

Would We All Behave Like Animals? A Conversation by William Thwaites

Does a "belief" in evolution lead to a loss of morals and ethics?

No. People who fear this result from teaching about evolution are mistaken. They are confusing a philosophy called "Social Darwinism" with biological evolution.

What is "Social Darwinism?"

"Social Darwinism" is an oversimplified and naive extension of biological evolution to human social systems. Theorists, such as Herbert Spencer (1820-1903), proposed and popularized much of what we now know as "Social Darwinism."

What are the major tenets of Social Darwinism?

Social Darwinists used evolution to explain, in a seemingly scientific manner, existing social and economic stratification among groups and among nations. Social and economic injustice as well as international belligerence were rationalized as being the natural order of things. Groups and nations with greater economic fortunes were identified, without any real justification, as being biologically superior.

But doesn't evolution claim the same things as Social Darwinism?

No. Biological evolution is very different from Social Darwinism. "Survival of the fittest" is not as accurate a slogan for evolution as "survival of the fit enough," but either way, it is important to realize that biological "fitness" can be achieved in many different ways. Biological "fitness" usually has little to do with physical strength or the use of force or coercion.

Then what does "biological fitness" mean?

Biological fitness is defined as the long-term ability, compared to others, to leave offspring or descendants. There are many factors involved in the ability to leave descendants in the long run (i.e. to have great, great, great, great, etc. grandchildren.) Among humans, for example, the abilities to communicate and to cooperate have gone a long way towards making our species successful.

But evolutionary thought does emphasize competition, not cooperation, doesn't it?

Again, the popular conception of "evolution" is really that of Social Darwinism. There are countless examples of evolution resulting in cooperative behavior. Insects and flowering plants are a perfect example. Most flowering plants use insects for pollination and the insects use the flowers as a source of food. "Cleaner" fish eat parasites off larger fish who, in turn, refrain from eating the "cleaners." The list of cooperative relationships between species is long, indeed. All, so far as we know, are the result of evolution. Furthermore, everyone knows of examples of cooperation within a species. Many social mammals will collectively defend the young, and elephants will help sick and injured members of the herd keep up. These cooperative relationships are also the result of evolution.

Competition or cooperation, evolution still teaches that we are just animals. If we think that, won't we behave like animals?

What animal species are you thinking of? Porpoises are gregarious, intelligent, and fun-loving. Baboons are protective of the young. They show cooperative group behavior. Gorillas are docile, family-oriented, and vegetarian. Chimpanzees form "bands" of more than one family, while orangutans live alone. From an evolutionary viewpoint, natural selection has produced people who behave like people. Humans, like all other species, are unique. There is no reason why we should behave as if we were some other species.

What does evolutionary thought teach us about the natural behavior of humans?

It is important to realize that we are a highly social species. Most of our behavior is learned, not genetically determined. We can learn behavior that will contribute to group well-being, and our long-term survival as a species. We can even "unlearn" whatever traces of instinctive behavior we may have inherited. Even if war between tribes is "natural" human behavior, we can learn not to make war. Systems of morals and ethics serve, in part, to channel our behavior away from behavior that is socially and biologically destructive.

If evolution is so harmless, how could Hitler and Stalin use the idea of evolution to justify their inhuman policies of cruelty and extermination?

Hitler, the Nazi, Stalin, the Communist, and Andrew Carnegie, the laissez faire capitalist, are 20th century examples of people trying to put Social Darwinism into practice. Certainly much damage and misery have resulted from these attempts. Most historians conclude that Hitler, Stalin, and the capitalist robber barons latched onto fragments of evolutionary theory to provide legitimacy for their particular views. They took a naive understanding of science and twisted it to suit their political purposes. But remember, this is Social Darwinism, a corruption of evolutionary theory, not evolutionary theory itself. Consider how curious it is that three extraordinarily different social/economic systems, Nazism, Communism, and laissez-faire capitalism could all be "derived" from the same idea of natural selection! It is clear that science was twisted for political ends. It is clear that science was twisted for political ends. But neither 19th nor 20th century Social Darwinism can be supported by a modern understanding of biological evolution.

The fact that Social Darwinism was said to be grounded in biological evolution does not mean that knowledge of biological evolution can be blamed for the wrong-doings of Hitler and others. By this logic, we could condemn the Bible for such excesses as witch hunts, the Spanish Inquisition, and the Crusades. All were said to be motivated by the teachings of the Bible.

If we accept the idea of evolution, won't that lead to programs to control our evolution?

Why? We have known for thousands of years how to control the evolution of domestic animals, and obviously the same principles apply to human beings: mate like with like. Hitler failed in his attempt to create a "pure" Aryan strain by marrying off tall, blonde, handsome SS officers with similar tall, blonde, good-looking German women. There are no examples of anyone successfully applying these principles to Homo sapiens. First, to even attempt to control human evolution by selective breeding would take thousands of years, because of our long generation span. It would also require a great deal of coercion by society's leaders, because large numbers of people would not be allowed to reproduce. What would be the likelihood of any political system existing for thousands of years? None has so far, and it's not likely to happen in the future -- regardless of whether people understand evolution.

What about genetic engineering? I understand that pretty soon scientists will be able to make a human being in the laboratory. That would speed up our control of human evolution. Shouldn't we be concerned about this?

You're probably thinking of "Brave New World" type science fiction movies where scientists create master races, or monsters, or both. First of all, even with the Human Genome Project's attempt to map all the genes of our species, it will be a very long time -- if ever -- before genetic engineering techniques will be able to produce a human being. If such a thing could be done, it would be extremely expensive, require large numbers of carefully trained personnel, and, again, because of our long generation time, be very time-consuming.

But let's take the worst-case scenario and imagine that sometime hundreds of years in the future, human beings could be created in the laboratory. Unless they could be produced by the hundreds of thousands, they would not have any effect on human evolution at all. Remember, the rest of humanity would continue to reproduce and evolve, and they would doubtless out-number those produced in the laboratory. We won't be able to control our future evolution through genetic engineering techniques.

But I think something is missing here. Just as with selective breeding, any attempt to control human evolution depends on the political and social, not scientific, decisions of the society. It is not inevitable that scientific knowledge will be carried to its extreme just because it can be done. You, the other members of your society, and your leaders will decide what we do with any applications of science.

When I was taught about evolution, we learned about what you are calling "Social Darwinism." Won't the same thing happen if my children are taught about evolution?

Not if we do something to make sure that outdated and misleading information is no longer taught. Many science teachers receive too little formal education about evolution. Another problem is that progress in scientific research has led to specialization and fragmentation in college programs. In some colleges, a student can get a degree in cell biology without learning about evolution or ecology! Often, there is no course that will teach students in other majors, including education, about the nature of evolution and its scientific importance. Instead, much of what teachers know is derived from textbooks that give too little space to the subject. Television and unscientific popular accounts are common sources of misinformation about evolution.

It is vitally important to set the record straight. Evolution is the foundation principle of biology. If our children are going to understand twentieth century science, and our country is going to be ready for the twenty-first century, we have to end the misunderstanding and fear surrounding this important aspect of biology.

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