METEORITES, MAN, AND GOD'S PLAN

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Unregenerate man has consistently substituted his own willful desires for God's perfected plan. The Apostle Paul testified, "When they knew God, they glorified Him not as God, neither were thankful; but became vain in their imaginations, and their foolish heart was darkened" (Romans 1:21).

The tower of Babel was the first of many futile attempts to reach heaven and thus gain immortality through man's own strength rather than obedience to God. Later on during the Dark Ages, mystical potions called "the elixir of life" or "the fountain of youth" were sought in the hope of attaining eternal life, rejecting God's clear plan of salvation through faith in His Son.

In our own time the current interest in, and search for, extra-terrestrial life, so expensive in terms of scientific manpower and taxpayer's money, has overtones of the same God-rejecting theme. A related area of lively interest is the synthesis of life, which Dr. Charles Price, president of the American Chemical Society, has proposed as a "national goal."

The search for life beyond the earth involves astronomical observation, monitoring of radio waves, and extensive plans for space exploration. So far, the only extra-terrestrial *matter* (as opposed to 1ight and radio waves which are *energy)* available for study by earth-bound scientists are the meteorites. Numerous carbonaceous meteorites have been submitted to careful and rigorous examination for evidence of life elsewhere in space,

The present intensity of interest in this research is reflected in the large proportion, over 10%, of the papers presented at the 1965 annual fall meeting of the National Academy of Sciences which were concerned with analyses of meteorites for possible traces of indigenous biological activity. This percentage is extremely high when the breadth of interests within the Academy are considered.

The studies indicate that the possibility of contamination of the meteorites after arrival in the terrestrial environment is extremely difficult to exclude completely, but that certain carbonaceous meteorites apparently do contain indigenous organic molecules. Nagy, *et al,*[1] reported that they extracted optically active compounds from the Orgueil meteorite, and cautiously suggested biological activity of indigenous origin. Hayatsu[2] was unable to duplicate the results of Nagy, *et al,* and demonstrated that experimental errors could account for their observations.

On the basis of morphological evidence, other scientists[3] have interpreted organized elements in carbonaceous chondrites as fossils, Indeed, in order to circumvent the thorny problem of the origin of life in evolutionary theory, it has sometimes been suggested[4] that the primeval source of earthly life, from which it is postulated that all other life evolved, was a meteorite contaminated with some form of extremely resistant spore or virus. This postulate obviously leaves unsolved the question of the ultimate origin of life.

Very recently, however, scientists from the University of Chicago and Argonne National Laboratory have reported[5] that the identity and distribution of organic compounds in meteorites is remarkably close to the mixture formed spontaneously in a laboratory when the proper proportions of hydrogen, oxygen, and carbon are brought together at about 300°C.

Formation of the organic compounds does not require a source of radiant energy such as ultraviolet light, gamma rays, or electrical discharge, and even more significant, the organic compounds formed are definitely *not* products of living organisms or cells. This last aspect of the discovery, obviously unfavorable to proponents of life in "outer space," was omitted from the accounts in the scientific press[6].

This report leaves without a shred of evidence those who claim a biotic origin for organic compounds in meteorites, the only extra-terrestrial material available for direct examination and analysis. Perhaps equally important, the position of Biblical Christianity, that of acceptance of scientific *data,* but rejection of atheistic *interpretations* of that data, is seen to be fully justified.

Only God knows what will be the ultimate outcome of these efforts to synthesize living organisms or to find them in space. As David put it, "For with thee is the fountain of life" (Psalms 36:9). Only God knows how deeply finite man will be permitted to delve into these mysteries of life. There are Scriptural indications that the limitation of man's dominion is the earth (Genesis 1:28; Psalms 115:16) although God has already allowed 1imited exploration beyond it.

Humanly speaking, the search for extra-terrestrial life by the exploration of space, dependent mainly on continued financial support and technological development, is a far more feasible project than the synthesis of life. The obstacles to the synthesis of life are neither financial nor technological, but are due to a fundamental in-

ability to bridge the enormous gap between animate and inanimate matter.

As a Christian and a biochemist, I do not believe that God will allow these obstacles to be overcome, nor do I believe that life will ever be found beyond the earth. God's character and God's plan have not changed since He declared: "I am the Lord: that is my name: and my glory will I not give to another" (Isaiah 42:8).

References

1. B. Nagy, *et al., Nature,* 202,228 (1964).
2. R. Hayatsu, *Science,* 149, 443 (1965).
3. F. L. Staplin, *Science,* 150. 385 (1965).
4. See, for instance, R. B. Brown, *Biology,* D. C. Heath and Company, Boston, (1961) p. 520.
5. M. H. Studier, R. Hayatsu, and E. Anders, *Science,* 149, 1455 (1965).
6. *Chemical and Engineering News,* October 25, 1965 p. 38, and *Industrial Research,* November, 1965, p. 46.

BOOK REVIEW

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Phenomenon of Man by Teilhard de Chardin
Harper Brothers, 493 33rd Street
New York City, 1959, 318 pp. No. Illus. ($5.00)

Chardin undoubtedly has aroused the enthusiasm of those who would like to harmonize a spiritual concept of life with the presumed findings of modern science.

First he claims evolution has not been properly understood because the irreducible psychic and spiritual element has been ignored. Thus he shows how intelligence varies in species in proportion to the size of the brain. He then calls for a Platonic type of classification by the "souls" of the species rather than an Aristotelian one by outward features familiar to us from the days of Linnaeus. (pps. 141-152)

He deals with phenomena in terms of a "world-soul"; and according to his "pleroma thinking" when souls become alive through salvation, there will be a new realization of "soul-life" throughout the universe.

He argues that the New Testament clearly teaches what might be called "pleroma thinking" about Christ as "the fulness of Him that filleth all in all." (Ephesians 1:23). In this respect he follows Leibnitz, Kant, Hegel and Schelling who maintain that spirit and matter are only different aspects of one and the same "world soul or world stuff." As Duyvené de Wit says somewhere, "Teilhard's cosmology may be termed 'evolutionistic Schellingism'."

Chardin's writings have a unique quality—a vitality and vivid power such that his biology, astronomy, paleontology and history glow and throb in a mental cathedral of luminous interrelated coherence. Thus in the chapter "Demeter" of the section "The Approach of Time." (pp. 152-160) we find "a great calm seems to be reigning (at the end of the Tertiary) . . . fertile steppes and dense world wide forests . . . Myriads of antelopes and Zebras, a variety of proboscidians in herds, deer with every kind of antler, tigers, wolves, foxes, and badgers . . . the landscape is not too dissimilar from that which we are today seeking to preserve in National Parks . . . a period of calm profusion. The mammalian layer has spread out. Yet evolution cannot be stopped. Something, somewhere, is unquestionably accumulating and ready to rise up for another forward leap. But what? And where?" Chardin then applies his thermometer of consciousness to find where the sap is flowing and the psychic tension increasing at the base of the nervous system. "In what region of the biosphere in the Pliocene period is there a sign of rising temperature?", he asks.

In the insects a "cephalic concentration of nerve ganglions goes hand in hand with an extraordinary wealth and precision of behavior." And yet they are "pathetically involved and struggling in a blind alley . . . First of all insects are too small. For quantitative development of the organs; an external chitinious skeleton is a bad solution . . . The insect cannot grow . . . without becoming dangerously fragile . . . Our own cleverness is dumbfounded by the extreme precision of their movements . . . Looked at more closely, this perfection is conditioned by the extreme rapidity with which their psychology becomes mechanized and hardened."

In the mammals however "instinct is no longer narrowly canalised, as it flutters, in the spider or the bee, paralyzed to a single function. Individually and socially it remains flexible. It takes interest, it plays . . . no longer completely the slave of its phylum . . . Around it an aura of freedom begins to float, a glimmer of personality. And it is in this direction that the possibilities presently crop up."

Chardin speculates that the luxury of achievement distinguishing the magnificent antlers on the foreheads of stags, the lyre shaped horns on the heads of antelopes mark these creatures for