

Faith Pulpit

‘And Man Became a Living Soul’: Powers, Probabilities, and Proteins- A Critique of Evolutionary Random Development of Living Systems

Evolutionary scenarios usually propose some form of random chance, natural selection, and/or long time spans for the development of living systems. These scenarios include numbers which are both smaller and larger than those in common use. To understand these scenarios, a brief review and critique of such numbers may be helpful, and an understanding of powers, probabilities, and proteins is necessary.

Powers

For ordinary things the familiar numbers are adequate (1 through 1,000 or even 1,000,000). However, for the very small and the very large, ordinary numbers are inconvenient, and scientific notation is used. For example, the following quantities are easily expressed in scientific notation as “orders of magnitude,” but would be very difficult to express as ordinary numbers:

Mass of an electron 9.11×10^{-31} kilograms

Diameter of a living cell 2×10^{-8} inches

Mass of water 1.0×100 grams per cc

Distance to the sun 9.3×10^7 miles

Speed of light 3.0×10^8 meters per sec

National debt 5×10^{12} dollars

30 billion years 1×10^{18} seconds

Atoms in a mole 6.02×10^{23} atoms

Electrons in the perceived universe 1×10^{80} electrons

The exponents shown are powers of ten that represent the number of zeros that follow the given figures or precede them, if the power is negative. The magnitude of these numbers ranges from very tiny to very large. But even the smallest or greatest of them does not compare with the infinitesimal probabilities involved in explaining origins by the evolutionary hypothesis of random chance and natural selection.

Probabilities

Dr. George Wald, in defending the evolutionary hypothesis, has stated:

The important point is that since the origin of life belongs in the category of at-least-once phenomena, time is on its side. However improbably we regard (an) event, . . . given enough time it will almost certainly happen at least once. . . . Time is in fact the hero of the plot. . . . Given so much time, the ‘impossible’ becomes possible, the possible probable, and the probably virtually certain. One has only to wait: time itself performs miracles”¹ (emphasis added).

The idea of time being a “hero” has also been presented by Dr. K. E. Boulding in an article entitled “The Importance of Improbable Events.” He wrote:

“That which has a probability of one percent per year, such as a 100-year flood, has a 66 percent chance of occurring in 100 years and a 99.9 percent chance of occurring in 1,000 years.”²

Such statements are deceiving when used in reference to origins. Although they are mathematically correct, the probabilities usually used are relatively large compared to probabilities that apply to evolutionary scenarios and actual time periods.

For independent repeated trials of an experiment with two outcomes, success (p) or failure (q), and for relatively high probabilities, let p = probability of success and q = probability of failure. Then $q = 1 - p$, and the probability (b) of a number of successes (k) from a number of repeated trials (n) with a probability of p for each trial is $b = {}^n C_k p^k q^{n-k}$.³

The probability of no successes, or $k = 0$, is $b = q^n$, and therefore the probability of at least one success is $b = 1 - q^n$.

If the probability of the event were 0.1% instead of 1.0%, as used in Dr. Boulding’s statement, the “certainty” would not be so certain. In this case $p = 0.001$, and $q = 0.999$. For 100 trials $1 - q^n = 1 -$

$(.999)^{1000} = 1 - 0.3677 = 0.6323$, and $b = 63.23\%$.

With this tenfold decrease in probability, repeated trials do not produce the certainty which Dr. Boulding's statement might lead one to believe. Even a probability of 0.1% is extremely large when compared to the probability of producing any form of living system, as will be shown.

Proteins:

Proteins are the basic building blocks of living systems. All the hype about DNA clouds its function, which is to direct the production of proteins by the nucleotide and gene structure. Proteins are made of amino acids. Some proteins contain thousands of amino acids.

Now, the probability of producing even a very small protein by random chance is extremely small. In fact, it is infinitesimally small.

Assume the existence of a protein molecule of only 100 amino acids (a very small protein molecule) that uses only the 20 amino acids available. For this assumed small protein, the number of possible arrangements of these amino acids would be 20^{100} . This may be evaluated as $20^{100} = 10^{130}$ (approx).

Only one of these possible arrangements will provide the specific protein needed. So, the probability of random chance production of a 100-amino-acid protein is $p = 1 / 10^{130} = 0.00000130$ zeros 1 = probability of success, then, $q = 1 - p = 0.99999130$ nines = probability of failure.

For repeated random trials, the probability for at least one success would be $1 - q^n = 1 - [1 - 1 / 10^{130}]^n$.

With the above values of p and q , this equation cannot be readily solved. Since the bracket value would be very large, an ordinary hand calculator could not be used. However, using the largest number of 9's which can be readily entered on a hand calculator, a probability of failure of $q = 0.999999999$ can be used, which results in a $p = 0.000000001$.

And, for $n = 100$, $1 - q^n = 1 - (0.999999999)^{100} = 0.0000001 = 0.00001\%$.

For $n = 1,000$,

$1 - q^n = 1 - (0.999999999)^{1000} = 0.000001 = 0.0001\%$.

Even with this larger possibility, $p = 0.000000001$, compared to $p = 1/(10^{130})$, there is no "certainty" that a specific event would occur. Now, with $p =$, $1 - q^n$ would be so small it would be undefined!

To offset this improbability, the evolutionary theory demands long time spans, which is another way of saying that many more repetitions than 100 or 1000 are necessary. Even if repetitions were repeated a billion times a second since the beginning of evolutionary time (30 billion years), the probability

would still be infinitesimally small. This statement can be approximated as follows:

The number of seconds in 30 billion years, $(10)^{18}$ times one billion $(10)^9$, is 10^{27} .

$$n = 10^{18} \times 10^9 = 10^{27}$$

$$1 - qn = 1 - (0.999...130 \text{ times}..)10^{27} \text{ or, } 1 - qn = 1 - [1 - 1 / 10^{130}]10^{27}.$$

This equation cannot be easily solved, even with a large computer. It is evident, however, that the order of magnitude of the numbers involved makes the probability of such an event infinitesimal!

Dr. Wald is wrong! Time is not the “hero” of evolution, but is impotent to make an impossible event (evolution) possible.

These calculations only show that natural causes random chance, natural selection and long time spans cannot explain either the origin or the development of living systems. The probabilities are infinitesimal even with evolutionary time scales. If natural causes cannot explain the origin and development of living systems, a non-natural cause must be evident. Such non-natural cause is clearly presented in Scripture.

“And the Lord God formed man . . . and breathed into his nostrils the breath of life, and man became a living soul.” Genesis 2:7

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Dr. David Boylan was a distinguished educator, pastor, and leader with a lifelong commitment to advancing biblical education and ministry. He served faithfully as the president of Faith Baptist Bible College and Theological Seminary from 1974 to 1980, where he focused on spiritual growth, academic excellence, and the training of servant-hearted leaders.

Known for his dedication to sound doctrine and a deep love for the Word of God, Dr. Boylan influenced countless students and colleagues through his teaching and administrative leadership. In January 2025, Dr. Boylan was promoted to Heaven. His legacy was marked by a steadfast commitment to equipping others to serve Christ effectively.