

The Debt of Science to Christianity

God created the universe and keeps it in existence by his Word, the Son "upholding the universe by his word of power " and by his Creator Spirit, the giver of life.

-Catechism of the Catholic Church #320

In creation, God laid a foundation and established laws that remain firm, on which the believer can rely with confidence, for they are the sign and pledge of the unshakable faithfulness of God's covenant. For his part man must remain faithful to this foundation and respect the laws which the Creator has written down.

-Catechism of the Catholic Church #346

Science, as we know it today, did have its origins in Christian lands. This is not to say that technological advances or discoveries had not occurred before or in other places. They most certainly did. But the concept of institutionalized practices and systematic studies was born and accepted almost 500 years ago and blossomed into a world-shaking force approximately 200 to 300 years ago. This is not by accident.

It was the Christians (Catholics in particular) who promoted education of the masses, advanced the fine arts and created the institution of the hospital as we know it today. But the Christian faith also brought something else to the table that exceeded mere encouragement. The Christians, from their Jewish heritage, taught the masses the idea that there was a stable universe that we live in, and that this stability was created and maintained by a God who cared for what happened to man: Thus says the Lord, He who gives the sun to light the day, moon and stars to light the night; Who stirs up the sea till its waves roar, whose name is Lord of hosts: If ever these natural laws give way in spite of me, says the Lord, Then shall the race of Israel cease as a nation before me forever. (Jeremiah 31:35-36). C.S. Lewis described science as the child of Greek logic and Christian faith. In his book *Miracles*, Chapter 13, he has this to say:

"The sciences logically require a metaphysics of this sort. Our greatest natural philosopher thinks it is also the metaphysic out of which they originally grew. Professor Whitehead points out (*Science and the Modern World*, Chapter II) that centuries of belief in a God who combined 'the personal energy of Jehovah' with 'the rationality of a Greek philosopher' first produced that firm expectation of systematic order which rendered possible the birth of modern science. Men became scientific because they expected Law in Nature, and they expected Law in Nature because they believed in a Legislator. In most modern scientists this belief has died: it will be interesting to see how long their confidence in uniformity survives it. Two significant developments have already appeared -- the hypothesis of a lawless sub-nature, and the surrender of the claim that science is true. We may be living nearer than we suppose to the end of the Scientific Age."

The "lawless sub-nature" is clearly quantum theory, as he discusses this in other works (perhaps most clearly in his paper "Religion without Dogma" as appears in *God in the Dock*). I do not know for certain what he specifically meant by "the surrender of the claim that science is true." Many popular ideas the scientific community discuss today barely meet (or even fail to meet) the standards of Popper's Falsifiability Criteria, such as String Theory (which was starting to gain popularity when *Miracles* was first written). Many "tests" are being done mathematically on computers and may never be replicated in reality. Many theories are questionable as to be testable at all. A surprising number of hypothesis are formed off of other hypothesis that had little or no testing performed, and some go back several generations before solid, tested theory can once again be found. Personally, I find Lewis'

observation to be very prophetic, regardless of what he personally imagined.

Science is based on the concept that if we observe A leading to B today, then the next time we see A, we can expect B to follow. Such an expectation is only rational if the universe is orderly and maintained. If it is not orderly or maintained, then B only followed A by chance, not by design or necessity. If B only followed A by chance, then our faith in science is misplaced as eventually C will follow A, then D and so on.

I propose that no other religion, with the possible exception of Hinduism, could encourage the masses to accept the products of science. Pagan pantheons (at least those of any significance) are universally made up of fickle and emotional gods who manipulate the universe out of whimsy and pettiness. Any pattern or order the universe seems to have is only due to their sense of duty (which, in itself, suggests an unknown God over them: consider Acts 17:23 -- For as I walked around looking carefully at your shrines, I even discovered an altar inscribed, 'To an Unknown God.' What therefore you unknowingly worship, I proclaim to you.). Such gods are infamous for striking down any human who threatens their respective spheres of influence. The first observation (the petty and whimsical nature of gods) is in direct conflict with the fundamental assumption that all science is based on. The second observation (the god's jealous guardianship of their domains) makes it questionable how readily the general public would accept a steady stream of new inventions, as they would be scared of incurring their god's wrath.

The eastern philosophies are very complex and multi-faceted. For example, Confucianism may or may not be called a religion, it may or may not embrace Dualism, it may only be a philosophy on how to live a good life or it may be spiritual. Practitioners do not see any contradictions in any of these "either/or" statements because, fundamentally, they all believe this world is an illusion. Each of these philosophies have broken down into multiple schools that developed along a single pursuit of knowledge. In each school, certain aspects of the core faith are taught to an exceptionally specialized degree, to the exclusion of the other aspects. The ultimate goal of each school is to escape from the illusion. Each school is merely a different means of escape. This outlook on life suggests that any scientific study would be pointless and the efforts better spent attempting to break through the illusion to the real. This is in contrast to the western idea of Materialism.

By assuming the world *is* real, Western philosophies tend to be more well-rounded and in agreement with each other. Consider the tens of thousands of Christian faiths that exist in the U.S. alone, yet most are only separated by superficial differences in theology. Most of these groups can enjoy communion with each other in so called "non-denominational" services as nearly everything one believes is likewise believed by the others. Furthermore, Christian teachings hold that the person is both spiritual and physical. Jews believed that the dead will return to this world when it has been purified. Mainstream Christian beliefs likewise hold a reborn body, although whether this world will be made pure or a new world will be created for them is not certain. But even for the Christians who believe in a new world, it is a matter of going from one reality to another as opposed to denying the reality of this world.

But the Western (non-religious) philosophies also failed to generate organized science on their own. In societies where the elite already have total control over the masses, emphasis is placed on maintaining power rather than improving conditions. Plato and Aristotle achieved small popular movements through their personal zeal and energy, but these movements died as soon as they did. For the most part, technological breakthroughs were performed by those wealthy enough and interested enough to devote their lives to the hobby of exploring nature. Such study as did take place was

inconsistent and erratic.

What we have, therefore, is that the common people of non-Jewish or Christian cultures would not (or could not) be able to accept a universe of fixed facts and predictable behaviors based on natural law. Without common support, scientists would be looked at as eccentric at best or hunted as witches at worst. Without the belief in God, the intellectuals would not have a focus to improve life for their fellow man as motivation. As the Church has supported education, however, the role of the scientist was rightly elevated to a prestigious profession.

Catholic Contributors to Science: It is not my intent to slight the non-Catholic Christians who have contributed to the sciences, and there are many. I encourage members of other denominations to research their own faith's contributions. The following list is just a highlight of contributions Catholics made to science. This list came from Bishop Barron's *Seeds of the Word* (chapters "One More Swing at the Catholic Straw Man" and "*Cosmos* and One More Telling of the Tired Myth").

Saint Albert the Great followed Aristotelianism (the philosophy of which modern science is based on).

Saint Thomas Aquinas pursued study of planets, plants, human societies, economics, politics, animals and more.

Bonaventure, Duns Scotus, William of Ockham, Alexander of Hales, Henry of Ghent and Roger Bacon pursued theological as well as scientific and practical studies.

Father Benedetto Castelli, 16th Century, was a friend and supporter of Galileo.

Father Jean Picard from the 17th Century was the first to accurately determine the size of the Earth.

Father Giovanni Battista Riccioli, also from the 17th Century, was the first to measure the acceleration of a free falling body.

Father Francesco Grimaldi, likewise from the 17th Century, was a mathematician and physicist who discovered the diffraction of light.

Father Gregor Mendel invented modern day genetics in the mid 19th Century

Father Georges Lamaitre was the formulator of the Big Bang Theory in the 1920s.

Father George Searle, also early 20th Century, discovered six galaxies.

Jesuit brother Guy Consolmagno won the Carl Sagan Medal for his work in planetary science in 2014.

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Original Publication Date: 7 January 2021