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SHOULD MACROEVOLUTION BE TAUGHT AS FACT?

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The title question of this article is examined in light of evidence from morphology, classification, natural selection, mutation, biogeography, and anthropology. The author concludes that evolution theory is inadequate and certainly cannot be considered as a "fact." The author did not have the objective of thorough discussion of special creationism, but numerous "leads" to creationist literature are supplied during review of each topic.

A teaching professor in a college biology department has an awesome responsibility, for science is a "sacred cow" in our science-oriented civilization, and he influences the minds of numerous students. Many students may perhaps never seriously question the validity of what they are taught; most of them have preconceived ideas that have not been examined critically.

Students tend to accept the ideas they are taught if such ideas are said to be basic to a particular discipline. However, certain ideas can be said to explain reality; and yet, after further analysis and questioning. these ideas may be demonstrated to be contrary to reality. Therefore, the student faces the alternatives—acceptance or rejection, and as stated in an earlier paper:

> Therefore when a student of the sciences is presented a controversial principle or [explanation of a] phenomenon or the interpretation of [data], he should expect the presentation to be as close to truth (reality) as is humanly possible and that if there are two opposing views, both will be presented with the evidences for and against. If this is done, the student is then in a position to contemplate (one of the finest of all human endeavors) and attempt to draw his own conclusions. Unfortunately in many cases, the student is presented only one side of the picture and often the view is quite distorted.
>
> If two interpretations of a principle are of such importance that both affect almost all other endeavors, the student should at least be presented both sides of the story. He may then be at such an angle to see beneath the reflections of the surface of the pool into the deeper more clear waters.[1]

Let us consider the essence and implications of a controversial concept—evolution. It is a complex of ideas which is widely accepted and is said to be a basic principle of science; and, moreover, even an established fact upon which rests the very structure of science, especially the disciplines of the life sciences and historical geology. The importance and influence of this idea is concisely stated by Savage:

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> The idea of evolution as the single most significant concept developed in the study of living organisms provides explanations for myriad biological processes and pervades every branch of biology from biochemistry and physiology to ecology and morphology. In addition, the concept has had profound impact upon thinking in every field of knowledge. Essentially, the principle of evolution implies *development of an entity in the course of time through a gradual sequence of changes from a simple to a more complex state.* The idea was originally applied to the historical development of life, and the word "evolution" was first applied to this process by the English philosopher Herbert Spencer. It is now recognized that organic evolution forms a very special part of a more general evolutionary process: The development of our universe, or cosmic evolution.[2]

Unless a student is adept at critical analysis, he cannot avoid the tendency to accept evolution as a valid explanation of reality since the concept is taught throughout the educational system.[3] Even children's books and popular books on science present evolution as an accepted fact.

Nevertheless, there have been and are today many scientists who argue against the validity of evolution and are convinced that it is not a basic principle of science that explains origins and developments, but is a religious doctrine of faith.[4] Many of these scientists have organized into societies which publish journals, e.g. The Evolution Protest Movement in Britain, and The Creation Research Society and the American Scientific Affiliation in the United States.

An increasing number of books and pamphlets are being published which propose to expose flaws in the concept of evolution.[5] However, scientific debate over the "fact" of evolution is denied by the author of one of the newest textbooks on evolution. His statements express the one-sidedness of such texts:

> The fact of evolution has not been controversial among biologists during the present century, at least no serious scholars have found need to question it in that time. Evolution as a real phenomenon is not a subject for debate, except occasionally among people who are either uninformed or for some reason anxious to impose dogma in the place of scientific learning. The study of evolution encompasses nearly all of biology, and the details of its processes, although extensively known, will draw the curiosity of investigators as long as scientific work is done.[6]

In contrast to the opinions of Eaton and other evolutionists, I shall attempt to demonstrate that evolution is **not** a fact and thus is not a real phenomenon. Hereafter the word "evolution" will refer to organic evolution; any mention of nonorganic evolution will be clearly denoted by an appropriate modifier.

A Fallacy—Use of the Word "Fact" to Establish Evolution as Reality

By repeated quotation, it can be shown that many evolutionists have confidence in the acceptance of evolution as a fact. But, what is a fact? A fact is, by definition: (1) "that which is actual, as contrasted with that which is merely possible"; (2) "actual individual occurrence"; (3) "an indubitable truth of actuality"; and (4) "an actual event" (Runes, D. D. (Editor) *A Philosophy of Science,* 1960, Sixteenth Edition, revised. Philosophical Library, N. Y., p. 107). Furthermore, that which is actual exists or, in other words, actually is reality. Therefore, something is factual if there is evidence which the truth of its actuality may be established beyond reasonable question or doubt.

Scientists attempt to understand and reveal the essence of natural (material) phenomena. Fundamental to science is the making of careful observations and collection of data. This is accomplished by perception via the senses, with or without use of instruments that are extensions of the senses. The data provide information that can be systematized and expressed as relationships and interrelationships by which scientists attempt to gain insight into the complexity of phenomena.

It is, therefore, the objective of scientists to provide concepts that are expressions of actuality (facts). These concepts are derived from highly probable connections of the data and are finally expressed as hypotheses, theories, and laws. However, in order to be valid, such concepts must be subject to verification via tests that are repeatable.

Nonverifiable suppositions cannot be combined to produce a concept that is fact. Evolution is based upon several assumptions which when subjected to critical examination are found to provide evidence against the concept of evolution. Take the study of microorganisms as an example.

Morphology and "Relatedness"

An evolutionary interrelationship is presumed among viruses, bacteriophages, *Mycoplasma* (pleuropneumonia-like organisms), rickettsia, budding bacteria, actinomycetes, true bacteria, spirochetes, myxobacteria, blue-green algae, slime molds, protozoa, algae (green, red, and brown), fungi, metaphyta or embryophyta, and metazoa. The metaphyta and metazoa could each be divided into numerous subgroups, but for the present discussion, this is not necessary. The crux of this assumption is, as worded by Kerkut:

> If one assumes that the origin of life was a unique occurrence then it follows that all the present-day living things must be derived from this original source. This then poses the problem, "What is the relationship between present-day forms?" In many cases it is difficult to form any definite conclusion regarding these relationships. . . .[7]

If one refers to textbooks, journals, and monographs that discuss the details of these groups of organisms, it is immediately evident that there is no common agreement among biologists as to the taxonomic relationships within many of these groups, much less among the groups as a whole. Each of these groups possesses what at least appears to be characteristic structure, chemistry, metabolic processes, movement, irritability, growth, reproduction, development, adaptation, and behavior.[8] Furthermore, proposed schemes of relationship are problematical, vague hypotheses and speculations.

Though there are numerous answers, one of the fundamental questions is: Which of these major groups of organisms is (are) the most (more) primitive, i.e. earliest (earlier) developed?[9] Answers to this question vary in accordance with the individual biologist's opinion as to what are "primitive" characteristics and what are "advanced" characteristics.[10]

All of these groups of organisms exist at the present time, and the groups with members that are extremely small and delicate could leave no (or in a few cases very poor) fossil record.[11] Thus, there is no verifiable connecting evolutionary "theme" among these organisms. Therefore, how can it be assumed that they are interrelated through divergent derivations from an original "life-source"? If evolution has occurred, gaps among these major groups of organisms should not occur.[12]

Classification

> The fact that it is possible to arrange the various kinds of organisms into categories of species, genera, families, orders, etc., is supposed to suggest that there are genetic relatoinships between them.[13]

Biologists have long believed that sexually reproducting organisms occur in distinct clusters or kinds. This concept is one of the most basic in biology and involves the idea of "species." Numerous attempts have been made by biologists to develop a definition for the term "species." Most evolutionists employ the definition of Mayr which was proposed in 1940:

> A species consists of a group of populations which replace each other grographically or ecologically and of which the neighboring ones intergrade or interbreed wherever they are in contact or which are potentially capable of doing so (with one or more of the populations) in those cases where contact is prevented by geographical or ecological barriers.
>
> Or shorter: Species are groups of actually or potentially interbreeding natural populations, which are reproductively isolated from other such groups.[14]

Mayr's definition seems simple and straightforward; but interbreeding in natural populations is often difficult or almost impossible to confirm.[15] Furthermore, many groups of organisms exhibit considerable individual and/or population variations in appearance. Therefore, it is most difficult to determine whether certain organisms are members of a single species or several species that resemble one another in morphology.

As a result of this dilemma, biologists have often designated variants in or between populations to be a different species; but later it has been discovered that interbreeding occurred between variants. Thus, it should be clear that the "species problem" is still in an unsettled state. An interesting comment about this problem was made by Ehrlich and Holm:

> The term *species* should be retained only in its original, less restrictive sense of "kind." There seems to be no reason why quantitative methods should not be used to study phenetic relationships (those based on similarity rather than imagined phylogeny) at what we now loosely call the species level.[16]

Ehrlich and Holm are evolutionists, but the statement quoted above is in agreement with the opinion of current special creationists, e.g., according to Morris:

> . . . Nothing in the account [Genesis account of creation] indicates how many original "species" there were, or what constitutes a "species." However, it does clearly indicate that there were meant to be definite limits to the possible biological changes that might take place. The only biological unit identified therein is called a *kind*, and at least ten times in the first chapter of Genesis is it mentioned that the various types of living creatures were to bring forth "after their kind." This states, quite plainly, that there were to be definite limits to possible biological change, perhaps, by implication, these limits being those of interfertility. But within those limits, it can surely be inferred that variation and speciation are possible.[17]

The original Genesis kinds[18] should constitute the true basic units of our system of classification rather than the "species" category. The scientific record shows that there have been and are today physiologically compatible, genetically variable

groups of organisms. There is no evidence that such groups were or are today genetically interrelated.

Attempts to show genetic relationships above the "species" level are arbitrary; for, according to Blackwelder:

> The only standard to determine the correct level of a group is the agreement of specialists. The group may be quite definite and understood by all, but its level may be subject to much difference of opinion. It may appear in various classifications as a class, a subclass, an order, or even a phylum, according to the classifier.[19]

Natural Selection and Mutation

The fact that entirely new varieties appear in populations of organisms is offered as the best present-day visual proof of evolution; "these new characteristics are called 'mutations' and it is said that, if these turn out to be favorable, they will be preserved by natural selection and thus contribute to the long-term evolutionary process."[20]

Mutation—Mayr[21] defined mutation as "a discontinuous chromosomal change with a genetic effect." This is a broad definition in which Mayr included

> . . . ordinary gene mutations, chromosome mutations (translocations, inversions, and so forth), and genome mutations (chromosome losses, polyploidy, and so forth). The majority, possibly the vast majority of mutations consist of gene mutations, but since there is no way of distinguishing phenotypically between gene mutations and other mutations, we must apply a broad definition.

All of these varieties of mutation have contributed to the process of evolution, e.g. according to Bonner:

> [Mutation] is really the factor of fundamental importance. Since mutation means a chemical change in the gene structure, all progressive advancements must ultimately be by mutation, and all that can be done by recombination is to shuffle what is given by mutation. Gene mutation provides the raw material for evolution, and recombination sets this material out in different ways so that selection may be furthered by being provided with a whole series of possible arrangements.[22]

However, most mutations are detrimental; and those that do not kill an individual may be detrimental to the population in that they lead to disorder and randomness through deteriorations of viability, hereditary diseases, and eventual genetic weaknesses.[23] This is an excellent biological illustration of the Second Law of Thermodynamics in operation.[24] Crow briefly summarized how mutations are harmful:

> . . . The degree of harm ranges from mutant genes that kill their carrier, to those that cause only minor impairment. Even if we didn't have a great deal of data on this point, we could still be quite sure on theoretical grounds that mutations would usually be detrimental. For a mutation is a random change of a highly organized, reasonably smoothly functioning living body. A random change in the highly integrated system of chemical processes which constitute life is almost certain to impair it.[25]

Geneticists cannot explain how mutations can be the mechanism for evolution and furthermore, according to Mayr[26] the fact that some geneticists can come to conclusions diametrically opposed to those of other geneticists is striking evidence of our ignorance of the actual facts.

Natural Selection—This process is the differential perpetuation of genotypes in which those individuals with the most favorable genes will survive and will tend to leave more offsprings. This is an excellent example of narrow circular reasoning in that evolutionists speak of the survival of the fittest and conversely, the fittest survive.

Natural selection is supposed to be the mechanism by which certain mutations are favored and give rise to higher categories of organisms. However, notice the contradiction between the first and last sentences in the following quotation which is an illustration of the contradictions common in writings of evolutionists. Crow says,

> The general picture of how evolution works is now clear. The basic raw material is the mutant gene. Among these mutants most will be deleterious, but a minority will be beneficial. These few will be retained by what Muller has called the sieve of natural selection. As the British statistician R. A. Fisher has said, natural selection is a "mechanism for generating an exceedingly high level of improbability." It is Maxwell's famous demon superimposed on the random process of mutation. Despite the clarity and simplicity of the general idea the details are difficult and obscure.[27]

Genes may become partially or almost completely isolated within a population which for various reasons may lose genetic contact with a parent population, i.e. there may develop segregation of a small gene pool from a larger one. Therefore, the characteristics (which result from the expression of genes) may be quite different for various populations and certain characteristics may exhibit gradations within populations that have not been completely separated; i.e.,

there is still gene flow between them. This situation illustrates how variation may occur within the range of a species, but it is not evidence for the production of new, higher categories of organisms.

It is verifiable that the influence of certain environmental factors can favor the propagation of offspring of certain variants in a population while tending to prevent or hold to a minimum survival of the offspring of other variants. However, this process in no way demonstrates that variants can give rise to other kinds of organisms; i.e., higher categories. Indeed, the data from genetic and selection studies conducted under natural as well as laboratory conditions are contrary evidence to the conclusion given by Mayr:

> In conclusion we may say that all the available evidence indicates that the origin of the higher categories is a process which is nothing but an extrapolation of speciation. All the processes and phenomena of macro-evolution and of the origin of the higher categories can be traced back to intraspecific variation, even though the first steps of such processes are usually very minute.[28]

In summary, it may simply be said that natural selection explains how organisms survive, not how they give rise to higher categories.[29]

Biogeography—As Morris has written, "The tendency of certain species of plants and animals to vary in character with geographic location, and especially to assume distinct characteristics when isolated from similar populations in other regions, is presumed to suggest evolution."[30]

Biogeographic studies show that some species are quite variable in different geographic locations. In diverse localities environmental pressures vary; thus, there are different selection pressures for each population and this is reflected in the geographic variants of a species.

However, there may be isolated populations within proximity of one another and their environments may be very similar. Therefore, in this latter situation, variability may not result from different selection pressures, but may come about from genetic differences that result when segregation of populations occurs.

Although many species exhibit quite variant populations, there is, nevertheless, fixity within the species category. Isolated populations with distinct characteristics (resulting from different environmental selections pressures and/or genetic segregation) may properly be called subspecies but not "evolving species."

Many subspecies may appear to be diverse enough from one another that each could merit the rank of species. However, if one will recall that there are extremely diverse varieties or "breeds" within domesticated plant and animal species, then the error in this reasoning will become evident.

It is often said that isolated subspecies that do not interbreed should be recognized as different species. However, the following example will show why this is not a correct interpretation of reality. The Great Dane and the Chihuahua are two breeds of dogs *(Canis familiaris)* that are mechanically unable to interbreed under normal circumstances because of size differences; and, furthermore, man maintains these breeds as "isolated populations."

However, if the various breeds of dogs were unknown and these two breeds occurred on separate oceanic islands and were discovered by the members of a scientific expedition, the biologists would in all probability consider the two breeds to be of different species and perhaps even of different genera. This example is, of course, hypothetical, but there are many real examples of this situation among the numerous so-called island species and genera that are supposed to have evolved as a result of isolation.

The Supposed Evolution of Man

Evolutionists say that man is an organism that differs only in degree from other primates, but not in kind, i.e. all of them arose from insectivore ancestors. Furthermore, it is postulated that man may have arisen from australopithecine-like ancestors whose fossils appear to show an interesting mixture of ape and human characteristics.[31]

Of the living primates, man is said to be most closely related to the African anthropoid apes (the chimpanzee in particular). This assumption was capitalized upon by Desmond Morris whose recent book, *The Naked Ape,* became a best seller.

If evolution is a fact, it must be established that man has "evolved" via the same processes that are assumed to have produced all other organisms. If, on the other hand, man differs in kind from all other organisms, how can this be explained by the concept of evolution? Perhaps this is the reason that no aspect of evolution has received such intense study and fervent debate as has the "evolution" of man.

Fossils that closely resemble modern man are often buried deeper than those which are supposed to be his ancestors.[32] The "ancestral" fossils are usually fragments of skulls and lower jaws are relatively few in number as compared to those of other kinds of vertebrates. Anthropologists differ among themselves as to the significance of "key" primate fossils.

In other words, there is a poor fossil record of primates and especially of those upon which human evolution is supposed to be based. Therefore, where is the information from which artists depict complete pictoral reconstructions of man's

ancestors? Why are drawings, painting, and models of supposed human ancestors—"ape-men or men-apes"—so radically different when portrayed by various artists?[33] From this situation one may conclude that human evolution is nothing more than science fiction. We shall see.

Von Koenigswald, in *The Evolution of Man*[34] discussed the classification of the primates and the evolution of man. He concluded, "Though modern primates have similar body structures, their physical proportions vary a great deal. . . . Unfortunately, we know little about these proportions in fossil men and apes."

The book, *Man in Nature*,[35] by Bates includes discussion of "The Human Animal," "The Primates," and "Human Evolution." Bates shows clearly that man differs from all other primates in physical characteristics, behavioral characteristics, cultural characteristics, and capability and achievement.

Nevertheless, Bates defined man on the basis of fossils which are the only characteristics that were capable of preservation prior to written history. However, Bates' definition is related to fossil tools rather than to fossil bones: "Man's uniqueness is in *the making of tools in accord with a predetermined plan or pattern.*"

Much Supposition, Vagueness Involved

A careful reading of *The Basis of Human Evolution* by Kraus[36] reveals the great amount of supposition upon which the concept of human evolution is based. The book is replete with details, but they are evidence of the uniqueness of man rather than of his evolutionary kinship with the animal kingdom which is the thesis of Kraus.

Fourteen fossil "landmarks" are assumed by Kraus to illustrate the morphological stages that have led to modern man. These stages begin with a Middle Jurassic stem mammal and terminate with Cro-Magnon Man.

However, Kraus did not explain why these fossils should all be included in an evolutionary sequence leading to man; i.e., he gave no justification for this arrangement of fossils except via a simple statement that they "will provide a reasonable picture until the gaps in our record are narrowed by new finds."

In contrast to Kraus, the book, *The Fossil Evidence for Human Evolution,* by W. E. LeGros Clark includes statements that acknowledge the vagueness of evidence for human evolution:

> Undoubtedly the most intriguing question in the whole evolutionary story is, What was the ultimate origin of man? Or, put in zoological phraseology, at what stage in geological time did the Hominidae become finally segregated from other groups of the Primates, and what was the nature of the ancestral stock from which this segregation occurred? Unfortunately, any answers which can at present be given to these questions are based on indirect evidence and thus are largely conjectural, for the paleontological record of the Hominidae is still incomplete.
>
> The interpretation of the paleonotological evidence of hominid evolution which has been offered in the preceding chapters is a provisional interpretation. Because of the incompleteness of the evidence, it could hardly be otherwise.[37]

Many anthropologists accept the more recent stages in human evolution as are outlined by Braidwood[38] in his book, *Prehistoric Man*:

> At this moment, the evidence bearing on human evolution appears to subdivide into three stages:
>
> 1. An australopithecine-habiline stage, back over a million years ago, with several varieties of forms and with crude stone tools associated with at least some of them. Whether the australopithecines were on the direct line or not is not yet a matter of complete agreement.
>
> 2. An early human *(Homo erectus)* stage, beginning at least with the Java, Olduvai "Chellean," and Peking men perhaps a half million years ago and lasting down through the Heidelberg, Ternafine, and Vértesszöllös finds. This stage lasted to about 100,000 years ago.
>
> 3. Therefore came first, the *praesapiens* types such as Swanscombe, Steinheim, and Fontéchevade; then the Neanderthals and their less extreme contemporaries. Beginning about 40,000 years ago came the first traces of fully modern skeletons in Europe, which seems to have been anticipated in southwestern Asia by the premodern types such as Skhul. The present tendency is to lump all this stage under the term *Homo sapiens.*
>
> There seems to be an increasing likelihood that the beings of the first stage will be accepted as "men." There is no question that we are dealing with tool-making humans in the second and third stages.
>
> You will note a quickening of pace as the stages develop. Men were learning even better ways to adjust to the variety and to the changes in their environment. The fossil bones of their bodies show these adjustments, but the pace of the change is also amply demonstrated by the tools they made.

These concepts and others have been admirably summarized from the creationist views by anthropologist R. Daniel Shaw.[39]

Braidwood's summary of the stages in human evolution is not in agreement with the opinions of a leading anthropologist and discoverer of

many of the aforementioned fossils, namely, L. S. B. Leakey:[40]

> . . . It seems to me more likely that *Homo habilis* and *Homo erectus*, as well as some of the australopithecines, were all evolving along their own distinct lines by Lower Pleistocene times.
>
> I submit that morphologically it is almost impossible to regard *H. habilis* as representing 'a stage between *Australopithecus africanus* and *Homo erectus*'.
>
> . . . I have never been able to accept the view that *Australopithecus* represented a direct ancestral stage leading to *H. erectus*, and I disagree even more strongly with the present suggestion of placing *H. habilis* between them. . . . It is possible that *H. habilis* may prove to be the direct ancestor of *H. sapiens*, but this can be no more than a theory at present. . . .
>
> All that need be said at present is that there was a time at Olduvai when *H. habilis*, *Australopithecus (Zinjanthropus) boisei* and what seems to be a primitive ancestor of *H. erectus* were broadly contemporary and developing along distinct and separate lines.

A concise, objective summary of scientific knowledge of the history of man based upon fossil evidence and dating methods is as follows:

> There is now and has long been a great variety of human and anthropoid forms on the earth. Brutal types of man are very ancient, but contemporary types were coeval with them. There is thus no evidence here for the evolution of modern civilized man.
>
> Man is as ancient in the world as Mid-Pleistocene. From his beginnings he has always varied greatly in skull size and type, but has been alike in torso and legs. He has as large a brain at first as now—often larger. He was anciently contemporaneous with different anthropoids than at present. These latter were always similar to and yet very unlike man, as now. Man always was composed of various physically different races or varieties. These probably hybridized at any points of contact. He was spread over the greater part of three continents, Europe, Asia and Africa—and perhaps another three.
>
> After thousands of years of existence in which his populations were scattered and scanty, often living under very arduous glacial conditions, he may have been replaced rather completely and suddenly by a modern type culture which started village life in the near East. This transition occurred about 9,000 years ago and quickly developed into the historic civilization of that area and of all the lands we know since. With this episode "modern life" began.[41]

Human Behavior Is Plainly Different

The behavior of man is plainly much different than that of other organisms, e.g., according to Adler's book, *The Difference of Man and The Difference it Makes:*

> In the sphere of what is plainly overt and observable behavior:
>
> 1. Only man employs a propositional language, only man uses verbal symbols, only man makes sentences; i.e., only man is a discursive animal.
> 2. Only man makes tools, builds fires, erects shelters, fabricates clothing; i.e., only man is a technological animal.
> 3. Only man enacts laws or sets up his own rules of behavior and thereby constitutes his social life, organizing his association with his fellows in a variety of different ways; i.e., only man is a political, not just a gregarious, animal.
> 4. Only man has developed, in the course of generations, a cumulative cultural tradition, the transmission of which constiutes human history; i.e., only man is a historical animal.
>
> In the sphere of interpreted behavior, involving an admixture of inference with observation:
>
> 5. Only man engages in magical and ritualistic practices; i.e., only man is a religious animal.
> 6. Only man has a moral conscience, a sense of right and wrong, and of values; i.e., only man is an ethical animal.
> 7. Only man decorates or adorns himself or his artifacts, and makes pictures or statues for the non-utilitarian purpose of enjoyment; i.e., only man is an aesthetic animal.[42]

In his introduction to the above list of behavioral characteristics of man (p. 90), Adler acknowledged that there was some minor dissent: "*With the one exception of language* (sentence-making behavior), there are minority dissents on all these indications of man's uniqueness in kind —dissents that treat these indications as signifying only superiority or uniqueness in degree." However, Adler summarized the views of leading scientists today, such as Julian Huxley, Dobzhansky, Mayr, Simpson, Leakey, Rensch, Eiseley, von Koenigswald, Oakley, Washburn, and Le Gros Clark who, either as paleontologists or as evolutionists in general, deal with the problem of man's origin and difference, as follows:

> In one set of terms or another, they all assert the ***uniqueness*** of man as an animal, by which they mean: first, that man possesses certain characteristics (forms of behavior springing from certain powers or abilities on his part) that are not possessed to any degree by non-human animals; and hence, second,

that man really differs in kind from nonhuman animals, not just in degree. In addition, there are several unique human traits that are not behavioral: man's erect or bipedal posture, his flexible hand with thumb opposed to forefinger, and the dominance of his cerebral cortex by either the left or the right hemisphere.[43]

Furthermore, according to Adler's review of paleontological literature, there is inadequate evidence to conclude that man differs from other animals only in degree; i.e., there have been "tenuous interpretations and inferences" derived from inadequate data. In speaking of the inadequacy of the fossil evidence, Adler said,

> Its inadequacy is absolute and irremediable for the simple reason that no amount of fossil data, no matter how carefully and soundly interpreted, can establish the existence of a critical threshold in the continuum of degrees of brain size and complexity. Without that being shown, it is impossible to tell whether a difference in kind that certainly looks like a real difference in kind, and is thought to be so by the paleoanthropologists, is superficial rather than radical. (p. 97)

Adler concluded (pp. 247-249) that the available evidence now supports the answer that man differs in kind from other animals. However, he qualified his conclusion by stating that the final answer will depend upon whether or not a future machine will be able to pass the conversational test. If it cannot, then the materialist hypothesis would be demonstrated to be false and conversely, the immaterialist hypothesis would be confirmed. The creationist, John Howitt, has emphasized the unique biological and spiritual traits which set man apart clearly from all other creatures.[44]

Conclusion

As a teaching scientist, I have attempted to explain why evolution cannot account for the origin of life or development of complex, unique kinds of organisms from more simple, ancestral forms. I have argued that evolution is not a fact, and that as a concept it is not in the domain of science.[45] The concept of evolution is an emerging religion with many religious characteristics such as dogma, faith, doctrine, mysteries, life-orientation, etc.

Evolution and the Genesis account of creation cannot both be correct.[46] Regardless of what some persons claim, one cannot be a Christian Evolutionist without persistent mental conflict. Therefore, if evolution is invalid, what can be put in its place that will explain reality?

Can a Christian (scientist or layman) accept special creation as revealed in Genesis in the light of modern science? The answer is a definite *yes*, but an adequate discussion of the subject would require another paper of at least the same length as the present one.

It has not been my objective to discuss special creation except in the manner of supplying key references to the creationistic literature. However, Marsh expressed clearly the philosophy of men that are believers in special creation:

> The doctrine of special creation is not merely a creed to be accepted by faith. It appeals to the spiritual faculties, and also to the logical. Every fact of natural science is explainable logically from the viewpoint of special creation. In actual practice less faith is necessary in its application to nature than in the acceptance of the theory of organic evolution.
>
> . . . in building his philosophy the special creationist begins with the few basic facts regarding biological beginnings and continuance which are found in the Bible. However, because of the paucity of information from this source he is largely dependent upon facts in the natural world for the superstructure of his philosophy. When the interpretation of material from the natural world is truthful and when the phenomenon is mentioned in the Bible, he finds harmony between it and the Bible record.[47]

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