

Can Faith and Science be Reconciled?

By Fr Andrew Pinsent

Over 80 people attended a lecture organised in June by the Eastbourne and Bexhill Circle. Fr Pinsent is Research Director of the Ian Ramsey Centre, at the Faculty of Theology and Religion, University of Oxford. He is a priest of the Diocese of Arundel and Brighton. This is a simplified summary of a PowerPoint presentation running to 72 slides.

God and philosophy

- Belief that there is a God is not unique to those who are “religious”, c.f. philosophical arguments of Plato, Augustine, Anselm, Aquinas, Aristotle, Newton, Descartes, Kant etc.
- This fact is obscured in contemporary culture due to the influence of (new) atheists, who generally argue (and want to believe) that theists are generally primitive, irrational and evil. So it is helpful to be aware of intellectual inferences that there is a God drawn simply from examining the world.
- These lines of reasoning lead to the conclusion that there is a God, although not (by themselves) to faith.

What the New Atheists share is a belief that religion should not simply be tolerated but should be countered, criticized and exposed by rational argument wherever its influence arises.”

Hooper, Simon. "The rise of the New Atheists". CNN.

“Militant atheists tend to make one or both of two claims that moderate atheists do not. The first is that religion is demonstrably false or nonsense, and the second is that it is usually or always harmful.”

Julian Baggini. Atheism. 2003. Page 1

Religion and faith

Belief in God’s existence and religion overlap but are not identical. Besides facts or inferences about the world, religion typically involves worship, traditions, ritual and other elements. The conception of ‘God’ and the relationship with God vary considerably, e.g. Islam (mainly third-personal); Christianity and ‘narrative Judaism’ (mainly second-personal) and Buddhism (‘no-personal,’ i.e. no personal God or relation). This talk focuses on ‘**faith**,’ the root virtue of a **second-person relation to God** by grace (divine adoption) in Catholicism.

The Father of the “Big Bang”

Mgr Georges Lemaître (d. 1966), a Belgian Catholic priest, proposed what became known as the “Big Bang” theory of the origin of the Universe, deriving what became known as “Hubble's Law” in a paper in 1927, two years before Edwin Hubble confirmed the expansion of the universe. He also proposed the way in which the theory might be tested by searching for radiation from the Big Bang. He died shortly after having learned of the discovery of cosmic microwave background radiation, proof of his intuitions about the birth of the Universe.

Mgr Gregor Mendel, Father of modern genetics

Gregor Mendel (d. 1884) was an Austrian Augustinian priest and scientist often called the “father of genetics” for his study of the inheritance of traits in peas (between 1856 and 1863 Mendel cultivated and tested c. 29,000 pea plants). Mendel showed that the inheritance of traits follows particular laws, later named after him. Mendel's paper was published in 1866 in *Proceedings of the Natural History Society of Brünn*, but largely ignored for nearly half a century. The rediscovery of Mendel's work prompted the foundation of genetics.

Fr Angelo Secchi, Father of astrophysics

Fr. Angelo Secchi (d. 1878), S.J., Director of the Vatican Observatory, made the first spectroscopic survey of the heavens, classifying stars by four spectral types. He also studied sunspots, solar prominences, photographed solar corona during the eclipse of 1860, invented the heliospectroscope, star spectroscope, telespectroscope and meteorograph. He also studied double stars, weather forecasting and terrestrial magnetism. He is considered to be the father of the “spectral classification of stars”, leading to an understanding of their physics and evolution.

Fr Nicholas Steno, Father of stratigraphy

Fr Nicolas Steno (d. 1686) was the founder of stratigraphy, the interpretation of rock strata. He is credited with the *law of superposition*, the *principle of original horizontality*, and the *principle of lateral continuity*, which are the building blocks for the interpretation of the natural history of rocks and the development of geology. Note that a Catholic layman, Georg Pauer (d. 1555) earned the title “father of mineralogy” for his great work *On the Nature of Metals*.

Fr Boscovitch, SJ, Father of field theory

Fr. Boscovich's *Theoria Philosophiae Naturalis* (1758) developed a theory of matter as consisting of many dimensionless points, with the mutual attraction of any pair of points being some general function of the distance between them, represented by an oscillatory curve. Field theory is now fundamental to modern physics. Einstein's efforts in 1919 to create a unified theory of physics was based upon extending Newtonian theory along the lines of Boscovich, who was also an early advocate of atomic theory. Yet few textbooks mention him today.

Fr Rene Hauy, Father of crystallography

René Haüy (d. 1822) was ordained a priest and had a strong amateur interest in science. Examining the fragments of a calcareous spar, he was led to make experiments which resulted in the statement of the geometrical law of crystallization associated with his name. Haüy is also known for the observations he made in pyroelectricity. His brother was Valentin Haüy, the founder of the first school for the blind, its most famous student being Louis Braille.

Fr Nicholas Callan, Pioneer in electronics

The induction coil was invented by priest and scientist Fr. Nicholas Callan in 1836 at St. Patrick's College, Maynooth, inspired by the work of Michael Faraday. An induction coil produces an intermittent high-voltage alternating current from a low-voltage direct current supply. It is one of the foundations of modern electronic technology. Induction coils were used to provide high voltage for early gas discharge and Crookes tubes and for X-ray research. Fr. Callan also invented the "Maynooth Battery" in 1854, using inexpensive cast-iron instead of platinum or carbon. He built the world's largest battery at that time, and discovered an early form of galvanisation to protect iron from rusting.

Fr Casimir Zeglen, Inventor of the bulletproof vest

In 1893, after the assassination of Carter Harrison, Sr., the Mayor of Chicago, Kazimierz Żegleń (Casimir Zeglen) invented the first commercial bulletproof vest. He discovered a way to weave silk to enable it to capture the bullet. In 1897, he improved it together with Jan Szczepanik who was the inventor of the first commercial bulletproof armour in 1901 which saved the life of Alfonso XIII, the King of Spain, when a bomb exploded near his carriage. Fr Zeglen was a Catholic priest of St. Stanislaus Kostka Roman Catholic Church in Chicago, then the largest Polish church in the United States, with 40,000 in the parish.

Women as early scientists in Catholic Italy

Maria Gaetana Agnesi (d. 1799) was one of a number of remarkable women scientists associated with the University of Bologna in the 18th century. Others include Laura Bassi (d. 1778), Anna Morandi Manzolina (d. 1774), and Maria Dalle Donne (d. 1842). Agnesi is credited with writing the first book discussing both differential and integral calculus. In 1750, Maria Agnesi was appointed by Pope Benedict XIV to the chair of mathematics and natural philosophy at Bologna. After the death of her father in 1752 she gave herself to the study of theology, the care of the poor, homeless, and sick. She eventually joined a religious order in Milan. To put this achievement in perspective, Winifred Merrill was the first woman to be awarded a PhD in mathematics in the United States – in 1886.

Other Catholic women pioneers

Laura Bassi (d. 1778): the first woman to earn a professorship in physics at a university in Europe and the **first woman in the world to earn a university chair in a scientific field** of studies. One of her most important patrons was Cardinal Prospero

Lambertini, later to become Pope Benedict XIV, who encouraged her scientific work. :
Elena Cornaro Piscopia (d. 1684): in 1678 she became **the first woman in the world to receive a Ph.D. degree.**

Faith and Science: are they compatible?

- Most of the time, modern science deals with matters that are not directly connected with faith at all, often involving measurements, laws and quantities.
- What should be clear from these examples is that **there are no grounds for supposing a naïve hostility to exist between faith and science**, or that being a person of faith precludes fruitfulness in science and intellectual life at the highest levels.
- But is there a stronger causal connection between faith and fruitfulness in science? Is the weak conclusion the best that we can offer: that faith and science are not incompatible....?

What would help?

- To draw on two thousand years of faith-formed genius to communicate that belief in God and a life of faith is intellectually respectable.
- To impart some basic historical facts, e.g. Catholic formation of universities etc., to inoculate against falsehoods.
- To show the value of faith in shaping our world, especially via '**organic apologetics**': **roots** (history and origins of our civilisation) and **fruits**.