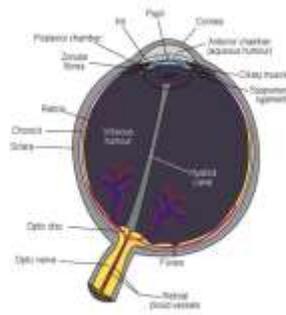
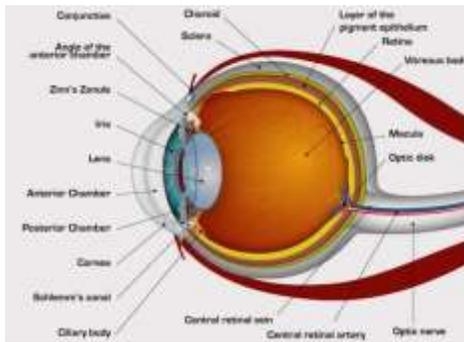


Can Evolution Produce an Eye?



"To suppose that the eye, with all its inimitable contrivances for adjusting the focus to different distances, for admitting different amounts of light, and for the correction of spherical and chromatic aberration, could have been formed by natural selection, seems, I freely confess, absurd to the highest possible degree... The belief that an organ as perfect as the eye could have formed by natural selection is more than enough to stagger anyone."

—Charles Darwin

(E. Shute, *Flaws in the Theory of Evolution*, Craig Press, Nutley, New Jersey, 1961, p. 468).

Can Evolution Produce an Eye? Not a Chance!

by Dr. David Menton Answers in Genesis August 19, 2017
(First published in *St. Louis MetroVoice* 4, no. 4, April 1994)

The human brain consists of approximately 12 billion cells, forming 120 trillion interconnections. The light sensitive retina of the eye (which is really part of the brain) contains over 10 million photoreceptor cells. These cells capture the light pattern formed by the lens and convert it into complex electrical signals, which are then sent to a special area of the brain where they are transformed into the sensation we call vision.

In an article in *Byte* magazine (April 1985), John Stevens compares the signal processing ability of the cells in the retina with that of the most sophisticated computer designed by man, the Cray supercomputer: While today's digital hardware is extremely impressive, it is clear that the human retina's real time performance goes unchallenged. Actually, to simulate 10 milliseconds (one hundredth of a second) of the complete processing of even a single nerve cell from the retina would require the solution of about 500 simultaneous nonlinear differential equations 100 times and would take at least several minutes of processing time on a Cray supercomputer. Keeping in mind that there are 10 million or more such cells interacting with each other in complex ways, **it would take a minimum of 100 years of Cray time to simulate what takes place in your eye many times every second.**

If a supercomputer is obviously the product of intelligent design, how much more obviously is the eye a product of intelligent design? And yet, evolutionists are dead certain that the human eye (and everything else in nature) came into being by pure chance and the intrinsic properties of nature!

Evolutionists occasionally admit that it is difficult for even them to believe such a thing. Ernst Mayr, for example, has conceded that:

It is a considerable strain on one's credulity to assume that finely balanced systems such as certain sense organs (the eye of vertebrates, or the bird's feather) could be improved by random mutations. (*Systematics and the Origin of Species*, p. 296)

Evolutionists rarely attempt to calculate the probability of chance occurrence in their imagined evolutionary scenarios. While there is no way to measure the probability of chance occurrence of something as complex as the eye, there are ways to calculate the probability of the chance occurrence of individual protein molecules that are essential to life. Over 100,000 different kinds of proteins have been identified in the human body, and each has a unique chemical composition necessary for its own particular function.

Proteins are polymers, whose chemical composition depends on the arrangement of many smaller subunits called amino acids. There are 20 different kinds of amino acids that are used to construct the proteins of all living organisms, including man. These amino acids are linked together end-to-end (like a string of beads) to form a single protein macromolecule. The average protein consists of a string of 500 amino acids. The total number of combinations of 20 different amino acids in such a string is, for all practical purposes, unlimited. Each protein in our body, however, must contain a specific sequence of

amino acids if it is to function properly. It is the task of the genetic system in our cells to organize the assembly of the amino acids into precisely the right sequence for each protein.

Proteins have been called *informational* macromolecules because their amino acid sequence spells out information, in much the same way as the letters of the alphabet can be arranged to form a sentence or paragraph. We can appreciate the improbability of randomly assembling one of the essential proteins of life by considering the probability of randomly assembling the letters of the alphabet to form even a simple phrase in English.

Imagine if we were to try to spell out the 23 letters and spaces in the phrase “THE THEORY OF EVOLUTION” by using the evolutionary principle of *chance*. We might proceed by randomly drawing characters from a Scrabble set consisting of the 26 letters of the alphabet plus a space (for a total of 27). The probability of getting any particular letter or space in our phrase using this method would be one chance out of 27 (expressed as 1/27). The probability of getting all 23 letters and spaces in the order required for our phrase can be calculated by multiplying together the probability of getting each letter and space ($1/27 \times 1/27 \times 1/27$ —for a total of 23 times). This calculation reveals that we could expect to succeed in correctly spelling our phrase by chance, approximately *once* in eight hundred, million, trillion, trillion draws! If we were to hurry the process along and draw our letters at the rate of a billion per second, **we could expect to spell our simple little phrase once in 26 thousand, trillion years!** But even this is a “virtual certainty” compared to the probability of correctly assembling any one of the known biological proteins by chance!

The 500 amino acids that make up an average-sized protein can be arranged in over 1×10^{600} different ways (that’s the number ONE followed by 600 zeros)! This number is vastly larger than the total number of atomic particles that could be packed into the known universe. If we had a computer that could rearrange the 500 amino acids of a particular protein at the rate of a billion combinations a second, we would stand essentially no chance of hitting the correct combination during the 14 billion years evolutionists claim for the age of the universe. Even if our high-speed computer were reduced to the size of an electron and we had enough of them to fill a room measuring 10 billion cubic light years (about 1×10^{150} computers!), they would still be exceedingly unlikely to hit the right combination. Such a “room” full of computers could only rearrange about 1×10^{180} combinations in 300 billion years. In fact, even if all the proteins that ever existed on earth were *all different*, our “room” full of computers would be exceedingly unlikely to chance upon the combination of *any one of them* in a mere 300 billion years!

Evolutionists counter that the whole probability argument is irrelevant since evolution is utterly purposeless, and thus never tries to make anything in particular! They insist, moreover, that “natural selection” makes the impossible, possible. But evolutionists were vigorously challenged on this claim by mathematicians in a symposium held at Massachusetts Institute of Technology (the proceedings were published in the book, *Mathematical Challenges to the Neo-Darwinian Interpretation of Evolution*). Murray Eden, Professor of Engineering at M.I.T. said:

The chance emergence of man is like the probability of typing at random a meaningful library of one thousand volumes using the following procedure: Begin with a meaningful phrase, retype it with a few mistakes, make it longer by adding letters; then examine the result to see if the new phrase is meaningful. Repeat this process until the library is complete.

I will leave it to the reader to consider the probability that an intelligent Designer and Builder can intelligently design and build an eye.

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