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The Notion of Self and the Process of Conscious Individual Evolution

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ABSTRACT

We further advance our recent works on incorporating individual evolution into mainstream biology as a determinant of species evolution and even of life evolution. Individual experiences are encoded in the psyche and get embodied in the genes continuously as the psychic body takes the physical form in accordance with the pattern of experiences and desires. The instinct for perpetuation determines all activity and experience by covering the individual in a powerful sheath of desire and only few are able to cut through it to attain the highest state of evolution. The zoom-in and zoom-out approaches to such attainment are discussed.

KEYWORDS: Consciousness, Individual evolution, Traits, Self-awareness, Microscopic approach, Telescopic approach

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INTRODUCTION

In recent works following our proposal of meta-evolution, we have re-examined many of the concepts and theories of biology in its light and have come up with a series of new insights into evolutionary biology which include the law of purposive association, generalized PPRs, +/- nature of all symbioses, nested hierarchies of evolving non-living and living systems coming under one unified framework, interplay of order and disorder, generalized niche classifications, processes, laws of individual dynamics, Role of epigenetics in evolution, similarities with classical and quantum physical laws and so on^{1,2,3,4,5,6,7}. In the process of defining various niches we hit upon the task of defining the central notion of the individual itself^{8,9}. In this paper we further delve into the means and the methods of the individual evolution in greater details.

To motivate our approach, we quote an interesting paragraph from a recent lecture which nicely captures the established doctrine of evolution:

*“Populations evolve, not individuals. In order to understand evolution, it is necessary to view populations as a collection of individuals, each harboring a different set of traits. A single organism is never typical of an entire population unless there is no variation within that population. Individual organisms do not evolve, they retain the same genes throughout their life. When a population is evolving, the ratio of different genetic types is changing -- each individual organism within a population does not change. The process of evolution can be summarized in three sentences: **Genes mutate. Individuals are selected. Populations evolve**¹⁰.”*

Now our first question is: Do the individuals really retain the same genes throughout their life? Are there not epigenetic modifications going on continuously? Secondly, why do the genes mutate in the first place? Are the mutations random or are there hidden factors not yet discovered by science, which determine mutations? Further is it not self-contradictory to claim in the same breath that individuals do not evolve and species is a collection of individuals?

DEEPER VIEW ON TRAIT PRESERVATION:

Those traits that come under competitive stress get modified due to adaptation and it causes speciation. Minor modifications due to mild stress factors lead to very closely related sibling species, so close that the differences may not at all be discernable and they may be bracketed under one species, as in case of *An. culicifacies* having five sibling complexes in Odisha (a small province in India) itself¹¹. In fact, in a certain sense, such finer modification of traits, if properly mapped in the genome, may lead to individual level distinctions in every species which would lead to an unimaginable level of complication in the study species and their interactions. Individual genomic level studies are much more complicated than the study of individual atomic states in physical systems like gases, but nevertheless, it would be infinitely rewarding as an adventure to conjecture

about evolution of each individual member in a species by a study of its mutations in course of its life time and beyond.

Speciation, as it is commonly understood, refers to differences in external traits and interactions at a rather gross empirical level. The competitions that occur among species have the fulfilling purpose of bestowing evolutionary advantages to the species involved¹². A competition that is observed to take effect at a gross level of physical or physiological interaction has indeed many deeper and finer level precursors arranged sequentially starting from the level of the evolutionary force through the instincts and down to the level of external fights and warfare.

The ecological evolutionary force is more or less the same in all members of the species in a given habitat but the intensity of instincts differs from organism to organism. Thus the urge to compete, the stress incurred, the adaptive mechanisms adopted, epigenetic changes obtained, the mutations achieved and the co-evolution undergone-- all leave their imprints and have their impacts on the final evolutionary change in an organism. Thus do organisms actually evolve individually, though grouped in terms of similarity of gross physiological traits, we say that the species evolve. To speak of evolution of species is all right as long as we ignore the finer individual level evolution that is occurring continuously on an experience to experience basis during each moment of the life of an organism. If competition is the fundamental factor of evolution, it must leave its mark at all levels, from the psychological to the physiological, of which we only have direct empirical access to the latter, and as far as the former is concerned, only the higher animals like humans provide any window at all for observations and inferences^{8,9}.

NOTION OF SELF:

The physical body is the outermost covering of different categories of 'self'. The notion of one's existence pervades the whole body and exists at every point of it. A touch or pinch at any point is appropriated to have happened to the "self". If a limb is amputated, the notion of the self which earlier pervaded the limb gives rise to the psycho-pathological condition called Phantom Limb Syndrome, wherein the amputee continues to experience the continued existence of the amputated limb, that is no more in existence¹³. This implies that the notion of the 'self' is a function of the mind and is in the psychic dimension rather than in the level of the physical body¹⁴.

Similar analysis can also be made about the mind in regard to self as a notion. Exactly like the physical body the mind is born, grows, decays and finally seems to die with the death of the organism^{8,9}. Now, is the mind really subject to birth and death? What is its make up?

Just as the body starts taking shape with the formation of the zygote at a microscopic level, the mind too starts taking shape at a microscopic level with the core element of the notion of self existence-“I AM”. Forced by the pressures of continuous interaction with the rest of the world right from the stage of the zygote, this microscopic selfhood gradually grows with growth of the fetus and continues its pervasion in an ever expanding manner till it fills the fully formed individual body. After birth, this ever-growing pervasion continues with the growth of the physical body. In addition, the experiences undergone in and through the physical body continue to contribute to the growth of the mind. And the notion of the self pervades all those experiences making up a mental body dual to the physical body. The experiences are encoded as neural correlates in the brain which are physical, whereas the experiences themselves are mental or metaphysical residing in the subtler domain of the individual psyche, which in its turn is part and parcel of the species psyche (collective psyche of the species)¹. It is only on this basis that we can truly explain Hackel’s biogenetic law *ontogeny recapitulates phylogeny* that he proposed basing on embryological evidences only^{15,16}.

Thus the ‘self’ that is sought to be perpetuated by reproduction is in the dimension of the psyche, rather than in the body. But driven by the instinct for reproduction, all organisms seek to perpetuate the physical form in whatever quality and quantity possible, in spite of the continuous nature of mutations in their genome that makes them different from what they were previously. Thus for all animals including most of the human species, this instinct for physical self-reproduction overpowers all other urges and sets them in the course of a total involvement in the process of reproduction, blindly directing all energies and faculties towards the fulfillment of that single most powerful instinct.

EVOLUTION OF MIND:

CORE SELF-AWARENESS:

The selfhood which forms the core of the mental substance and which pervades the zygote gradually evolves as per the plan encoded in the genome and unfolds in time as fetal development^{8,9}. The experiences gathered all along get epigenetically encoded and superimposed as the epigenome with definite mutations resulting from those experiences that are repeated and thereby get accentuated⁶. Out of the innumerable experiences only the deepest and the most repeated ones corresponding to fulfillment of the predominant urges go to form the core of the mental substance as it grows. The selfhood pervades all these subtle reconstitutions of the core content and even when the physical body grows old, degenerates, decays and ultimately suffers death, the reconstituted core content of the individual mind continues to exist as an undistorted wholeness in the psychic realm, but restructured as per the experiences gained. It is this subtle mental content pervaded by the self-

hood of the individual that seeks to fulfill those very instinctive urges encoded therein and thus seeks an appropriate physical form for such fulfillment.

The dynamics of self perpetuation is thus primarily a mental process occurring in the psychic realm transcending the physical body, even though utilizing the latter for its reconstitution¹⁷. This exercise of reconstitution of the content of the mental substance by taking up a physical body is what is called as life, beginning with birth and ending with death, and ever engaged in means and methods of perpetuating itself physically in the middle.

As we have seen in this analysis, reproduction as a mode of perpetuation is not as gainful for the individual as it presumed by those blinded by this particular overwhelming instinct. What it reproduces is actually a separate individual with core content matching its own to some extent, at least to the extent that it was at the moment of copulation. In reality therefore nature possesses and utilizes the organism without its knowledge by using the instinct for reproduction for fulfilling the requirements of another individual of the same species who requires a physical body for fulfillment of its own need for self perpetuation. The ignorance of the reproducing agents is such that they are driven by the instinct only for a modicum of pleasurable sensation associated with the act of copulation, not knowing what is truly going to come out of it. They are, so to say, driven only by the recreational, hedonistic aspect of it rather than the pro-creational evolutionary aspect. Such is the play of nature and the work of the over-powering instinct of self perpetuation.

BEYOND THE PERPETUATION INSTINCT

It is only in the highest evolved humans with superior analytical intelligence that this particular urge for reproduction is put to question as to its utility and validity and the whole process is analyzed threadbare. Due controls are exercised by such individuals on this particular overwhelming instinct and the body ward movement is sought to be arrested, diverted, channelized for other more meaningful purposes. In these beings, this downward movement of the mind is even reversed, so that from the mind dimension the notion of self-existence moves further deeper and further higher to the realm of the spirit or of pure consciousness, though such instances are rather rarer¹.

NON-PERCEPTION AND ALL-PERCEPTION:

The inner time or the subjective time depends on the information that is processed in the memory that is utilized and the attention that is focused during a particular interval of objective duration^{18,19}. All objects and processes perceived by the senses or conceived in the mind consume external time. These external and internal processes which are physical and psychic respectively occur as a succession of events leading to elapse of objective and subjective time. In the absence of

perception, no subjective time occurs even if the whole universe of phenomena proceeds from creation to dissolution objectively. A non-perceiver of events is a non-perceiver of processes in time, and hence, of time itself. It is only as a series of perceptions that beings live, grow and die. In non-perception, these processes are no more experienced to be in existence at the psychological level, though at the physical and physiological levels and for other perceiving observers, they do exist. Non-perception of objects and processes leads the subject to a timeless experience of a vacuous eternity devoid of any trace whatsoever of the physical, physiological and psychological phenomena. One undergoes phenomenological processes as long as one perceives them i.e. as long as one perceives external time through association with the nervous system and the brain^{18,19}. Such total non-perception paves way for the ultimate state of being.

ZOOM-IN OR MICROSCOPIC APPROACH:

A physical system in space has structure, substructure, fine structure, finer structure and still finer structures and so on till we reach a mathematical zero dimensional object called a point, which is devoid of all characteristics except its existence at a point in space. Similarly, any process has sub-processes, finer processes and so on till we reach a zero dimensional point event in time at a definite instant of time or as that instant of time itself. Such zeroing in on point objects and point events by a dissection of perception automatically excludes all the rest of the phenomenal universe of extended objects in space and extended events time. This leads one to a state of focused attention on a single point of space at a single instant of time, to the exclusion of all else. Timelessness and spacelessness follow such eventlessness and objectlessness in this microscopic approach or zoom-in approach. However, experience of such non-being is in no way a negation of the being of the perceiver since without the existence of the perceiver, even non-perception cannot be perceived!

On the other hand, there exists the inclusive approach in which all-encompassing perception of the wholeness of phenomenal existence lands one in the plenum that is the experience of the ultimate state of being itself.

ZOOM-OUT OR TELESCOPIC APPROACH:

This other approach is the telescopic approach where starting from a perceived object or event, its contiguous objects and events all around as its causative factors are successively brought into an ever-widening focus and ultimately the entire phenomenal existence in space and time is fully covered within the purview of one's perception which expands to infinity and eternity. In such a zoom-out process, the entire course of evolution of the whole cosmos including the perceiver is charted out in one compass, where individual objects and events of finite spatio-temporal dimensions

lose their identity all together, merging themselves in an experience of a homogenous plenum that beggars all description. This is the zoom-out or telescopic approach.

In the zoom-in approach one gets to the very core of the fundamental unit of a particular phenomenal experience making the inner perception come to a null, while in the zoom-out approach one experiences the entire gamut of all one's past and future experiences as an essential inextricable part of the cosmic evolutionary process, which is infinite and eternal. Uncommon as such perceivers are, they differ from the rest in their distinctively different appreciation of objects and events, since theirs is an experience which puts them outside of themselves, who are not any more to be conceived of as finite individuals like the rest, struggling for survival from birth to death and in the middle a physiological process of aging occurs in all ²⁰ and they evolve to strengthen their original core ²¹. Their existence and their experiences continuously extend beyond birth into the infinite past and beyond death into the infinite future, engulfing in one go, the infinitude of the universe itself. This is the growth of inner time ending in the identification of oneself with infinity and eternity. Whether we zoom into zero dimensions or zoom out to infinite dimensions, both presuppose the existence of the perceiver and the perceived. The perceiver is a unit of consciousness and the perceived is a manifestation of consciousness ^{7,22,23,24,25,26}. And thus both have consciousness as the background, on which rest all observations.

CONCLUSION

We have discussed the evolution of Individuals in a species in general, and of humans in particular basing on an analysis of the selfhood of creatures. Individual evolution is thus a major contributor, if not the entire, to the evolution of species. We have carefully scrutinized the notion of individual and the role of the primary and powerful instinct of self-perpetuation. Going beneath the apparent individual selfhood of a man, we point out the possibility of realization of a universal consciousness as the supreme selfhood underlying all individuals. The microscopic and macroscopic approaches to the possibility such realization are discussed.

We thus counter the established evolutionary doctrine referred to in the introduction to propose a new paradigm, individuals will, genes mutate, and individuals evolve¹⁰. The species are more like morphological portfolios available to individuals to willfully move in to or get out of the corresponding morphologies. The morphic forms remain static in time while the individuals move through them ^{1,27}.

REFERENCES:

1. Tripathy A. and Pradhan RK. A Prelude to Meta-Evolution, Indian Journal Of Science And Technology. August 2018. Vol 11(31), DOI: 10.17485/Ijst/2018/V11i31/130098,.

2. Tripathy A. and Pradhan RK., The Ubiquitousness Of Prey-Predator Relationship(PPR), The Law Of Purposive Association And Fundamental Questions In Evolution, Indian Journal Of Science And Technology. August 2018.Vol 11(32), DOI: 10.17485/Ijst/2018/V11i32/131052,.
3. Tripathy A. and PradhanRK., Role Of Evolutionary Urge In Epigenetics And Gene-Culture Coevolution: A Meta-Evolution Perspective, Indian Journal Of Science And Technology, August 2018.Vol 11(32), DOI: 10.17485/Ijst/2018/V11i32/ 131051.
4. Tripathy A. and PradhanRK., A Critical Analysis Of Unusual Prey-Predator Relationships With Regard To Their Exclusive Evolutionary Advantages, Indian Journal Of Science And Technology. October 2018.Vol 11(39), DOI: 10.17485/Ijst/2018/V11i39/131270.
5. Tripathy A. and PradhanRK., Symbiotic Interactions, Law Of Purposive Association And The ++ Nature Of All Co-Evolution, Indian Journal Of Science And Technology, November 2018.Vol 11(43), DOI: 10.17485/Ijst/2018/V11i43/132577.
6. Tripathy A. and PradhanRK., Methylation-Assisted Epigenetic Evolution and The Psycho-Biology of Human Experiences. IJPHRD. December 2018. (In press)
7. Tripathy A. and PradhanRK , Consciousness as the cosmic ordering principle and the interplay of order and disorder in the physical and biological systems. IJSRR. 2019; 8(1): 859-873 .
8. Tripathy A. and Pradhan RK. Niche Classification, Niche Processes and Niche Dynamics: Role of Consciousness. 2019;8(1): 1316-1328.IJSRR.
9. Tripathy A. and PradhanRK., Niche, Competition and the Laws of Conscious Individual Dynamics: Similarities with Laws of Classical and Quantum Physics.2019. 8(1), 1626-1635. IJSRR.
10. http://abyss.uoregon.edu/~js/21st_century_science/lectures/lec09.html
11. Tripathy A, Samanta L, Das S, Parida SK, Marai N, Hazra RK, Kar SK, Mahapatra N. Distribution of sibling species of *Anopheles culicifaciens*.and*Anophelesfluviatilis* and their vectorial capacity in eight different malaria endemic districts of Orissa, India.Mem Inst Oswaldo Cruz. 2010; 105(8):981-7.
12. Tripathy A and Pradhan RK The Indomitable Force of Instinctive Urge in Competitive Success, Stress Response and Evolution.IJSRR. 2019 (In Press).
13. Ramachandran VS, Hirstein W. The perception of phantom limbs: the D. O. Hebb lecture. Brain. 1998;121:1603–1630..
14. Peter W. Halligan Phantom limbs: The body in mind, Cognitive Neuropsychiatry, 2002; 7(3): 251-269, DOI: 10.1080/13546800244000111
15. Haeckel, E. 1866. GenerelleMorphologiederOrganismen. G. Reimer, Berlin.
16. Tripathy A and Pradhan RK. Ontogeny Recapitulates Phylogeny; A Deeper Metaevolutionary Analysis. 2019 (under preparation)

17. Tripathy A. and Pradhan RK. The Tremendous Anaphasic Sensation as the Fundamental Design of Nature for the Evolution of Reproduction and Perpetuation of Life. 2019. (Under preparation).
18. Tripathy A. and Pradhan RK. Neural Recruitment, Information Processing And The Equation For Subjective Time, Neuroquantology, October 2018; 16(10): 82-86, Doi: 10.14704/Nq.2018.16.10.1756.
19. Tripathy A. and Pradhan RK. Subjective Time In Neuropsychology Vis-À-Vis The Objective Time Of Physics, Neuroquantology, November 2018;16(11): 1-11, Doi: 10.14704/Nq.2018.16.11.1850.
20. Tripathy A. And Pradhan RK. Oxidative Stress And Role Of Glutathione S-Transferase In Brain Health and Ageing, IJPHRD. Decembr 2018. (In Press)
21. Tripathy A. and Pradhan RK. Parasite-Vector-Host Conscious Mechanism as Determinant of Parasite Virulence, Vector Infectivity and Host Susceptibility: Reproductive Success of Malaria Parasites in Plasmodia-Mosquito-Human Troika. Accepted for Publication in International Journal of Scientific Research and Reviews. 2019; 8(1): 2079-2086.
22. Tripathy A. and Pradhan RK. Information, Perception and Quantum Objectivation: The Potential of Human Consciousness. 2019; 8(1): 599-608. IJSRR.
23. Tripathy A. And Pradhan R. K The Apparent Wholeness of Perception as an effect of the Wholeness of Consciousness: Gestalt Psychology Explained. 2019. (Under preparation).
24. Pradhan RK. Psychophysical Interpretation of Quantum Theory. Neuro Quantology, 2012; 10(4): 629-645. DOI:10.14704/nq.2012.10.4.592.
25. Pradhan RK. The problem of Conscious Observation in relativistic Description, Neuro Quantology. 2014 December;12(4);pp 417-423. DOI: 10.14704/nq.2014.12.4.755.
26. Pradhan RK. Psychophysical Interpretation and Conscious Observation in Quantum Field Theory, Neuro Quantology, 2018 September;16(9);pp34-45, DOI: 10.14704/nq.2018.16.9.1258.
27. Sheldrake R. The presence of the past: Morphic resonance and the habits of nature. London: Vintage Press; 1988; 1–391.