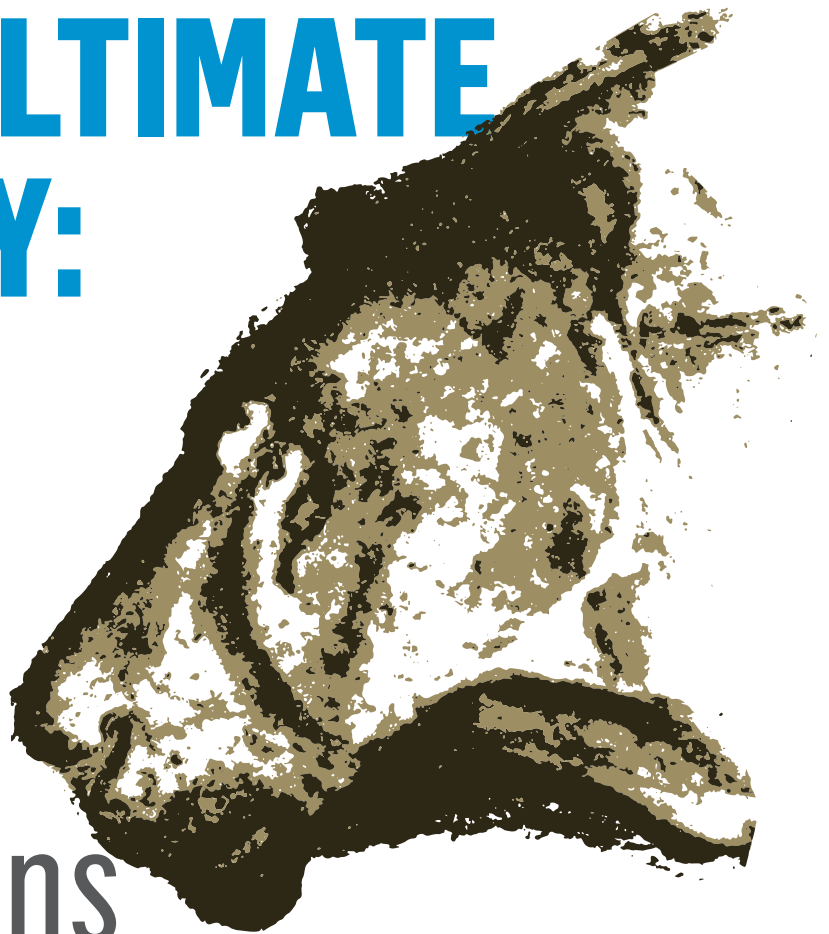


## THE PENULTIMATE CURIOSITY:

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# THE PENULTIMATE CURIOSITY: Science, Religion and the Big Questions?

Roger Wagner and Professor Andrew Briggs



Photo: Andy Toovey

The Ardèche Gorge, in the South of France, is home to some of the most remarkable paintings in the world. They would be worthy of inclusion in any national gallery. But these paintings are in a cave. They have recently been subject to redating by the most sophisticated methods known to science, and the conclusion is that the oldest of them were painted some 35,000 years ago.

Jean Clottes led the team that studied the paintings following their discovery in 1995. In September last year, in the course of making a film, we visited him in his home. Dr Clottes is convinced that the paintings in the Chauvet Pont d'Arc cave were religiously motivated. He points among other things to evidence that people did not live in the cave, but held their religious ceremonies there. He reckons

that the anatomical accuracy of the paintings was essential for the spiritual power that they were intended to convey. The quality of portrayal of the underlying musculature is something that the great animaliers like Leonardo or Stubbs would not have been ashamed of. It is as if the spiritual concerns of the painter inspired a curiosity about the subjects of the paintings.

We had started talking about religion and science more than sixteen years ago, and these paintings seemed to provide a clue.

Although we come from very different professional interests – a painter and poet, and a materials scientist – we share a deep interest in the relationship between the natural sciences and belief in God. That relationship is much more complicated one than is



Lions painted in the Chauvet Cave. This is a replica of the painting from the Brno museum Anthropos. (Source: Wikimedia)

often realised. For a start the categories of science and religion are very recent, at least with the meanings generally attributed to them now.

The historian Peter Harrison loves to ask what you would think of a scholar who told you that they had discovered evidence of a hitherto unknown war that had broken out in the year 1600 between Israel and Egypt. Israel and Egypt did not exist as states then, and whatever conflicts may have been raging, they could not reasonably be described as involving a war between those two countries, even if you could produce contemporary maps showing the cities of Jerusalem and Alexandria and the Jordan and Nile rivers. Professor Harrison argues that many of the claims about the relationship between what we now call science and what we now call religion are confused by a similar distorting projection of our present conceptual maps back onto the intellectual territories of the past.

What we found, as we examined the evidence, is that the relationship between curiosity about the material world, which eventually led to what we now think of as science, was entangled in a rich and often highly fruitful way with questions about what lies, as it were, beyond the rim of the visible world. Where there has been a culture, or a community, or sometimes simply an individual, asking big questions about the nature of truth, reality, meaning, purpose, love, or God, so time and again that has proved

conducive to curiosity about the nature and operation of the physical world we can see and touch and measure and in many cases describe mathematically.

Why, we asked ourselves, should this be so? We found at least three underlying reasons.

First, a development in religion among the ancient Greeks, which posited a single divine rational principle behind the universe, challenged earlier views of Zeus throwing thunderbolts or Poseidon shaking the ground and motivated a search for rational principles underlying natural phenomena. When this belief was combined with the conviction of the Abrahamic religions that God is not a part of the universe but the creator of it, it motivated a search for rational principles underlying the whole physical universe.

Second, developments in religion which have emphasised that the pursuit of truth is a religious duty have provided a motivation across the whole range of intellectual endeavour. Although throughout history intellectual clashes have occurred where people have tried to use science to prove or disprove religion, and have sometimes tried to impose their convictions by force, there is also another story to be told. When for instance reformation theologians began to emphasise the need to study the bible for yourself, it was natural for thinkers like Francis Bacon to conclude that what applied to the book of God's words also applied to book of God's works. The Christian's duty was not

to take things on authority but to study nature for themselves.

Third, and perhaps most fundamental, the impulse to reach out beyond the horizon of the visible world that we describe as ‘religion’ seems to be a universal characteristic of human beings: part of our cognitive architecture. Could the relationship between religious practices and physical curiosity that we find in the Ardèche cave help us to understand the long historical entanglement between science and religion?

As we shared ideas on our reading about the subject, we developed the metaphor of a slipstream. On some mornings and evenings you can see geese flying in a V-formation over the University Parks in Oxford. The geese behind do not have to work as hard as the leader. They find the place where they can benefit from the vortex created by the bird in front, and use this to reduce the work that they need to do. They even adjust the phase of their wings to maximize the energetic advantage.

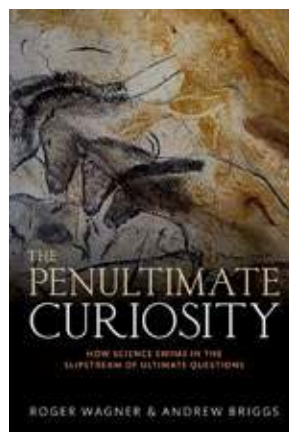
If the need to make sense of the world as a whole could be described as an ‘ultimate curiosity’, then a curiosity about the physical world around us might be described as a kind of ‘penultimate curiosity’ travelling in its slipstream.

The Chauvet Pont d’Arc cave is not open to the public. An earlier discovery in France was the Lascaux caves, into which visitors were initially allowed. After several years it became apparent that the paintings

were deteriorating, which was attributed to the breath of the visitors and other collateral effects of their presence. The caves were sealed off, and an air conditioning system was installed. This caused even more harm than the humans had, and the paintings are alas now damaged beyond repair. By the time the Chauvet Pont d’Arc cave was discovered in 1995 the authorities had learned from the Lascaux experience.

A replica of the Chauvet Pont d’Arc cave has been built. It cost of over 55 million euros and took eight years. Visitors can experience something close to the original cave, and ponder what motivated the penultimate curiosity that lay behind those very remarkable paintings.

For those who may not be able to make it to the Ardèche before Christmas, an alternative might be to read our moderately priced ‘fascinating...beautiful volume’ (Times Higher Education).



*The Penultimate Curiosity: How Science Swims in the Slipstream of Ultimate Questions* by Roger Wagner and Andrew Briggs is published by Oxford University Press (2016).



**Roger Wagner** has been described by Charles Moore in *The Spectator* as the “best religious painter in Britain today”. He has work in public and private collections in Britain and around the world, and has produced several books of illustrated poems and three illustrated volumes of his own translation of the Psalms. He read English at Oxford, and then studied at the Royal Academy School of Art. In 1981 he returned to Oxford and began a conversation about science with Andrew Briggs.



**Professor Andrew Briggs** is Chair in Nanomaterials at the University of Oxford and former Director of the UK Interdisciplinary Research Collaboration in Quantum Information Processing. He has published over 585 papers and articles, the majority in internationally reviewed scholarly journals. After studying physics at Oxford he gained a PhD at the Cavendish Laboratory in Cambridge, followed by a degree in Theology, winning the Chase Prize for Greek. His scientific curiosity focuses on materials and techniques for quantum superposition and entanglement.