almost super-human achievements: "I do not know what I may appear to the world, but to myself I seem to have been only a boy playing on the seashore and diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before."

pebble or a prettier shell than ordinary, while the great ocean of truth lay all undiscovered before." The second, self-styled "cautious approach to a classification of life," not only illustrates, under the thin guise of caution, that dogmatic materialism which Hardy suggests is the greatest threat to the soul of modern man, but also provides a classical example of reductionism *ad absurdum*. For the mind responsible for the formulation of such a statement is itself subsumed within that which is being defined away and is therefore itself, implicitly and ineluctably, part of the total *non*-importance and *non*-sense predicated by the definition. Lest the reader feels that I am giving undue prominence to an obscure and irrelevant example of scientific gobbledygook, consider one statement from *Saint Genet* by that powerful molder of contemporary thought, Jean-Paul Sartre, which illustrates well enough the close relationship between dogmatic scientific materialism (scientism) and reductionist philosophy: "In any event, even after man does take a stand, his act is without significance, because we are still impossible nullities."

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EDUCATIONAL COLUMN

TEACHING ABOUT ORIGIN QUESTIONS: ORIGIN OF HUMAN BEINGS

JOHN N. MOORE•

Abstract

In three previous "how to" articles on teaching about origin questions in a fair and just manner the author discussed (a) the nature of scientific activity in generation of inquiries by scientists, based upon some of the presuppositions of founders of modern science, who accepted belief in Eternal, Personal Creator God Who created all things (CRSQ 21:115-119); (b) identified that professional scientists deal primarily with inquiries to explain "present" natural phenomena resulting in the science of cosmology, for example in contrast to "Historical" Theories, which include evolution cosmogony (Evolution Model) and creation cosmogony (Creation Model) about the origin of the universe (CRSQ 21:189-194); and (c) analyzed and critiqued the five stages of mechanistic, materialistic, reductionistic "chemical evolution" as basis for presentation of circumstantial evidence for a Creator origin of life on the earth as believed by Pasteur, Mendel, and many leading biologists who founded the biological sciences (CRSQ 22:20-25). This article contains discussion of contrasting basic conceptualizations regarding the origin of human beings.

Introduction

As stated at the beginning of this four-part series on "Teaching about Origin Questions," to protect the integrity of a pluralistic educational curriculum, a positive alternative to the majority "establishment" interpretation of first origin questions is needed in American schools. A viable contrasting position to the "conventional wisdom" of the mechanistic, animalistic origin of human beings is needed as an integral part of curriculum in both public and parochial schools.

Again, in introduction, science as a proper and orderly profession entails specifically the direct and/or indirect, *repeatable* observation(s) of *natural* objects and/or events that occur or exist in the physical environment.

However, Total Creationism (based upon belief in Eternal, Personal Creator God Who created all things), and Total Evolutionism (based upon the belief that all things derived from some Eternal, Impersonal Matter-Energy condition) involve *un*natural objects and/or events (singularities). Thus both of these viewpoints cannot possibly be submitted to scientific study. Nevertheless, professionally qualified scientists of the majority do present objective, scientific facts in support of Total Evolutionism; and, also, professionally qualified scientists of the minority do present objective, scientific facts in support of Total Creationism, as fully listed in the December 1984 article in this series, and given for origin of human beings in Table I. Certainly teachers must understand "how to do it" if they are to supplement the majority ideas of "evolutionary" origin of modern male and female human beings.

Actually the question of the origin of human beings involves concepts that have been changing, ever changing—since Charles Darwin's second book, *The Descent of Man*, published in 1871. Because of such changing views and interpretations careful, openminded discussion of human origin is required to protect the integrity of science education. Yet, currently, a certain majority view of the origin of human beings is proclaimed and taught exclusively, monopolistically as an intellectually acceptable substitute for the traditional view of human origin held by founders of the modern scientific discipline.

Table I. Two Sets of Evidence

A. Circumstantial Evidence for Animal Origin of Human Beings

1. Similarities of skeletal, muscular patterns, and brain form

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- 2. Similarities of embryonic structure
- 3. Similarities of DNA and RNA components of life
- 4. Similarities of hemoglobin, cytochrome c, and other biochemical aspects
- 5. Human behavioral similarities to emotional, territorial, and aggressive animal-like behavior involving reaction to signs, signals, and perceptual thought

B. Circumstantial Evidence for Creator Origin of Human Beings

- 1. Abrupt appearance of fossil forms separated by systematic gaps between fossil forms
- 2. Distinctness of DNA, chemical components, and pattern (design) of morphological similarities
- 3. Laws of Mendel: combination, recombination always results in easily recognized plant, animal forms; conclusive evidence of fixed reproductive patterns (designs)
- 4. Distinctness of human self-conscious awareness, and metaphysical concern
- 5. Distinctness of human personality involving moral and ethical concern; reflective, symbolic, abstract, conceptual thought

To be precise there have been and still are only two basic contrasting conceptualizations regarding human origin: (1) the primary, initial thesis that the Eternal Creator God breathed the breath of life into the dust of the earth and man became a living soul, with woman made from man—both endowed with physical, cultural, and intellectual capabilities unique and distinct from all other life forms; and (2) the nineteenth century substitute that somehow both male and female human beings "evolved" at the same time from the same anthropoid origin.

Admittedly the later animalistic view of evolutionists has become *the popular view* to the extent of seeming obliteration of the view of the supernatural, special creation of human beings. Nevertheless, the special created view of the first origin of human beings was *the widely accepted* view during the 18.5 centuries prior to Darwin. That view had been part of a written tradition for many centuries B.C. as specialists have deduced from tentative, limited translations of some of the Ebla clay tablets (2500 or 2300 B.C.) found in northwestern Syria since the mid-1970's.

Current Scenario of Human Origin

Generally evolutionists begin the earliest "history" of *Homo sapiens sapiens* within the perspective of presumed sequence of cosmic evolution, molecular evolution, and organic evolution. Such an orientation was provided with the first article ("Evolution" by Ernst Mayr) in the September 1978 *Scientific American*, widely distributed to afford citizens with the then latest status of evolutionary thinking. In fact Richard Leakey and Roger Lewin opened their "history" of mankind (*Origins.* 1977. E. P. Dutton, N.Y.) with a chapter on "Humanity in Perspective" that they set in the context of the earth being in relation to the sun in the Milky Way galaxy, which the authors presume was generated from some cosmic "big bang."

In brief statement, megaevolutionists maintain that human beings came from an animal origin; and they think they can trace vertebrate ancestry to some invertebrate forms, and to changes presumably initiated in unicellular life after spontaneous generation of first life supposedly occurred on the earth from inanimate matter. Yet the answer is quite negative to one of the questions posed in the first article of this series: Is it possible to study scientifically the origin of mankind? No scientist, as a scientist, was there when the first male and female human beings appeared on the earth. Therefore all teachers should be prepared to critique the proposed Australopithecus (afarensis or africanus?)-Homo habilis?-Homo erectus-Homo sapiens sapiens scenario of megaevolutionists.

Points of Critique

Specific points of critique of the above mentioned scenario are basic to any presentation of an alternative interpretation, that is, a creationist scenario on the origin of Homo sapiens sapiens. A few of the points are: (1) Evolutionists must resolve the ambiguity about the kind of change intended in the meaning of the term "evolution," i.e., megaevolution (macroevolution) vs. microevolution; (2) Megaevolutionists exhibit a predisposition or prior commitment to an animal origin of human beings; (3) The popular scenario of the origin of human beings is "staged" within imagined millions and millions of years that followed some presumed, unnatural "big bang" explosion of some dense substance of unknown origin; (4) Darwin's analogy breaks down since changes in domestic organisms are always consequential to selective criteria of human breeders ("artificial selection"), whereas in the natural environment there was (and is) no set of criteria by which presumed selection occurred ("natural selection")-essentially only differential survival (or differential elimination) occurs in the natural environment; and (5) The popular megaevolutionary scenario does not rest upon any measurements of time, but only upon estimates of time "before the present" (B.P.) (See my 1983 book, How To Teach Origins (Without ACLU Interference) for more detailed discussion of these points.)

Furthermore, there are specific problems in any discussion of human origin. The overall picture of human origin is not simple. Due to the unique problems involved in the study of anthropology, neither creationists nor evolutionists have reached a clear conclusion within their framework. Evolutionists are still attempting to clarify the supposed ancestral relationships while creationists are trying to differentiate between human and apelike remains. Again the teacher of human origin should approach the subject in an open and critical manner.

Many of the fossil remains used in analyzing human origin are very fragmentary. Non-*Homo* finds seldom contain more than a few bones, and often "constructions" of appearances are merely speculations by artists based on minimum data. Until more complete remains are possibly found the "relationship" between man and apes will be confusing at best.

Even if an abundance of fossil finds were available, there would still be classification problems. Anthropologists are influenced by their own presuppositions and desire for recognition. For example, many remains which are within the range of modern man are sometimes assigned to *Australopithecus* by evolutionists because they are found in strata thought to be older than when *Homo* "evolved." Anthropologists have

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Table II. Abbreviated Table of Misinterpretations of Human Fossils.

Numerous interpretive errors of human fossil remains have been made since 1848 to the present. This abbreviated diagrammatic representation shows the date of the original misinterpretation and the date of the correction. Note that the interpretive errors have been away from modern man and the corrections have been in the direction of modern man.

Popular Name Java Man (Trinil) 1981	Genus Other Than Modern Man Pithecanthropus erectus-1894	Genus of Modern Man → Homo erectus 1940	Genus and Species of Modern Man
Heidelberg Man 1907		Homo heidelbergensis 1908→Homo erectus-1963	
Peking Man 1921	Sinathropus pekinensis _ 1927		
Rodesian Man 1921		Homo rodesiensis 1921	Homo sapiens rhodesiensis
Solo Man 1932		$\frac{Homo\ soloensis}{1932} \longrightarrow$	Homo sapiens soloensis 1964
Sangiran I, Java 1937	Pithecanthropus II 1938	Homo erectus 1950	

often confused the situation by assigning the remains to new genera and species which were eventually found to be unacceptable. In assigning remains to taxonomic categories one must keep in mind the possible limits to variation as well as put aside any desire for personal recognition. (See Table II for misinterpretations of human fossils.)

In order to understand the problems involved with the classification of *Homo*, students should be made aware of the importance of variation. For instance the brain capacity of normal intelligence in modern adults ranges from 850 cc. to over 2000 cc. A fossil with brain capacity of 1000 cc. could be claimed by evolutionists to be an early ancestor of man (i.e., *Homo erectus*), or could be claimed by creationists to be a fully developed human within the acceptable range of *Homo sapiens*. Often the strata of the fossil find or the scientists' presuppositions take precedence in the classification of a new find. The range of variation among living and fossil forms must be given a more important role in studying human origin.

important role in studying human origin. The "humanness" of fossil finds is often determined by their association with cultural artifacts. The problem is in determining which artifacts are associated with which bones. "Peking Man," a collection of skulls discovered during the 1920's in a cave system in China, is a good illustration. Experts continue to disagree whether the stone tools also discovered in the general area belonged to the Peking fossils or to other "more human" fossils which possibly used the tools to prey upon the "Peking Man" victim. And the time problem should be considered when

And the time problem should be considered when presenting the topic of human origin to students. Megaevolutionists do not consider any creationist idea to be credible primarily because it violates their assumed time scale. The time frame involved in the creation view of human origin is much different than that of the evolutionary scenario involving millions of years. It is important to stress to students that, in general, a "date" is not assigned to fossil remains directly, but rather time estimates for fossils are usually assigned by attempting to determine the "age" of nearby strata.

It becomes evident to those who study the time assignments for *Homo* fossils that the derivation of time estimates of human-like remains is not a precise science. For example, the 1470 Skull discovered by Richard Leakey in 1972 was originally "dated" at 2.6 millions years. However many anthropologists objected because then the more modern 1470 Skull would predate all its supposed ancestors. Thus 1470 was "redated" until a more "acceptable" estimate of 1.8 million years was adopted.

There is also the problem of assigning cultural remains to a certain era based on the "advanced" or "primitive" technology represented by the finds. It is now recognized that periods supposedly occupied by Paleolithic Man, Mesolithic Man, and Neolithic Man may have been contemporaneous; just as the Indians in North America were still in a Stone Age when the Industrial Revolution began in Europe, and some Australian aborigines were still in a Stone Age when the first atom bomb was dropped on Hiroshima.

A Creationist Alternative: Where Did Human Beings First Appear?

A broader understanding of the problem of human origin can be gained if teachers will lead an open and candid discussion of the traditional explanation of human origin and creationist concepts alternative to the "conventional wisdom" of megaevolutionists.

A. Traditional Explanation

Prior to acceptance of an evolutionary origin of mankind, scholars had agreed that the "Cradle of Mankind" was in Asia Minor, or in some portion of the Middle East on the basis of immense caches of data in the form of pottery and other artifacts of human activities. According to the traditional interpretation mankind began with the creation of Adam only a few thousand years ago, which was the same theistic position on the origin of human beings accepted by the founders of modern science. (See the first article in this series.)

Many creationists contend that eight members of only one family survived a major catastrophe by flooding that resulted in complete obliteration of all human civilization that had developed from Adam and Eve. Noah and his family of three sons and their wives had survived a major flood catastrophe aboard an ark that was grounded somewhere in the highlands north of Mesopotamia. There are many, many extended traditions about a few people who survived some great catastrophe. (Also there is a long list of circumstantial arguments for a world-wide Flood, including ubiquitous sedimentary rocks supposedly formed under water, and also multiple examples of polystrate fossils and massive graveyards of plants and animals apparently water deposited.)

Until the nineteenth century scholars believed that, in the course of time, three distinct families of human beings became established from the initial family pattern represented by the sole survivors. On the basis of their patriarchial lineage the three families have appropriately been termed Japhethites, Hamites, and Shemites. In modern terminology these groups would be recognized as Indo-Europeans (Caucasoids), Mongoloids and Negroid people, and Semites (Hebrews, Arabs, and some more ancient branches of the family such as the Assyrians, etc.) However, since the early 1900's especially due to the

However, since the early 1900's especially due to the diligent leadership and ardent efforts of the late Louis Leakey, his wife Mary, and son Richard, many hominid fossils have been found in Africa. Thus the Leakey family "pushes" their claim that locations in Africa (Olduvai Gorge, Lake Rudolph, and other nearby sites) are possible beginning places for mankind.

Because of the Leakey family successes and the work of other physical anthropologists more recently, many intellectuals have turned away from the previously accepted interpretation that the Tigris-Euphrates river area was the "Cradle of Mankind." Megaevolutionists seem to ignore the extensive pottery collections and other archaeological finds of previous decades.

The point, then, should not be missed during creation/evolution discussions of the origin of human beings that *interpretations* of data are involved primarily. Mary Leakey, Richard Leakey, and others simply seem to disregard the traditional interpretation (based upon pottery and other artifacts) in favor of their own interpretation (based upon skull features and other skeletal fragments).

Hence teachers need not feel that the traditional Tigris-Euphrates river region as the possible "Cradle of Mankind" has been denied by megaevolutionists. Rather teachers of human origin should encourage and help students interested in human "roots" seek an explanation that involves *all* groups of data: pottery, skeletal fragments, and other artifacts, as well as geographic distribution.

B. General Migration-Dispersal Model

According to the traditional interpretation the three survivor families of Noah kept together at first, but very likely within a century or so they would have moved away from each other due to a type of population pressure. Possibly some of the family of Shem, some of the family of Ham, and even a few of the family of Japheth reached the southern section of the Mesopotamian Plain.

Using many sources some creationists emphatically support the following generalization: All lines of migration of human beings, which are at all traceable or deducible, seem to radiate like the spokes of a wheel from the Middle East. (Leakey and others have "reversed" this concept with their claims for and implications based upon the discoveries in South and Central Africa.) And this generalization holds whether attention is given to fossil materials, ancient civilization, contemporary or extinct native peoples, or the present nations of the world.

In general, according to abundant evidence, the direction of movement tends to be reflected in the gradual *loss* of cultural artifacts. This is particularly true whenever complex items are found. For example, certain Minoan pottery vessels are clearly copies of metal prototypes. Logically, if the earliest migrations were quite rapid, then there would be marked tendency toward *loss* of cultural items common to the center as the people migrated out.

And accompanying such cultural *losses* in initial spread of early people, according to a Creation Model, creationists interpret that a certain coarsening of the human physique would be expected. Dietary disturbances undoubtedly affected the normal growth patterns of the young.

That food deficiencies have definite effects upon the form of the human skull can be shown by certain studies. Also according to other studies variations in pituitary gland secretion have direct causal effect upon body size and skull structure. Thus bone structure of so-called prehistoric people that evolutionists want to call ancestors of mankind may be deformities or at least modified bone structure of "normal" human beings. Noteworthy is the fact that the earliest collection of Neanderthal bones contained significant evidence that certain individuals had bone disease, such as rickets or some type of osteoarthritis. Syphilis also causes bone deformations and skeletal aberrations.

Creationists, then, include a general condition of degeneration and degradation of migratory people in a Creation Model. If early migrants were in isolation and suffered deprivation of food, clothing, and shelter, then any possibility of their living for a hundred years or perhaps even longer would add further complications. Evidence can be found that early human beings lived long spans of time, though declining after the Flood catastrophe. In fact the skull sutures are almost obliterated in some fossil specimens, which might reasonably be interpreted as evidence of very extreme old age. Might the conventional "man-ape" form be a consequence of isolation, deprivation, and old age?

Analysis of Geographic Distribution

Though the problem of time still is not really resolved, teachers of human origin can help students consider this plausible and reasonable Creation Alternative on human origin by leading classroom analysis of the geographic distribution of *four* major groups of fossil materials that have been found around the world from the 1900's to the present. The following brief

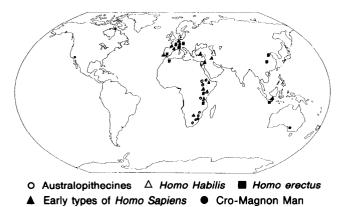


Figure 1. Locations of Fossil Finds.

discussion will require repeated reference to the geographic distribution of fossil finds shown in Figure 1.

1. Please note that the fossil finds of Australopithecus (the most "primitive" in the evolutionary scenario) are located in South Africa and East Africa. Thus the Australopithecines are found furthest away from the center of the Tigris-Euphrates area; they are clearly in an area peripheral to the Middle East region. If Australopithecines are part of the human ancestry, might they have been some that migrated first from a center of civilization, and changed the most and suffered the greatest loss of cultural practices and physical degeneration? (Of course certain specialists consider these fossil materials as that of some ape. If so these remains would not be part of the ancestry of human beings.)

2. Likewise the site of fossil finds of *Homo habilis* are located in South Africa and East Africa. Were they some of the earliest migrants from the Middle East area? (Certain specialists question the legitimacy of this fossil material as a separate species of genus *Homo*. If considered an Australopithecine, it might even be excluded from the ancestry of human beings.)

3. The sites of fossil finds of *Homo erectus* are located in Java, China, East Africa, North Africa, and Europe. Though these forms are widely scattered they are notably peripheral to the Middle East area, but they are somewhat closer than the Australopithecines. There seems to be a more even distribution of *H. erectus* than the Australopithecines, since they are found on all the large land masses of the Old World except Australia.

4. Though the sites of fossil finds of *Homo sapiens* are also widely scattered and located on all the large land masses, most of the fossil materials have been clustered in Europe and to the west and north of Mesopotamia, along with the more isolated finds toward the periphery in Australia and North America. Were *H. erectus* and *H. sapiens* (that is, Neanderthal, Swanscombe, Mt. Carmel, and Solo forms) those individuals who migrated last from the Middle East area, pushing out *H. habilis* and *H. erectus* from previously occupied areas?

Population Analysis

Space is not available in this short article to deal adequately with various aspects of population analysis. Two points are relevant:

a. In small groups of people living in comparative isolation, specialists have found a wide variation in

physical appearance and a marked conservatism in cultural development. Reasonably the survivors of the Flood catastrophe were a small population that could have varied widely in physical appearance, and tended to be highly conservative in cultural and social behavior.

b. In contrast, when human beings are found living in large conglomerations there is a strong tendency for uniform physical appearance, but a rather wide cultural diversification is noted. Again some creationists hold that as migrating survivors radiated from Mesopotamia they could have established large local populations (n.b. "founding principle" of population analysis)—each of uniform physique; and yet each group could have gradually practiced more freedom in cultural behavior.

Of course science teachers can use principles of modern genetics to help students realize that, in any small population where *inbreeding* occurs, the genes for all characteristics contribute to the appearance of a marked variability in physical form. And remarkable variableness in physical appearance is the condition that is observed in fossil hominids when finds from all the various widely scattered geographic sites are compared. The range of skull forms is amazing.

Concluding Remarks

Some creationists assert that the facts of variabiliity are best accounted for when three assumptions are made: (a) that a small population of individuals began at some central area, (b) that successive waves of migrants of probably only a few individuals in any one group moved along migration lines to establish a succession of centers, and (c) this migration pattern was repeated again and again, until early man had spread into every inhabitable part of the world.

Creationists are aware of the geographic distribution analysis of the four groups of fossil forms touched upon briefly. Megaevolutionists consider these groups favorably in developing their scenario for the origin of mankind. Creationists hold that such prehistoric forms of presumed human ancestry could very well be examples of diseased, degenerate, and degraded, inbred and isolated survivors of waves of migration from the Middle East (the traditional "Cradle of Mankind").

Of course creationists admit that all this contradicts evolutionary scenarios. However teachers of human origin can present the facts that support the contention that lines of migration of human beings do *not* radiate from some points in Africa (or the Far East, as some evolutionists have also claimed, based primarily upon skeletal material).

Teachers can give serious credence to the migrationdispersal Creation Alternative, based upon (1) archaeological evidence about cultural patterns, (2) consideration of physical diversity of fossil hominids, and (3) known principles of genetics relevant to small breeding populations. There is excellent logical sense and reasonableness that human beings were making long treks to the uttermost parts of the world *at the very same time* that civilization was "blossoming" at the center, i.e., the Middle East (still the most logical "Cradle of Mankind," when all facts are taken into consideration).

Of course megaevolutionists, who follow the pri-

mary emphasis upon skeletal data utilized by the Leakey family and other prominent paleoanthropologists (who seem to summarily disregard the abundant archaeological and philological evidence), will continue to bring into question the geographic position of the "Cradle of Mankind" contained in the Creation Alternative presented here. However, acknowledging that many "primitive" people have recollections of a former higher cultural standing, I conclude that *all* peoples of the world, prehistoric and historic, came from the family of Noah. And since the events described in Genesis 5 through Genesis 10 can be taken as a reasonable historical account of the ancient peoples of the world, I believe, consequently, from all the above that modern teachers can teach that modern man did not begin with the stature of an ape, and did not reach a civilized state after a long, long "evolu-

tionary history." And in closing this four-part series on "Teaching about Origin Questions," readers should be reminded that there are no legal prohibitions against academic freedom and open, candid discussion of different interpretations of objective, scientific data in science classes, or in any social studies, history, or anthropology classes. Surely Supreme Court guidelines with respect to State neutrality under the Establishment Clause of the First Amendment prohibit all scientific discussions of origin questions in public schools with the *primary*

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effect to advance or hinder religion. Evolutionists could avoid Constitutional arguments by admitting that a creation viewpoint and an evolution viewpoint on human origin are both scientifically based. Certainly all students have the right of access to "procon" considerations of scientific facts for and against an evolution viewpoint.

Therefore, to assure students that one pattern of beliefs is not favored over another set of beliefs, modern teachers should practice open, candid treatment of origin questions wherein both the viewpoints of Total Evolutionism and Total Creationism are presented. Such would be consistent apparently with Darwin's "fully stating and balancing the facts and arguments on both sides of each question," as quoted in the December 1984 CRSQ article.

Acknowledgement

I am very indebted to the extensive writings of Arthur C. Custance, Ph.D., the late Canadian research physiologist and a Fellow of the Royal Anthropological Institute, for features of the general migration-dispersal model that I present here. He held different inter-pretations of "Historical" Geology. However I refer serious readers to his books: Noah's Three Sons. 1975, and Genesis and Early Man. 1975, both available from Zondervan Publishing House, Grand Rapids, MI.

SPECIAL FEATURE

RECORDED INSTANCES OF WRONG-ORDER FORMATIONS: A BIBLIOGRAPHY—PART V

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