

The New York Times

Evolutionary Psychology: The Landscape

Few scientific enterprises evoke more interest, debate and hostility than evolutionary psychology, the effort to use the principles of evolutionary biology in studying the human mind.



CHARLES DARWIN

The naturalist's 1859 book, "On the Origin of Species by Means of Natural Selection," changed the scientific world forever.

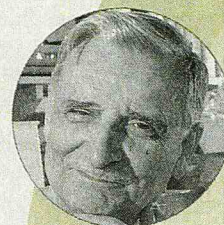
Adopts natural selection as a partial explanation for social behavior.

Sociobiology

The systematic study of the biological basis of social behavior; it attempts to explain animal behavior in light of natural selection and other biological processes.

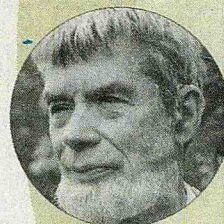
EDWARD O. WILSON

A renowned entomologist, his 1975 book "Sociobiology," laid a foundation for the field. Though most of it dealt with animals, its final chapter brought evolution into the realm of human affairs, where critics said he was on shaky ground.



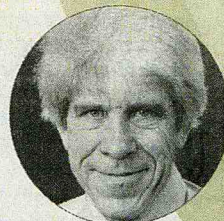
GEORGE C. WILLIAMS

In 1966, he refuted the idea that adaptations arise for the good of the species or group. Rather, he said, adaptations are the result of successful genes spreading themselves through the population.



WILLIAM D. HAMILTON

His work brought mathematical rigor to the study of evolution and offered a genetic basis for altruism, behavior that had baffled naturalists from Darwin onward. Wilson called Hamilton's work "pivotal."



Evolution

All life evolved through a process of "natural selection": Organisms with traits that promoted survival or reproduction passed on those traits to future generations; others died off. Natural selection remains the central feature of evolutionary biology.

Cognitive Science

In the last few decades, scientists in a variety of fields, including psychology, have harnessed concepts from computer science to understand how people take in information, process it and use it to solve problems.

Applies the idea of a "designed" mind.

Applies natural selection to behavior.

Evolutionary Psychology

It holds that the human mind is not a "blank slate," but instead, comprises specialized mental mechanisms for solving problems faced long ago. The question is, are these mechanisms limited to functions like vision, or do they extend to complex behaviors?



LEDA COSMIDES AND JOHN TOOBY

Considered by many as among the intellectual leaders of evolutionary psychology, they have articulated many of its basic tenets and have studied cooperation and other aspects of social interaction.



MARGO WILSON AND MARTIN DALY

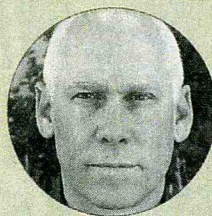
Their studies of infanticide and spousal murder have become classics in evolutionary psychology.

Distorts Darwin's theory to justify class differences.

A Shadow Over the Field

SOCIAL DARWINISM

The 19th-century theory distorted Darwin's scientific message to justify social inequities. Though scientists generally agree that social Darwinism has nothing to do with reputable evolutionary science, some theorists find themselves tarred with the term.



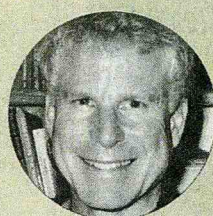
DONALD SYMONS

One of the first to study sexual attractions and other aspects of human sexuality from an evolutionary perspective.



STEVEN PINKER

He maintains that humans have an instinctive ability to learn language, that all people learn language similar ways and that languages evolve in predictable fashion.



DAVID M. BUSS

His controversial studies find that women looking for mates rank wealth and status higher while men put a higher priority on reproductive potential.

Photographs by John Tooby (John Tooby and Leda Cosmides); Rick Friedman/The New York Times (Edward O. Wilson); Oxford University (William D. Hamilton); Donna Coveney/M.I.T. (Steven Pinker)