

# The Origin of Conceptual thought in Living Systems

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It is almost universally taught in the high schools and universities of Europe and North America that a truly scientific view of the origin of life must be concerned solely with its origin from the properties of inorganic matter over huge time spans unaided by any extra-material factor or factors. If factors beyond the properties of inorganic matter are invoked in any theory of the origin of life, then that whole theory is today rejected out of hand as unscientific.

Since no one (scientist or not) really knows how life originated from inorganic matter, however, such prejudging of the whole issue of origins must of necessity be highly unscientific itself, for it pronounces dogmatically on subjects still outside the knowledge of science.

## **Isomerism**

Trained scientists in both the West and the East are well aware of the fact that both right and left-handed forms of certain molecules (dextro and levooptical isomers) possess an identical state of order, and so cannot possibly be separated by any unaided chemical means.

Left-handed amino acids and right-handed sugars are both necessary for living systems, but ordinary chemical reactions cannot supply them. Only the information in molecules that can recognize patterns can sort out the left from the right forms.

For the synthesis of optically pure-handed forms, information leading to pattern recognition must be available, and is found on the DNA molecule or its products. The reason for the necessity of specific handed forms for all biosynthesis becomes clear when it is realized that the DNA molecule stores its information, not merely in

sequence along the molecule, but in three dimensions rather than in just two. It only recently has been shown that, if the information on the DNA molecule were stored in just two dimensional linear sequences such as would be necessary if the mixture of forms were used in biology, the molecule would have to be thousands of miles long to accommodate all the information which life needs. However, with the addition of the third dimension to the chemistry of life, the same amount of information can be stored within tiny cells in three dimensions rather than in two.

### **Conceptual Information**

Since virtually all forms of life show specific orientation—either left or right—and all forms of life have their equivalent of the DNA molecule as a reservoir of information, conceptual information must have played its role in origins so as to supply the third dimension required for the super-miniaturization of information storage and retrieval, in addition to standard organic chemistry, time, and energy. Life's origin must then have occurred under the influence of conceptual information somewhere down the line, thus enabling the separation of right from left-handed molecules of identical state of order. If this conceptual information could not arise directly from the material properties of matter, then surely it is a perfectly justified scientific question to ask just where this conceptual information might have originated.

Conceptual information of the type necessary to "finance" life's codes, languages, and concepts must be carefully distinguished from Claude Shannon's type of information, which consists of mere surprise effects without any necessity of conceptual content. That is, "information," according to Shannon, does not need to contain any code, language, or purpose such as is understood in the normally accepted sense of the term "information." "Information" in the Shannon sense of the term certainly can arise from concept-free inorganic matter, but it is non-conceptual in nature and has never been shown to be in a position to resolve any molecular forms. It is, therefore, "unscientific" to invoke non-conceptual mere surprise effects as a factor active in the origin of life, which is certainly a matter of concepts and not mere surprise effects. For the DNA molecule builds the concepts of the biological machinery of life, which are superbly conceptual, and, indeed, purposeful. Certainly conceptless mere surprise effects, such as the Shannon-type information, would be useless as a source of the purposeful language conventions and meaning of the DNA molecule, which are vital for the construction of concept-laden organs such as kidneys or livers, not to mention four-chambered hearts.

### **Confusion Over the Definitions of "Information"**

Confusion in assessing the importance of "information" in origins theories is due to the fact that the term "information" has been reduced by Shannon to non-conceptual surprise effects, without most non-experts in this area of knowledge having noticed the fundamental change in meaning. One is, therefore, speaking of two fundamentally different subjects, when using the term "information," often without knowing this fact. It is just this type of confusion which plays its hidden role in the basis of Manfred Eigen's important work on the origin of life. Eigen postulates in effect that life's conceptual information and its information storage and retrieval machinery arose spontaneously from inorganic matter and that the non-conceptual information arising spontaneously from matter stands in for fully conceptual information in the origin of life. Eigen insists repeatedly that information "arises," thus demonstrating that he really means conceptless information in line with Shannon, but not the concept-filled purposeful information such as is generally understood under the term "information." Thus, a whole expensive research program is built on confusion in word-use. As far as I am aware, he nowhere clarifies this grave confusion. **It must be kept firmly in mind that inorganic matter contains none of the code and language concepts on the basis of which the DNA molecule functions.** Inorganic matter certainly contains no purposeful concepts such as those necessary for, say, the synthesis of counter-current flow systems in kidneys or three-dimensional structures such as allow the hemoglobin molecule to supply the body with oxygen.

#### **Origin of Conceptual Information**

This leaves us finally with the grand question of the origin of the concepts of life's information. The fact that Shannon's conceptless-type information can arise spontaneously from inorganic sources does nothing to explain the origin of the purposeful concepts of biology and of the type of information residing on the DNA molecule. Confusion on just these points has allowed Darwinism to be plausible to materialists world-wide even today. Darwinism thus is supposed to be "scientific" because it appeals to nothing else but the "Here and Now." It admirably suits materialistically minded modern man. This point alone would explain the hold Darwin still has on modern world thought, in spite of the total lack of scientific evidence for its views on origins and macroevolution, both in chemistry, in geology, and in the fossil record.

This then leaves us with one last vital question on the origin of life: How does one produce the purposeful type of information required to construct any machine—biological or mechanical? We know of only one answer to this question to date. That

answer says that the conceptual type of (*begriffliche*) information necessary for the production of the handedness of life arises to date exclusively in organs which function according to the principles extant in the brain of higher biological organisms, and which generate conceptual thought.

Sir John Eccles has shown that the human brain works in a three-dimensional columnar system which gives rise to the continuity of individual consciousness, which characterizes at least the human brain and probably to some extent, at least, the consciousness of the apes and maybe certain whale-like mammals. It may be necessary to extend this list to certain parrots, which seem to show very high states of consciousness and intelligence. Obviously, until the exhaustive nature of consciousness is more fully understood than today, it will not be possible to construct any electronic machine which possesses similar properties to those of consciousness and which produces conceptual thought in the development of language and codes such as those stored on the DNA molecule.

The grand question in origins, then, is whether codes and languages as such ever arise by chance, and selection over long periods of time in inorganic matter. To invoke natural selection as the source of such conceptual information or thought constitutes a huge begging of the whole question. For natural selection to occur in any plane, life and its concepts must already pre-exist. Thus, to explain the origin of life together with its concepts and selection of molecular forms by any methods which presuppose the prior existence of life, is a huge begging of the whole question. Life as we know it could not have started as a mixture of forms, which then, by natural selection, performed the separation of forms. The development of other concepts on the DNA molecule would require the origin of the concepts we are trying to explain.

### **Conclusion**

Thus, we come to the conclusion that there is no getting around this "chicken or egg" type of problem. We are forced to come back to basics and assume that there must have been in the beginning—at the act of creation—an organ of the kind that makes the human brain tick (but infinitely more powerful, of course) to generate the concepts of biology on a much larger scale than the human brain can ever develop.

Now that it is known that the DNA molecule stores its information not linearly but in three dimensions, we understand that life could not, on theoretical grounds, ever have originated from inorganic matter alone. Equal amounts of different forms of

DNA could never have functioned as an information storage and retrieval system. Therefore, matter alone, with only chemistry to aid it, could never have produced any form of life as we know it.

For these reasons, the Biblical report on the origin of life is right on the mark when it states that man, with his brain and ability to speak and to develop conceptual thought, was created in the image of God the Creator. The ability of the human brain to invent and conceive concepts such as those of language is directly coupled to the ability of people like Sol Spiegelman and Arthur Komberg to apply conceptual thought to the synthesis of a relatively simple form of life. They merely copied the concepts which the Creator had already delivered to them in the natural virus! But man has the ability to develop conceptual thought just like the Creator Himself, but on an infinitely reduced scale.

This, then, provides us with the solution to the problem of the origin of conceptual thought, such as is necessary for the origin of life.

**\* Dr. Wilder-Smith has three earned doctorates and over 45 books to his credit. He is a leading creationist scientist now living in Switzerland.**

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