

The Integrated Tree of Trees & Their Influence on the Origins-Evolutionary Dynamics

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Abstract:

The Origins & Evolutionary Dynamics include fundamental elements & constants like the mutation & positivity (e.g. aestho-fitness) matrices in the quasi-species equations. However, these elements & constants could be substituted by their expressions relating them to each other &/or providing additional initial characteristics. The relations could be causal or comparative. Expressions of these fundamental elements could be limits of static, transient &/or dynamic process sequences. They could emerge due to homology, equality-nesting or convergence & parallelism. They could also be true (e.g. causal phylogenetic) or imaginary (e.g. apparent coherent) relations. They could be at various stages of the Tree of Life. The examples of such relations could be those original, phylogenetic, developmental, life historical, structural & functional et cetera. Their substitution in the Origins-Evolutionary Dynamics could give further results & insight into the fundamental principles of the dynamics.



Photograph 12 1



Photograph 12 2

Fire Versus Plain Seed

The seed of a peach, the fire seed with fierce morphology, & that of an apricot, the Plain seed, are morphologically contrasting which could be apparent in expressions of their topology & morphometry.

These expressions could be substituted for resultants of the Origins & Evolutionary Dynamics as well as the fundamental elements for their static & down-stream process sequences.

This shall give further theoretical results like neutro-bi-phyly of the Fire-to-Smooth Spectrum. How ever the imaginary & *de novous* monophyly may provide additional results.



Photograph 12 3



Photograph 12 4



Photograph 12 5



Photograph 12 6



Photograph 12 7



Photograph 12 8

Convergent Plastaceous Components & Their Functional Homology

Birds & insects have a functional homology with the taxa converging to plastic like wing, body & feather components, especially for flight.

The plastic components being light, non-decaying benefit flight while need more velocities for equal momenta. The opposite is true for the lobo-pterics wings & flight related components. Moreover, development of plastaceous components is difficult as they allude to dry alife as compared to the lobo-pterous.

The functional homology results above could be substituted in the phylogenetic models to obtain details of the convergence of the plastaceous structures.

The functional homology with Aesthesis included could further provide meaning to the origins-evolutionary dynamics of the components.



Life History Trees

The Life History could get recorded in the morphology of organisms as for the vine in photograph 12 9. However, the ultimate morphology may result from a complex & differing history as for the vine, rather than simply growth along the final axis & length of vine. Both the growth life history true & apparent, & final morphology could provide for relation expressions for their down-stream life-history dynamics.

Photograph 12 9



Photograph 12 10



Photograph 12 11



Photograph 12 12



Photograph 12 13



Photograph 12 14



Photograph 12 15



Photograph 12 16



Photograph 12 17



Photograph 12 18



Photograph 12 19



photograph 12 20



Photograph 12 21

