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The nature of interaction between Science and Religion in

Islam and Christianity

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# The nature of interaction between Science and Religion in Islam and Christianity

## Introduction

The nature of the interaction between science and religion in Islam and Christianity is quite similar. Despite the loud, vociferous and notoriously acrimonious battle between the religions and science, in actual fact, there is great synergy between both religions and science. In this paper, we will investigate the progression of this relationship, from synergistic to two mutually exclusive entities. We will also see how there has been a reconciliation in recent times, and the pursuit of a more moderate path.

## Religious Doctrine and Importance of Scientific Reason

Both Christianity and Islam essentially view science as an attempt to explain and investigate the natural world around us, to have a better understanding of God's creation. In essence, scientific study is a validation of religious belief and proof of the Divine plan.

The Catholic Church has, from its very beginning, taken a positive approach to intellectual activities. The Church teaches that science and the Christian faith are complementary. Christians maintained that because people have been endowed with reason, they have an urge to express their experience of faith intellectually, to translate the contents of faith into concepts, and to formulate beliefs in a systematic understanding of the correlation between God, humankind, and creation. This thought was also expressed succinctly by St. Anselm of Canterbury in the formula *fides quaerens intellectum* ("faith seeking understanding").

Similarly, in Islam, scientific study is linked to *Tawhid* (oneness with God) as it is an integral part of Islamic views on God, humanity and this world. Science is a means of recognizing the Divine all around us.

Muslims believe that the Quran is the literal word and the final revelation of God for the guidance of humankind. Many classical and modern sources agree that the Quran condones, even encourages the acquisition of science and scientific knowledge, and urges humans to reflect on the natural phenomena as signs of God's creation.

## Role of Religious Institutions in pursuing Science

### Medieval Christianity

Historically, Christianity and the Church has often been a patron of sciences. From ancient times, Christian emphasis on practical charity gave rise to the development of systematic nursing and hospitals and the Church remains the single largest private provider of medical care and research facilities in the world.

Catholic scientists, both religious and lay, have led scientific discovery in many fields. Following the Fall of Rome, monasteries and convents remained bastions of scholarship in Western Europe and clergymen were the leading scholars of the age – studying nature, mathematics, and the motion of the stars (largely for religious purposes). During the Middle Ages, the Church founded Europe's first universities,

producing scholars like Robert Grosseteste, Albert the Great, Roger Bacon, and Thomas Aquinas, who helped establish the scientific method. Historians of science such as Pierre Duhem credit medieval Catholic mathematicians and philosophers such as John Buridan, Nicole Oresme and Roger Bacon as the founders of modern science.

In medieval times, the elevation of Christian belief to the status of scientific universal knowledge was dominant. Theology, called the queen of the sciences, became the instructor of the different disciplines, organized according to the traditional classification of trivium (grammar, rhetoric, and dialectic) and quadrivium (music, arithmetic, geometry, and astronomy) and incorporated into the system of education. This system of education became part of the structure of the universities that were founded in the 13th century.

### Islamic Golden Age

Scientific study was also at its peak at the time of the 7<sup>th</sup>-15<sup>th</sup> centuries (Islamic Golden Age). Scholars translated existing Greco-Roman, Persian, and Indian works into Arabic. Greco-Roman (Mid- and Neo-Platonic, and Aristotelian) texts translated by the Kindi school were commented, redacted and developed substantially by Islamic intellectuals, who also built upon Persian and Indian mathematical systems, astronomy, algebra, trigonometry and medicine.

Particular progress was made in the areas of medicine and physics. Al-Ghazali used dissection to study the human anatomy as a method to gain knowledge of God's creation. Ibn al-Nafis discovered pulmonary circulation in 1242. Ibn Sina wrote *The Canon of Medicine (Al-Qanun fi't-Tibb)*. It was used as the standard medical textbook in the Islamic world and Europe up to the 18th century and still plays an important role in modern-day Unani medicine.

Physicist Fakhr-al-Din al-Razi used Quranic verse to challenge the Aristotelian notion of Earth's centrality in the universe and even introduced the concept of multi-verses.

The study of the Quran and the Hadith thrived in such a scholarly atmosphere. Philosophy, Fiqh and theology (*kalaam*) were further developed.

### Renaissance

During the Renaissance, Catholic scientists made remarkable progress in a diverse range of scientific fields: Nicolaus Copernicus pioneered heliocentrism, Jean-Baptiste Lamarck prefigured the theory of evolution with Lamarckism, Friar Gregor Mendel pioneered genetics, and Fr Georges Lemaître proposed the Big Bang cosmological model.

### The Growing Rift

The Golden Age of Islam was followed by a decline around the 14-16<sup>th</sup> centuries, coinciding with the rise of a clerical faction within the Islamic world. Religious fanaticism and suspicion on the increased interaction with the Western world and Islamic societies, brought the changing winds of Protestantism and other such influences to the Islamic empires.

The Protestant Reformation resulted in the Catholic Church finding itself in a struggle for authority in Europe, following the emergence of the Protestant Churches and nations of Northern Europe. Pope Paul III created the Roman and Universal Inquisition to stop the spread of "heretical depravity" throughout the Christian world. From 1571, the institution had jurisdiction over books and created the Index of Prohibited Books. Rome established the Sacred Congregation for the Propagation of the Faith in 1622.

The historian of science, Jacob Bronowski wrote that "Catholics and Protestants were embattled in what we should now call a Cold War. ...The Church was a great temporal power, and in that bitter time it was fighting a political crusade in which all means were justified by the end." In this climate, Cardinal Bellarmine, instigated inquiries against Galileo Galilei as early as 1613.

### *The Galilei Affair*

Galileo Galilei was a Catholic scientist of the Reformation period, initially a beneficiary of church patronage of astronomy, whose support for Copernican heliocentrism was suppressed by the Roman Inquisition. Galileo was ordered not to support Copernican theory in 1616, but in 1632, after receiving permission from a new Pope (Urban VIII) to address the subject indirectly through a dialogue, he fell afoul of the Pontiff, and was hauled before the Inquisition.

The Inquisition found him guilty of defending Copernican theory as a probability, "vehemently suspect of heresy," and placed him under house arrest for the remainder of his life.

Galileo's championing of Copernicanism was controversial within his lifetime, when a large majority of philosophers and astronomers still subscribed to the geocentric view. Galileo gained wide support for his theories outside the universities by writing in Italian, rather than the academic Latin. In response, the Aristotelian professors of the universities formed a united effort to convince the Church to ban Copernicanism.

Protestant and atheist critics of Catholicism's relationship to science have placed great emphasis on the Galileo affair. It is significant as being a touchstone event in the history of the relationship of Christianity and science, because, being a staunch Catholic that arrived to differing conclusions from what was the accepted truth of the world of the time, he was condemned as a heretic. Galileo himself, rejected the accusation – quoting Cardinal Baronius: "The Holy Ghost intended to teach us how to go to heaven, not how the heavens go." He invited the Church to follow established practice and reinterpret Scripture in light of the new scientific discoveries. However, this was not done.

### *Age of Enlightenment – Tensions between Religion and Science*

The Age of Enlightenment was an intellectual and philosophical movement that dominated the world of ideas in Europe during the 18th century.

The Enlightenment included a range of ideas centered on reason as the primary source of authority and legitimacy and came to advance ideals like liberty, progress, tolerance, fraternity, constitutional government and separation of church and state. In France, the central doctrines of the Enlightenment philosophers were individual liberty and religious tolerance, in opposition to an absolute monarchy and the fixed dogmas of the Roman Catholic Church. The Enlightenment was marked by an emphasis on the scientific method and reductionism, along with increased questioning of religious orthodoxy—an attitude captured by the phrase *Sapere aude*, "Dare to know".

The ideas of the Enlightenment further undermined the authority of the existing monarchies and the Church and paved the way for the political revolutions of the 18th and 19th centuries.

While seemingly acrimonious, it is important to note that open conflict between science and theology occurred only when the traditional biblical view of the world was seriously questioned, as in the case of Galileo. Some other examples are given below.

#### *Evolution/Genetics and Genesis of Man*

Darwin's theory of Evolution, that finds its roots in Lamarck's work, was a point of contention for a long time with the Church. The evolution of species was a diametrically opposing view to the scripture that claimed that "God created man in His own image". Gradually the Church came to reconcile

It was only in October 1996, Pope John Paul II outlined the Catholic view of evolution to the Pontifical Academy of Sciences, saying that the Church holds that evolution is "more than a hypothesis," it is a well-accepted theory of science and that the human body evolved according to natural processes, while the human soul is the creation of God. In other words, evolution gives us the 'how,' but we need the Bible to understand the 'why' of our creation."

#### *Cosmos*

The Big Bang model, or theory, is now the prevailing cosmological theory of the early development of the universe and was first proposed by Belgian priest Georges Lemaître, astronomer and professor of physics at the Catholic University of Louvain. Lemaître was a pioneer in applying Albert Einstein's theory of general relativity to cosmology. Bill Bryson wrote that the idea was decades ahead of its time, and that Lemaitre was the first to bring together Einstein's theory of relativity with Edwin Hubble's cosmological observations, combining them in his own "fire-works theory". Lemaitre theorized in the 1920s that the universe began as a geometrical point which he called a "primeval atom", which exploded out and has been moving apart ever since.

This view brought it into direct contention with the Creation story as detailed in Genesis.

#### *Islamic Isolation*

The Islamic world too felt this separation between religion and science, in the age of enlightenment. The philosophy of personal worship of Protestantism and the increasing reliance on scientific method and reason, led to a deepening of the chasm between orthodox and moderate Muslims. This chasm was not due to science and scientific method itself, but rather the outlook of scholars at that time – to look at science in isolation from religious knowledge. Schools of thought like positivism and Darwinism flew directly in the face of the traditional complementary basis of existence of Islam and Science, and as these ideas penetrated Islamic society, they served to divide it.

On one side were those who saw science as the real source of enlightenment, while others viewed it as corrupt foreign thought, incompatible with Islamic teachings. These fault lines between those Islamic states who embraced science versus those which rejected it are clearly seen even today in the geopolitical makeup of countries like Turkey (moderate), Iran and Saudi Arabia (orthodox).

In recent years, the lagging of the Muslim world in science is measured in the disproportionately small amount of scientific output as measured by citations of articles published in internationally circulating science journals, annual expenditures on research and development, and numbers of research scientists and engineers. Skepticism of science among some Muslims is reflected in issues such as resistance in Muslim northern Nigeria to polio inoculation.

## Reconciliation of Religion and Science

In modern times, there has been an effort to reconcile the historical divides between science and both Islam and Christianity.

Science is also making inroads into the Muslim World, after a century of isolation. Progressive Islamic nations like Turkey, Jordan, Indonesia and Malaysia have successfully married scientific and technological progress with Islam. With increased globalization, it is a matter of time until other Islamic nations follow suit.

From a moderate Muslim viewpoint, science is a meritorious activity, a collective duty condoned and encouraged by the Quran as a validation of God's creation. The belief that the Quran had prophesied scientific theories and discoveries has become a strong and widespread belief in the contemporary Islamic world; these prophecies are often provided as a proof of the divine origin of the Quran.

The scientific facts claimed to be in the Quran pertain to varying subjects, including creation, astronomy, the animal and vegetable kingdoms, and human reproduction.

*"A time is fixed for every prophecy; you will come to know in time" [Qur'an 6:67].*

According to some scholars the verse above refers to the scientific facts in the Qur'an that would be discovered by the world in modern time, centuries after the revelation. The divide between Islam and Science is thus on the mend.

As mentioned above in the examples of evolution and cosmology, the Catholic Church has made a point to redact its initial harsh reactions to scientific progress and made an effort to reconcile its position with scientific discovery and progress. Additionally, the scientific community is increasingly vocal about their belief and faith guiding their scholarly work.

Positive tendencies concerning education and science have always been dominant in Christianity, even though the opposite attitude arose occasionally during certain periods. The German astronomer Johannes Kepler spoke of celebrating God in science. In the 20th century, Pope John Paul II maintained that he saw no contradiction between the findings of modern science and biblical accounts of the Creation; he also declared the condemnation of Galileo to be an error and encouraged the scientific search for truth.

In conclusion, we can see that religion provides inspiration and deeper meaning to man's search for truth and meaning through science. The day is certainly not far where faith and scientific pursuit will again be synergistic and complementary activities as they have been for most of their history.

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