

Genes or Environment?



Edward O. Wilson

Is it a fancy not worth speaking of? Or is at long last Sociobiology?

My heart is sad and lonely, for genes I sigh, why haven't you seen them?

Are humans born good or evil? Is the natural condition of humans, nasty, brutish, and short, or are they born good and free in the state of nature? Is Caliban in *The Tempest* a "born devil" because he is the misshapen son of a sorceress, and so brutal that education has no effect on him, or is he bad because of cruel circumstance? Viewed in the light of today's political events is Caliban the symbol of oppressed indigenous people enslaved by colonialists?

Throughout history one of the oldest philosophical discussions has concerned the relative contributions of genetic inheritance and environmental factors, so called nature and

nurture factors, to human development. Opinions vary widely from the supposition that the mind is a blank slate, *tabula rasa*, that humans are born without any innate mental content, to the belief that certain things are inborn, or occur naturally regardless of environmental influences,.

In theory, the difference is stark. Nature focuses on biology, genes and hereditary factors, eye color, skin color, the basis of appearance and personality. Nurture, based on empiricism and behaviorism, includes multiple factors, such as the influence of childhood upbringing, parenting style, nature and extent of education, social class, group affiliation, national and social culture. Yet, even though the debate has long been discussed it is arguable whether any strict dichotomy of the two views, genetics or environment, is of more than limited value.

Even if the war is not over, a useful compromise is that both factors play a crucial role in explaining behavior, in topics such as such as differences in height, life expectancy, educational ability, temperament, or the causes of crime and aggression. Moreover, admitting that our genes guide our individual and social behavior, it is still true that the influence of genes changes throughout life. The DNA may remain the same, but the impact of genes alters with age and different circumstances.

The controversy over the nature or nurture debate was reopened in the 20th century by the work, mainly the concept of Sociobiology, popularized by E. O. Wilson, the distinguished biologist, professor of entomology at Harvard and founder of the Biodiversity Foundation, who died on December 26, 2021, at the age of 92. Wilson was born in Birmingham, Alabama, in 1929. He was the world's leading authority on the behavior of and communication of ants and small insects as well as being prominent and controversial in a number of scientific disciplines. Wilson in his early years played a

significant part in the intellectual clash between advocates of the approaches of molecular biology and classical biology. He was also prominent in the study of biological diversity, the existence of different numbers of species in different places, to some extent. In addition, Wilson is controversial partly because he changed his views during his long career.

Wilson started with a butterfly collection, and his specialty became the study of social ants and insects. He analyzed the factors, natural selection and others, that led to creation of a complex structure such as an ant colony. His interests were extended to attempts to understand the social behavior of humans, by a new scientific field he called Sociobiology. The basic principle is that all animal behavior, including that of humans, results from heredity. Genes for particular social behaviors exist, and have been spread by natural selection and the laws of evolution. Free will may be an illusion. Scientists are deeply divided on the scientific and social implications of this.

From his early works, Wilson held that genetic traits influence intelligence and play a role in animal and human behavior. Social behavior can best be understood from a biological perspective. Human nature might be related to evolutionary pressures, to a natural selection.

Yet Wilson did not argue that human behavior is totally determined by genes. Behavior is influenced by genes, shaped by evolution. Wilson was influenced by the Darwin theory of natural selection and the argument that social behavior evolves to increase chances of survival. Wilson wanted to be remembered as a successor to Darwin. In a lecture in April 2009, at Montana State University, Wilson remarked that Charles Darwin was arguably the most important person who ever lived. He viewed Darwin as the one who, of all scientists, most fundamentally changed the way humanity sees itself. Darwin's books, he said, have formed the foundation of modern biology.

Wilson popularized the term "sociobiology," the study of all forms of social behavior of humans as well as of insects. Essentially, it holds that human behavior is at least partly inherited and can be affected by natural selection. Behavior has evolved over time and led to the formation of complex social processes and the preservation of genes in the population. The concept of sociobiology was strongly criticized, partly for political reasons as being linked to real or imagined political and ideological consequences.

Those who were critical of the concept and of "biological determinism," included Marxist writers who saw the concept as injurious to the progress of human beings. They argue, for example, that traits such as aggressiveness, can be explained more by social environment than by biology. Critics accused Wilson of racism and sexism. The most vocal critics, Steven Gould and Richard Lewontin, argue that human traits can be explained more by social environment than by biology. They were critical of sociobiology and evolutionary psychology, and argued that many physical and psychological traits are evolved adaptations, not the result of some innate characteristic. Critics argued that sociobiology was a new version of biological determinism and of eugenic policies. Wilson dismissed the criticism and the physical attacks, one by having water thrown over him, as self-righteous vigilantism.

As a result of this criticism, the term sociobiology is less used in favor of the term evolutionary psychology. Nevertheless, despite the terminology, Wilson was involved in the study of the biological basis of human existence, the social evolution of humans, and on the existence of a social gene or set of genes that influence intelligence and shape human as well as animal behavior. Simply put, Wilson argued that fundamentally genetics played a dominant role in shaping culture and behavior. This meant that some forms of human behavior, tribalism, class differences, sexuality, personal

ability, emotional attributes are genetically influenced, and have evolved in certain ways through natural selection.

Sociobiology is the study of the biological basis of social behavior, purporting to explain social behavior in the light of natural selection and other biological processes. The study includes the basis of the preservation of biodiversity, the variety of life on earth, the great diversity of genes within and between species, is essential for the stable existence of the earth. Wilson posited that two competing forces driving human behavior are operating simultaneously; group selection, occurring when there is competition between two or more groups, and individual selection, competition between individuals within each group in passing along one's genes.

The root causes of human behavior are still debatable. Now a study in December 2021 by the University of New South Wales, Australia, of 17,000 students has found a decline in their levels of wellbeing, in their ability to regulate emotions and impulses, and noticed they are becoming less able to empathize with others and are less tolerant of the views of views not their own. They are more likely to block speakers because of disagreement with their point of view. The given reason is the too strong use of social media so that social interactions increasingly take place online. They therefore miss social cues such as body language and voice tone. Social networks have created a situation where young people are subjected only to views that mirror their own. It is indeed commonplace that social media have to a large extent replaced communication in person, and this means students are less capable of having fulfilling relationships, and less capable of controlling their emotions and of handling stress.

This new study is the latest item in the haunting problem, is language an innate behavior shaped by natural selection and adapted to our needs for communication, and do human beings have an innate facility for understanding language. Most broadly, is the biological approach to the mind the most

appropriate, or is it more correct to argue that human abilities are due to different evolutionary forces affecting them?

It is still a mystery how individual genes give rise to human nature. However, policy makers might benefit from heeding the aphorism of E.O. Wilson, "in a group, selfish individuals beat altruistic individuals. But groups of altruistic individuals beat groups of selfish individuals."