

Evolution



Evolution British novelist Arthur Koestler once quipped that the human brain is, " the only example of evolution providing a species with an organ which it does not know how to use". Indeed, the human brain, and its capacity for imagination and abstract thought, has made the topic of evolution one of the most debated and controversial issues of our time. Lines are often drawn along religious beliefs that reject the theory of evolution, while other camps argue that the theory is fact. Evolution is often misunderstood and has challenged scientists to provide proof for the belief that all life transforms, progresses, and adapts to its environment. The effects of evolution, while difficult to prove, have left an archeological record that gives us a picture of how and why evolution occurs.

One of the most basic and fundamental forms of evolution occurs when a virus or bacterial agent mutates to become immune to the drugs that are developed to treat them. HIV is a particularly challenging agent to overcome through drug therapy. According to Luskin, " HIV is particularly prone to " evolution" (i. e. change) because of its high replication and mutation rate-- nearly one mutation per replication". The physical characteristics of the HIV virus adapt to the agents designed to kill it. While we can measure and observe this in HIV, " The amount of genetic informational change between rapidly mutating virus strains, such as HIV, is miniscule compared to the type of informational changes required in the wild to create new body plans or biochemical pathways" (Luskin). This is evolution being accomplished at the most basic level.

Just as HIV evolves as a group, higher life forms also experience change over time to adapt to their environment. Ancient environmental events forced animals to adapt to a new environment and nature accentuated the

differences. The early primates that date to 60 million years ago " evolved from archaic nocturnal insectivores, something like shrews, and resembled lemurs or tarsiers" (The History of Animal Evolution). As food sources changed, the early primates evolved to take advantage of their new opportunities. They developed limbs, organs, and behaviors that allowed them to flourish.

While the evolutionary history is clear in viruses and primates, it is often clouded or discounted when the issue revolves around the human race. Human evolution is defined as the " theory which states that humans developed from primates, or ape-like, ancestors" (Langseth). Indeed, the primates that roamed the earth 50 million years ago were very primitive when compared to modern man's ability to think, plan, and organize. While man retains the shape of the early primates, there has been a significant modification to their brain and body as they have adapted to new threats and opportunities for resources. While the 'fight or flight' impulse of the human mind is retained, it has been supplanted with an ability assess danger and exploit nature.

In conclusion, it is clear that evolution occurs in the lowest forms of life on earth. The ability of the HIV virus to mutate in response to a drug can give us a record of its evolution. Historical events and climatic changes have necessitated evolution as the early animals adapted to new food sources. Humans have also experienced evolution as the brain has harnessed the primal instinct and become more than just an organ of survival. The fossil record confirms that evolution takes place everywhere and among all living things.

Works Cited

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