

CHAPTER 3

Christianity at the Forefront of Philosophy and Science: Priestly Formation and the Praxis of *Eruditio*¹

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Human formation ought to have as its aim the fuller development of priests' humanity so that their humanity can be a "bridge" for communicating Jesus Christ to men and women today ... Human formation entails contact with the culture: the arts, sciences, and politics of human life. These studies and involvements keep priests in touch with their own lives and the lives of those whom they serve.²

Introduction

The myriads of contrasting opinions that have trailed the agelong questions of existence and essence inevitably engender endless arguments regarding the *fons et origo*, hypostasis and goal of nature. The argumentative enterprise thereof has for many centuries been borne on the wings of dialectics between faith and reason, a core ground for the infinite catalogues of diverse and divisive views about the universe and our place in it. The calls for a separation between the two categories of faith and reason have been well-matched or sometimes even outmatched by the quest to strike a healthy balance or lasting accord between them. Such a quest which is believed to be a potential icebreaker for the unity of ideas and universal harmony has been one of the most challenging tasks of humankind.

In contemporary times, the scientific, technological and internet revolutions have taken the challenge beyond the intellectual realm, situating it within the very core of our day-to-day existence. Attempts to create a chasm between religious truths and scientific truths is changing the world, evident not in the gradual loss of the sense of the sacred but also in the befuddled clime that currently besets the human sense of morality. This will get worse if we do not confront the general misconceptions that reason and faith on the one hand, and religion and science, on the other hand, are contraries on bipolar ends of the spectrum respectively, and incapable of meeting without conflict. What is frequently lost in all these misconceptions, however, is that both the history of philosophy and the history of science are rich with Christian thinkers and scholars, and at the same time the progress of both disciplines have been facilitated and enriched through the centuries by Christian thinkers and scholars.

As a matter of fact, from the early history of Christianity till date, Christian scholars have been at the forefront, made remarkable breakthroughs, and registered indelible impacts in the disciplines of Philosophy and Science. While great Christian philosophers and thinkers like St. Augustine, St. Anselm and a host of others are very well known, there is incontrovertible evidence that Christianity provided the ideal culture for the origin of Modern Science.

This paper will discuss a few Christian philosophers and scholars whose works made a leading impact in the discipline of philosophy, and some of the top scientists who happen to be Christians whose works also revolutionized modern science. The aim is not only to show that Christianity has been, and is still, at the forefront of philosophy and science, but to sound a wake-up call to today's generation of seminarians and priests who have been trained in philosophy and various other disciplines, to engage in active *eruditio*, so as to perpetuate the trend and to imprint positive impacts upon the changing world for the overall betterment of humankind. That is to say, besides the religious functions of saving souls, we can commit the fruits of our training to active scholarship and scholarly productions, tirelessly until those efforts combine into a supernova force that is strong enough to rewrite the world's changing narrative and restructure the world on the prop of a healthy faith albeit human and technological progress.

1. The Biblical-Christian Perspective On Philosophy and Science

For a Christian, the logic and assumptions of philosophy, as well as the characteristics and assumptions of science are founded on the belief that the universe was created by the Almighty God who is faithful and consistent.

The creation of the universe by the all-powerful, intelligent God (cf. Gen 1:1-2:4, Wis 13:2-9) explains why the universe is so intelligible and open to our scientific investigation. In addition to the belief that the universe was created by God, both the Old Testament and the New Testament of the Bible are so rich in 'cosmology' and 'cosmological' motifs that serve to explain the world and the real effects behind the natural order of things.

In the Old Testament, motifs drawn from astral reflection are almost certainly present in places like Isaiah 14 and Ezekiel 28. Although the worship of heavenly bodies are regularly condemned, yet the foundational text of Gen 1:14 leaves room for positive engagement with ancient astronomy, which could, of course, stretch easily into more astrological speculations based on the 'three-heavens' scheme of creation. The first heaven is the firmament, the part closest to the earth (cf. Gen 1:8), the second heaven is the home of the heavenly bodies, the sun, moon and stars (cf. Deut 4:19), and the third heaven is where God the Most High dwells (cf. Isa 14:13; also 2 Cor 12:2). The supremacy of YHWH meanwhile, could be effectively demonstrated by noting that he is the creator of the heavens and the earth, the one who calls the stars by name, the Lord of the heavenly host.³ Drawing upon the Old Testament foundation, the New Testament carries the cosmological reflection even further. In the *Prayer of the Community*, the creation is chanted as one of the *Magnalia Dei* (Acts 4:24; cf. Rev 4:11; 10:6; 14:7),⁴ with a plan for the fullness of time in which God will unite all things, both in heaven and on earth, in Christ (Eph 1:10). When perspectives from both the Old Testament and the New Testament are brought together, one would imagine that the Holy Grail of biblical cosmology was the precise determination of the number of 'layers' or 'tiers' of the cosmos, with early theological debates raging between two, three, four, seven, nine or more layers. This provided a fundamental setting upon which future philosophers and scientists would research and

propound theories regarding the nature of the universe, and the principles governing the manifestation of things in nature.

It is important to note that the cosmological reflections of early Christians thinkers and writers fit analogically into modern cosmological theories. The ‘three heavens’ scheme, for instance, has been variously interpreted. Concomitant with the aforementioned categorization is the view that they refer to the regions below the moon, above the moon and above the sun – or might be a tripartite division of the night sky, with the Milky Way at the apex, with other regions dropping into the north and south. St. Paul, for instance, used this particular schema in 2 Cor. 12, just as one can explore the use of *hyperouranos*, ‘the heaven above’, and duly compare it with Plato’s self-consciously fictionalized depiction of the ascent of the soul in the *Phaedrus*.⁵

Generally, the cosmology of the New Testament writers provides a solid basis for the philosophical and scientific reflections for so many who came after them, many of whom would eventually become leading figures in the fields of Philosophy and Science.

2. Christian Scholars in the History of Philosophy and Science

Many Christian scholars and Catholic clerics throughout history have made significant contributions to philosophy and science. The Catholic Church, in particular, has produced many philosophers, scientists and mathematicians, from among clerics, religious brothers and the lay faithful. There have been many others as well from other Christian denominations, and so we group all of them together using the broad categories, such as “Christian Philosophers” and “Christian Scientists”. Some notable Christian philosophers and scientists include such illustrious names as Paul of Tarsus, St. Augustine, St. Anselm, St. Thomas Aquinas, St. Albert, Nicolaus Copernicus, Gregor Mendel, Georges Lemaître, Albertus Magnus, Roger Bacon, Rene Descartes, Pierre Gassendi, Roger Joseph Boscovich, Marin Mersenne, Bernard Bolzano, , Robert Grosseteste, Christopher Clavius, Nicolas Steno, Athanasius Kircher, Giovanni Battista Riccioli, William of Ockham, S. L. Jaki.

We must also not fail to mention the Catholic Church herself and some of her groups and associations from the medieval times to the present, amongst which are religious orders such as the *Jesuits* (esp. in Philosophy and Science), the *Dominicans* (Philosophy and

Science) the *Opus Dei* (esp. Philosophy and Communication), *the Salesians* (esp. Classics and Communications), *the Legionaries of Christ* (esp. Philosophy, Bioethics and Science vis-à-vis Neuroscience). We shall briefly discuss a few of the scholars and one of the religious orders mentioned above.

(a.) Paul of Tarsus (died 67 AD)

Over the centuries in the history of thought and scholarship, there have been scores of philosophical thoughts, discourses and treatises from renowned theologians who were also distinguished philosophers. We have the examples of St. Augustine, St. Bonaventure, St. Thomas Aquinas, Teilhard de Chardin, Paul Tillich, etc. No serious mention is usually made of St. Paul when philosophers are being counted or cited because he has always been regarded as a theologian, one of the finest the world has ever produced, and the greatest Christian evangelizer of all time. Recently, there is a growing trend in which scholars have begun to identify standard philosophical principles and theories in the writing of St. Paul, and more people are beginning to appreciate the great philosophical resorts inherent in the thoughts, teachings and writings of St. Paul who hitherto, was viewed and studied mainly within the theological endeavour.⁶

Earlier, we have hinted on Paul's contribution to science through his cosmological theories. Within the same framework, Paul contributes enormously to Philosophy, but it suffices to say that his views and contributions to Philosophy and Science are intertwined.

Much of the Philosophy of Paul is centred on the "Concept of Truth", on which he based various other reflections on the meaning and purpose of life. For St. Paul, there was always "truth in order to goodness". Goodness has its perfection in God, and the real truth is the perfection of certainty realized in God, and knowing God as the Ultimate Being who created and rules over the universe.⁷

A careful study of Paul would reveal that Paul has both idealist and realist views of truth. From the realist perspective, Paul's concept of truth has some bearing with the philosophy of Aristotle as interpreted by St. Thomas Aquinas. Realists argue, in line with common sense, that truth is the conformity of mental images and ideas with what is "out there". If two people see a dog, one might say,

“That is a dog”, while the other says, “That is a fox”. The first statement is true because it conforms to reality; the other is false because it does not. This is more or less in a logical tune with the “*adequatio intellectus et re*”, that is, the correspondence theory of truth, wherein what is in the mind or what is stated corresponds to what the case is in reality.⁸

Also for St. Paul, besides observing and reasoning about the physical world, one can attain truth by reasoning from abstract principles, via a committed procession from the depth of faith, rising through the gradation of love unto its highest expression, realized only in the Almighty and Infinite God, the Creator of the universe and Lord of time and history. Faith constitutes the abounding ground for the abstract principles upon which the reasoning progresses, as well as for making the perception real, because “faith” Paul says, “is the assurance of things hoped for and the evidence of things not seen”, and “*for those who have faith or believe, all things work together unto good*” (cf. Rom. 4:16; 5:2; cf. Heb. 11:1; 12:2).⁹ That is actually his main standpoint on truth – the idealist intent. In this, St. Paul resembles Plato. Plato believes that the human mind could arrive at the truth only by apprehending certain ideas existing in a realm apart from everyday reality.¹⁰

A synthesis of the Pauline thought, therefore, is that everyday reality owes its existence and meaningfulness to the One, Infinite and Omnipotent, God, the author of the universe, “*in eo vivimus, movemur et sumus*” (“in whom we live and move and have our being” (cf. Acts 17:28). Following from this, every human person who exists is baseless and empty until he discovers the truth and lives in it; to discover the truth is to know God and serve him with an abiding faith (cf. Rom 3-5).

(b.) St. Thomas Aquinas (1224-1274)

Thomas Aquinas was a Catholic priest of the Dominican Order, theologian and philosopher, one who is said to have had the greatest influence on both philosophy and theology in all of history.

The mainstay of Aquinas’ philosophy is a rethinking of Aristotelianism, with significant influences from Stoicism, Neoplatonism, Augustinianism, and Boethianism. It also reflects some of the thinking of the Greek commentators on Aristotle, and of Cicero, Avicenna, Averröes, ibn-Gabirol, and Maimonides. This may

suggest that we are dealing with an eclectic philosophy, but actually, Aquinas reworked the speculative and practical philosophies of his predecessors into a coherent view of the subject which shows the stamp of his own intelligence.¹¹ The impact of his effort will, however, be far-reaching covering all the various aspects and branches of philosophy, even through centuries after his life.

One of the significant hallmarks of Aquinas' work in philosophy is the conscious tendency to seek the middle ground on questions that have been given a wide range of answers. This spirit of moderation is best illustrated in his solution to the problem of universals. For centuries, Philosophers had debated whether *genera* and *species* are realities in themselves (e.g. Plato, Boethius, William of Champeaux) or mere mental constructs (Roscelin, Peter Aberlard). What made this odd discussion important was Aquinas' conviction that these universals, such as 'humanity', 'justice', 'whiteness', 'dogness', are primary objects of human understanding.¹²

Thomas' spirit of compromise as a philosopher was balanced by another tendency, that of innovation. His original Latin biographers all stress this feature of his work. Thomas introduced new ways of reasoning about problems and new sources of information, and he handled his teaching in a new way, and thus stood in advance of his contemporaries in the philosophical endeavour.

(c.) Nicholas Copernicus (1473-1543)

Nicholas Copernicus was a brilliant Renaissance man in every sense of the title, a mathematician, astronomer, physician, artist, translator, scholar, jurist, governor, military leader, diplomat, economist and a Third Order Dominican. He attended various European universities and became a Canon in the Catholic Church in 1497.¹³

He was the first astronomer to formulate a heliocentric - sun-centred - model of the solar system, i.e. the first mathematically based system of planets going around the sun. He demonstrated in the book *On the Revolutions of the Celestial Spheres*, published just before his death, that the motions of the planets could be explained without presuming the Earth was the centre of the system. His uncle was the Bishop of Warmia, to whom Copernicus served as secretary and in whose castle he lived and began work on his heliocentric model.

His new system was actually first presented in the Vatican gardens in 1533 before Pope Clement VII who approved and urged Copernicus to publish it around this time.

(d.) Galileo Galilei (1564-1642)

Described as the “father of modern physics”, the “father of modern science” and the “father of modern observational astronomy”, Galileo di Vincenzo Bonaiuti de’ Galilei was a pious Catholic, who travelled to the Jesuit College in Rome in 1611 to argue his support of a Copernican sun-centered universe (galaxies and stars as other suns were unknown in Galileo's time), even though the Church favoured the Ptolemaic and Aristotelian earth-centred theories. He took his telescope with him to Rome so that the philosophers and mathematicians could view Jupiter's moons for themselves, which he considered strong support for heliocentrism. The next year the clergy denounced his views and he was forbidden to advocate or teach Copernican astronomy.

Galileo's writings on astronomy proved to be invaluable in the study of the Earth and stars, challenging a past system of backward science that leapt from disorganized speculation drawn from a set of already established outcomes. These writings on astronomy attempted to draw conclusions about the Earth and the Heavens based on lengthy, meticulous recordings of his observations and subsequent data gathered from his findings. His work in the field of astronomy is certainly suggestive of Galileo's "modern" approach to science as a whole.

Prior to Galileo's time, the Milky Way was believed to be nebulous. Galileo studied it and found it to be a multitude of stars packed so densely that they appear from the Earth-like cloud. He noticed and located many other stars lots of distance away and impossible to be seen with the naked eyes. Among the stars he observed is the double star *Mizar* in Ursa Major in 1617.

His most important works were experiments and investigations in the realms of physics. During those eighteen years, he changed the foundations of traditional physics – or, as others see it, established an entirely new science. However, remarkably few people outside Padua realised this. For various reasons, he did not make his results public until well into old age, and when he did finally become famous all over Europe, it was for quite different things.¹⁴

The formulation of the concept of *Inertia* has been described as Galileo's greatest contribution to Physics. The concept states that: an object in a state of motion possesses an "inertia" that causes it to remain in that state of motion unless an external force acts on it. In order to arrive at this conclusion, Galileo had to abstract from what he, and everyone else, saw.

With regards to objects and their state of motion, Aristotle held that objects at rest remained at rest unless a force acted on them, but that objects in motion did not remain in motion unless a force acted constantly on them. Galileo carried out a catalogue of experiments and came to the conclusion that Aristotle's theory was inconclusive, perhaps incorrect, because the frictional force between surfaces of inclined planes and the object objects sliding down these planes (hidden force) is not properly accounted for. In Galileo's observation, when an object is pushed across a surface, two opposing forces act on each other, the force associated with the push and the force that is associated with the friction that acts in the opposite direction.¹⁵

Galileo also made a number of contributions to technology. Between 1595 and 1598, Galileo devised and improved a *Geometric and Military Compass* suitable for use by gunners and surveyors. For gunners, it offered, in addition to a new and safer way of elevating cannons accurately, a way of quickly computing the charge of gunpowder for cannonballs of different sizes and materials. As a geometric instrument, it enabled the construction of any regular polygon, computation of the area of any polygon or circular sector, and a variety of other calculations. Under Galileo's direction, instrument maker Marc'Antonio Mazzoleni produced more than 100 of these compasses. In 1593, Galileo constructed a thermometer, using the expansion and contraction of air in a bulb to move water in an attached tube.¹⁶

In 1630 Galileo returned to Rome seeking approval to publish his *Dialogue Concerning the Two Chief World Systems*, which was published in Florence in 1632. He was ordered to appear before the Holy Office for papal trial. He was confined to house arrest for the rest of his life. In 1992 that Pope John Paul II apologized for the Galileo affair, affirming that the Earth is not stationary or the centre of the universe - or even the solar system.

(e.) Rene Descartes (1596-1650)

Descartes was a French mathematician, scientist and philosopher who has been called the “father of modern philosophy”. His school studies made him dissatisfied with previous philosophy: He had a deep religious faith as a Roman Catholic, which he retained to his dying day, along with a resolute, passionate desire to discover the truth. At the age of 24, he had a dream and felt the vocational call to seek to bring knowledge together in one system of thought. His system began by asking what could be known if all else were doubted, suggesting the famous “*Cogito ergo sum*” (I think therefore I am). Actually, it is often forgotten that the next step for Descartes was to establish the near certainty of the existence of God for only if God both exists and would not want us to be deceived by our experiences can we trust our senses and logical thought processes. God is, therefore, central to his whole philosophy and mathematical principles. What he really wanted to see was that his thoughts be adopted as standard Roman Catholic teaching.

In essence, Rene Descartes and Francis Bacon (1561-1626) are generally regarded as the key figures in the development of scientific methodology. Both had systems in which God was important, and both seem more devout than the average for their era.

(f.) Blaise Pascal (1623-1662)

Pascal was a French mathematician, physicist, inventor, philosopher and theologian. In mathematics, he published a treatise on the subject of projective geometry and established the foundation for probability theory. Pascal invented a mechanical calculator and established the principles of vacuums and the pressure of air. He was raised a Roman Catholic, and in 1654 he had a religious vision of God, which turned the direction of his study from science to theology. Pascal began publishing a theological work, *Lettres provinciales*, in 1656. His most influential theological work, the *Pensées* ("Thoughts"), was a defence of Christianity, which was published after his death.

(g.) Gregor Mendel (1822-1884)

Mendel who was a monk, and later elected Abbot of his monastery, was the first to lay the mathematical foundations of genetics, in what came to be called “Mendelianism”. He began his research in 1856

(three years before Darwin published his *Origin of Species*) in the garden of the Monastery.

Our modern understanding of how traits may be inherited through generations comes from the principles proposed by Gregor Mendel in 1865. However, Mendel didn't discover these foundational principles of inheritance by studying human beings, but rather by studying *Pisum Sativum*, or the common pea plant. Indeed, after eight years of tedious experiments with these plants, and – by his own admission – “some courage” to persist with them, Mendel proposed three foundational principles of inheritance. These principles eventually assisted clinicians in human disease research; for example, within just a couple of years of the rediscovery of Mendel's work, Archibald applied Mendel's principles to his study of *alkaptonuria*. Today, whether you are talking about pea plants or human beings, genetic traits that follow the rules of inheritance that Mendel proposed are called Mendelian.¹⁷ On the cell theory, Mendel was indebted to Unger's work on the role and behaviour of cells in pollination, and his observation of the production of new varieties through cross-fertilization, in particular, the notion that his involved the union of just two cells. Through his experiment with pea plants, Mendel further explored the question of how the union of two cells produced a new organism, the enigma of generation. He concentrated on what, until then, had remained overlooked: the importance of considering pairs of observable characters and the statistical law governing the pattern of their reappearance in the off-springs.

The impact of the genetic theory is no longer questioned in anyone's mind. Many diseases are known to be inherited, and pedigrees are typically traced to determine the probability of passing along a hereditary disease. Plants are now designed in laboratories to exhibit desired characteristics. The practical result of Mendel's research is that it not only changed the way we perceive the world but also the way we live in it.¹⁸

(h.) Georges Lemaître (1894-1966)

Georges Lemaître was a Catholic cleric, who earlier in life had discerned his call to both the priesthood and the life of the mind as a research scientist around the time of his high school graduation. In July of 1913, Georges Lemaître earned his bachelor's degree in

mechanical engineering and began work as a mining engineer.¹⁹ He studied theoretical physics, and in 1923 was ordained as an Abbé. The following year, he pursued his scientific studies with the distinguished English astronomer Arthur Eddington, who regarded him as “a very brilliant student, wonderfully quick and clear-sighted, and of great mathematical ability.” Lemaître then went on to America, where he visited most of the major centres of astronomical research. Later, he received his PhD in physics from the Massachusetts Institute of Technology.²⁰

Georges Lemaitre was born in Charleroi, Belgium at a time when most scientists thought that the universe was infinite in age and constant in its general appearance. Some theories, such as those by Isaac Newton and James C. Maxwell suggested an eternal universe. Indeed, when Albert Einstein first published his theory of relativity in 1916, it seemed to confirm that the universe had gone on forever, stable and unchanging. Lemaitre reviewed the general theory of relativity. As with Einstein's calculations ten years earlier, Lemaitre's calculations showed that the universe had to be either shrinking or expanding. But while Einstein imagined an unknown force – a cosmological constant – which kept the world stable, Lemaitre decided that the universe was expanding. He came to this conclusion after observing the reddish glow, known as a redshift, surrounding objects outside of our galaxy. If interpreted as a Doppler effect, this shift in colour meant that the galaxies were moving away from us. Lemaitre published his calculations and his reasoning in *Annales de la Societe scientifique de Bruxelles* in 1927. Few people took notice, however.

It could actually be said from the foregoing that Lemaitre was the first person to propose the theory of the expansion of the universe, which is now popularly misattributed to Edwin Hubble. What is known as Hubble's Law actually was derived by him and he made the first estimation too of what is now called the Hubble constant, which he published in 1927, two years before Hubble's article. He founded the Big-Bang theory of the origin of the universe which is today called the “hypothesis of the primaeval atom”²¹

Among the many things that can be said of Lemaître legacy, is a statement in 1933, by Rev. Vecchierello, O.F.M. which is still valid today:

It is a point of great interest nowadays when there are so much loose thinking and still looser writing and talking about the non-existence of God ... to see a man who is both a priest and a scientist fraternizing on the most intimate terms with the world's most illustrious scientific geniuses. He not only associates with them, but he is their peer, and in that is the lie given to the old and empty charge that the study of science means the loss of belief in religion. Lemaître, of course, is usually an object of great curiosity — not so much to his coreligionists as to many not of the faith who marvel at the "phenomenon" of a Catholic priest being a scientist, yes, not only a scientist of the regular run, but a genius whose theories are most daring.²²

Perhaps Lemaître's greatest gift to the world is a Religion-Science/Faith-Reason intellectual framework. In addition to its logical, practical benefits compared to an openly hostile science-religion approach, it also is filled with optimism and hope.²³

(i.) Teilhard de Chardin (1881-1955)

Teilhard de Chardin was a French idealist philosopher, palaeontologist, geologist and Jesuit Priest. He did a lot of work in the aspect of creation and evolution, advancing arguments to prove creation in the midst of scientific facts, and he settled for 'evolutionary creation'. God is the creator and preserver, the active Centre of centres upon which the evolutionary process derives motion for action and sustenance.²⁴ His life-long search was for synthesis: of reason and authority, of matter and spirit, between past and future, between body and soul.²⁵

Teilhard's basic premise is that all of reality, the whole of the cosmic order is in movement (evolution), by the very fact that God who is Almighty Creator "makes things make themselves". Evolution as he saw it is a process in space and time that generates new levels of a more complex organization. All observable phenomena of the universe are involved in this process, particularly the phenomenon of man. But evolution is not only a process in which the material or

quantified aspects of the matter have moved from the simple to the more complex; it is also a process in which primitive psychism has moved to more intense consciousness. Man presently climaxes the process of evolution as the most complex expression of cellular structures and the most intensely conscious.²⁶

In his characteristic way of further explicating his ideas, Teilhard explains the situation thus:

The whole of the cosmic order is moving towards a goal (the *Omega Point*), gradually progressing from one stage of development to another, each one more unified than the preceding. The highest stage of material development is life. The highest stage in the development of life is human life. With human life, consciousness achieves a level of self-reflection. We not only *know*, we *know that we know*. Human existence, therefore, represents a new and unique order of being.²⁷

Teilhard's perspective on Omega Point takes account of a personal, transcendent centre to the creative-evolutionary process. This centre is outside and above the process – or to use more traditional language, is transcendent to it. Omega Point is active in history, not only through the provision of motive for action but principally through its own personal effectiveness. Teilhard names this active “Centre of centres”, God.²⁸

(j.) Stanley L. Jaki (1924-2009)

Stanley L. Jaki, a Hungarian-born Catholic priest of the Benedictine Order, was Distinguished Professor at Seton Hall University, South Orange, New Jersey. With doctorates in theology and physics, for more than forty years he specialized in the history and philosophy of science. The author of over fifty books and over four hundred articles, he served as Gifford Lecturer at the University of Edinburgh and as Fremantle Lecturer at Balliol College, Oxford. He lectured at major universities in the United States, Europe, and Australia. He was an honorary member of the Pontifical Academy of Science, *membre correspondant* of the Académie Nationale des Sciences, Belles-Lettres et Arts of Bordeaux, and the recipient of the Lecomte du Noüy Prize for 1970 and of the Templeton Prize for 1987.

Jaki was profound and persuasive in upholding the view that thinkers and writers of the Enlightenment period up to the present have been mistaken about Christianity and science. He refuted their submissions that Christianity was opposed to, and even oppressed, science. Instead, he argued that Christianity has made a great positive impact on science. In *The Savior of Science* (2000), Jaki revealed the Christian foundations of modern science. According to him, Christian monotheism alone provided epistemological underpinnings for the scientific endeavour, where other ancient cultures of Greece, China, India, and the early Muslim empire failed to make an impact.²⁹

Following Jaki's four-point reasons for the unique birth of modern science in Christian Western Europe, explicated in the book *Christ and Science*,³⁰ the noted conservative thinker Russell Kirk has this to say: "Modern science, Father Jaki points out, rose from the natural theology of medieval Christian learning—a fact that *philosophes* and positivists sedulously ignore."³¹ Father Jaki was sturdy in defending the view that Catholicism has been and is still a blessing to science, not an obstacle, as many erroneously claim.³²

Through the rest of his life, Jaki spearheaded the move aimed at establishing a friendly relationship between science and religion. He wrote more than two dozen books on the subject, expressing the notable theory that modern scientific inquiry can only exist alongside Christianity because modern science arose from within a Christian society, a society which alone afforded it the opportunity to thrive. For this, he was awarded the Templeton Award, which is given to those who do outstanding work in affirming a spiritual dimension to reality.³³

After rising to be one of the most significant scientific minds in modern times, S. L. Jaki died in Madrid on April 7, 2009.

Conclusion

Belief in God has a much longer history than does the practice of philosophy or the 'scientification' of science. These Christian thinkers and scholars we have discussed above, many of whom were Catholic priests and who were products of their age, serve as models for our own age when the scientific study of the universe, technological revolution and contrasting standards of morality have become real issues within the gamut of our collective existence,

posing serious challenges to people's faith in the one true God as the creator and sustainer of the universe and the process of the natural order. Our model Christian scholars familiarized themselves with the philosophical and scientific theories of their day and did not hesitate to appropriate them into their theological reflections, even giving them pastoral applications. They professed God to be the creator and sovereign of the heavens and the earth, through intellectually active engagement with the world and its objects.

As the contemporary world continues to drift on the slopes of manifold crises – the crisis of faith, crisis of values, crisis of morality – and a host of other maladies, it behoves today's generation of Clerics who have been trained in Philosophy and various other disciplines to follow the lead of the likes of those discussed in this paper by putting our training into active use for the service of the global community. We should not be afraid to actively and critically engage the philosophical and scientific systems of thoughts in today's world with an eye to building a better world in which universal progress can be sustained.

Endnotes

¹ This paper is dedicated to my Formator, Vocations' Director and Lecturer in Logic, Epistemology and Analytic Philosophy during the period of my Seminary Formation, Rev. Fr. Prof. Anselm Jimoh, as he marks the Silver Jubilee of His Priestly Ordination.

² JOHN PAUL II, *Pastores Dabo Vobis*, 43; US CATHOLIC BISHOPS, *The Basic Plan for the Ongoing Formation of Priests* (2001).

³ S. M. McDONOUGH – J. T. PENNINGTON, (eds.), *Cosmology and the New Testament* (London: T & T Clark Int., 2008) 2.

⁴ P. SMULDERS, "Creation: Theology", in: K. Rahner (ed.), *Encyclopedia of Theology: A Concise Sacramentum Mundi*, London: Burns & Oates, 1975, pp. 313-319.

⁵ Cf. E. ADAM, *Constructing the World: A Study in Paul's Cosmological Language* (Edinburgh: T & T Clarke, 2000) 3ff.

⁶ A. M. HUNTER, *The Gospel According to Paul*, (Philadelphia: The Westminster Press, 1966) 1ff.

⁷ A. M. HUNTER, *The Gospel According to Paul*, 43.

⁸ J. OMOREGBE, *Epistemology: A Systematic And Historical Study*, (Lagos: Joja Publishers, 1998) 43.

⁹ Cf. The Letters of St. Paul to the Romans 4:16; 5:2; cf. the Letter to the Hebrews 11:1; 12:2. Although it remains a major question in Biblical scholarship who the author of the Letter to the Hebrews is, the view by some that its has some connection with the Pauline school of disciples, rings a bell that brings a worthwhile intertextual connections between the quoted text and related texts in Paul's letters.

¹⁰ J. M. COOPER – D. S. HUTSCHINSON, *Plato: The Complete Works*, (Indianapolis, IN: Hackett Publishing Company, 1997).

¹¹ V. J. BOURKE, "Thomas Aquinas, St." in P. EDWARDS et al. (eds.), *The Encyclopedia of Philosophy* (New York: Macmillan Publishing Co, 1967) 105-116.

¹² V. J. BOURKE, "Thomas Aquinas, St.", 105.

¹³ Although Copernicus was highly engaged in ecclesiastical life, there are not extant documents to show that he he was ever ordained a priest. The fact that he was one of the four candidates to the assume the episcopal seat of Warmia in 1527 gives credibility to the supposition that he was ordained a priest. Cf. "Nicolaus Copernicus", in *New Advent Catholic Encyclopedia* [Available at: <http://www.newadvent.org/cathen/04352b.htm> (Accessed 21 August 2019)].

¹⁴ A. NAESS, *Galileo Galilei: When the World Stood Still*. Trans by James Anderson (Springer, Berlin 2005) 33.

¹⁵ G. GALILEI, *Dialogues Concerning Two New Sciences*. Trans by H. Crew – A. de Salvio (William Andrew Pub, New York 2001).

¹⁶ Cf. http://en.wikipedia.org/wiki/Galileo_Galilei

¹⁷ I. MIKO, "Gregor Mendel and the Principles of Inheritance" in *Nature Education* 1(1):134, 2008.

¹⁸ E. MAYR, *The Growth of Biological Thought*, The Belknap Press of Harvard University, 1982, 720-740.

¹⁹ A. BERGER (ed.), *The Big Bang and Georges Lemaître* D. Reidel Publishing, New York, 1984, 365.

²⁰ S. SOTER – N. TYSON, *Cosmic Horizons: Astronomy At The Cutting Edge*, A Publication of The New Press. © 2000 American Museum of Natural History. [Available at :

http://www.amnh.org/education/resources/rfl/web/essaybooks/cosmic/p_lemaitre.html (Accessed: 14 August 2019)].

²¹ Wikipedia online: http://en.wikipedia.org/wiki/Georges_Lema%C3%AAtre

²² H. VECCIERELLO, *Einstein and Relativity. Lemaître and the Expanding Universe*, St. Anthony Guild Press, Paterson 1934, 23.

²³ J. R. LARACY, "The Faith and Reason of Father George Lemaitre" in *Homiletic and Pastoral Review*, Ignatian Press, San Francisco, CA 2009, 50-59.

²⁴ T. DE CHARDIN, *The Appearance of Man*, (trans. by J. M. COHEN) (New York: Harper and Row Publishers, 1956).

²⁵ D. CARROLL, "Creation", 183.

²⁶ T. DE CHARDIN, *The Appearance of Man*.

²⁷ T. DE CHARDIN, *The Phenomenon of Man*, (trans by Bernard Wall) (New York: Harper and Row Publishers, 1959) 77-183.

²⁸ D. CARROLL, "Creation", 252-253.

²⁹ S. L. JAKI, *The Savior of Science*, William. B. Eerdmans, Grand Rapids, MI 2000.

³⁰ S. L. JAKI, *Christ and Science*, Real View Books, Royal Oak, MI 2000, 23.

³¹ R. KIRK, "The Rediscovery of Creation", *National Review* 35 (10) (27 May 1983), pp. 640-41.

³² T. D. WATTS, "Cosmology and the History of Science" in *Social Justice Review (St Louis, MO)*, Vol. 100, No. 7-8, July-August 2009.

³³ Tyler Huckabee, "Nine Groundbreaking Scientists Who Happened to be Christians" [Available at: <https://relevantmagazine.com/god/9-groundbreaking-scientists-who-happened-be-christians/> (Accessed on: 26 August 2019)].