

Are we all Martians?

by

Carl H. Gibson

UCSD, MAE and SIO Departments La Jolla CA, 92097-0411, cgibson@ucsd.edu

Abstract

The Benner proposition is considered that life on Earth could not possibly appear spontaneously without chemical communication with other planets because the early Earth was too wet, and required crucial organic chemical steps at much high concentrations that might be provided by desert minerals, presumably on Mars, a relatively dry planet known to exchange meteors with Earth.

Background

HGD cosmology predicts organic chemistry of any complexity would evolve promptly at the time of plasma to gas transition 330,000 years after the cosmological big bang. From the Gibson turbulent combustion explanation of the big bang, followed by a short inflation period with nucleosynthesis ending at 3 minutes (the Weinberg scenario), a total mass-energy of $\sim 10^{100}$ kg should be produced. Schild (1996) showed the dark matter of galaxies is small planets $\sim 10^{24}$ kg, in stable clumps of a trillion as predicted by Gibson (1996); that is, $\sim 10^{80}$ potential hosts for the millions of organic chemistry reactions that can evolve in communicating planets with liquid water seeded by supernovae, eventually creating the incredible complexity of RNA and DNA life. With 10^{80} interacting planets (all stars are formed from the planets and exploded by the planets, spreading C, N, O stardust to all), the evolution is immediate and unlimited, well within the 2-8 million year time period between the condensation of liquid water and freezing of water on the planets. Life with intelligence and technology far beyond our own is not only possible but inevitable in this time period somewhere, possibly everywhere. Water is produced by the hydrogen-helium gas planets when the supernova oxides of the supernovae contact the hydrogen of the planets. The organic chemistry of life described by Professor Benner's paper "The standard model for the formation of Life on Earth" cannot be accomplished on Earth alone. Since Earth and Mars exchange meteors, all Earthlings are Martians and all Martians are Earthlings, as shown in Figure 1. The question is, "What is the minimum number of interacting planets necessary to produce life?". Considering the extreme complexity of organic chemistry shown in Professor Benner's paper, the answer is likely to be much larger than 2, Mars and Earth, suggested in Figure 1. In any case, the high temperatures required for organic chemistry rule out the standard cosmological model Λ CDMHC, where the first planet appears after the time when water, and even hydrogen, freezes.

Benner biochemistry requires Martian Deserts to make life



Models for planetary formation suggest that the inventory of water on early Earth did not leave *any* dry land before continental drift.



Figure 1. JC2015.19.1 (Carl H. Gibson) "Are we all Martians?"

Discussion and Conclusions

Professor Benner makes a convincing case that the origin of terrestrial life is impossible on one planet alone, certainly not on Earth alone. Adding Mars as a second planet does not resolve all of the paradoxes, but given the enormous numbers of interacting primordial planets available from HGD cosmology with the high densities existing when the planets appeared at 330,000 years, it seems likely that the answer to the question in Figure 2 is much less than the total available.

With all these interacting biochemical complexities and paradoxes, how many of the 10^{80} dark matter planets are needed for life?



- Tar paradox: Give energy to organic matter but no access to Darwinian evolution, one gets tar, not RNA building units. *Well validated, from the kitchen to the coal field.*
- Oligomer entropy paradox. Even if we get units, high concentrations needed to get oligomers.
- Water paradox. Even if we get oligomers, they are hard to make in water and, if made, are destroyed by water.
- Single biopolymer paradox. Even if we get the oligomers, the needs of catalysis contradict the needs of genetics.
- Even if RNA is a good compromise for catalysis vs. genetics, destructive catalysts >> productive catalysts.

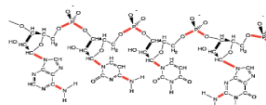


Figure 2 Benner's approach to Life origins is to follow the paradoxes.