
Human Evolution It Is Part Of The Mechanism Of Nature

Culture and nature represents human evolution in a way that defines what is a human? What make human? What makes humans different from other animal especially African apes and monkeys? The human brains had developed into bigger brains and have been able to learn more complex analytical skills than our ancestors. Evolution has shaped the way we see ourselves and the world around us. Humans and other monkeys have adapted to use tools in our environments and the basic element to survive on this planet. We have very few environment specific genetic adaptations and this is important when we are talking about our success. When we look at other species that have been very ecologically successful we look at for example ants. Ants create lots of biomass and go through a lot of different environments but they have an immense number of environment specific genetic adaptation. We are intelligent, we have big brains, lots of mental fire power, and we can just figure out how to solve problems. And it is this ability to build causal models that allows us to enter all these different environments. The tension between nature and cultures is a theoretical insight that separates them from each other, but it is a continuous relationship with each other.

Franz Boas was the first scientist to challenge the taxonomic approach to human biological variation. He wanted to test the widely held notion that head shape and other so called racial markers were static entities, essentially unchanging through time. Natural selection occurred in the development of the human brain. Animals behaviors especially chimpanzees and other great monkey and apes have adaptive to use tool. Just like human a bigger brain allows us to use cognitive thinking ability and teach our offspring about survival in the wildness. We know that other animals use the same system when they are teaching their young. In fact all animals use this kind of methods, first the offspring see the movement, then they learn it and finally they copy whatever movement they see. Humans on the other hand is complete different, animals have the biggest advantages over a human child.

Primates can acquire food using only their bodies; humans depend on technology or material culture to acquire food. But that does not mean that a primate does not have material culture. We see chimpanzees using sticks and twig to get termites and other bugs out of a hole. This is what Jane Goodall realized that one fundamental assumption about what it means to be human is that a material culture is exclusive to human being. Other scientist then realized that living chimpanzee's tools use may be the best model for understanding our pre-human ancestor earliest cultures. Big-brained primates invent new behaviors, copy the innovations of others, and use tools more than small-brained primates do. Other primates that evolves into hominine also use a new way to hunt, communicate and socialize with others hunting primates. Vocal and nonvocal communication is a fundamental behavior in primate societies including our own. All primates communicate vocally and non-vocally, behaviors that serves various functions.

Genes only survive if they can produce an organism that survives to propagate. Organisms that can reproduce with one another form populations that survives as groups, which can be understood through taxonomy and speciation. Genetic, environmental and statistical forces act upon these populations in certain ways. The dynamics of evolution can be understood at the levels of the genes, at the level of the individual organism and at the level of the population. Adaptive traits are simply those that are favored by natural selection. Natural selection focuses

on reproductive success, or fitness. In particular, fitness is a measure of the propensity to contribute offspring to future generations, usually by the next generation.

Evolution is caused by one or a combination of four forces called mutation, natural selection, genetic drift and gene flow. Each main group is important to natural selection and is accountable for most evolution. The first main group is mutation; it is where a change in DNA can affect the genes of a human for example sickle cell anemia. The realization that evolutionary mechanism was acting upon what would eventually be understood as genes gave rise to the evolutionary synthesis, the combination of the two. Variation is crucial to this process, without it natural selection has nothing to select. Survival of the fittest is thus the process that leads to differential reproductive success. Natural selection is the second main point that causes evolution to occur. Natural selection is when an individual with a specific characteristics that is enhanced to survive and reproduce successfully. It is also a force that selects which variants will survive and get offspring capable for reproduction. For example baboons are capable of reproduction when it comes from a perfect mate. In a female society of baboons a male baboon may be a part of the female, but when another male baboon comes into the social group, and then an all ballet of male-male aggression occurs. Genetic drift is the third main point that causes evolution to occur. Genetic drift is a change due to chance. For example, passing genetics genes to your offspring will most likely be able to survive better than a weak offspring. It is important for future generation of undergo these changes of evolution because of their changes to survive and to maintain homeostasis. Gene flow is the fourth main point that causes evolution to occur. Gene flow is the transfer of genes across population boundaries. While mutation increases genetic variation between two populations over time, gene flow decreases such variation. There are many kinds of biological traits, in which it range from cranial shape to blood type. Migration also influences the way human had evolved into the different species in a life time.

Homo habilis became the first species on it way to it path from humanness. Modern humans are distinctive in having a bigger brain and are depending on material culture for their survival. Homo habilis short legs indicate that the species retained a primitive form of bipedalism than human. Much more telling about their adaptation and evolution are the skull and teeth morphology and evidence of the making and use of stone tools. Keep in mind that humans have been using tools for thousand of years and it helped us to survive the harsh environments. Not only did it help us to survive it also incorporated our understanding in hunting and improving our unique way of assessing our resources. Some question to ask ourselves is which of the hominine with brain size expansion likely depended on tool use and material cultures for their survival and behavioral flexibility? To answer this question we need to think about the tool use and the way early human ancestor use these tools. Did they use it as a weapon, as in hunting large prey bigger then they were. Or were they using it for helpful situations as for cutting down on the bone to get to the access bone marrow. We now know that early hominines did in fact use these weapons to protect themselves against other big animals and preys. As for the Australopithecus they were the first tool makers that ever use a pebble tool called an Oldowan as their ever first technology. With a better technology and a better chance of surviving we have overcome all the obstacle of one main skill. And that is to stay on top of the food chain. The environment reconstructed the landscape of east and South Africa at 2.5 million years ago. This reconstruction indicates a spread of warm season grasses, increasing habitat diversity and an increase in food resources for early hominine. Another amazing thing that happens to us is our skull and teeth increase dietary versatility. The use of tools may have played a central role in this early hominine ability to exploit this increasingly diverse landscape.

Neanderthals were associated with the culture known as middle Paleolithic. This culture's stone tool technology, lasting from about 300,000 till 30,000 years before the present, includes a complex and distinctive type of flaking called the levallois techniques. This technique involves preparing a stone core and then chipping away the raw materials for tools from the core. Neanderthal technology was complex and required considerable hand on eye coordination. Hunting success was a determine measurement in how Neanderthals accumulate food. Butchered animals bones are abundant in Neanderthal habitation sites, indicating that Neanderthal hunted the animals and processed the carcasses for food. There is even evidence that Neanderthal also buried their dead. In many sites the remains have been found scattered about, commingled and concurrent with living areas. Just like human, Neanderthals were a part of us in a way that influences our emotions for the dead. Was burial of the dead religious or ceremonial like human? Or was burial simply a means of removing bodies from living spaces? We never know why the Neanderthal did what they did.

Beginning around 1.8 million years ago a new hominin appeared, Homo erectus had an anatomical characteristics that distinguished it from Homo habilis. It was the only descendant of Homo habilis and was among the earliest fossil hominines described, having been found at Trinil in java. The earliest record of Homo erectus comes from Africa, less than 2 million years ago. At the time, the last australopithecines were still around East Africa and South Africa, and comparing the fossils of each reveals great differences in anatomy and adaptation between Homo erectus and the last australopithecines. One of the most striking modern characteristic is the combination of relatively short arms and long legs. Homo erectus body plan is much more like that of a living human but in it ratio the arm length is slightly longer than the leg length. We are meant to run long distance in which it helps with our hunting ability.

An increase in body size is obvious different in Homo erectus body size and height. The increase in body size increase rapidly, in less than a few hundred thousand years.