

The Pope and I

LAWRENCE M. KRAUSS

Much of my popular writing in newspapers over the past several years has been devoted to trying to clearly lay out the demarcation between science and religion in order to help fend off attacks on science by those who feel that the absence of an explicit consideration of a deity in scientific explorations implies that the scientific enterprise is itself somehow either inconsistent or immoral. Darwinian evolution is usually at the center of these attacks, because many groups feel that somehow evolution via natural selection poses a direct threat to the notion that humanity is a divine creation. Interestingly, the attacks are, however, often couched in seemingly scientific language and the claim is made that evolution is simply bad science.

Most recently, in perhaps the most conciliatory piece I have ever written, I described in a May opinion piece in *The New York Times* (“School Board Wants to ‘Teach the Controversy.’ What Controversy?” May 17, 2005) how recent statements made by Pope John Paul II, and by the International Theological Commission, have made it clear that the Catholic Church can theologially accept natural selection mediated by unguided genetic mutation, because they view God to be the “cause of all causes.” Therefore, God can act through natural physical processes to achieve the desired goal, presumably the existence on Earth of human beings.

More importantly, I felt, I used the example of Georges Lemàître, the Belgian priest who, as a theoretical physicist, first discovered the Big Bang solution of Einstein’s equations from General Relativity. While the discovery of a consistent expanding universe stood the then-conventional scientific wisdom on its head (implying a finite age for what had previously been assumed to have been an eternal universe), Lemàître nevertheless worked hard to convince Pope Pius XII to cease proclaiming a new scientific basis for Genesis. As he indicated, the Big Bang theory—as it later became known—was a scientific theory that made falsifiable predictions. Whatever metaphysical implications one chooses to draw from the theory are essentially independent of the science itself.

As a result, I argued that the current supposed “controversy” over the teaching of evolution in high schools in this country was not a scientific controversy at all, but a theological one. Just as the Big Bang neither proved nor disproved the existence of God, so too evolution as a natural process is equally independent of one’s theological leanings. The absence of explicit evidence for design, which in fact appears to be the case, is no more a proof that God doesn’t exist than the Big Bang implies that the biblical story of Genesis is accurate.

Imagine my surprise when almost eight weeks after the appearance of my piece in the *Times*, an op-ed (“Finding Design in Nature,” July 7) was published in the *Times* by Cardinal Christoph Schönborn, the Archbishop of Vienna, that appeared to take issue with my claims and moreover indicated that unless science manifestly recognized the “overwhelming” evidence for design in nature, it could not be consistent with Catholic theology.

I subsequently discovered from a *New York Times* news article (“Leading Cardinal Redefines Church’s View on Evolution,” July 9) that the Cardinal apparently became aware of my piece through interactions with the Washington Bureau director of the Discovery Institute, the major Intelligent Design lobbying organization in this country, and moreover, that the public relations firm for the Discovery Institute actually submitted his piece.

Motivated by this, I took the opportunity to write an open letter to the new Pope (Benedict XVI) (July 12), cosigned by

two distinguished Catholic biologists, Kenneth Miller and Francisco Alaya, asking the Holy Father to clarify and reconfirm the Church’s support for evolution via natural selection as a “contingent” process governed solely by natural physical laws. *The New York Times* picked up the story, and it has circulated around the country.

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A number of scientists have written to me asking why I have bothered to try to influence the Catholic Church in this regard. After all, with its doctrinal belief in virginal birth, opposition to stem-cell research, etc., the Church is not generally viewed as a particularly progressive scientific organization.

This is in fact largely the reason to be particularly concerned about these recent developments, however. As long as Catholic theology is understood as being consistent with scientific investigation in general, and with evolutionary biology in particular, the claims of various fundamentalist groups in this country that one must be an atheist to accept that natural selection has resulted in the diverse evolution of life on Earth can be demonstrated to be vacuous. If Cardinal Schönborn’s flawed theology is left to stand without comment, the efforts of all those who wish to help fight the public relations battle against false controversy now being waged in various school districts throughout the country will be severely hampered.

Whether or not one is particularly religious, most people in this country are. Anyone interested in education must understand that to effectively convey ideas, you must be willing to reach out to understand where those you’re trying to teach are coming from. I believe that those who feel they must first attack the basic premises of religious orthodoxy in the process of explaining the nature of science are acting inappropriately. Science and religion are separate aspects of the human experience. Scientists who convey the impression that the scientific experience has exclusive ownership on truth only serve to further alienate the vast majority of religious non-fundamentalists to whom one might hope to expose the beauty and the power of the scientific process. □

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