. They just claimed no alternative.

To be or not to be pragmatic depends on how you fill about life. If life is a story told by an idiot, full of sound and fury, signifying nothing then the only pragmatic solution is to get rid of it as soon as possible, and this is what such logically consistent philosophic teachings as Stoic's have recommended or implied. Is meaningful death an alternative to meaningless life? We have no positive experience of death and our theories of it are believes. Yet it seems logical to expect meaningful death as consummation of happy life, while absurd life stumbles toward respective death, a less

noisy and furious aspect of absurdity, but not a way out.

Those of a more optimistic breed have sought meaning not so in life as it is (idiotic consensually) but in life perspectives in this or alternative world. For making such projections meaningful scientist applies to developmental principles providing that future will be different from present in a consistent way (increasingly different with time). This is theory of evolution in general terms.

However the mere existence of general developmental principles is a matter of uncertainty, on account of which the founders of scientific pragmatism have advised to start in belief that steers us to action [2], rather than questing after universal truth that always leaves a residual doubt; commonly used as a pretext of doing nothing. Somehow it escaped their notice that starting in belief usually ends in disappointment, with absurdist existential philosophy a bitter sprout of it.

Columbus has acted upon the belief that one can reach India by sailing to the west rather than to the east. Although the belief was proved impractical, he discovered New World, great for those disappointed in the Old one, but disappointingly absurd as a copy thereof. We cannot know if it were different with native Indian tribes given a fair chance of developing their statesmanship. They might be less successful in fighting smoking, but more efficient with their peace pipes. Anyway, the American pragmatism might have had a different tinge.

4. Pragmatism and Selection Principle

Sigmund Freud has placed 'death drive' beyond the Epicurean principle of pleasure [4]; a different way of being pragmatic. Yet it is arguable that pleasure is intensified by death awareness. More pleasure before curtain drops! More deaths to make pleasure more pleasurable! Unfortunately the sources of pleasure are restricted, because of which there are losers, unhappy by definition, and winners unhappy because of the constant fear of overthrow that makes them tense and hysterical. The contemporary evolution theory tells that such situation is not only normal, but also encouraging. So don't worry, be competitive as far as you can and win by all means. This is only fair when the others are doing the same, and this is just insofar as they are given equal chances.

Malthus' was the first sociological theory that encouraged happiness of some at the expense of unhappiness of the others, but it was rather unpopular until the advent of Darwinian evolution that sanctioned Malthusian demography with the authority of naturalness. Since Thomas Aquinas it is believed that natural cannot be entirely bad.

The Enlightenment idea of 'natural man' ascending from wild nature to moral existence has implied natural roots of human behavior. Theory of evolution was entitled to make sense of natural history in respect to human perspectives. Now evolution is identified with the Darwinian (Neo-Darwinian) version of it because there is no other evolution theory of standing in view. Moreover, the theory of natural selection is thought exemplary for all science, worth of being transcended to the level of Universal Darwinism [5].

Darwin, however, denied evolution of any universal goals and throughput tendencies like 'Lamarckian progress' admitting circumstantial adaptation alone [6]. This was in accord with the empiricist philosophy of science long established on the islands and not in dissonance with the pragmatic turn it took in the New World, abolishing universal/timeless goals, but concentrating on practical agendas of human life span scale.

In his 'Autobiography' Darwin fully admitted the origin of his evolutionary idea from reading Malthus. Yet Malthus insisted on limitation of resources being a good thing in a long run because struggle for life have raised civilized humans beyond savage state [7]. Darwin was not as sure, because it occurred to him that savages, and animals even, had practiced natural selection long before civilized humans grasped the bright idea.

The Empedoclean evolution theory and progressivism of Enlightenment born of it seemed an unwarranted wishful thinking in comparison with the pragmatic adaptation theory based on hard facts (although only those who never read *On the Origin of Species by Means of Natural Selection, or the Preservation of Favored Races in the Struggle for Life* might think there were any hard facts there). It seemed pragmatic at the time to pay workers as little as merely sustained their labor capacity while sending troops over vast colonial empire in order to keep unfavored races low and servile. Presently, high salaries, globalization and political leadership seem to provide a more pragmatic way of doing the same. Intermittent warfare is still a component of political pragmatism, and survival of the fittest is pragmatic as never before. Do we need a new evolution theory? Sure we don't. One stating that evolution was in vain is entirely ok with us.

Karl Marx has predicted overturn of the winner/loser roles on the basis of Hegelian dialectics, but his statistical expectations did not come true: turned top down or bottom up, losers remained the majority all the same. That they would take and hold power in their inexperienced hands proved wishful thinking. However, democratic society took to more subtle methods of coercion and manipulation, which enhanced pragmatic lie beyond the habitual level of it in the traditional stratified societies.

'*Jedem das Seine*' was written on the gates of Nazi concentration camps; a corrupt by abbreviation Biblical maxim rather than a tribute to *Dasein* philosophy. Yet Heidegger's servility under Nazi regime, as well as his removal of dedication to his Jewish teacher Husserl from his book reveals the essence of his *Dasein* concept as a mumbling attempt at formulating the problem of identity, for which Adolph Hitler found a crystal clear practical solution in his *völkisches* philosophy: your existential status is identified through your race, genetically it is, which justifies genocidal practices in general and concentration camp daily selections in particular as a means of making people as a whole happier. Universal truth is as vacuous as abstract morality they say.

If you think that past tense is more appropriate in referring to such attitudes you are wrong. The ongoing Ukrainian crisis reveals that Hitler sympathizers are more numerous now than

in 1940s. Recently I attended a theological meeting in Krakow and was pleasantly surprised by seeing young men absorbed in reading, not a usual thing in itself presently, as it seemed one and the same book during coffee breaks. It obviously was not the Catechism. Curious, I peeped over their shoulders. Heidegger.

Notwithstanding the Epicurean pleasure principle or Freudian death drive, those who obtain pleasure by inflicting sufferings are called maniacs. On the other hand, theories justifying happiness at the expense of sufferings are called pragmatic. This makes distinctions between ‘maniac’ and ‘pragmatic’ somewhat tenuous. Indeed, without maniacs the contemporaneous cinematography would decline and some movie stars would remain jobless.

It is not a matter for serious debate that many or maybe most social practices, from cannibalistic sacrificial rituals aimed at improving the weather to genocidal purification of human gene pool, sprung from inadequate beliefs. Such practices are proved wrong/inappropriate sooner or later, in the long run it is; but how soon or how long? What if longer than human species life span? Are extinctions of fossil record the result of pragmatic survival strategy? Many paleontologists relate extinctions to narrow adaptation (‘specialization’) in which internal energy was lost and evolutionary potentials expired with it.

5. Having Brains is Not Pragmatic

Epicurean pleasure is the end of sufferings. But even a permanent sufferer as he was confessed being happy when philosophic thought comes. That *life unexamined is not worth living* and *I think therefore exist* mean one and the same thing: for *Homo sapiens* thinking is happiness, pragmatic thereof. Yet as a professional taxonomist I cannot but admit that *Homo sapiens* is a provisional name. It is not attached to a designated holotype, therefore invalid so far.

Though the audience at large may seem unaware of it, the present day theory of evolution is neither Darwinian nor Neo-Darwinian, but stochastic, with random factors ousting the meager vestiges of causality, teleology and determinism such as natural selection, adaptation, and survival of the fittest. Since stochastics is not a theory, but just a summary of what happens it will be only fair for the proponents of it to admit that they don’t have and don’t need theory of evolution whatsoever.

Theory in general and evolution theory in particular is brainwork, the attitudes to it depending on the time being prestige of intellectuality in general. Romans spitefully nicknamed their native intellectuals ‘Greeks’, a defeated nation. Through the middle ages, intellectuals were bad guys and remained so during the Renaissance even (at least Savonarola disliked them, and his opinion was respected by Botticelli, Michelangelo and the other great molders of the time). In his Resume, Leonardo positioned himself as the best inventor of weapon in Italy. He also declared his skill in organizing festivities, adding in passing that as a painter he is not behind anybody. Yet his pragmatism was put to doubt on account of

enormous diversity of his interests and notorious inability of bringing his projects to completion. So he sought his last refuge in France, the Renaissance backwaters.

Religious philosophy sought to regain ideological control, but this had become increasingly costly, and after the scandalous Galileo trial a truce was achieved at the expense of the Aristotelean entelechy, the unity of causes, means and ends at the base of intellectual achievement, pragmatically divided between Church (causes and ends; unobservable) and laboratory (means; observable). Both have sought autonomy rather than cooperation. In this vein, scientists declared that scientific theories sprung from observation, thus rendering causes and goals dispensable. Further it was concluded that holistic approach does not work, and it did not. Causes cannot be linked to the ends without means, while means without causes and ends are suspended in thin air for no reason at all. Dismembered, entelechy does not work.

Analytical reduction focusing at ‘how’ while neglecting ‘why’ and ‘for what’ has amounted to castration of knowledge for which a pragmatic utility remains the only excuse for being sought at all. The next logically predictable step is the denial of deterministic reality, with causation – teleology declared to be brain phenomena of no pragmatic relevance, illegitimate as far as the positive science is concerned. In effect, castration of knowledge is followed by castration of brain scarcely compensated by the technological prosthesis of it. However, scientific discoveries are not impeded, but enhanced, because brain production is evaluated not by its intellectual impact and not by its practical utility even, but solely on the basis of public endorsement, for which the brainless state is the most pragmatic. Shakespearean prophetic vision of life as a tale told by an idiot comes true.

Yes, causes and ends are brain phenomena in the same way as simplicity and parsimony are. But the former enhance brain complexity, whereas the latter provide for brain atrophy.

Descartes had awakened the Enlightenment with apotheosis of reason, but technological revolution choked it up. Technological innovations are facilitated with technology rather than knowledge. So far the only unambiguous technological achievement is the means of destroying humankind in few days (with nuclear weapon) or years (by transforming all girls into guys and all guys into girls or like that).

Once humans were taught how to think and it was deemed necessary to pay a sophist for the lessons. We are PhDs still, however paid for teaching people how not to think. Yet our effort is not worth the money because human cognition will be lost through disuse by itself.

According to Bertrand Russell, *every increase in skill demands, if it is to produce an increase and not a diminution of human happiness, a correlative increase of human wisdom* [8, p. 116]. When he said it? 1960s? Stone Age.

The assertion of causality and determinism being mere brain phenomena and more typical of totalitarian than democratic brain states cross out billions of years taken by evolution to produce human cognitive powers. If brain can be that deceptive then it is more pragmatic to be amoeba.

Since positive philosophy of science recognizes only such

theories that sprung from observation, people with brains are scared of using them, so brains would predictably deteriorate of disuse as anything else. The pragmatic aspect of it is that people delegate their brain functions to administration, fortune tellers, mass media or whoever *denkt für uns*, but most willingly to the machines.

Thus pragmatic epistemology converges upon positive epistemology over a number of essential points leaving the distinctions arbitrary. A neglect of thing as such (in itself) is characteristic of both, which make them anti-Kantian rather than derived from Kant. Human perspectives are entirely assigned to the world of things for us. In archaic language (Parmenidean) it is the *Way of Appearance* rather than of *Truth*. Positive epistemology implies more thorough observation – accurate description (from which all knowledge allegedly sprung) than pragmatists deem necessary for bringing things to action. Things are unknowable before practical use and useless before their utility is revealed. That we cannot know what things are but suffice with a ‘good’ model of them [9] is a typically pragmatic stance rather than typically positive, although standpoints merge. That logic does not matter is pragmatic but not necessarily positive.

Logic need not get underfoot on the way toward human happiness [1]. Yet minding that people still have problems in thinking without logic, a compromise is sought and found in adopting a pragmatic (predicate) logic [10] the nominal target of which is not the consistent idea of what things are (this is syllogism, hopelessly old-fashioned), but what to do with them.

Fortunately, thinking machines scarcely need anything else, and people appended to them – we all will be such people soon – have no choice but adjust (in particular, *select* is a powerful predicate attracting large number of *arguments*, such as things for us, theories for us, life styles for commons, alleles for genes, sexual partners for love, presently genders even, our leaders and our losers, also favored races if you feel like that. Theory of natural selection owes its successes to consistent use of predicate logic mainly).

In 1960s, Thomas Kuhn was fairly persuasive in recommending ‘normal science’ to concentrate on something narrowly pointed like how many angels fit a pin head 100 µm across instead of wasting time on general speculations like what angels are and why pin head. He admittedly failed in explaining why and for what scientific revolutions occur if they occur at all, but suspected that they are a semantic problem mainly (what is revolution and what is science after all?), while progress, if any, is due to gradual Darwinian selection of what is most appropriate in given circumstances.

The title of his book obliged to tell something on the structure of scientific revolutions, non-existent as the case may be. After going in circles over two hundred pages he comes out of the embarrassing situation with I don’t know but perhaps Darwin had known ask him. But Darwin has answered already admitting the theory of natural selection being his ‘greatest mistake’. Kuhn eventually assigned scientific discoveries to collective effort, while ‘the man who continues to resist after his whole profession has been converted has ipso facto ceased to be a scientist’ [11, p.159], in

which his tutor was not Darwin, but Mao. Paradigm is a formidable mechanism of oppression and for creative people like Baruch Spinoza, Sigmund Freud or Barbara McClintock to name a few, being expelled from under its spell was a great stimulus for intellectual productivity. The Spartan borne upon his shield was not more free.

A smart schoolboy may escape penalty for unprepared home task by stating that his home task was incorrectly formulated. This trick may work once or twice, in particular with inexperienced teachers, but the attempts at erecting an epistemological paradigm on it are ridiculous. Semantic problems are a poor excuse for recognizing no problems at all. A philosopher denying general matters any significance is committing philosophic hara-kiri, the more absurd because it has been committed long before when the pragmatic principle of least action was forcefully set up with the help of Occam’s razor. Luther ascribed scientific revolutions like the Copernican to vanity: foolish show ups. Indeed, the Copernican model of celestial mechanics was imperfect and impractical, of zero impact on everyday life. Yet after Copernicus it became increasingly difficult to prevent further show ups like his with razor, guillotine, common sense or whatever. A road sign toward Enlightenment was installed and left for scientists themselves to dismantle if they feel like that. Further developments have shown that many of them do.

I would like to assign scientific revolutions to advent of Truth that illuminated the scenery making petty conventions and tricky experiments at the back of ‘normal science’ too obvious. Yet I suspect a less inspiring explanation. To keep afloat a paradigm overloaded with conventions and covered all through with badly fitting patches that do not hold water is too costly for to be pragmatic. Fresh lie brings a temporary relief and is hailed as great discovery.

I was among those who in the 1970s hailed the advent of plate tectonics challenging the restrictive earth science paradigm of vertical movements at the base of all geological processes. Presently, for the plate tectonics turned into a hideous *perpetuum mobile* generating new crust at mid-ocean ridges only for to be consumed in marginal trenches, and clumsily mended with hot spots, back-rolls and what not, it seems like a high time to be replaced by something even more hideous like earth history driven by asteroid impacts (the idea has occurred to Maupertuis already).

Truth has little chance in a hostile epistemological situation like the contemporary. The neglect of creativity, the political machinations at the back of science turn scientists into relatively cheap accessory to instrumental equipment, dispensable as the other parts of hardware; not the champions of reason anymore but a part of all-embracing absurdity. The red line is approached over which ‘sapiens’ would sound as a bad taste joke.

6. From Entropy to Ectropy

Freudian Death drive falls under the auspices of the pleasure principle because according to Epicurus pleasure is the end of sufferings. Death is more normal than life in the

statistic sense: there are more non-living things than living things in this world. When compared with life, death is the least action, therefore pragmatic. These are the rationales for struggling for death rather than for life. That we do just the opposite is because the pragmatics of death and life are not the same. Traditional pragmatism of least action is the thermodynamic death principle of entropic collapse. Pragmatism of life is relatively recent and still confused with pragmatism of death, but obviously based on the most action principle and ectropic in respect to creativity of it.

For the second law of classical thermodynamics being applied, the process cannot start with chaos because chaos is the state of maximal entropy already. At the beginning there must be order created in one way or another. We know how, why and by whom steam machines are created, so there is no problem with the steam machine origins. Religious orthodoxies have no problems with the origin of nature either. But for scientific worldview origins pose a major problem so far, with the currently popular solutions mostly following the negligent schoolboy strategy: the home task was incorrectly stated.

In non-living things, the initiation impulse is external like gravitation forcing or chemical attraction, and the action is entirely induced. In living things, external impact generates fear or pleasure, impression that is, and the response starts with the question what to do asked in subconscious or advanced conscious form, a decision is made, subconscious as the case most often is, and then something ingenious or stupid is done. This is life. We learn for it, work for it, and die for it. We evolve for it. It is precious. This is beyond reasonable doubt.

It is thought that life is feeding and reproduction or feeding – reproduction if these now divergent processes had been closer interlinked in primordial forms. Yet feeding – reproduction beyond the pleasurable aspect of it is necessary for mounting resistance to destructive external pressure thus providing for perpetuation of life as a process, and this is the principle distinction between life and non-life. Non-living things persist effortlessly owing to their mechanical resistance to destruction. In contrast, life proceeds by permanently countering destruction with creative effort (*conatus* in Spinoza's terminology [12]).

Classical thermodynamics was about non-living things set in motion by external pressure, with entropy increasing in the process. Life seemed enigmatic and lawless, incomer from a different world, until it was realized (still incompletely in [13]) that maintenance effort, system's work on itself is the universal source of internal energy proportional to structural complexity this system maintains. *Ectropy* (Orman Quine's term) is just the opposite of entropy, but for life it is more appropriate because directly correlated with the process.

Fate of non-living things is in the merciless hands of the second law that allows only growth of entropy driving such things to disorder and collapse. Most we can do is to slow down the process a little by following the pragmatic maxim of *least action*, making life a tale told by an idiot, because verdict is announced before the process had begun. Execution can be delayed, but somewhat later or little sooner is not a difference worth all the fury and sound about it. So don't miss your

chance while still here because there is nothing there. This is a fairly sound philosophy for non-living things and those half-alive, but life proper obeys not the least but the most action principle from which potential energy is generated propelling life ahead.

That our fate is in the molecular arms of 'germ plasma' was proclaimed even before DNA was discovered. Some scientists, like embryologist Wilhelm His, denied inheritance of acquired characteristics even before Weismann's experiments. Geneticists proclaimed one way information flow from DNA to proteins when mechanism of transcription was not known. This is not science, but ideology and scientific arguments seem irrelevant. Yet ideology forbids directional change, determinism of genome processing, and evolutionary progress, but science permits.

Technological advance of genetic research leaves no reasonable doubt in DNA playing more significant role in organismic development and evolution than blind fate or a source of occasional errors meliorated by natural selection. That the immensely complex mechanism of genome regulation may perform something meaningful by mistake only is indeed a tale told by an excessively committed person to put it mildly.

Not all technical details are available yet, but in general terms life sustains itself by the Volume/internal pressure conservation work in response to external pressure, and does it more efficiently from generation to generation. Thus optimal survival strategy for life is learning that involves the preceding life experience modified in respect to new challenges that are interactive; never exactly the same thereof. Subconscious learning is based on interaction of physiological (hormonal) response and molecular memory (the genome) that is mediated through a complex system of transcription regulators.

The pattern of upregulated and downregulated regions provides a time schedule for genome renovation (replication) thus incorporating regulatory modifications, with directional nucleotide displacements and replacements as final adjustments that are potentiated by re-distribution of energy rather than occasional. Morphological renovation results from developmental heterochronies adequate to distribution of maintenance work between the parts, therefore inter-correlated and goal-oriented (systemic).

This mechanism explains how organism develops as a whole, a miracle when assigned to stochastic processes and why individual development recapitulates the evolutionary sequence of regulatory changes, otherwise mysterious (more in [14]). What it does not explain is why some groups of organisms expand while the others restrict their developmental potentials through times, with progress vs. degeneration as respective evolutionary alternatives. This is determined at the higher regulation levels (population, community, ecosystem, biosphere) in respect to which organisms chose between Love and Strife in Empedoclean terms, the principle of complexity vs. circumstances in Lamarckian terms, the most or least action in thermodynamic terms, saying one and the same thing eventually.

Non-life is driven by somebody's effort, to oblivion that is. Primitive life still takes to least action, thus nearer to death than life, recognizing no goal except pragmatic adaptation, a selective survival of the fittest at the expense of the less fit. Competitive competence is circumstantial and expires with change of circumstances. Adaptation is dimmed the more successful the less action it requires, with potential energy reduced to dangerous minimum at which extinction becomes a matter of when rather than if.

In distinction, life proper relies on *creativity* that provides for positive feedback whatever the circumstances. The more action is invested in it, the more potential energy is generated enhancing structural complexity, with no faculty lost because all functional.

The compensation of function rule says that when something is gained something other must be lost for a balance of energy being preserved. This is under adaptation, the entropic least action enterprise habitually recognized as the only possible. However progress of life is after preservation of momentum rather than balance, the ectropic most action enterprise. It is potentiation that evolves, and regulatory adjustment is realization of it. In evolution, things are what their Gibbs energy potential is, justifying the Way of Truth as a viable alternative to the Way of Appearance.

Perfect intuition of the ancients has placed people in the middle world, with entropic kingdom of death below and ectropic realm of boundless creativity above, where stones are moved by thought, horses fly, and no entry for death. We live with our eyes turned up to Hyppocrene that Muses splash bare feet to seduce the winged stallion, from which union centaurs are born; superb combinations of animal ferocity and refined human brains, as well as acute esthetic sensitivity. Even this rural picture was pragmatically censored in a civilized way, with Pegasus coming to drink unpolluted water in the first place, and Muses bathing for hygienic considerations mainly. Yet their world remained the powerful source of ideas and ideals that moved us ahead until technological penetration made it noisy, furious and death stricken as this middle world of ours.

7. Altruism

Young animals usually quit their parents, but some occasionally remain helping to raise the next brood while suspending their own reproduction. Such altruistic behavior contradicts universality of natural selection, in defense of which an ingenuous mathematical model of 'kin selection' was developed, suggesting that 'helpers' actually may increase their genetic contribution to the next generation by facilitating genes they share with their relatives, a 'reasonable egoism' actually.

Irrespective of mathematical correctness, the mechanistic 'kin selection' model propagates unrealistic concept of natural selection purportedly preoccupied with genes rather than organisms. 'Kin selection', which is not a selection at all, but 'reasonable altruism' is a component of comprehensive altruistic behavior encompassing reproductive process as a whole.

In essence, all living beings are provided with energy potential for growth and embryonic development they inherit from their parents. Because the parents in turn received it from their parents and so on back in time, heredity comprises life experience of countless generations from the very beginning of life. We get it for free as a generous gift from evolution. This is altruism: parents share the energy increment of their life experience instead of securing it for themselves, unless they devour their progeny. Infanticide still exists, although diminishing up the ladder of life, and cannibalistic theories like the origin of species by means of natural selection, are still popular. However an infanticidal parent must be prepared for being eaten by a surviving offspring or castrated or otherwise ousted from reproductive process.

Intellectual evolution is driven by scientific revolutions, the creative brainwork that a philistine may take for impertinent erudition show as it was suggested in the case of Copernicus revolution. But show ups are not performed posthumously. All efforts secured for posterity as a driving force of intellectual evolution are altruistic; the immediate gains being zero as a rule. Faraday said electricity would never be of any practical use. William Smith invented correlation of coal seams with the help of fossils, the method on which all geological exploration is based and enormous profits are made. He spent his last days in debtor's prison. Life as creative effort is altruistic by definition; the lone fire of most action from which creative sparkles spread.

A bowerbird male furnishes its little huts with flowers, iridescent beetle wings, sparkling beads, bits of mirror or color glass and what not, with a recently shot machinegun cartridge case on top, a symbolic last touch that only a connoisseur of modern art can endorse. And she comes, curious and excited, jumps around, imbibes everything with her askance eye and... suddenly flips her wings and disappears without a chirp. But the male is not disheartened. The true one would come sooner or later, and her esthetic criteria would exactly match his. Because the hut design is not so fitness display as a means of finding twin soul; for the breeding season at least.

Of course it is fairly possible to reproduce without going to such pains, and most birds do. One just copulates with any bird that occasionally comes close and she barely takes a notice, unless there is a skirmish of contenders selected by distance mainly because even for her shrewd eye there is scarcely any other difference between them. But evolution is not about this. Complex behavior grants bowerbirds special niche in the avian world, places them above the level of mechanistic sexual selection, and contributes to overall complexity (diversity) of living beings. Above all, it enhances individuality and the value of individual life with it. This is evolution proper, the general progress of life.

8. Conclusion

Philosophy, the field of pure reason, deals with potentiation, metaphysical unless realized. Science, the field of practical reason, is about realization mainly. Energy potentials are created through work that realizes energy potentials inherited

from the preceding round. Philosophy and science are impotent without each other.

With the second law of classical thermodynamic reformulated on account of life, the ectropic process, existential philosophy has to be reconsidered. A sizeable part of it including the contemporary philosophic indeterminism, limitation of free will, pragmatism of least action or parsimony, primacy of happiness over truth and logic, interpretation of natural history (evolution theory) and evaluation of human perspectives based on it requires radical renovation.

New existential pragmatics would explore the idea of *life as sustenance of structure by work of a system on itself*, in which internal energy increases providing for the buildup of structural complexity. Thus *life is ectropic process* the creativity of which increases from generation to generation, with life experience transmitted as altruistic gift all living beings receive at conception. The perspectives of life are determined through potentiation generated by the maintenance work.

Evolution is a consistent change through the line (lines) of descend, progressive when an increment of potential energy is produced and transmitted, but regressive when potentials are lost through narrow adaptation and disuse. *Progress of life is an increase in creativity*, with molecular memory and subconscious learning based on it developing toward self-consciousness and free will. Happiness is the congruence of potentiality and realization, achieved through most action rather than least action/parsimony, a death drive principle rather than pragmatics of life as commonly interpreted.

Determinism of life appears in development at the appropriate level of complexity. With this level skipped for the sake of parsimony and simplicity, determinism is no longer discernible and is declared non-existent as the reductionist epistemology requires. Absurdist existential philosophy is generated this way.

The logical sequence of brain events that led to formulation of 'uncertainty principle' is somewhat shorter than reasonable conclusion requires. Contrary to what the principle implies, difficulties in simultaneous measuring of electron coordinates and momentum mean that observational data are not enough for explaining things without recourse to potentiation (thing in itself), a metaphysical component of existence. Potentiation cannot be random, and the range of realizations is determinate although circumstantially amendable.

That evolution is something occasional occasionally selected is a contribution to absurdist existential philosophy rather than natural history. That life experience is not inherited is ideology rather than natural science. There is no other reason for supporting the contemporary paradigm of it except the perverse adherence to the least action principle. In effect, evolutionary achievements like conscience, noble spirit,

insight, creativeness and free will are lost through disuse, but competitiveness and conformism spread. A story told by an idiot signifies nothing of course. Why listen to it.

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References

- [1] W. James, *The meaning of truth*, New York, Longmans, Green and Co., 1909, 297 pp.
- [2] C. S. Peirce, "The essential Peirce: selected philosophical writings, Volume 1: 1867–1893," N. Houser, and C. Kloesel, Eds., Bloomington, Indiana University Press, 1992, 448 pp.
- [3] G. Axtell, and P. Olson, "Three Independent Factors in epistemology," *Contemporary Pragmatism*, vol. 6 (2), pp. 89–109, 2009.
- [4] S. Freud, *Beyond the pleasure principle*, On *Metapsychology* Penguin Books Ltd, New edition, 1991, 496 pp.
- [5] J. Campbell, "Bayesian Methods and Universal Darwinism," *AIP Conf. Proc.*, vol. 1193, pp. 40–47, 2009.
- [6] Ch. Darwin, *On the origin of species by means of natural selection, or the preservation of favoured races in the struggle for life* [1st ed.], London, John Murray, 1859, 502 pp.
- [7] T. R. Malthus, *An Essay on the Principle of Population*, London, F. J. Johnson, 1798, 126 pp.
- [8] B. Russell, *Human Society in Ethics and Politics*, New York, Mentor Book, 1962, 264 pp.
- [9] S. Hawking, *The universe in a nutshell*, London, Bantam Press, 2001, 224 pp.
- [10] G. Frege, *Begriffsschrift, eine der arithmetischen nachgebildete Formelsprache des reinen Denkens*, Halle, Verlag von Louis Nebert, 1879, 88 pp.
- [11] T. Kuhn, *The structure of scientific revolutions*, 3d ed., Chicago, London, University of Chicago Press, December 15, 1996, 226 pp.
- [12] B. Spinoza, *Ethics*, 1667, Transl. E.M. Curley, Penguin Classics, July 26, 2005, 208 pp.
- [13] I. Prigogine, *From Being to Becoming*, San Francisco, W.H. Freeman, 1980, 272 pp.
- [14] V. A. Krassilov, *Evolution: System Theory*, Sofia, Pensoft, June 2014, 414 pp.