

Bipedalism essay

[Economics](#), [Trade](#)



“ On land, tropical forests underwent reduction or, more commonly, broke up into mosaics where patches of forest were interspersed with savanna or other types of open country. With the breaking up of forests, our early ancestors found themselves spending more and more time on the ground and had to adapt to this new open environment. ” There are many different theories trying to explain why and how our ancestors came to be bipeds. This quote is stating the theory that our ancestors faced many obvious problems through having to deal with the forest-savanna change.

The major problems here are that as forests shrank, we had to move from patch of trees to other patches of trees, but the major problem was food gathering. As trees became scarce, so did the foods found in trees, therefore we had to rely more on foods found on the ground like seeds, grasses, and roots. As our diet changed, our dentition changed as well.

As our teeth became smaller and less vicious, our hands took over by being able to use weapons and make tools. “ Bipedalism, as a means of locomotion, has its drawbacks... it makes an animal more visible to predators... and it does not make for particularly fast running. Have you ever tried running on all fours? It’s probably harder and we cannot run fast doing so just because we have evolved out of being quadrupeds. But looking at the fastest animals in the world, most of the fastest animals run on four legs. I’m not saying that we should run on all fours but that speed was no longer a necessity in our survival. There are many disadvantages of being biped as well as advantages. I have noticed that almost all of these disadvantages are directly correlated with the advantages.

Basically, everything in our evolution process was a system of trade-offs. A perfect example of this is shown here, " Still other advantages of Bipedalism would have enhanced survivability. With their heads up well above the ground, bipeds are able to spot predators before they get too close for safety.

", which can be compared to, " Bipedalism makes an animal more visible to predators, and exposes its ' soft underbelly'. " See how it's all a system of trade-offs? I could show many more examples, but you get the point. More disadvantages of Bipedalism are limiting the ability to run faster or change direction quicker when running. " Quadrupedal baboons and chimpanzees are 30 - 34 percent faster than we bipeds. " Again, think cheetah compared to us. The worst drawback (I think), is the frequent lower back problems.

I have already had back problems and I am 17! My dad has had back problems for as long as I can remember, and it is so common, I know so many people that always complain about their back hurting, it happens to nearly everyone. Another problem is the circulatory problems to which humans are so prone to getting. Another huge drawback to being biped is that if we severely hurt one of our legs, we have to change quite a few of our habits for quite some time before it heals.

" A quadruped can do amazingly well on three legs, but a biped with only one functional leg is seriously hindered. " In our society today having one hurt leg isn't a big deal, it will eventually heal and you can still go to school, work, and do your daily things. But if it was way back in the day of the

Neanderthal, you would be useless without use of both legs. You wouldn't be able to gather food, hunt, run from predators, or anything.

All of these drawbacks put our ancestors at risk from predators, but the advantages must outweigh the disadvantages, after all, we are bipeds now aren't we? There are many different theories as to why we are biped, I believe in the multiple causation theory along with a few others. There are many advantages as well as disadvantages to being biped. A fully erect biped out on the open savanna - whether male or female - has the ability to gather substantial quantities of food for transport back to a tree or other place of safety for consumption..." This quote is obviously true. Being human, we are always multi-tasking, even times when you think you're doing one set thing you could still be multi-tasking without even realizing it.

I'll be talking on the phone while eating and reading and doing homework all at the same time. If I was on four limbs, I wouldn't be able to do have of those things. In addition to making food easier to transport and gather in substantial amounts, mother primates can hold/carry their infants. It makes a significant contribution to the ability to survive in offspring. Also, being upright allows for greater reach. Being biped would allow our ancestors to reach different foods. Another advantage is that Bipedalism gives us height advantage; our ancestors could now spot food, water, and predators from afar.

Lastly, having hands wide open, our ancestors could defend themselves better by being able to fight, throw ticks, or threaten predators while maybe running away from danger or something along those lines. The many

theories on how Bipedalism came about among our ancestors can be challenged or defended forever. There are quite a few and I am sure that eventually more theories will arise. The one theory that I disagree greatly with is the pair-bonding theory (one male attached to one female). The reason I disagree so much with this theory is that pair-bonding has never been seen among any species of animal except for in the majority of modern human society. Most human societies believe that it is every person's duty to get together with one member of the opposite sex and have sexual relations with no one other than that person, which they have sworn to stay with.

A theory in which I can agree with is the 'stand up to keep cool' theory. "The African Savanna is one of the most thermally stressing habitats on the planet as far as large mammals are concerned... among apes, our ancestors are the only ones that managed the switch; no other ape today lives on the savanna full-time. This theory states that our ancestors became bipedal in order to escape the harsh conditions of the savanna.

Since the forests were taken away, our ancestors had to undergo some drastic changes in order for survival among species to be an option. I love this theory because it sounds the most 'real', and it just plain-out makes sense to me. But this isn't the only theory I believe in, which brings me to the multiple causation theory. The multiple causation theory states, obviously, that there is more than one reason for which our ancestors became bipeds. In fact, there are many reasons. Basically, all the advantages of biped that I have listed can be put as reasons in the multiple causation theory. But I believe that the stand up to keep cool theory also

applies to this theory in how the 'stand up' theory is one of the causes of the multiple causation theory.

I strongly believe in the multiple causation theory because I don't think that there is only one cause of our ancestors becoming biped. The ability to keep their brains from overheating, of protecting themselves, holding objects while running, and travel extremely long distances without tiring are all very liable reasons for our ancestors to adapt to the ever-changing environment in order to survive. I don't think that we humans will ever go back to quadrupedalism, but the human mind is always changing and adapting, so who knows? Evolution will take its course, and its not like we can change how the world works. All species follow the Earth, we do not lead it.