Article

The Life Sequence Conjecture and the Theory of the Reptoid

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Abstract: Reptilians or reptoids are staple characters of Hollywood cinema, science fiction literature, ufology and conspiracy theories. Despite its popularity, the reptoid has been dismissed by the scientific community as a figment of the imagination; born out of a speculation, paranoia and wanton anthropocentricism. In this paper, however, the *Life Sequence Conjecture* is advanced as a supportive framework for the notion of reptilian extraterrestrials. This paper is not an argument in support of the existence of extraterrestrials. Rather, it proposes that if extraterrestrials do exist, then a reptilian morphology is not untenable.

Keywords: reptilian; reptoid; ufology; Life Sequence Conjecture; extraterrestrials; convergent evolution; homologous evolution; parallel evolution; divergent evolution; chaos evolution

1. Introduction

The comparative mythologies and histories of mankind are replete with references to reptilian humanoids (or reptilians) – the serpent in the Garden of Eden; the Aztec god Quetzalcoatl; Cecrops, mythological founder of Athens, and the Naga of Asiatic lore. The plethora of such allusions to reptilians has been audaciously taken by some as testament to their existence. But I think this a fragile conclusion.

Reptilians may be arbitrarily classed as either Type I or Type II. Type I reptilians are reptilians of extraterrestrial origin and may or may not be descended from dinosaur or dinosaur-like precursors (the evolutionary origin of Type I reptilians is not often proposed). Type II reptilians are of terrestrial origin and are often described as having descended from dinosaurs that survived the K-T extinction. Both types of reptilians have been portrayed in film, literature, and pop culture as both beneficent (bestowing mankind with knowledge and technology) or belligerent (exploitative, imperialistic and sometimes of generally amorphous and shady agenda).

The idea of reptilians as key agents in the socio-political structuration and evolution of mankind, though not originating with the work of David Icke, certainly finds its greatest development under his guidance[1, 2, 3, 4]. In Icke's political aetiology, a nefarious cabal of descendants of Type I reptilians from the Alpha Draconis star system, known as the Brotherhood, are at the head of political and economic world domination. The original reptilians themselves are believed to be the *Anunnaki* of ancient Sumerian religion. Some academics, most notably Richard Kahn and Tyson Lewis, eschew a literalist interpretation of Icke's writing, seeing it as merely a satirical allegory of political domination[5].

In1982, Canadian paleontologist Dale Russell hypothesized an evolutionary pathway for *Troodon* (a dinosaur genus) if it had not perished in the KT-extinction event (c. 65 mya). Russell suggested the eventual emergence of a humanoid morphology and theorized a present-day intelligence comparable to that of modern-day *Homo sapiens* based on an extrapolation of the Troodon's encephalization quotient (which he reported to be six time higher than that of other dinosaurs)[6]. Russell ventured to construct a model of the evolved Troodon, termed the dinosauroid, which did much to popularize the notion of Type II reptilians. Despite the popular appeal of Russell's dinosauroid, the idea has been largely dismissed by the scientific community as an abuse of speculation and a classic case of unbridled anthropocentricism[7, 8,].

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A 2012 publication by Columbia University chemist Ronald Breslow – namely "Evidence for the Likely Origin of Homochirality in Amino Acids, Sugars, and Nucleosides on Prebiotic Earth"[9] – has offered a new perspective and instigated renewed interest in the Type I reptilian. The paper, as the title indicates, is a discussion of the origin of homochirality (a single chiral form: either D or L) in the fundamental chemical precursors for life. In the last paragraph of the paper, Breslow states that: "An implication of this work is that elsewhere in the universe there could be life forms based on D amino acids and L sugars, depending on the chirality of the circularly polarized light in that sector of the universe or whatever other process operated to favor the L α-methyl amino acids in the meteorites that have landed on Earth." He then goes on to say, ominously and in non-sequitur fashion, that: "Such life forms could well be advanced versions of dinosaurs, if mammals did not have the good fortune to have the dinosaurs wiped out by an asteroidal collision, as on Earth. We would be better off not meeting them." This paper, on the premise of its final paragraph and given the authority of Dr. Breslow and the prestige of the journal in which it was published (Journal of the American Chemical Society, JACS), has been taken by some as support for the reptilian theories of David Icke[10]. However, like the extrapolations of Dr. Russell, this work of Dr. Breslow has been attacked by the scientific community for its speculative claims as well as for Breslow's participation in what they consider pseudo-science and anthropocentricism[11].

However, the author perceives that, despite its strange and perhaps unnecessary injection into the JACS paper, the Breslow's "dinosauroid speculation" is not an implausible scenario. That Breslow's claim is a scientifically supportable possibility should shield it from the ready dismissal on the premise that it is too speculative or too anthropocentric. In response to the criticism that it is impotently speculative, the author states that it though it is certainly of a speculative character, it is not unrespectably so: it rests on the tenable assumptions that:

1. there are other planets capable of producing dinosaur or dinosaur-like life forms
2. these dinosaurs are privy to an evolutionary lineage which eventually produces life forms of human or even superhuman intelligence.

The first assumption needs no support but the admittance of the existence of Earth-like planets and the proposals of convergent evolution. The second assumption is certainly not beyond scientific support as it finds explanation in notions of adaptation, optimality, evolvability and genotypic and phenotypic plasticity. In response to the accusation of anthropocentricism, the author rebuts that it is not impossible that the degree of freedom of what is termed life is such that no life form, in composition and form, is far removed from Earth-based life (c.f. Rare Earth Hypothesis[12]).

To make such proposals as that of Dr. Breslow is not to dogmatically exclude all others. A paper, though it may admit a host of possibilities, never proceeds to describe them all; instead it usually begins with homely premises which inadvertently imbues it with an artificial anthropocentrism (when such motivation may be entirely absent). Too often has the taint of anthropocentrism been employed illegitimately by the scientific community to discredit speculative, yet tenable and scientifically supportable (and perhaps even promising), lines of thought. A similar defense can be proffered for Russell's dinosauroid. It is the primary intent of this paper to formalize and support the claims of Dr. Breslow.

2. The Life Sequence Conjecture

In the book, Wonderful Life, famed American evolutionary biologist Stephen Jay Gould puts forth an argument for chance as an integral factor in the evolutionary process[13]. His argument was based on based on the preserved fauna of the Burgess shale, animals from around 505 million years ago, just after the Cambrian explosion. Gould argued that although the animals of the Burgess shale were all exquisitely adapted to their environment, most of them left no modern descendants and more importantly, surviving creatures did not seem better adapted than their extinct contemporaneous neighbors. Gould proposed that given a chance to "rewind the universe" and flip the coin of natural

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selection again, we might find ourselves living in a world populated by the descendants of Hallucigenia rather than Pikaia. This seems to suggest that fitness for existing conditions does not ensure long-term survival, especially when conditions change rapidly, and that survival of many species depends more on chance events and features, which Gould termed exaptations, fortuitously beneficial under future conditions than on features best adapted under the present conditions.

The seminal idea emanating from this work of Gould is the notion of contingency in evolution: the idea that the evolutionary process is dominated by chance events or that the features of the evolutionary process are largely contingent on chance. This idea is kindred to the idea of divergent evolution[14] which is characterized by an accumulation of difference in groups which can lead to the formation of new species, usually as a result of diffusion of the same species to different and isolated environments which blocks the gene flow among the distinct populations allowing differentiated fixation of characteristics through genetic drift and natural selection. Diffusion is the primary basis of molecular division and can be seen in some higher-level characteristics of structure and function that are readily observed in organisms. For example, the vertebrate limb is an example of divergent evolution. The limb in many different species has a common origin but has diverged somewhat in overall structure and function.

Given that divergent evolution may be used to describe local evolutionary events without regard to the evolution of the entire system of living things, the author proposes the term chaos evolution as the global equivalent of divergent evolution. It thus replaces mere contingency. Chaos evolution may be defined as an evolutionary process characterized by sensitivity to initial conditions. This is much in keeping with the assertion of Gould that should the evolutionary tape be rewound, the evolutionary fauna would be totally different. Chaos evolution and contingency have strong implications for the possible morphologies of extraterrestrial life forms. Even on Earth-like planets, chaos evolution may imply a floral and faunal sequence of life forms significantly dissimilar to that of Earth. Also, at any given time, the composition of flora and fauna may be unlike anything that has ever been produced on Earth.

Despite the relevance of chaos evolution and its undoubted operation in the evolutionary process, the author proposes the Life Sequence Conjecture (LSC) as an alternative viewpoint. The Life Sequence Conjecture states that any Earth-like planet will give rise to a sequence of flora and fauna similar to that of Earth. This is implicitly the statement that if the Gouldian reel is replayed, the evolution of life will follow a similar pathway. Consequently the evolution of life on a planet sufficiently similar to Earth will engender a similar developmental pathway. By an Earth-like planet it is meant, a planet with prebiotic conditions similar to that of Earth (in terms of atmospheric composition and terrestrial elemental composition and other chemical constituents such as an abundance of water). The "sequence" in The Life Sequence Conjecture refers to the timeline of evolution on planet Earth. Scientist have divulged to sequence to be: simple cells prokaryotes, cyanobacteria, complex cells (eukaryotes), multicellular life, simple animals, bilaterians, fish and proto-amphibians, land plants, insects and seeds, amphibians, reptiles, mammals, birds, flowering plants, primates, Hominidae, Homo genus, anatomically modern humans[15]. The LSC is supported by convergent evolution[16] and may even find explanation within the model of chaos evolution.

Convergent evolution describes the independent evolution of similar features in species of different lineages. Convergent evolution creates analogous structures that have similar form or function but were not present in the last common ancestor of those groups. The wing is a classic example of convergent evolution in action. The cladistics term for the same phenomenon is homoplasy, from the Greek for *same form*. Flying insects, birds and bats have all evolved the capacity of flight independently. They have "converged" on this useful trait. Traits arising through convergent evolution are termed analogous structures, in contrast to homologous structures, which have a common origin, but not necessarily function. Bat and pterosaur wings are examples of analogous structures, while the bat wing is homologous to human and other mammalian forearms, sharing an ancestral state

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despite serving different functions. Convergent evolution is similar to, but distinguishable from, the phenomena of parallel evolution. Parallel evolution occurs when two independent, but similar species evolve in the same direction and thus independently acquire similar characteristics – for instance gliding frogs have evolved in parallel from different types of tree frogs. In morphology, analogous traits will often arise where different species live in similar ways and/or similar environment, and so face the same environmental factors. When occupying similar ecological niches (that is a distinctive way of life) similar problems lead to similar solutions. Simon Morris Conway counters Gould's argument, arguing that convergence is a dominant force in evolution and that since the same environmental and physical constraints act on all life, there is an "optimum" body plan that life will inevitable evolve toward, with evolution bound to stumble upon intelligence, a trait of primates, corvids, and cetaceans, at some point.

The LSC may also find support in the chaos evolution. Chaos theory is a branch of mathematics devoted to the study of non-linear dynamical systems that are highly sensitive to initial conditions[17]. The sensitivity of such systems to initial systems is encapsulated in the anecdote that: "a butterfly beating its wings in Texas can cause a storm in Africa". For chaotic systems, small differences in in initial conditions (such as those due to rounding errors in numerical computation) yield widely diverging outcomes for such dynamical systems, rendering long term prediction impossible in general. Weather prediction is a clear case of a chaotic system. This happens even though these systems are deterministic, meaning that their behavior is fully determined by their initial conditions, with no random elements involved. In order words, the deterministic nature of these systems does not make them predictable. Edward Lorentz summarizes the effect as: "Chaos: when the present determines the future, but the approximate present does not approximately determine the future"[18].

Integral to chaos theory is the concept of the attractor. An attractor is defined as a set towards which a variable, moving according to the dictates of a dynamical system, evolves over time. That is, points that get close enough to the attractor remain close even if slightly disturbed. The existence of attractors implies that chaotic systems possess high-level order. Despite sensitivity to initial conditions, two sufficiently near chaotic systems may possess similar attractors. Even if one admits the influence of contingency and chaos dynamics on the evolutionary process, the very existence of attractors implies the possibility of convergence as higher levels of classification, and the sequencing of such higher levels may be a manifestation of the attractor rather than the dynamics within the attractor (which may parallel such low level dynamics as speciation and lower level events). On this basis of attractor dynamics, a replay of the Gouldian reel, though it may not reproduce particularly species of plants and animals or be obedient to the order in which they were produced (if they are produced), may still be obedient to the production of higher-level groupings such as phyla and clades.

The argument over the effects of replaying the Gouldian reel reduces largely to one concerning the dominance of the forces of convergent evolution and chaos or contingency evolution. It is doubtless that both forces co-exist. If chaos evolution predominates, then the prospect of extraterrestrial dinosaurs are slim but not zero as it has been argued that attractor dynamics may permit such despite sensitivity to initial conditions. If convergent evolution predominates and the LSC is true, then the probability of Breslow's dinosauroids is closely related to the probability of Earth-like planets (under the assumption of only Earth-like planets entire dinosauroid life forms). As it is still a matter of contentious debate in the scientific community as to which of the two forces predominates, Breslow's speculation cannot be discredited with any force.

Furthermore, the paper has been written in a matter as to afford easy falsifiability. The verity of this paper rests always entirely on the verity of the Life Sequence Conjecture. To discredit the paper is to discredit the Life Sequence Conjecture. It is not expected that the other important assumption – that of the existence of Earth-like planets or that an Earth-like planet will eventually generate life or that only Earth-like planets could

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engender dinosauroid life – would be challenged. Challenging the latter only adds to the credence of the paper.

3. The Theory of the Reptoid in the Context of the Life Sequence Conjecture

An immediate corollary of the Life Sequence Conjecture is that Earth-like planets, unaffected by such mass extinction events such as the KT-extinction, may give rise to planet dominated by evolved reptilians.

A number of careful considerations must be made here:

1. had there not been K-T extinction, would lineages of dinosaurs that perished in the extinction be alive today?
2. If they did survive, what would be the extent of their evolution?
3. What would be the evolutionary relationship between dinosaurs and mammals?

Had there not been a K-T extinction event, there is little evidence to suggest that another event would have been cataclysmic enough to result in the extinction of an entire clade of organisms. Therefore it is reasonable to proffer a continuity of the dinosaur lineage; furthermore, the survival of aerial dinosaurs in the form of modern-day birds is partial support for the plausible continuity of non-aerial dinosaurs. Also, there are many contemporaries of dinosaurs that are still alive today.

Taking the survival of dinosaurs as a given, it must be asked whether any dinosaurs would have produced an evolutionary lineage of human intelligence or superhuman intelligence. Dale Russell has offered the Troodon as a viable candidate on the premise of its comparatively high encephalization quotient[6]. It is difficult to predict the evolution of intelligence. As the evolutionary process is non-teleological and responds to environmental pressures, the emergence of intelligence of the order of humans is tied to a particular environmental context where intelligence imbues an organism with fitness. The object of the evolutionary process is procreation and many organisms – including bacteria – have met this requirement without recourse to intelligence (or rather sapience). Furthermore, the emergence of intelligence is contingent on the particular life history of organism. Since Troodon had already possessed heightened intelligence, it may be that such intelligence was in the process of being selected for. For an evolutionary consideration of intelligence, we must consider the potential of the organism for such development. Since the evolutionary process is path dependent, it may be that the adoption of a particular evolutionary trajectory forever precludes the emergence of some features (including intelligence). The organism may be said to have reached an evolutionary cul-de-sac for that trait. Such cul-de-sacs are usually tied to energy considerations as well as what the author terms trait asymmetry: a trait may evolve under a given condition and may be useless under a newer condition; due to robustness, it may be easier to acquire that trait than to get rid of it. This stubborn trait may be an obstacle to the emergence of such traits as intelligence. It may be that the life histories which engender heightened intelligence have a low degree of freedom. Nevertheless, despite the seeming low probability of the evolution of high intelligence, no argument can be proffered to preclude Troodon from such a path.

Now that we have admitted the possible emergence of human like intelligence in Troodon, not to mention the evolutionary head-start, what would have been the relative fates of the descendants of dinosaurs and mammals? Three possible scenarios may be considered:

1. mammalian life forms triggering extinction of dinosaurs
2. dinosaur life forms triggering extinction of mammals
3. co-existence of mammals and reptilians.

As it relates to mammalian life forms triggering extinction of dinosaurs, the probable mode would be the consumption of the dinosaur eggs by the mammals.

As it relates to reptilian life forms triggering extinction of mammals, a likely scenario would be dinosaur predation on mammals.

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Both of the above-mentioned cases should consider the possibility of evolutionary synergism such that the presence of a given organism may induce an ecological change that may lead to the annihilation of another.

Another likely situation may be a co-evolution of mammals and reptilians: there are many possibilities for this mode:

1. a planet co-dominated by both sapient reptilians and mammalians
2. a planet dominated by sapient reptilians who have subjugated sapient mammalians
3. a planet dominated by sapient mammals who have subjugated sapient reptilians.

The first two possibilities may lend support to the theory of the reptoid as expressed by David Icke and his disciples. Furthermore, demands of optimality may render these reptilians very humanoid and bilaterally symmetrical.

4. Number of Reptoid Extraterrestrial Civilizations: The Icke-Breslow Equation

In 1961, American astrophysicist Frank Drake, in preparation for the first SETI meeting, proposed an equation, now known as the Drake Equation[19], not for purposes of quantifying civilizations but to promote discussion about the probability of extraterrestrial life forms in the Milky Way Galaxy[20]. The equation summarizes the main factors which scientists must contemplate when considering the question of other radio-communicative life[21]. Notwithstanding its humble motivation, the Drake equation has proved controversial since several of its factors are currently unknown and estimates of their values span a very wide range[22, 23, 24]. The equation is as follows:

$$N = R_*. f_p. n_e. f_l. f_i. f_c. L$$

where:[25]

N: The number of civilizations in the Milky Way galaxy whose electromagnetic emissions are detectable.

$\mathbf{R_*}$: The rate of formation of stars suitable for the development of intelligent life (number per year).

$\mathbf{f_p}$: The fraction of those stars with planetary systems.

$\mathbf{n_e}$: The number of planets, per solar system, with an environment suitable for life.

$\mathbf{f_l}$: The fraction of suitable planets on which life actually appears.

$\mathbf{f_i}$: The fraction of life bearing planets on which intelligent life emerges.

$\mathbf{f_c}$: The fraction of civilizations that develop a technology that produces detectable signs of their existence.

L : The average length of time such civilizations produce such signs (years).

Guided by a similar motive, the author wishes to propose a trivial modification of the Drake equation to summarize the prospect of reptilian extraterrestrial life form. The equation is called the *Drake-Icke-Breslow equation* in honor of David Icke and Ronald Breslow. The equation is as follows:

$$N = R_*. f_p. n_e. f_l. f_i. f_r. f_{rc}. L$$

where:

N: The number of civilizations in the reptilian civilizations in the Milky Way galaxy whose electromagnetic emissions are detectable.

$\mathbf{R_*}$: The rate of formation of stars suitable for the development of intelligent life (number per year).

$\mathbf{f_p}$: The fraction of those stars with planetary systems.

$\mathbf{n_e}$: The number of planets, per solar system, with an environment suitable for life.

$\mathbf{f_l}$: The fraction of suitable planets on which life actually appears.

$\mathbf{f_i}$: The fraction of life bearing planets on which intelligent life emerges.

$\mathbf{f_r}$: The fraction of intelligent life that is reptilian

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f_{rc} : The fraction of reptilian civilizations that develop a technology that produces detectable signs of their existence.

L : The average length of time such civilizations produce such signs (years).

The most important factor in the Icke-Breslow Equation is f_r – the fraction of intelligent life that is reptilian . This factor is dependent on a number of conditions – most importantly evolvability, evolutionary synergism and mass extinction.

5. Conclusion

In this paper, the idea of extraterrestrial dinosauroids has been formalized in homage to the likes of Dale Russell, David Icke and (*en passant*) Ronald Breslow. Specifically, the Life Sequence Conjecture (a form of convergent evolution) – the hypothesis that all Earth-like planets will evolve along similar lines – has been proffered in support of the idea of extraterrestrial (and possibly intraterrestrial) dinosauroids. The Life Sequence Conjecture states that any Earth-like planet will give rise to a sequence of flora and fauna similar to that of Earth. This implies that if the famous Gouldian reel is replayed, the evolution of life on a planet will follow a similar pathway. Consequently the evolution of life on a planet sufficiently similar to Earth will engender a similar evolutionary trajectory. While the LSC does not explicitly argue for the existence of extraterrestrials, it proposes that if extraterrestrials do exist, then a reptilian morphology is not untenable.

References

1. (1991) *The Truth Vibrations*, London: Gateway. ISBN 1-85860-006-5
2. (1994) The Robot's Rebellion, London: Gateway. ISBN 1-85860-022-7
3. (1995) … And the Truth Shall Set You Free, Ryde: Bridge of Love Publications. ISBN 0-9538810-5-9
4. (1996) I Am Me, I Am Free: The Robot's Guide to Freedom, New York: Truth Seeker. ISBN 0-9526147-5-8
5. Lewis, Tyson E.; Kahn, Richard (2010). Education Out of Bounds: Reimagining Cultural Studies for a Posthuman Age. New York: Palgrave Macmillan.
6. Russell, D. A.; Séguin, R. (1982). "Reconstruction of the small Cretaceous theropod Stenonychosaurus inequalis and a hypothetical dinosauroid". Syllogeus. 37: 1–43.
7. Paul, G. S. (1988). Predatory Dinosaurs of the World. New York: Simon and Schuster. pp. 398–399. ISBN 978-0-671-61946-6.
8. Naish, D. (2006). Dinosauroids Revisited Darren Naish: Tetrapod Zoology, April 23, 2011.
9. Breslow, Ronald. (2012). Evidence for the Likely Origin of Homochirality in Amino Acids, Sugars, and Nucleosides on Prebiotic Earth. Journal of the American Chemical Society. 134. 6887. 10.1021/ja3012897.
10. Lightfoot, Alexander. (2012). Scientists Explain The Possible Existence Of Reptilian Humanoids https://humansbefree.com/2012/04/scientists-explain-the-possible-existence-of-reptilian-humanoids.html
11. Mitchell, Elizabeth. (2012). Dinosaur Aliens. https://answersingenesis.org/dinosaurs/extinction/dinosaur-aliens/
12. Ward, Peter. Rare Earth: Why Complex Life Is Uncommon in the Universe with Donald Brownlee (2000) ISBN 978-0-387-95289-5
13. Gould, S. J. (1989) Wonderful Life. New York: Norton
14. Gulick, John T. (September 1888). "Divergent Evolution through Cumulative Segregation". Journal of the Linnean Society of London, Zoology. 20 (120): 189–274. doi:10.1111/j.1096-3642.1888.tb01445.x
15. https://en.wikipedia.org/wiki/History_of_life
16. Conway Morris, Simon (2005). Life's solution: inevitable humans in a lonely universe. Cambridge University Press.ISBN 978-0-521-60325-6. OCLC 156902715
17. "chaos theory | Definition & Facts". Encyclopedia Britannica. Retrieved 2019-11-24.
18. Danforth, Christopher M. (April 2013). "Chaos in an Atmosphere Hanging on a Wall". Mathematics of Planet Earth 2013.
19. Burchell, M.J. (2006). "W(h)ither the Drake equation?". International Journal of Astrobiology. 5 (3): 243–250. Bibcode:2006IJAsB...5..243B. doi:10.1017/S1473550406003107. S2CID 121060763
20. Drake, N. (30 June 2014). "How my Dad's Equation Sparked the Search for Extraterrestrial Intelligence". National Geographic.
21. "Chapter 3 – Philosophy: "Solving the Drake Equation". Ask Dr. SETI. SETI League.
22. "The Drake Equation". psu.edu.
23. Devin Powell, Astrobiology Magazine (4 September 2013). "The Drake Equation Revisited: Interview with Planet Hunter Sara Seager". Space.com.
24. Govert Schilling; Alan M. MacRobert (3 June 2009). "The Chance of Finding Aliens". Sky & Telescope.
25. https://www.seti.org/drake-equation-index