The Evolution of Life, Probability Considerations and Common Sense—Part Three

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The Odds of a Complex Molecule

Noted astronomer Fred Hoyle uses the Rubik cube to illustrate the odds of getting a single molecule, in this case a biopolymer. Biopolymers are biological polymers, i.e., large molecules such as nucleic acids or proteins. In the fascinating illustration below, he calls the idea that chance could originate a biopolymer "nonsense of a high order":

> **At all events, anyone with even a nodding acquaintance with the Rubik cube will concede the near-impossibility of a solution being obtained by a blind person moving the cubic faces at random. Now imagine 10^{50} blind persons each with a scrambled Rubik cube, and try to conceive of the chance of them all simultaneously arriving at the solved form. You then have the chance of arriving by random shuffling at just *one* of the many biopolymers on which life depends. The notion that not only biopolymers but the operating programme of a living cell could be arrived at by chance in a primordial organic soup here on the Earth is evidently nonsense of a high order.[13]**

DeNouy provides another illustration for arriving at a single molecule of high dissymmetry through chance action and normal thermic agitation. He assumes 500 trillion shakings per second plus a liquid material volume equal to the size of the earth. For *one* molecule it would require "10^{243} billions of years." Even if this molecule did somehow arise by chance, it is still only one single molecule. Hundreds of millions are needed, requiring compound probability calculations for each successive molecule. His logical conclusion is that "it is totally impossible to account scientifically for all phenomena pertaining to life."[14]

Even 40 years ago, scientist Harold F. Blum, writing in *Time's Arrow and Evolution*, wrote that, "The spontaneous formation of a polypeptide of the size of the smallest known proteins seems beyond all probability."[15]

Noted creation scientists Walter L. Bradley and Charles Thaxton, authors of *The Mystery of Life's Origin: Reassessing Current Theories*, point out that the probability of assembling amino acid building blocks into a functional protein is approximately one chance in 4.9 X 10^{191}.[16] "Such improbabilities have led *essentially all scientists* who work in the field to reject random, accidental assembly or fortuitous good luck as an explanation for how life began."[17] Now, if a figure as "small" as 5 chances in 10^{191} is referenced by such a statement, then what are we to make of the kinds of probabilities below that are infinitely less? The mind simply boggles at the remarkable faith of the materialist.

According to Coppedge, the probability of evolving a single protein molecule over 5 billion years is estimated at 1 chance in 10^{161}. This even allows some 14 concessions to help it along which would not actually be present during evolution.[18] Again, this is *no* chance.

Cells and Bacteria

Consider that the smallest *theoretical* cell is made up of 239 proteins. Further, at least 124 different types of proteins are needed for the cell to become a living thing. But the simplest *known* self-reproducing organisms is the H^{39} strain of PPLO (mycoplasma) con-

taining 625 proteins with an average of 400 amino acids in each protein.

Yet the probability of the occurrence of the smallest *theoretical* life is only one chance in $10^{119,879}$ and the years required for it to evolve would be $10^{119,841}$ years or $10^{119,831}$ times the assumed age of the earth![19] The probability of this smallest theoretical cell of 239 proteins evolving without the needed 124 different types of proteins to make up a living cell, i.e., the chance of evolving this "helpless group of *non-living* molecules" in over 500 billion years is one chance in $10^{119,701}$.[20] Dr. David J. Rodabough, Associate Professor of Mathematics at the University of Missouri, estimated the more realistic chance that life would spontaneously generate (even on 10^{23} planets) as only one chance in $10^{2,999,940}$.[21]

Whether we are talking about giving evolution every conceivable chance to evolve a single protein molecule or the smallest theoretical cell, the odds are still impossible.[22]

In the 1970s Sir Frederick Hoyle calculated the mathematical probability that a single bacterium could be spontaneously generated. He determined the chance of this occurring was 1 in $10^{40,000}$.

Hoyle confessed what most scientists are, strangely, unwilling to confess, "The likelihood of the formation of life from inanimate matter is one to a number with 40 thousand naughts [zeros after it]. *It is enough to bury Darwin and the whole theory of evolution*. There was no primeval soup, neither on this planet or on any other, and if the beginnings of life were not random they must therefore have been the product of purposeful intelligence."[23]

But Harold Morowitz, a Yale University physicist, gave a far more realistic "probability" for a single bacterium. He calculated the odds of a single bacterium emerging from the basic building blocks necessary were 1 chance in $10^{100,000,000,000}$.[24]

This number is so large it would require a library of approximately 100,000 books just to write it out! Ponder that!

In his book, *Origins—A Skeptic's Guide to the Creation of Life on Earth*, Robert Shapiro comments concerning the probabilities calculated by Morowitz, "The improbability involved in generating even one bacterium is so large that it reduces all considerations of time and space to nothingness. Given such odds, the time until the black holes evaporate and the space to the ends of the universe would make no difference at all. If we were to wait, we would truly be waiting for a miracle."[25]

Googols and Factorials

Again, these numbers are unimaginable. That's why even scientists don't know what to do with them. Consider that a given individual's chance of winning the state lottery is about one in ten million. The odds of winning each successive week involve the multiplication of probabilities so that the odds of winning the lottery every single week of your life from the age of 18 to 99, a period of 80 years, is 1 chance in $4.6 \times 10^{29,120}$. In other words, it is infinitely more likely that you would win the lottery every week of your life consecutively, from the day you were born, without missing even one winning weekly ticket, for 80 years, than it is that we would have the spontaneous generation of a simple bacterium.[26]

Physicist Dr. Howard B. Holroyd refers to the book, *Mathematics and the Imagination*, where the authors, Kasner and Newman, name the extremely large number 10^{100}, a "googol." Noting the fact that there could only, at most, have been 4.8×10^{38} possible mutations in all the life forms throughout the history of earth Dr. Holroyd writes, "It is not possible in a

googol of operations to select at random, from the possible infinity of forms, the shapes and arrangements of the dextral and sinistral bones of even one mammal…. Let us recognize that if a result depends upon a hundred factors, and if the probability of getting each one right is 1 in 10, then the probability of getting the whole 100 right is only one in a googol."[27]

Dr. Holroyd also discusses factorial numbers. A factorial number is a number that multiplies each successive number by the next number. So ten factorial would be to multiply 1 X 2 X 3 X 4 X 5 X 6 X 7 X 8 X 9 X 10. Seventy factorial is around a googol (1.198×10^{100}). Sir Arthur Eddington estimated the total number of electrons and protons in the entire universe as approximately 3.145×10^{79}. This is infinitely less than 100 factorial, which equals 9.3×10^{157}. But when it comes to evolution, we are not dealing with 100 factorial but millions X millions factorial. To illustrate, there are 5,000 fibers in the auditory nerve of man that may be connected to the brain in 5,000-factorial ways—and probably only one is correct. The optic nerve has about one million fibers, and these may be connected to the brain in one million factorial ways. The odds they could have been connected correctly by chance cannot even be written out longhand. Holroyd proceeds to show by several other examples how absurd belief in chance evolution is. He points out that the straight hydrocarbon chain $C_{40}H^{82}$ has about 6.25×10^{13} isomers. It would be impossible for the entire human race, working full time for four billion years, just to study all the isomers of this single organic molecule of no great size.[28] (Yet it just happened to evolve by chance.) When we consider there are ten billion cells in the cerebral cortex, that there are several trillion nerve connections between cells in the brain, plus many other amazing factors, it becomes "preposterous beyond words" to believe that all this originated by chance:

> **Surely the probability of the whole body is far less than that of any of the internal organs: that of two eyes to send two images over two cables of 1,000,000 conductors each to form one image is less than that of one eye; and surely that of one eye is much less than merely taking the bones of the skeleton and placing them into their proper positions. [—which he calculates as 1 chance in approximately 5.6×10^{388}.][29]**

Notes:

13. Fred Hoyle, *The Big Bang in Astronomy*, p. 527, emphasis added.
14. Cited in Evan Shute, *Flaws in the Theory of Evolution* (Nutley, NJ: Craig Press, 1971), pp. 23-24.
15. Harold F. Blum, *Time's Arrow and Evolution* (2nd ed., Princeton, NJ: Princeton University Press, 1955).
16. Walter L. Bradley and Charles B. Thaxton, "Information and the Origin of Life" in J. P. Moreland (ed.), *The Creation Hypothesis* (IVP, 1994), p. 190.
17. Ibid., emphasis added; cf., William A. Dembski, "Reviving the Argument from Design: Detecting Design Through Small Probabilities," *Proceedings of the Biennial Conference of the Association of Christians in the Mathematical Sciences*, Vol. 8, (1991), pp. 101-145.
18. James Coppedge, *Evolution Possible or Impossible?* (Grand Rapids, MI: Zondervan, 1973); See the additional refs. in *Darwin's Leap of Faith*, p. 371
19. Coppedge, *Evolution* p.114
20. Ibid.
21. David J. Rodabough, "The Queen of Science Examines the King of Fools," *Creation Research Society Quarterly*, June 1975, p. 15.
22. Coppedge, *Evolution,* for an extended discussion.

23. Cited in *Nature*, November 12, 1981, p. 105, emphasis added.
24. Cited in Mark Eastman, Chuck Missler, *The Creator Beyond Time and Space*, (Costa Mesa, CA:TWFT, 1996), p. 61.
25. Robert Shapiro, *Origins—A Skeptics Guide to the Creation of Life on Earth*, 1986, p. 128.
26. Eastman and Missler, p. 61.
27. Howard Byington Holroyd, “Darwinism is Physical and Mathematical Nonsense” *Creation Research Society Quarterly.* June 1972, pp. 6, 9.
28. Ibid., p. 10.
29. Ibid, p. 12.