



# The Pursuit of Science in a Christian Context

Randy Isaac

The prevailing American public perception appears to be that both science and religion, particularly Christian faith, are important to daily life but should be kept in their respective corners. Most Americans profess to believe in some type of a deity while simultaneously enjoying a cornucopia of benefits from science and technology. Yet when science and religion meet, sparks often fly, and headlines scream about the clash.



From school-board decisions in Kansas to court rulings in Pennsylvania, widely publicized conflicts seem to confirm the dichotomy between science and Christian faith. Science is portrayed as sparring with Christianity, pitting objectivity and reality against subjective mysticism and piety.

How is it then possible that an organization of Christians in science continues to thrive sixty-five years after its founding?

The American Scientific Affiliation (ASA), organized in Chicago in September 1941, is a group of nearly two thousand scientists who affirm the orthodox Christian creeds. Far from being on the fringes of pseudoscience, these scientists are involved in higher education and industry and are committed to integrity in science. Furthermore, they do not keep their science segregated from their faith but actively seek to integrate their faith with their vocation. Neither do they avoid areas of controversy but strive to sustain a healthy dialog across the entire spectrum of diverse views of Christian faith and mainstream science.

How does the ASA deal with the apparent dichotomy between science and Christianity? How does it handle the sharp differences of opinion on controversial issues? How can these conflicts be handled in our pluralistic society?

### ROOTS OF HARMONY

Underlying the ASA's approach is the conviction that the core assumptions and commitments of science and Christian faith are fundamentally in harmony. Modern science arose in a strongly theistic milieu that helped to shape it in very important ways. The world makes sense because it is a product of the divine mind. The nature of nature as a created entity rather than as a divine being means that humans can explore nature and use it for their benefit within the limits of an appropriate stewardship. The freedom of the creator requires a science that looks for contingent order, not for necessary truths imposed on nature by our minds.

This is not to deny the presence of genuine conflict at certain points in history, such as the trial of Galileo or the fundamentalist rejection of large parts of modern science. Such conflicts are real, but they are also very complex phenomena that cannot be simply equated or reduced to the standard metanarrative that "science" and "religion" are in a perpetual state of inevitable conflict. In Galileo's case, for example, he and his principal Vatican opponent, Robert Cardinal Bellarmine, agreed that the Bible should not be reinterpreted without absolute proof of the earth's motion. Galileo thought that he had such proof, but his arguments, based on the phases of Venus and the cause of the tides, were logically flawed, and he pushed them beyond their real force. In the process, he personally insulted his longtime friend, Pope Urban VIII, who retaliated by summoning Galileo to Rome to face charges of heresy. In short, there was plenty of blame to go around. It was not simply a matter of "science" versus "religion."

In the hands of later apologists for science, however, Galileo became a martyr for scientific progress, the epitome of what would happen to the diligent scientist who simply pursued Truth against entrenched, unenlightened religious zealots. In reality, the truth is what is lost when

such historically unsupported interpretations are advanced as established matters of fact.

A strong focus on the history of science and of theology is therefore vital to understanding how science and Christian faith actually do relate. If science and Christian faith were inherently incompatible, any effort to bring them together would be hopeless. A peaceful but wary coexistence would be the best that one could hope for.

Before the enlightenment period, no sharp professional distinction existed between theology and science. The study of the natural world was an integral part of the search for God's truth. For the most part, university positions and governmental funding were not available to enable creative minds to devote their lives to scientific research. Observations of the natural world were often made by the clergy and by independently wealthy amateur natural philosophers.

Philosophically, science and religion often were understood according to the so-called two-book model, which views the natural world and the Bible as complementary revelations of God. The early Greek philosopher Heraclites wrote in the fifth-century BC of *logos*, the words or thoughts of God, being the organizing principle of the natural world. Later, the apostle John identified *logos* as the Maker of all things and as Jesus Christ, the incarnate Son of God. This concept lays the foundation of harmony between science, the study of what was made, and Christian faith, the study of the Maker and his incarnate Son. In many ways, the understanding that all nature was made by a single deity, rather than by a panoply of warring deities, was important to building confidence that science was even possible. A natural world responding to the whims of various gods would hardly be amenable to systematic scientific study.

During the enlightenment, secularism advanced aggressively. One impact on theology was the growth of deism, whereby the creator of the universe was not involved in its subsequent existence and development. This viewpoint led ultimately to agnosticism and atheism. Especially in the nineteenth century, science came to be viewed as an alternative to a theistic explanation rather than as a way of understanding the ordinary, everyday actions of a deity.

In the last half of the nineteenth century, opponents of religion became more militant. They seized upon Darwin's theory of evolution as a primary piece of evidence to reject the role of a deity in forming the biological world. Thomas Huxley, John Tyndall, John Draper, Andrew White, and others aggressively advanced a model of inherent warfare between science and Christianity. White's *A History of the Warfare of Science with Theology in Christendom* in 1896 became a worldwide staple in education. Though his work has since been decisively discredited by historians such as David Lindberg and Ronald

Numbers, his assertion has had widespread influence. The myth of a fundamental conflict between science and Christian faith has become a basic assumption in academic circles. Deconstructing this misconception is an important element in restoring a more accurate understanding.

Today, those who accept the warfare model take a variety of approaches to the conflict. On one end of the spectrum, vocal advocates such as Dawkins, Dennett, and Provine claim that science has shown religion to be false and even dangerous. They proclaim that the existence of a deity has been disproved by science and that religious faith can even be detrimental to society. They mistake scientific explanations of phenomena as substitutes for God rather than expressions of the coherent actions of a monotheistic creator. It is seldom clarified in their works that their metaphysical conclusions are derived from their own presuppositions and are not a necessary consequence of scientific analysis.

Reacting to this provocation, some defenders of the Christian faith counter with claims that science as practiced today is inherently biased toward an atheistic presupposition and is thus no longer objective. Ideas ranging from scientific creationism to intelligent design are offered to demonstrate how “true” science is not in conflict with religion. Often they make the same mistake as the vocal atheists, seeing the divine hand only where the laws of nature provide no explanation. While accepting the claims that science leads to the rejection of divine existence, their response is to be skeptical of mainstream science, proposing an alternative theistic or Bible-based science. The result is an escalation of warfare, particularly in the public classroom. This conflict has been a major factor in the growth of religious private schools where modified versions of science can be taught.

These two polar opposites are sometimes called scientific fundamentalists and religious fundamentalists. Their conflicts are headline grabbers, making it appear that conflict is pervasive. Nevertheless, many, if not most, scientists do not subscribe to either extreme. Some who represent the middle ground strive to keep science and religion separate. Stephen J. Gould championed the NOMA concept (Non-Overlapping MAgisteria) in which science and religion were considered to be separate, noninteracting spheres of influence. For most scientists this is a de facto description of everyday life. Religion does not affect their work at the laboratory, and science has little influence on the average sermon in church. Philosophically, however, NOMA essentially means that religion is irrelevant to understanding the natural world. In essence, it reinforces the perception that science and religion are incompatible, needing to be isolated in their respective corners to prevent culturally destructive warfare.

## THE RAGING DEBATE

Want to read more from both sides of the debate that Randy Isaac outlines in this article? Here is a list of recent and well-received books that will help you to decide your own position on the complex issue.

*The God Delusion*, Richard Dawkins

An evolutionary biologist argues against the existence of God and the continuing harm that he says religion has caused.

*The Language of God: A Scientist Presents Evidence for Belief*, Francis S. Collins

Collins presents a personal account of faith, the human genome, science, and spirituality, much of which relates to evolution.

*The End of Faith: Religion, Terror, and the Future of Reason*, Sam Harris

Harris argues that religious faith (Muslim as well as Christian) encourages unacceptable dangers to modern life because it places more value on the afterlife than present existence.

*Darwin's Black Box: The Biochemical Challenge to Evolution*, Michael J. Behe

A biochemist argues that life is “irreducibly complex” on the cellular level, which he sees as strong evidence for intelligent design.

*Why Darwin Matters: The Case Against Intelligent Design*, Michael Shermer

A skeptic takes what he calls the “ten most cogent” arguments for intelligent design and presents the science against them.

*Intelligent Design: The Bridge Between Science & Theology*, William Dembski

A three-part book which argues that intelligent design holds the promise of reconciling science and religion.

*Breaking the Spell: Religion as a Natural Phenomenon*, Daniel C. Dennett

Dennett provocatively calls for studying religious faith as a purely biological process, the result of evolution and natural selection.

*Coming to Peace With Science: Bridging the Worlds Between Faith and Biology*, Darrel R. Falk

Falk discusses how he has reconciled the study of biology with holding a deep religious faith.

A more fruitful approach is to reject the warfare model itself and to recognize the genuine compatibility of modern science and traditional Christian belief. Most ASA members acknowledge this harmony and seek to integrate mainstream science and Christian faith without compromising the integrity and orthodoxy of either one. No monolithic, single-minded perspective reflects that integration. Rather, a spectrum of opinions sharpens the dialog and understanding. Broad education of the history of science and of Christianity is a vital element in restoring order in this discussion.

At least one inherent conflict is unavoidable. A fundamental incompatibility does exist between the opposing worldviews of metaphysical naturalism and atheism on one hand, and monotheistic Christianity on the other. Science is caught in the crossfire as it is used by all sides as an attempt to bolster their own position. Yet science provides no definitive proof for either side.

## DIALOG AS A PATH TO UNDERSTANDING

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Issues in science and Christian faith are complex. Many firmly held beliefs are rooted in traditions and presuppositions not fully vetted from a scholarly perspective. How can progress be made in bringing together such a vast array of opinions?

The ASA deliberately avoids taking a specific position on controversial issues and is not an advocacy group. Its core beliefs reflect, on the one hand, a commitment to the orthodox creeds of the Christian faith and, on the other, a commitment to integrity in science. Beyond those commitments, however, ASA has a policy of neutrality.

Several disadvantages are inherent in such a policy. An advocacy group has the advantage of waving a flag as a rallying point. Passion can be aroused by encouraging the faithful to carry the banner and spread the word. An organization without a specific position on such controversial issues has a less-colorful rallying point. Dialog and discussion can appear boring and banal compared with the excitement of spreading the “answer” to the problems. The diversity of opinions can be a disadvantage as well as an advantage. While we all agree on the broad theological and metaphysical perspectives, much time and energy are spent on disagreements in the details.

The advantages, however, outweigh the disadvantages. The primary focus of the ASA is to foster scholarship and dialog on the full spectrum of perspectives. The result is a deeper understanding of the issues and an emphasis on unity based on common ground. The effort to integrate science and faith includes several basic areas, each requiring a different approach.

The first area is philosophical, or metaphysical, seeking to understand the big picture of the relationship among the natural world, humanity, and God. This

area includes the warfare models discussed above as well as conceptual relationships among God, humans, and nature. The existence of God, the philosophy of science, the truth of theology, the meaning of life, and many other issues have been discussed for millennia and will long continue to be the focus of debate. Dialog in this area requires a basic understanding of philosophy, theology, and general science.

The second area involves the interpretation of the Bible. The most frequent source of conflict in what should be a landscape of inherent harmony is a specific interpretation of a passage of Scripture. The most well-known of these is the interpretation of the first chapter of the book of Genesis as proclaiming that the Earth and its inhabitants appeared during a 144-hour period approximately six to ten thousand years ago. Though neither a historical nor an orthodox interpretation, it has become a hallmark of biblical inerrancy for those reacting to the rise of religious modernism with its challenge to the reliability of the Bible. Secularists accept this interpretation as the norm and conclude that scientific evidence of a 13.7 billion-year-old Earth disproves the Bible and therefore the existence of God. Fundamentalists who remain convinced of the accuracy of this interpretation conclude that scientists are biased and have failed to interpret the data correctly. Meanwhile, the real issue is the hermeneutics, or the method of interpretation, of the passage. When interpreted from the perspective of the language and culture of the era in which it was written, it is not certain that any chronology is taught by this passage.

In any religion, the interpretation of sacred texts is a cornerstone of the faith, arousing a passionate apologetic. Various religious leaders emphasize nuances relating to issues that they consider important, resulting in a vast spectrum of interpretations. Dialog in this area requires extensive study and knowledge of original texts and the writings of diverse theologians.

The third area involves applying scientific and religious perspectives to ethical issues. In this area it is not possible to keep science and religion separate. Well-known battlegrounds of abortion, euthanasia, stem-cell research, and ecology are areas in which both science and religion have something to say. Deep scientific knowledge is necessary to understand the nature of cells and embryos. Religious views of life and the respect and reverence to be accorded to various types of cells are a vital check and balance to the insatiable appetite for scientific research. The biggest threat of all is ignorance. Dialog requires both scientific expertise and a firm grasp of the religious and social basis for our ethical standards.

Technology is not immune from the discussion. Many engineers consider technology and its development to be ethically neutral, leaving the producers and users of such technology to be the arbiters of ethical behavior. Yet such a NOMA-like approach is an abrogation of responsibility.

The human impact and implications of a technological project should be core considerations at every step of the work. Dialog in this area requires a sensitivity and knowledge of the implications of technology in our global economy.

Finally, the fourth area relates to the nature of human beings. While scientists have growing confidence in theories of the origin of species and are hot in pursuit of a viable theory of the origin of life, the origin of consciousness and humanness itself is still beyond our grasp. It is not at all clear from science alone why a species should exist that can ponder the meaning of its own existence and that of the universe around it. As scientists are rapidly gathering more information about the details of the brain and its operation, more questions arise about the relative role of physical and spiritual influence on behavior. These issues may be more divisive in the future than issues of origins are today. Dialog in this area requires a vast knowledge of all types of scientific data regarding human beings, including psychology, neuroscience, and theology.

## RESPECT AND RESOLUTION

Much of the hostility expressed publicly in the various issues cited above derives from adamant adherence to a particular viewpoint, coupled with a lack of understanding of alternatives. The ASA seeks to resolve issues under an umbrella of respect for each other's view. Not surprisingly, as is common in ordinary scientific debates, in the passion of a heated debate tempers may flare, and strong words may be exchanged. But fundamental respect, especially in the art of listening to each other, is a necessary starting point for resolution.

An organization dedicated to the advocacy of a particular viewpoint owes its very existence to the truth of that viewpoint and cannot openly accept the input of contra-

dictory views. The ASA has the advantage of accepting a very wide range of input within the Christian theological framework and therefore of making progress in the resolution of critical issues.

The model of warfare between science and Christian faith seems to pervade our culture and causes many of the open clashes. By pursuing an understanding of diverse views in a model of harmony, the ASA seeks to integrate the vocation and the faith of the many Christians in the scientific community. Its members pursue science not in isolation from their personal faith but in a Christian context of an immanent Creator.

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### For further reading:

- Collins, Francis, *The Language of God: A Scientist Presents Evidence for Belief*, Free Press, 2006.
- Gingerich, Owen, *God's Universe*, Harvard University Press, 2006.
- Kaiser, Christopher, *Creation and the History of Science*, Eerdmans, 1991.
- Lindberg, David C. and Ronald L. Numbers, editors, *When Science and Christianity Meet*, University of Chicago Press, 2003.
- McGrath, Alister, *The Science of God: An Introduction to Scientific Theology*, Eerdmans, 2004.

Additional recommended books are available at [www.asa3.org](http://www.asa3.org).

