



source Innovation in ETFs

For the latest independent thinking in Exchange Traded Funds, try Source

FINANCIAL TIMES

Click here to try **our new website** — you can come back at any time

January 29, 2016 3:47 pm

‘The Penultimate Curiosity: How Science Swims in the Slipstream of Ultimate Questions’, by Roger Wagner and Andrew Briggs

Review by John Cornwell

[Share](#) [Author alerts](#) [Print](#) [Clip](#) [Gift Article](#)

[Comments](#)



Cristiano Banti's 'Galileo before the Roman Inquisition' (1857)

On the April day in 1953 when James Watson and Francis Crick completed their model of the structure of DNA in Cambridge, they decided to announce the consequent solution to “the secret of life” down at the local pub. Hastening through the portals of the old Cavendish Laboratory, opened in 1874, these staunchly atheistic researchers passed beneath a Latin inscription from the Book of Psalms. It translates in the King James version: “The works of the Lord are great, sought out of all them that have pleasure therein.”

The authors of *The Penultimate Curiosity*, Roger Wagner and Andrew Briggs, see significant irony

in that circumstance. They note, moreover, the existence of a parallel religious emblem above the entrance to the Oxford University Museum: the effigy of an angel holding a book in one hand and three germ cells in the other. In 1860, shortly after the building was completed, the museum was the scene of a heated spat between Thomas Huxley and Bishop Wilberforce over Darwin's theory of evolution; fists were shaken, a lady swooned.

As Matthew Arnold's "Sea of Faith" ebbed ever further through the 19th century, science and religion, despite such sacred quotes and images, were seen to be separating. By the end of the 20th century it seemed like an acrimonious divorce.

Since figures such as Galileo were persecuted by the Church, religion is seen as an enemy to progress

[Tweet this quote](#)

The familiar version of the scientific revolution, outlined for example in Herbert Butterfield's *The Origins of Modern Science* (1949) and in most standard histories to the present, begins with Copernicus's mid-16th century refutation of a geocentric universe. In the period that followed, top-down deduction from immutable principles gave way to bottom-up induction in the formation of predictive, falsifiable theories based on observation and experiment. Hence, as the story goes, science triumphed over the fog of metaphysics. Moreover, since figures such as Galileo, who confirmed Copernican cosmology, suffered persecution by the Roman

Catholic Church, religion is generally seen as an enemy to scientific progress.

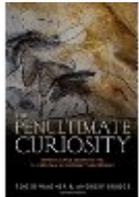
Wagner, a painter and art historian, and Briggs, professor of nano materials at Oxford, would not dispute of course the importance of the fall of Aristotelian physics or the Copernican revolution. But they see a longer, more complex story in relation to the role of religion — by which they mean not any particular religion but rather the spirit of wonder and curiosity that dwells on the grandeur of nature and the mysteries of existence. In their view, without that spirit modern science would never have occurred.

The authors see the term "religion" as problematic in history of science. In the premodern world, they point out, the modern sense of a set of doctrines did not exist, while the word "scientist" was not employed until 1833. In the medieval era, the word *religio* meant reverence or worship, while *scientia* meant habits or discipline of mind.

Wagner and Briggs argue that at its birth modern science swam "in the slipstream of ultimate questions" that were spiritual, aesthetic and philosophical in nature. They use the images of geese in flight and the cyclists' peloton to illustrate their basic thesis: those up front make the going easier for those behind, who eventually overtake.

In this reading, the development of modern science has many tributaries, setbacks and advances. The metaphor of the peloton creates a useful explanation for the spectacular crashes along the road to, and beyond, the scientific revolution: for example, the lapses into demonology and witchcraft of the 17th century, the Social Darwinism of the 19th, and the Lamarckian ideology of "soft inheritance" espoused by the Soviets in the first half of the 20th.

amazon.co.uk



The Penultimate Curiosity: How...

£25.00 

Shop now

The authors' illustrations reference many disciplines, from archaeology to aesthetics. Wagner and Briggs are as much at home commenting on the stunning Chauvet cave paintings in France, believed to be 30,000 years old, as they are expounding the significance of the anthropologist Bronislaw Malinowski's notes on the Trobriand Islanders or animal behavioural research with chimpanzees in the Taï Forest of Ivory Coast. Their commentary on early Chinese technology, so often neglected in western science history, lends insight and breadth to the story.

Wagner and Briggs's citation of pioneering figures ranges from the early medieval Islamic logician and philosopher Al-Ghazali to the atomic scientist Niels Bohr. At the centre of their account is Isaac Newton, whom they describe as perceiving "a deep congruence between 'the beautiful system' of interlocking laws . . . and the free choices of an all-wise creator God" — the prelude to Newtonian physics.

Generally eirenic in tone, they do not hesitate to gently rebuke naivety where they find it. They take issue, for example, with the claim by Crick — who later in his career turned from molecular biology to brain science — that religionists have perpetuated the fallacy of a split between the body and a spooky-stuff soul. Citing Jewish scriptures and Thomas Aquinas, Briggs and Wagner argue that the Abrahamic faiths consistently posited an embodied-soul notion of human identity in contrast to a crass body-soul dualism.

This gripping work of history and reference deserves to be read on both sides of the science-arts divide. Without espousing a particular faith or denomination, the authors have provided a much-needed antidote to the New Atheists' promotion of science at the expense of spirituality, a campaign that has done much to coarsen and misinform public understanding of both.

The Penultimate Curiosity: How Science Swims in the Slipstream of Ultimate Questions, by Roger Wagner and Andrew Briggs, *OUP*, *RRP£25*, 496 pages

John Cornwell directs the Science and Human Dimension Project at Jesus College, Cambridge

Photograph: Bridgeman Art Library

[Share](#) [Author alerts](#) [Print](#) [Clip](#) [Gift Article](#)

[Comments](#)

PROMOTED CONTENT

Promoted By McLaren

McLaren Sports Series

At McLaren, everything starts with the driver. Every component of our cars is there for one reason alone – to create a driving experience like no other. See more...

Printed from: <http://www.ft.com/cms/s/0/18359e98-c5a6-11e5-808f-8231cd71622e.html>

Print a single copy of this article for personal use. Contact us if you wish to print more to distribute to others.
