

# Behavioral implications of biological developmental changes in the human past

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Behavioral patterns of the humans are no less influential in its biological development. In fact, one had complemented the other in many ways, and it is a never ending process. It is this process which have manifested in humans the most, after they justified their candidature before natural selection through its various stages of evolution, ranging from bipedalism to the development of language, save the development of brain-size in between.

As behavior is found to be mostly species-specific, it speaks of its biological connection; on the other hand, biological development also keeps track of the behavioral changes and adapts to them, all the while environment playing a catalyst between (Descent, 2007). It's like gene-text facilitating the course of behavior and behavior at other times, influenced by the environment, scripting new traits in the gene-text.

Some might call humans lucky to find the environment conducive to reach this stage, some would stress on the fact that bipedalism holds the key, while some other would stress on the behavior that humans achieved after bipedalism through the development of brain. Thus this essay explores the behavioral implications of biological developmental change, before coming to the conclusion of holding both equally responsible and complementing to each other. Bipedalism Two-legged activities are called bipedalism (bi= two, and pedalism= pedaling acts).

It basically covers the four states of movement through a pair of legs, such as standing, walking, running and hopping. It has long evolving history among the vertebrates, ranging from dinosaurs to birds, save the ostrich, who has an estimated speed of 65 km per hour that once matched by the <https://assignbuster.com/behavioral-implications-of-biological-developmental-changes-in-the-human-past/>

maniraptors, now in the extinct list of dinosaurs (Bipedalism, 2003). However, bipedalism is not a habit of those who have four legs, like the larger section of mammals.

However, to match with the uniqueness of nature's diversity, the kangaroos lead in representing the mammals who use bipedal movement, through hopping. But it is the humans who provided more variation in their bipedal movements, while the gibbons and giant pangolins prove to be distantly resembling to it. Understandably, bipedalism involves a firm ground beneath the feet; and that takes away the amphibians' scope to earn this scope. More so, it is mostly a reared-up action and barring a few instances of some lizards and cockroaches this action is also unfamiliar in arthropods.

Same can be said about the reptilians. With exception being the rule of the nature, two kinds of octopus are seen to resort to bipedal movement at times or some of the animals can be trained to exploit the bipedal movement. , much like the humans who can train themselves to walk on their hands. These are deviations and have no bearing to the mainstream evolution. Bipedalism is considered to be one of the major causes of bringing humans where they are today. The reasons are far too many, as they range from elevation of perception to the improved condition of survival.

Between them lies the factors like utilization of free hands, swimming, faster movement, greater reach, etc. , that speak of several advantages of adapting to the living conditions. This trait has evolved independently, that is, not in a set pattern, having various lineages. As for example, the lizards, the recognized pioneer in bipedalism, have a proven track record of this since 290 million years! Dinosaurs and birds follow closely with their record <https://assignbuster.com/behavioral-implications-of-biological-developmental-changes-in-the-human-past/>

of 230 million years, much before the groups of extant mammals resorted to bipedalism, mostly evolved independently.

However the quest to find the reasons behind this elevation of humans fetch us 12 hypotheses and also points at the fact that the human brain-size could develop only after attaining bipedalism. Brain Development Bipedalism facilitated the humans with a new kind of freedom that they enjoyed with hands, letting them to be more organized in their survival and developmental processes. However, the gradual manifestation of intelligence in humans has a complex process, and still invites lot of research and observation.

Charles Darwin attributed its development in humans as an evolution through the process of natural selection, where humans have become successful in manipulating the brain-body ratio, as well as the development of brain-size for a longer period after birth, rather than other creatures (Creationists, 2007). Overall the situations proved more conducive for the humans to develop their brain-size, like the bipedalism, or front-facing, binocular vision. The work-power of the two hands saved free zone for the brain for them, which led to the exploration of new avenues, thereby increasing the horizons of thinking through more number of activities.

Once they adapted to giving birth to their offspring with soft skull that would grow on later, the humans were the decided master of the Earth. The evolution of intelligence always follows a pattern, where, a solution to a problem takes the solver to another plane, where it faces a new set of problems - upon solving which, it again arrives at another plane to face the

similar situation; in the process its thought-processing faculty also fights to gear up for the new challenge, finally succeeding in increasing its ability.

Humans, after discovering their new life in the post bipedalism era, when they also had the scope to develop their brain-size in the post-natal period, faced the challenge of securing their offspring, who proved to be totally unfit to survive alone. This situation forced them to remain in groups and explore the ways to enhance the communication among the group members.

This state again, commanded for using the brain more than earlier, and responding rightly to that challenge, the humans arrived at a new plain of existence, where they could mastermind their ventures and be joyous with more productivity, with the more secured system for their offspring. The power of interpersonal communication earmarked the new bend in the history of development of humans and finally propelled them to an astoundingly different height from the rest of all other creatures of the earth, with sophisticated set of body and brain complementing each other.

**Language Faculty** The advent of the concept of communication gradually helped humans to shape their behavior, and those acquired traits again worked on their biological evolution apropos their interdependency. As like in its earlier stages where the new solutions fetched new problems which ultimately proved ladder to another developed state of being, the progress of language also had a similar route and is still evolving on with time. It started with signs and sounds and finally followed by the scripture forms, all generated with the intensity to express the ideas bubbling within.

The behavioral process at this stage dealt with the urge to create the identity of the individual and the group; another new challenge with the invitation of reaching another plane of refined existence. They then started identifying various sounds as the representative of various emotions, and needs; with time, these set ideas gave birth to proto-language, which, it could be well-assumed, were influenced and conditioned by the environment, much the way it helped them to achieve bipedalism, and thereafter the larger brain-size.

Now it worked on to them find their identity, which generated the races with their certain features distinguishable from one group to another. This tendency of uniqueness gave way to the quest of tracing the uniqueness in an individual greater than ever, and in the process, the started reshaping the language by broadening its base from sound to scriptures, the cuneiforms. These activities also helped to serve the group or the race, helped to maintain the balance in the demand and supply ratio of the resources, it again indicated towards a better state of living with every requisites of it being more organized and handy (Scientists, 2003).

Thus a new avenue of collective living was opened with the cohesion in language. Some also earmark this period as the involuntary manifestation of the desire to form better society or race, a period of precursor of eugenics in the recent times; some attribute this stage as the moment before the giant leap of the civilization. However, concepts apart, there is no doubt that the advent of language among humans helped them to find their ways and means of more comfortable life-style and that attributed further to the

evolution of their body that gradually adapted to that newly acquired lifestyle.

CONCLUSION The history of the evolution of humans may be counted from the natural selection to the time from when humans started selecting their living conditions. Between these two poles, lie millions of years of graduation or probation period entwined with millions of influencing factors, in which its behavioral patterns and biological developments played stellar roles, both being interdependent and determiner of the development of the other.

Likewise, it's the bipedalism facilitating the development of the brain, and then brain's behavior affecting the working pattern of the humans, which in turn influencing the body to adapt to that new working condition, and again that acquired new formation of the body ventures to some new action which is supported by the brain.. this never-ending process of evolution is still on; with body, brain and environment, all the three components achieving new dimensions, nevertheless influencing one another as ever.

It can be said, thus, the human past is a fascinating, interactive journey of body and brain (the determiner of behavior), where environment all along served the input for the development of both. In the maze of body-brain communication, any of them can rule over the other, depending on the situation, i. e. , the state of environment, who works on as a stimuli, be in on the mental or on the physical plane. Ends BIBLIOGRAPHY Adaptation by

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