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## **Human Evolution**

### **Introduction**

It is a common belief that the human species is originated from ancestors that are apelike. The behavioral and physical characteristics of the human resemble the ape-like ancestors and have evolved from six million years ago. In general, evolution means the transformation from a simple structure into a more complexed structure.

Humans are known as 'primates'. The first humans that evolved were found in the regions of Africa. The fossils that were found million years ago from Africa were of a human. The human evolution is a slow but consistent process studied under the heading of paleoanthropology, one of the branches of Anthropology. The human evolution theories are given by many well-known scientists that will be discussed in this essay along with the stages of human evolution and the difference between early primates and humans today.

### **Paleoanthropology**

It is the study that relates to ancient humans based on their fossils evidence and other signs of habitation. It is concerned with the development and origin of early humans. In this study, through comparative anatomy, physical anthropology and evolution theory the human fossils are determined and assessed. The evolutionary changes and mutation occur are mostly genetic, that alters the phenotype and genotype of the human body. These changes are transferred from one

generation to another, and the process of evolution continues to grow more and more especially in human species, more specifically, Homo Sapiens (Bruner et al., 1058).

However, from the point of view of many religions, the theory of evolution from apes do not fit because of their traditional and religious beliefs. They have a whole set of different ideas of how the humans in earlier years would live and how they came into being. But many have reconciled with the idea that they have evolved through apes.

The best clues and signs of human evolution are derived from human remains and fossils by the scientist. These remains contain footprints, bones, and other tools left and used by earlier generations. These remains were found buried deep down in the earth crust. They were found either by digging deep into surface or were naturally exposed by wind erosion, rivers, and rain. These fossils helped to determine the physical appearance of the earlier humans and how it differed from the present-day human. The study of paleoanthropology studies all these fossils and the changing behavioral and physical phenomena of humans (Smith, 38).

### **Darwin's Theory of Evolution**

'Over the time, organisms changed as a result of alterations in their behavioral and physical traits.' The theory of evolution was first evaluated in the book 'On the Origin of Species' by Darwin in 1859 (Mirazon Lahr, 150). It states that the alteration in behavioral and physical traits of species cause evolution. These changes allow the organisms to be adaptive to their environment for their survival. One of the most substantiated theories of evolution among all is the evolution by natural selection. This theory is supported by many scientific disciplines like geology, paleontology, and genetics.

The two main postulates of this theory are:

- Every life on earth is related and connected to each other
- Modification in population occurred through natural selection where few traits were favored over others.

Natural selection can cause microevolution like slight changes in a species for example change of size and color in coming generations. On the other hand, the macroevolution is capable of bringing in wide changes like the evolution of human from ancestor apes.

The mechanism behind this evolution was later found out to be a link to genetics i.e. the behavioral and physical alterations are due to the change in genes pattern and DNA modification known as a mutation. Random changes and error can cause DNA repair or replication including radiation and chemical changes as well. Mutation can either be neutral or sometimes harmful. As one change can be transferred from one generation to another and can go on like this for several generations.

One more idea given by Darwin was the used and unused organs. He believed that the organs and parts of the body that were not much used eventually diminished in the coming generation, for example, the Giraffes used to have smaller necks like every other animal, but soon the land became barren and they had to stretch out to reach to eat. The excessive use of the neck made it longer in coming generations. This example also points out the adaptability of the organism in their environment.

### **Stages of Human Evolution**

The Hominoidea generation diverged into subfamilies namely Hominidae (humans) and Pongidae (apes). The stages of the human evolution are Dryopithecus, Ramapithecus, Australopithecus and Homo Erectus and Homo Sapiens Sapiens (Diogo, 1365).

1. Dryopithecus

This genus was found in the regions of Europe, India, China, and Africa. Dryopithecus name was given to them because they mostly live in areas that were densely forested and tropical lowlands.

The members of this stage were herbivorous.

## 2. Ramapithecus

Initially, this genus was discovered in Saudi Arabia and Africa. The area they lived in was open grasslands and forested. Their fossil study assumed that they used their hands for defense and food. They had shorter canines and robust jaws.

## 3. Australopithecus

They are the forerunner of Homo genus. They were found in South Africa. Their physical appearance resembles the present-day human. They lived on grounds and walked erected. They used weapons for hunting and killing animals. Their estimated average height and weight were 4 feet and 70-80 pounds respectively.

## 4. Home Erectus

The first evidence and clue of the homo species were discovered in Java. They were ape-man who walked erected. They had the wide cranial capacity and subsisted in communal existence. They used fire and their tools were mainly made up of quartz. They were indulged in big clan cooperative hunting which is evident through big wooden weapon spears.

## 5. Homo Sapiens Sapiens

The skeletal remains of this genus were found in Europe. The reduction of jaws in homo sapiens the modified chin in the present-day human. This genus is closely related to the humans of the present era. The primary method of gathering food was mainly hunting. The emergence of art was first seen in this era where they were used to craft and engrave animal art onto the walls of the cave.

## **Current belief of Evolution**

From the very beginning, there have been doubts about humans evolving from apes. This was merely hypothetical. Humans have not evolved from apes. They both only share common ancestors and were two totally different breeds with some distinctive and some similar traits and habits.

## **Has Evolution Ended?**

The answer to this question is that the humans are evolving each day. Most of the evolution these days occur through technology and culture. The scientific experiments on cells, genetics, and other micro organelles of the human body are bringing evolution to mankind. The natural factors such as global warming and environment also play a significant role in the process of evolution. The process of evolution can slow down but it can never stop. In the present time, most of the evolution is done in the form of mutation which is the minor changes and alteration that are performed in the human cell by implementing various experimental techniques to enhance and develop a better life and to make mankind more adaptive and sufficient for the ever-changing environment of the earth (Fuentes, 310).

## **Conclusion**

Both fossil and genetic evidence shows the evolution of human and the stages that occurred. It is vital to know and dig about the existence and first appearance of our species because those aspects helped in shaping and molding the genetic composition that Homo Sapiens still carry today. The most highly recognized theory was presented by Darwin, which presented the idea that all organisms are inter-related, and evolution is based on natural selection. All these postulates elaborate the evolution and its importance in the field of anthropology.

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