

# The Concept of Mutual Necessity and the Absurdity of the Theory of Evolution

Dr. Chuck McGowen

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In his defense of the theory of intelligent design, Professor Michael Behe, writing in his best selling book *Darwin's Black Box*, introduced the concept of "irreducible complexity." His focus was on the multiple, complex, subcellular chemical reactions possessing such a high degree of interdependency that one could not possibly exist apart from the other, or evolve singularly. He then utilized that starting point to show the improbability, yes even the impossibility of organic evolution by chance over any currently proposed amount of time. This paper will introduce another concept which the author labels "mutual necessity" and which is posited to the same end; that is to show the improbable nature of the evolutionary theory.

*Mutual necessity* implies an intimate interdependence between two or more entities. To illustrate the point, consider the mutual necessity of each of the entities involved when a person hears a grandfather clock strike twelve. There is the clock itself, the air between the clock, the person hearing the clock, the ear of that person and the brain which interprets the sound. This is a continuum of cause and effect and as the effect is utterly dependent upon its cause, so the cause finds no purpose for its existence apart from its effect; in fact aside from its effect it is not a "cause" in the first place, thus their mutual necessity. C.S.Lewis put it this way, "So it is with the life of souls . . . fixed laws, consequences unfolding by **causal necessity**, the whole natural order, are at once the limit within which their **common life** is confined and also the whole condition under which any such life is possible." (*The Problem of Pain*, page 34-emphasis added). His use of the words "common life" and "causal necessity" echo the concept which is about to be discussed.

## The Illustration

Within the grandfather clock one has innumerable parts each interdependent and mutually necessary. A pendulum is set into motion by virtue of a main spring which moves the pendulum back and forth as it unwinds. The pendulum motion moves a series of gears, or cog. wheels which in turn move the hour and second hands on the face of the clock. Without the pendulum the spring is unnecessary, without the cog wheels the pendulum becomes unnecessary. Without the hands the cog wheels serve no purpose. Without the hammer the clanger makes no sound but without the clanger the hammer is unnecessary. If the metal in the clanger does not vibrate a sound wave is not perpetuated through the medium of air but apart from the medium through which its sound is sent the clanger and its vibrations become unnecessary. Thus each part in the process is dependent upon the existence of the preceding part or relies upon that part which follows its specific role in the announcement of twelve o'clock.

Air is the medium that transmits the sound which the clanger made at midnight. The sound is transmitted by way of waves that are set in motion by the vibration of the metal in the clanger after it has been struck by the hammer. As the metal in the clanger moves outward it compresses the air and forms a wave, much like one sees in pond water when one drops a pebble into it. The wave, and subsequent waves move as molecule after molecule of air (oxygen, nitrogen, carbon dioxide, etc.) is compressed and then released in a rhythmic fashion until the sound waves enter the external ear of that person who is about to hear the clock's sound. Each molecule of air in the in the propagation of the sound wave is of mutual necessity to the one following, for if it had not moved neither would the one that followed.

Once the air waves reaches the external ear and pass down its canal they strike the ear drum (I.e. tympanic membrane) and set it into a vibratory motion with the same frequency as that which was sent from the clanger and through the medium of air. Without the presence of the ear drum neither the external ear nor the medium of air would be of necessity, for the whole purpose of the air in this case was to transmit the rhythmic vibrations from the grandfather clock's clanger. When the ear drum begins to vibrate its movements are transmitted via three minute ear bones (I.e. hammer, anvil and stapes) located in the middle ear, to another smaller

drum that is located between the middle and internal ear. That drum then begins to vibrate and send waves through a structure (I.e. the cochlea) which is fluid filled and which contains fine nerve endings that in turn are set in a rhythmic motion by the sound wave being sent through the cochlear fluid. Every part of that mechanism is of mutual necessity solely because of its adjacent part in the sound transmission process. The small nerve endings within the cochlea ultimately combine to form the 8<sup>th</sup> cranial nerve (a.k.a. the auditory nerve). At this point sound waves have been converted into nerve impulses and that information is sent to a specific location in the brain where the sound is interpreted. That portion of the brain is totally dependent upon the mutual necessity of every part of the hearing mechanism from the auditory nerve to the cochlea, the drums, the ear bones, the tympanic membrane and the external ear.

Finally, the person hearing the clock strike midnight was of mutual necessity to grandfather's clock whose purpose would not have been fulfilled had the person not needed to know the time. Furthermore the person hearing the stroke of midnight may well have been the one that wound up the main spring which set the entire process in motion.

## The Application

The concept of mutual necessity is utterly fatal to the theory of evolution. That is true because of the mutual necessity which one finds between each and every part of a living cell; even one as relatively simple as an amoeba. To further illustrate the point let the reader consider the two kinds of nucleic acids that make up the information system within a living cell; a system that is absolutely vital to the cell's existence and self replication. One can even posit that the author is speaking of that first cell which the evolutionist proposes to have come into existence, out of a primordial slime by pure chance.

There are two kinds of nucleic acids, DNA (deoxyribonucleic acid) and RNA (ribonucleic acid). DNA is contained within the nucleus of the cell. Its total composite represents the literal "brain" of the cell and contains all of the necessary information for all of the cell's functions. Those individual roles include metabolism, the manufacture of proteins, cell repair, defense, excretion, assimilation of nutrients, replication, etc. Genes are made up of numerous

molecules of DNA and chromosome are made up of multiple groups of genes.

RNA is found in three varieties; messenger RNA (mRNA), ribosomal RNA (rRNA) and transfer RNA (tRNA). Each variety is of mutual necessity to one or more of the other varieties and DNA is of mutual necessity to all three. Take for example the production of a protein which is vital to cellular function.

The information necessary to make a particular protein is contained within the “cellularly omniscient” DNA. In order for the cell to manufacture this unique and vital protein the information needs to be sent to the protein fabricating plant called the ribosome and which is located outside of the nucleus within the cell substance (I.e. cytoplasm). This building complex can be likened to an automobile manufacturing plant where the assembly line must be re-tooled for each new car model. In this case the so-called “assembly line” in the ribosome is rRNA. This uniquely ordered assembly plant receives instructions on how to assemble the necessary protein from the nuclear DNA by way of mRNA. The strand of mRNA first aligns itself next to the DNA where the information is transferred much like the old punch cards in a primitive computer. Vital to this process is a highly complex enzyme called “transcriptase.” Having received that information the mRNA then travels outside the nucleus into the cytoplasm and on to the location of the ribosome. Upon entering the “protein manufacturing plant” it then aligns itself with the rRNA and retools the assembly line in exactly the proper sequence necessary to manufacture the vital protein.

The next step in the fabricating process is the gathering of the raw materials needed to construct and assemble the specific protein. This is where tRNA comes into play. This nucleic acid acts much like a trucking company that brings parts to an automobile assembly plant. The tRNA, having learned from the rRNA which amino acids will be needed to construct the specific protein, goes into various areas of the cytoplasm and collects just the right type and number of amino acids that will be needed in the manufacture of the protein. Once delivered the amino acids are fed into the template on the rRNA and a protein is thus produced.

## Logical Conclusions

It is evident from everything that was said that the tRNA is only necessary if rRNA is present and that in turn mRNA is of mutual necessity in relation to both rRNA and DNA. The information in DNA is of necessity only if the vital protein is of necessity; of course an “**unnecessary, vital** protein” is an oxymoron

What is readily apparent in this entire scheme of things is the fact that each member of this society of mutually necessary entities is an extremely complex molecule, composed of numerous parts, each of which is also of mutual necessity to the other parts. For evolution of the simplest of cells to have occurred everyone of these complex systems would have had to develop simultaneously; a scenario of the most unlikely and improbable proportions.

Each DNA molecule alone has 60,000 parts (20,000 phosphate-sugar-base units). One chromosome contains many thousands of DNA molecules (which comprise approximately 25,000 genes) tightly wound in a double strand. The human genome\_ made up of 23 pairs of chromosomes\_ has approximately 4.5 billion letters in it; letters of carbon, oxygen, nitrogen, sulfur, phosphorus, hydrogen, etc. If the DNA within human genome could be unwound and each strand laid end to end, the result would reach from Miami, FL to Seattle, WA. Every letter in that 3000 mile strand of DNA has to be properly placed in a prearranged sequence or the results will be disastrous.

One molecule of DNA is of no use by itself. It is of *mutual necessity* to all of the other DNA molecules as well as the three kinds of RNA and multiple other parts of a cell in order to fulfill its useful purpose. Given the number of parts in one molecule of DNA, the mathematical probability of its coming into existence by chance defies the imagination.

In order for DNA or RNA to function properly each of its component parts must be arranged in a proper sequence. To assess the odds of such a thing occurring one need only examine the probability that three things will be properly arranged in a prescribed sequence through a

random process. One may illustrate this by taking three blocks, with each of their six sides lettered either A, B or C, and then tossing them on the floor. One then finds that they will have aligned either as BAC, CAB, ACB, CBA, BCA, or ABC. The odds are one out of six that ABC, the prescribed sequence, will occur randomly. If one adds a fourth block D the odds rise to one out of twenty four. Add E and the odds climb to one out of one hundred and twenty, etc. The odds that 200 things will align in a prescribed sequence by chance are 1 in  $10^{364}$ . That number is one with three hundred and sixty four zeros behind it. Now that does not even approach the odds of one molecule of DNA coming into existence randomly. Recall that one molecule of DNA is composed of not of a mere 200 parts but of 20,000 phosphate-sugar-base units and each of those units is of mutual necessity to the other 19,999.

This is the kind of information that needs to be presented in the on-going classroom debate regarding the theory of spontaneous macro-evolution versus that of intelligent design in the venue of origins. When logically examined utilizing well understood scientific standards and principles, the theory of evolution falls extremely short of that which is posited by the adherents of the theory of Intelligent Design. The concept of *mutual necessity* should prove to be quite useful in this educational endeavor.