

On the Power of Humans Over Natural Selection

Evolution through the mechanism of natural selection is seen in scientific circles as the defining factor of a species' progression. According to modern biology, any given species is affected by the ever-continuous march of natural selection; it is simply the way things are. However, there is, perhaps, one species that has taken this power from nature: human beings, as a result of advancements in modern medicine, a change in the definition of fitness in mates, and a slowing in the divergence of populations, have effectively controlled the seemingly unhalting progression of evolution. In removing the power that natural selection holds over them, humans have crafted a form of artificial selection that places the power in their own hands and, especially, their minds.

Medicine is possibly the most primary example as to why humanity is no longer affected by natural selection to such a great extent as every other species. With every decade, especially within the last century, advances in health sciences have enabled people to live longer than ever before, even with illnesses and deformations that may have killed them in the past.

One such instance of this is in sickle cell anemia. It is said that, at one time, sickle cell anemia probably evolved as a method to avoid death by malaria, a major killer in parts of sub-Saharan Africa and the Mediterranean. In recent times, however, sickle cell has posed an enormous disadvantage to those individuals that carry it in that it deforms the cell and can eventually lead to death if left untreated. As recently as half a century ago, these people would suffer and die from anemia as a result of their naturally-selected genes that no longer serve a beneficial purpose for them. Today, fortunately, people suffering from sickle cell anemia can benefit from modern medicine which can control their anemia as well as prevent them from succumbing to malaria. The fact that the gene for sickle cell survives today is largely in part due

to the fact that many who carry it survive as a result of modern medicine and can live long enough to reproduce and pass it on to their offspring. In nature, an obsolete gene that causes more harm than good will be selected out by the death of its carriers dying before they can reproduce; for modern humans, such a fate is not of concern because a trip to the doctor will sort it all out.

It is not only those people who precedently would not have survived to reproduce that are able to help populate the modern world. So, too, do the formerly “sterile” among us produce offspring. In the 1980s, a massive advancement in reproductive medicine—which subsequently won its inventor a Nobel Prize—allowed for the artificial insemination of a woman who is unable to bear a child through “natural” means. That is to say, scientists could now create so-called “test-tube babies” that were fertilized outside of the womb and then inserted into the uterine lining after a safe period. Never before was this a possibility for couples that could not conceive, and suddenly, men and women who would have ordinarily been childless were—and are—producing children all over the place, sometimes in quantities of two and three at a time (artificial insemination and fertility treatments often lead to twins and triplets). In nature, these people would never reproduce at all.

A third notion of formerly-non-reproducing individuals is found in older people. In nature, it is accepted that there is a fertile time of an organism’s life that is bookended by times in which procreation is unlikely, either due to being too young or too old. Modern medicine has made the former a thing of the past for human beings, primarily due to such inventions as Viagra or other erectile dysfunction treatments. At some point, usually just before they die, most creatures simply can’t reproduce anymore. But humans are no longer in service to this rule, as

evidenced by people like Rod Stewart who, at 66 years old, became a father for the eighth time when most men have been grandfathers once or twice over.

Medicine is not the only factor which has made artificial selection, rather than natural, the mode of human development. Another is found in human society and culture redefining what consists of fitness in a potential mate. In nature, poorly-suited mates are quickly selected out by choosy females or tough competition. Human society is much less cruel in that regard and offers every individual the chance at redefining what they were naturally born with into something that may be more palatable to the type of mate they are seeking.

One extreme example of human beings altering their fitness in the eyes of others is in the literal changing of their appearance to follow a set beauty ideal; that is, plastic surgery. Plastic surgery is common around the world, but in places where it is especially frequent, like East Asia, there are numerous court cases in which husbands sued their wives for “lying” to them about how they looked and producing children that had similar appearances to how they looked before—they passed on their original, “unfit” genes to their children because plastic surgery does not affect DNA. An advertisement for plastic surgery out of Taiwan shows a similar situation: two wide-eyed parents hold the shoulders of their three children, all of whom have very narrow eyes. It is because of things like plastic surgery that these formerly “undesirable” traits have become irrelevant in modern human evolution.

Further redefinition of fitness in human mating is found in an adjustment of social norms. For most creatures in the animal kingdom, complete ostracization of individuals due to lack of fitness is totally acceptable and occurs every day. In modern human society, this could be frowned upon as bullying or discrimination, and thus is becoming more and more infrequent. Humans, as social creatures, have largely attempted to create inclusive environments in which

individuals of different appearances can find acceptance, which is unique in nature. Traits such as dwarfism or albinism might be shunned in nature but are seen as irrelevant in polite human society, and as such, these traits are not removed from the gene pool and can be subsequently passed down to future generations.

A final unique aspect to human evolutionary progression is a lack of divergence between populations. In natural selection, it is due to a branch-off between species that a new one comes into existence. A prime example of this is in Darwin's finches on the Galapagos islands, wherein the many species of finch on the islands evolved from only a few individuals that arrived from the mainland. In humans, this is extraordinarily unlikely to ever occur for many reasons.

The first of these is the interconnectedness of humanity on the planet. With our penchant for travel and capability to do so, human populations intermingle frequently, preventing any sort of offshoot from our line from ever occurring, since large isolated groups no longer exist.

A second reason for a lack of divergence in some populations is the growing tendency toward smaller family sizes. While some nations like China and India continue to boom, they may someday follow the course of nations like Japan or France, where a startling slow in birth rates threaten the upkeep of the population. As modern demands take their toll and society continues to make claim on our faculties, humans have perhaps begun to decide, at least in Westernized countries, that fewer children is perhaps more conducive to a better life. This, of course, leads to slower evolution of a species according to Darwinism and the principle of natural selection.

Humanity has become the only species on Earth to defy the rule of natural selection and decide to develop its own. For most of nature, the power that evolution holds over the progress of a species is undeniable; humans, on the other hand, have taken control of their own futures

and the future of *Homo sapiens*. It's certainly untrue to say that evolution for human beings will have stopped entirely due to our use of modern medicine, changes in fitness, and slower divergence of populations, but it has been made slower by an artificial means of selection. For the first time in the history of the planet, the power no longer lies entirely in evolution itself, but in the advancements of a single species.