

PERSPECTIVES & OPINIONS

Francisco Ayala

EVOLUTION AND CREATIONISM

THE CONFLICT LIES IN PERCEPTION.

Dani Brubaker

In his native Spain, Francisco Ayala attended Catholic schools, where he studied evolution in science class and creationism in religion class. No one saw a conflict. Having moved to the United States in 1961, he was shocked when, in the mid-1970s, California sought to introduce an antievolution curriculum into its public schools. How could this be, in the most scientifically advanced country in the world? His bewilderment led Ayala to a lifelong study of how evolution is, or is not, taught in public schools.

You are the lead author of a major 2008 report arguing that evolution is settled science, and creationism should not be taught in science classes. Many people assumed that this issue was resolved in 2005, with the court ruling in Dover, Pennsylvania, that “intelligent design”—the latest face of creationism—is religion, not science. Is there still a problem?

Yes, unfortunately so. The courts have settled the issue many times, starting with a decision of the Supreme Court in 1968 that Arkansas could not prohibit the teaching of evolution in its public schools. Then came the idea of “creation science,” and the Court ruled in 1987 that it was actually religious teaching and therefore could not be mandated in the public schools.

Next, the conversion to “intelligent design” took place. Some school boards tried, as in Dover, to introduce it as a scientific theory, comparable to evolution. The federal court in the Dover district decisively knocked down this claim. The judge, John Jones, said that intelligent design is creationism and the Dover school board was trying to introduce religion into public school classes, which the U.S. Constitution forbids.

But that court does not have authority in the rest of the United States. Creationism is still a live issue in Florida, Kansas, Louisiana, Alabama, Michigan, and Missouri—other places. One new tactic is to seek to protect any teachers who attempt to debunk evolution in their classes, as a matter of “academic freedom.”

Some argue that schools should teach the controversy between intelligent design and evolution.

Yes, even the president of the United States said that not so long ago, to which my response was, well, maybe we should teach astrology with astronomy, and alchemy with chemistry, and witchcraft with medicine. Because intelligent design is not science, it is not something to be taught as an alternative.

Almost half of Americans, according to recent Gallup Polls, say that evolution and religion cannot coexist. Why is evolution so contested in the United States, at least in certain areas?

The United States was largely founded by people who were being persecuted for religious reasons. I think love for reli-

gion predisposes citizens in this country toward the perception of a conflict with science. On top of that, the idea is pervasive that science tends to be materialistic.

Meaning?

Materialism is a philosophical position, affirming that nothing exists beyond “matter,” that which we can experience with our senses. I would say that science is methodologically materialist: it can deal only with the world of matter. But it is not *philosophically* materialist; it does not imply that nothing can exist beyond what we experience with our senses, as religion requires. One can accept scientific principles and also hold religious beliefs.

But, many people are ignorant of science and just assume it is contrary to their religion. Of course, the proponents of intelligent design and creationism are also spreading a lot of propaganda. The only way to deal with the problem is education and specifically science education, which is unfortunately lacking, by and large, and not only in this country.

Don't most mainstream theologians actually endorse evolution?

Yes. In Christianity, Islam, and Judaism, the compatibility of science and religion has long been accepted by most scholars, by most theologians. Pope Pius XII said in 1950 that Catholics should accept what science demonstrates about evolution, while holding that God creates the human soul. In 1996, Pope John Paul II spoke very strongly in support of evolution and the idea that evolution and religion are quite compatible. The current pope, Benedict XVI, says there is plenty of scientific proof for evolution and that it is absurd to assume there is a conflict between evolution and religious faith.

INTERVIEW BY HARVEY LEIFERT. *Francisco Ayala is a professor of biology and philosophy at the University of California, Irvine. For more information about the National Academy of Sciences/Institute of Medicine report, “Science, Evolution, and Creationism,” visit www.nap.edu/sec.*