



## **Readings II in Faith & Science**

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## **Science and Religion Not on Speaking Terms in Today's World**

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## Science and Religion Not on Speaking Terms in Today's World

[Dr. David Byers has been Executive Director of the Bishops' Committee on Science and Human Values, United States Conference of Catholic Bishops. During his tenure the Committee held many executive sessions with scientists, including many Nobel laureates. Many of the sessions involved such issues as Evolution and Creation.]

You are sitting in your TV room watching the news and the announcer says, "Scientists today revealed that ... " Your ears perk up. What is coming could be important, something you need to know.

A few days later you are driving to work and the voice on the radio says, "Religious leaders reacted to today's news by..." You yawn and look out the window. Interesting, maybe; important, no.

These fictional newscasts spotlight a revealing feature of life today. Many people feel the gifts of science are ambiguous; after all, it has given the world nuclear weapons, industrial pollution and a dizzying pace that sometimes leaves us wishing for a time when life seemed more stable.

Nevertheless, much of the comfort, convenience and efficiency of the modern world rest firmly on science and technology. By and large, we applaud the transformation they have wrought, especially in the past 100 years. Nostalgia aside, does anyone really want to trade in his or her Dodge Caravan for a horse and buggy, or his or her Stieffel lamp for a candlestick?

Given science's vast influence, there is little wonder that it profoundly affects the way we think, the range of things we accept without question. Science "works." It deals with hard, no-nonsense facts. Pragmatists that we are, we naturally take it very seriously indeed.

Faith, on the other hand, seems to deal with untestable feelings and experiences, intuitions rather than facts. Moreover, extreme interpretations of the doctrine of separation of church and state have largely banished religion to the realm of private opinion. As a result, religious teaching and commentary are often greeted with indifference or, if the teaching concerns sexual morality, outright hostility.

How did we get into this cultural fix, where human pronouncements are more believable than those based on God's revelation? That is an interesting story. The Benedictine scholar Father Stanley Jaki, in books like *The Origin of Science and the Science of Its Origin*, has persuasively shown that the cradle of modern science is Christianity. We Christians believe that God created the universe and everything in it. The universe issues from the Divine Intelligence as a consistent, if ever-evolving system. We believe also that humanity is created in God's image and that our intelligence somehow mirrors his, however darkly.

These beliefs have two implications. First, the universe makes sense; it is not a jumble of chaotic motion without pattern. Second, we human beings can understand it through the exercise of reason.

These assumptions of coherence and rationality in nature are fundamental to science. If scientists did not believe beforehand that the universe makes sense, they would never seek to discover and describe natural laws. Newton's Third Law of Motion ("To every action there is an equal and opposite reaction"), which underlies rocket-based space travel, is of value only because it applies always and without exception. So important are these assumptions that cultures which do not see the universe as a coherent, rational whole -- for example, the great civilizations of India and China -- did not develop science as we know it.

While Christianity and science are profoundly linked, history and human foolishness dictated that they would develop along divergent paths. Everyone is familiar with a simplified version of the Galileo case: how an oppressive Church shamed and condemned the gallant, pioneering physicist for arguing that the Earth revolves around the sun.

The truth, though not pretty, is somewhat more complex. While Galileo had considerable evidence to support his heliocentric theory -- for example, the phases of Venus and the existence of moons orbiting Jupiter -- he could not prove it.

As Owen Gingerich of the Harvard-Smithsonian Center for Astrophysics says in a recent article, "In the end the pope's conservative advisers won out, and Galileo... was forced to abjure a 'vehement suspicion of heresy' and to recite a humiliating confession. In essence the verdict was imposed for disobeying orders, not heresy."

In October 1992, Pope John Paul II accepted the conclusions of commissions he had appointed to restudy the Galileo affair. Since the great physicist had never been charged with a sin, there was no question of forgiving him. The Holy Father admitted that the Church, in preferring an overly literal interpretation of Scripture to persuasive scientific evidence, had committed a serious error of judgment and justice. The pope said: "Paradoxically, Galileo, a sincere believer, showed himself to be more perceptive [in the interpretation of Scripture] than the theologians who opposed him...."

Galileo's 1633 trial has come to symbolize conflict between science and established Christianity, a conflict marked by resistance to explanations of nature that threatened, more and more, to equate religion with magic and superstition. Organized religion's response to Charles Darwin 250 years later is only the most famous of the many skirmishes the two sides have fought since Galileo's day.

Broad historical currents have also played major parts in driving the religious and scientific communities apart. The naive optimism of 18th century Enlightenment philosophers that all of reality would yield its secrets to experiment and rational analysis undermined Christian claims to truth. Perhaps most importantly, the vicious Catholic-Protestant warfare of the post-Reformation period branded religion in many people's eyes as a dark and bloody force that must be eliminated for the sake of human harmony.

The United States at the end of the 20th century has inherited this legacy of fear and misunderstanding. Few recognize that religion and science share a common task: illuminating from their different perspectives an intelligible, divinely ordered universe. Polarization between the two disciplines has grown so great, indeed, that Catholic scientists frequently hide their religious convictions, afraid that colleagues will question their scientific integrity.

Scientists continue to wage warfare grounded in old prejudice. So do religious leaders who, basing themselves upon a wrongheaded reading of Genesis, flatly deny the broad validity of evolution. As Pope John Paul himself said in a 1980 address to the Pontifical Academy of Sciences, "the Bible . . . does not wish to teach how heaven was made but how one goes to heaven."

Both science and religion suffer from this historic rift, and both could benefit from a more cooperative relationship. A papal letter to Jesuit Father George Coyne, director of the Vatican Observatory, which was reprinted as the preface to the 1988 book *Physics, Philosophy and Theology: A Common Quest for Understanding*, declared that: "Science can purify religion from error and superstition; religion can purify science from idolatry and false absolutes. Each can draw the other into a wider world, a world in which both can flourish."

Cooperation between the religious and scientific communities is impeded by too much confidence on one side and not enough on the other. As noted, Americans too readily accept the power of the scientific method without acknowledging its limitations. Scientists in the 1940's could and did figure out how to build the atomic bomb. The scientific method, however could not determine whether developing it was wise. Scientists have pursued the technology that allowed Saddam Hussein to stockpile biological and chemical weapons of mass destruction. Should they have done so? Science cannot say. On a broader plane, science lacks the tools to tackle "ultimate questions": Who are we? Where are we going? What meaning do our little lives have?

The religious community, on the other hand, is curiously passive, almost shy, about claiming its right to cooperate in the analysis of scientific and technological change. Too often, Christians seem unconsciously to accept the notion that empirical reasoning is the only valid source of knowledge. This “scientism” is a dangerous form of moral blindness, leading to acceptance of every form of scientific advance as progress. It left the leaders of Eastern Europe disarmed before the technologies that devastated their environment. It threatens to paralyze moral reflection upon the exploding biotechnologies which, in the 21st century, may enable us to engineer “desirable qualities” into human children as we breed cattle today.

The pope, who is acutely aware of these dangers, has often called on the religious and scientific communities to start talking to one another. As a result, small efforts at dialogue have sprung up here and there throughout the Christian world. Perhaps the most promising of these is a new series of discussions between the U.S. Catholic bishops’ Committee on Science and Human Values and a national scientific organization.

[Here Dr. Byers listed groups who have been working in faith/science and theology/science areas, Editor.]

These efforts are pinpricks, however, not hammer blows. Many more Christians must take science seriously, and many more scientists must take religion seriously if that wall [of separation] is to fall.

Evangelization is primarily the work of the laity. At present, however, American culture seems to be evangelizing the Church, instead of the other way around. Catholics progressively merge with the surrounding culture, when they should be challenging that culture with Jesus’ message of hope and salvation.

The passive acceptance of scientism in contemporary life is part of that dynamic. Responsible Christians should heed the pope’s call to listen to scientists and to help bring moral insight to bear on their essentially noble enterprise, “For the truth of the matter is that the Church and the scientific community will inevitably interact; their options do not include isolation. Christians will inevitably assimilate the prevailing ideas about the world, and today these are deeply shaped by science. The only question is whether they will do this critically or unreflectively, with depth and nuance or with a shallowness that debases the Gospel and leaves us ashamed before history.” (Dr. David Byers -- with permission from *Columbia*, March, 1994 Knights of Columbus publication)

## Questions

If science and Christianity are so profoundly linked, why is there often an assumption and appearance of antipathy or outright hostility? What part, if any, did The Enlightenment play in this antipathy?

“On a broader plane, science lacks the tools to tackle ‘ultimate questions’: Who are we? Where are we going? What meaning do our little lives have?.... Too often, Christians seem unconsciously to accept the notion that empirical reasoning is the only valid source of knowledge. This ‘scientism’ is a dangerous form of moral blindness, leading to acceptance of every form of scientific advance as progress. We can all reject the notion that empirical reasoning is the only valid source of knowledge if we seriously know that love puts a different view on all reality.

“Evangelization is primarily the work of the laity. At present, however, American culture seems to be evangelizing the Church, instead of the other way around. Catholics progressively merge with the surrounding culture, when they should be challenging that culture with Jesus’ message of hope and salvation.” Is this true of Catholics in science? Are we neglecting the evangelization of science and technology in favor of “getting along”? Or is it because we really donot know the faith beyond a grade school knowledge (if that) of the riches of that faith? Can we honestly say that what we know of the faith is adequate to its reality?

“The United States at the end of the 20th century has inherited this legacy of fear and misunderstanding. Few recognize that religion and science share a common task: illuminating from their different perspectives an intelligible, divinely ordered universe. Polarization between the two disciplines has grown so great, indeed, that Catholic scientists frequently hide their religious convictions, afraid that colleagues will question their scientific integrity.” It is literally true that some Catholics hide their religious convictions. The story goes that a team at Oak

Ridge some years ago was attending a conference on some aspect of physics. On Sunday morning several went to Mass and were astonished after Mass that others at the Conference were there as well. As well as they knew the others, they had no idea they were Catholic. Should such a thing happen frequently? Should it happen at all. Discussion of such attitudes would be helpful.

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