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Research Article

DNA IS A BINARY COMPUTER PROGRAM OF INFINITE POSSIBILITIES FOR THE EVOLUTION OF NEW SPECIES

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Abstract

The objective of this study is to test the hypothesis that comparing DNA encoding to binary computer programming may explain historical evolutionary bursts that go far beyond anything that could have been anticipated by Darwinian natural selection theory. Statistical analysis of biological sequences suggests that randomness may have a negligible effect on evolution. Every organism is preprogrammed with a binary encoded genetic template for what it could evolve to as a species plus endless possibilities for the evolution of new species. Each DNA molecule consists of a base pair of nucleotides, either guanine (G) coupled with cytosine (C), or adenine (A) coupled with thymine (T). GC and AT are base molecules linked together in long chains. This is analogous to binary computer coding in which each molecule is either a "GC" or an "AT" (rather than a "1" or a "0"). Advanced species have significantly less DNA encoding than primitive species. The amphibian that evolved from a fish no longer needs those parts of its DNA that were exclusive to fish and so loses them. Similarly, the lizard loses those parts of its DNA that were required by amphibians, and so on up the evolutionary scale. Every species carries with it disproportionately huge amounts of inactive DNA that they themselves cannot possibly use. This is for the apparent purpose of keeping biological codes in reserve as a backup contingency plan in case of mass extinctions.

Keywords: DNA, Evolution.

INTRODUCTION

All living creatures require deoxyribonucleic acid (DNA), the self-replicating genetic material present in their cells as a component of chromosomes. DNA carries elaborate and precisely encoded instructions for cell reproduction. Each DNA molecule consists of a base pair of nucleotides, either guanine (G) coupled with cytosine (C), or adenine (A) coupled with thymine (T). Human DNA consists of a chain of about three billion of these GC and AT base molecules linked together. DNA polymerases are enzymes that regulate cellular reproduction by assembling the nucleotide building blocks of DNA. [1] DNA polymerases are highly accurate, with an intrinsic error factor of less than one mistake for every 10^7 nucleotides. [2] This is an error factor of 0.00001 percent. Somehow, our DNA has been programmed with uncanny precision. If only two or three out of 1.5 billion DNA molecules are out of sequence, birth defects or congenital disease can be the result. If only five to 10 of these 1.5 billion molecules are defective, death can be the result.

Binary Programming

GC and AT base molecules linked together in long chains is analogous to binary computer coding. Mechanical computers are programmed in a binary machine language in which each digit is either a "0" or a "1". Living cells are similarly programmed in a binary language in which each molecule is either a "GC" or an "AT". Ten binary codes in sequence make possible $2^{10} = 1{,}024$ unique combinations. Three billion binary codes in sequence (as in humans) make possible $2^{3{,}000{,}000{,}000}$ unique combinations, which is a number so incredibly huge that it might as well be infinity. Every life form has its own DNA program. Surprisingly, the simpler the organism, the longer is its DNA chain.

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The single celled amoeba, for example, has 290 billion nucleotide pairs in its DNA chain, compared to only 2.9 billion pairs in human DNA. [3] The amoeba, however, uses only an infinitesimal fraction of all the DNA that it carries within it. Why does the simple amoeba have 100 times as many DNA codes as we humans have? For two reasons: (1) every organism carries within its body DNA potential for possible use by subsequently evolved species; and (2) the more evolved a species becomes, the more of its ancestral DNA is shed as no longer being required. Every living thing carries in its DNA genetic programming for future species to which it could evolve, as an evolutionary reserve. This is proof positive that DNA orchestration has been deliberately planned and could not possibly be the result of random events. Every species actively uses only a tiny fraction of its DNA. Only about 1.5 percent of human DNA may be active. The other 98.5 percent or so is inactive. [4] Nature must have a reason for continually and consistently reproducing so much inactive DNA in all species. The only plausible explanation is that it provides potential for species to adapt and evolve. Each species comes with a genetic imprint of what it could evolve to as a species, plus endless possibilities for the evolution of new species. Darwinian evolution presupposes that the development of more advanced life forms can happen only from a combination of these two factors: (1) random mutation, and (2) natural selection. There is a third factor overlooked by evolutionists: (3) cellular adaptation. Cells can acquire new characteristics resulting from interaction with their environment, and these characteristics are inherited by successive generations. In other words, cells can learn and adapt within their own lifetime, making significant changes without having to wait for them to show up in their descendants.

A Deliberate Plan

Evolution is impossible without DNA. Therefore, whatever created DNA also created evolution, and vice versa. Either

DNA was the result of random events, or it was orchestrated. There is no third possibility. All the evidence indicates that sophisticated DNA programming could not possibly have been random. DNA binary coding defies evolution. [21] DNA structure and function are too complex to be explained by known evolutionary mechanisms. The DNA biological system could not have evolved by successive small modifications to pre-existing systems through Darwinian natural selection or random mutation. Random mutations happen rarely; and most mutations are harmful, making an organism less capable of surviving. Furthermore, DNA copying processes have elaborate built-in repair mechanisms. [22, 23] In the rare instances where genetic mutations may be beneficial, they can make only minor changes to organisms and are incapable of developing new body plans. The birth of new species thus requires pre-planning. It is not possible for programmed DNAto have been the result of random events. In the case of the amoeba, it took foreknowledge (a) to make cytosine combine consistently with thymine, (b) to make adenine combine consistently with guanine, (c) to line up 300 billion of these CT and AG base pairs in an exact binary sequence, (d) to arrange these binary codes with precise logic and nontrivial computing, (e) to create a double helix structure in which an AG purine in one strand always bonds to a CT pyrimidine in another strand, and vice versa, (f) to create self-correcting polymerase enzymes that proofread their work at each stage of DNA development, and (g) to include surgical and chemical ways of correcting DNA damage after the fact. There is another difficulty with the "DNA just happened" argument. DNA is an essential component of life. Before there was DNA, life did not exist; there were only physical and chemical substances. If the four nucleotides involved in DNA were spontaneously created by means of chemical reactions in multiple locations at various times, how did they seek each other out to form DNA? There is no electromagnetism, no chemical affinity, nor any other physical force drawing them together. Only living organisms are capable of the independent motion required to seek each other out, but nothing was living until there was DNA. The DNA polymerase enzyme is a protein molecule comprised of over 700 amino acids and requires a template in order to function. [24, 25] There is no way that DNA polymerase just happened.

Atrophy of Disuse

Humans, other primates, guinea pigs, and fruit-eating bats suffer from an ancient genetic defect, *hypoascorbemia*, in which the liver has lost its ability to produce L-gulonolactone oxidase, the enzyme which produces vitamin C internally. [5-7]. All other mammals produce vitamin C endogenously, which ability gives them immunity to scurvy, viral infections, rheumatoid diseases, cardiovascular conditions, and strokes. To compensate for its inability to produce vitamin C internally, gorillas must consume 18 to 20 kilograms of vegetation every day (leaves, stems, roots, young branches, buds, bark, piths, seeds, and fruit).[8] This is the equivalent of consuming 4,500 mg. of vitamin C (ascorbic acid) daily from dietary supplements.[6,9] The only plausible explanation for loss of the ability to produce L-gulonolactone oxidase is that somewhere in the ancient ancestry of these four species, this enzyme was no longer required. They were living in lush vegetation that provided all their requirements for vitamin C from external sources. The DNA molecule that produces L-gulonolactone oxidase atrophied from disuse and could not be passed on to their descendants.

Atrophy from disuse explains why advanced species have significantly less DNA than primitive species. Multicellular fungi no longer need the DNA required to replicate unicellular organisms, and so they lose it. The amphibian that evolved from a fish no longer needs those parts of its DNA that were exclusive to fish and so loses them. Similarly, the lizard loses those parts of its DNA that were required by amphibians … and so on up the evolutionary scale.

Evolutionary Reserve

We humans have 98.8 percent of our DNA in common with chimpanzees.[10] What makes us different from them is that more of our DNA is active. Chimps may be using only about 70 percent of the same DNA that we are using. The ability of a species to tap into its DNA reserves gives it the potential to take major leaps forward in evolutionary development. We humans appear to have about 50% of our DNA in common with bananas.[11] This makes sense only if bananas are carrying unused DNA as a contingency plan for the evolution of more advanced species. Little to none of the DNA that bananas have in common with us can possibly be in actual use by them. If it were, one would expect our two species to have at least some physical traits in common. Fruits and primates are as different as two species could possibly be. Humans and fish diverged from their common ancestor over 450 million years ago, yet nearly 1,000 genes in the pufferfish (*Fugu rubripes*) are identical to previously unidentified ones in humans.[12] Pufferfish use no human DNA. The only reason they can still be carrying it is to provide for the possible evolution of more advanced species. Primitive species carry forward disproportionately huge amounts of inactive DNA that they themselves will never use. This is for the sole purpose of keeping biological codes in reserve for all possible creatures that could evolve from them. This orchestration provides for limitless development and expansion of existing life forms, thereby providing a backup contingency plan in case of mass extinctions.

Evolution Reboots Itself

About 250 million years ago, there were major volcanic eruptions that continued for some two million years. More than 90 percent of all species were wiped out by this Great Permian Extinction. [13-14] By dipping into its evolutionary reserve DNA, species that survived this extreme global warming eventually evolved into dinosaurs, which dominated the planet for about 165 million years. About 66 million years ago, a giant asteroid the size of Mt. Everest struck the Earth at a velocity of 45,000 mph.[15-17] It left an impact crater over 100 miles wide that is now buried under the Yucatan Peninsula in Mexico. Over 70 percent of all species, including the dinosaurs, vanished because of this asteroid collision. Those not killed by the impact and its fallout perished because dense clouds of debris blocked the sun, thus halting photosynthesis and starving the life forms dependent upon it. Alligators, crocodiles, frogs, salamanders, and spiders survived; but large land animals did not. Evolution was dealt a serious setback but rebooted, thanks to the inactive DNA potential of the surviving species. In the next 10 million years following this asteroid disaster, every major animal group that is around today burst onto the scene. There was a prolific divergence of life into new forms and species that had never existed before – including flowering plants, birds, and large mammals (eventually including humans) – all made possible by calling

into play unused DNA potential that had been waiting in reserve for just such a contingency. The death of species became the birth of new species. The only mammals that appear to have existed prior to this asteroid collision were rodents that served as a food source for dinosaurs. It was only after the dinosaurs became extinct that the surviving mammals evolved into more advanced forms, including primates and humans. We owe our existence to the extinction of the dinosaurs. Mice and humans share about 97.5 percent of their DNA, which amounts to approximately 3.1 billion binary base codes. [18-20] We humans owe our existence to the untapped evolutionary reserve of mice. If an even greater disaster ever wipes out all life forms except for unicellular organisms, evolution would recreate itself. Amoebae, algae, and fungi contain enough inactive binary DNA coding to create every species that have ever lived or ever could live on Earth.

The Cambrian Explosion

DNA evidence suggests that the first animals started to evolve around 800 million years ago and some 260 million years later there were sponges; varied seafloor creatures shaped like leaves, ribbons, and quilts; algae, flagellates, stromatolite colonies, and worm-like animals. Some of these creatures reproduced sexually. [26, 27] In only the next 11 million years evolution increased dramatically during what is called the *Cambrian Explosion*. This event was characterized by the appearance of many of the major phyla that make up modern animal life. [28-30] Newly developed species included (a) animals with defined heads and tails for directional movement; (b) animals with hard body parts like shells and spines; (c) chordates, animals with a dorsal nerve chord; (d) brachiopods resembling clams; (e) arthropods, the ancestors of spiders, insects, and crustaceans; (f) mollusks; (g) segmented worms; and (h) species that burrow into the sediments of the seafloor rather than lying on top of it. During the Cambrian Explosion, the proliferation of new species far outstripped the ability for them to have been created by natural selection. The only explanation for this evolutionary explosion is that animals have built-in abilities to change the expression of their genes by switching on inactive genes and switching off formerly active ones.

A Universal Template

A universal DNA program in which each species accesses only its own sub-module provides unlimited potential for the adaptation of every form of life. This preprogramming ensures that every species carries in its huge reserve of inactive DNA some unused sequences that are common to many other species, both present and future. It makes possible adaptive evolution through the survival of specific genes, rather than the survival of select species. It explains similarities in species that have completely different origins. Two unrelated species can, on separate evolutionary pathways, activate DNA common to both.

Unanswered Questions

There are two questions about traditional evolutionary thinking that beg for answers: (1) How was DNA created, and (2) Why does every organism always pass on to its descendants billions of inactive DNA codes whose only possible purpose can be to serve as untapped potential for new species? Natural selection takes us only as far as understanding how two parents can have offspring with characteristics of both parents, and that the resulting combined DNA may make the children better adapted to their environment than were succeeding generations. However, natural selection is not intuitive. It cannot predict which DNA codes may be required by future generations and future species.

Conclusion

Every organism comes preprogrammed with a binary encoded genetic template for what it could evolve to as a species plus endless possibilities for the evolution of new species. Darwinian natural selection plays only a small and incidental part of this complex evolutionary process.

REFERENCES

1. Mandal A. "What is DNA Polymerase?" News Medical.net.
2. McCulloch SD, Kunkel TA. The fidelity of DNA synthesis by eukaryotic replicative and translesion synthesis polymerases. *Cell Research* 2008;18(1):148-161.
3. Genome News Network.org.
4. "Human Genome Project". Wikipedia.org.
5. Stone I. Hypoascorbemia, the genetic disease causing the human requirement of exogenous ascorbic acid. *Perspect Biol Med* Autumn 1966;10(1):133-134.
6. Stone I. "The Genetic Disease, Hypoascorbemia, a Fresh Approach to an Ancient Disease and Some of its Medical Implications." *Cambridge University Press* 01 August 2014.
7. "L-gulonolactone oxidase." Wikipedia.org.
8. Gorilla Facts.org
9. Rowland D. Antioxidant therapy to protect against free radical damage implicated in coronary heart disease and cancer. *OSP Journal of Healthcare and Medicine* 2021;2(2).
10. Ruder K. "Chimp and Human Chromosomes are Compared". Genome News Network.org.
11. Genome News Network.org.
12. Reinert B. "Pufferfish Genome Reveals Nearly a Thousand Potentially New Human Genes". Genome News Network.org.
13. "Siberian Volcanic Eruptions Caused Extinction 205 Million Years Ago, New Evidence Shows". 2017 ScienceDaily.com.
14. Rampino MR, Rodriguez S, et al. Global nickel anomaly links Siberian Traps eruptions and the latest Permian mass extinction. *Scientific Reports* 2017;7(1).
15. Smith R. "Here's What Happened the Day the Dinosaurs Died". National Geographic 2016; June 11.
16. Black R. "What Happened the Day a Giant, Dinosaur-Killing Asteroid Hit the Earth". Smithsonian Magazine 2019; Sept. 9.
17. Kohl S. "A Massive Asteroid Hit Earth 66 Million Years Ago". Science360.org 2019; Sept. 15.
18. "Comparing the Mouse and Human Genomes". *NIH Research Matters* 2014; Dec. 8. National Institutes of Health.
19. "Why Mouse Matters". National Human Genome Research Institute.
20. Coghlan A. "Just 2.5% of DNA turns Mice into Men". 2002; May 30. NewScientist.com.

21. Tomkins JP. "Three-Dimensional DNA Code Defies Evolution." 2015; April 27. Institute for Creation Research.org.
22. Sherwin F. "DNA Paramedics Repair Chromosomes." 2018; July 24. Institute for Creation Research.org.
23. Sherwin F. "DNA Repair Research Reveals Astounding Complexity." 2019; August 15. Institute for Creation Research.org.
24. "DNA Polymerase". Wikipedia.org.
25. Berg JM, Tymoczko JL, Stryer L. "DNA Polymerases Require a Template and a Primer". *Biochemistry 5th ed*. New York 2020: W H Freeman.
26. Windley BF. "Precambrian". Britannica.com
27. "Early Life on Earth – Animal Origins". National Museum of Natural History.
28. Flannery TF. "Cambrian Explosion." Britannica.com.
29. Bagley M. "Cambrian Period: Facts & Information". Livescience.com.
30. Bowring SA, Grotzinger JP, et al. Calibrating rates of early Cambrian evolution. *Science* 1993; 261(5126): 1293-1298.
31. Wang J, Du PF, et al. Vis Feature: a stand-alone program for visualizing and analyzing statistical features of biological sequences. *Bioinformatics* 2020 Feb 15; 36(4): 1277-1278.

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