

Can a scientist believe in God?

Prof. David Watts, University of Manchester, UK

david.watts@manchester.ac.uk

Before I answer this question directly, let's note two particular features of the context in which this question is raised today - on the University 'doorstep'.

The first is the rise of the 'new atheism' – atheism with a militant tendency, but in many respects we could call it *atheism-lite*, or soft-core atheism. The second is the rise of a new University subject area: the serious *interdisciplinary* study of the *interactions* between Science and Religion/Theology. This involves:

- The creation of professorial chairs at leading Universities, eg. Oxbridge.
- The formation of specialist academic societies.
- New peer-reviewed academic journals and an avalanche of new books and papers.
- The Templeton prize (more 'valuable' than the Nobel prize)!
- Considerable activity in the blogosphere, especially interacting with the new atheists.

I view this development enthusiastically, since rigorous intellectual standards are needed in the dialogue about science and religious belief. Universities should be places where open discussion and critical thought can be applied, untrammelled by *imposed* beliefs. This can involve a measure of 'detachment' and discussion can even become an end in itself. However, I would not be involved at all without deep, rational convictions about God and the scientific enterprise. These are important – indeed central - to my personality. When I was young, believing scientists were my key role models among family friends. They nurtured my ambition to engage fully in the scientific quest for "whatever things are true".

The Reality of God

The question before us concerns belief in God. The answer we then give depends on what we mean by God. My understanding of God is that of historic Christian Theism, or *Christian Trinitarian Theism*. That is, I hold convictions about the reality of God as a transcendent personal Being, the God and Father of Jesus Christ, who is as potentially knowable in the same moment, and to the same extent, as we are each self-aware of our own existence. This means that this God is not an abstract theory, but supremely alive. In a general way we can say that the physical universe is somehow *embedded* in a personal and spiritual universe. Certainly, without human consciousness, we could know nothing of this.

With that introduction, we can re-phrase the question: *How* can a scientist believe in God? What does it really mean to say this?

Absolute Creation

Christians – and other Theists – acknowledge that God is the Creator of the entire universe. And if there should exist an objective reality that we could call the 'multiverse' then we must extend the wording to include that also as a product of the creative will, power and love of God. Now the sacred Biblical texts of Christianity use the language of creation in a variety of contexts and with different shades of meaning. However, there is an *absolute* meaning of creation in key texts that is often summarized by the Latin expression: *ex nihilo*, out of nothing. This expresses the concept of absolute creation, not as a *process* operating with pre-existing materials but as a time-less *reality* by which the entire space-time universe, along with matter, radiation and all that is not-God *is caused to exist*.

By contrast, 'create'/'creation' is also widely used in Scripture texts in a secondary sense (*mediate* creation). This is to denote the formation/origin *within time* of key entities – including mountains and humanity – *from prior terrestrial matter*: "the dust of the earth". Thus not all creative events directly denote *ex nihilo* creation, although the latter underpins all created existence. This is a vital distinction!

As regards *absolute creation*, Christian theologians go on to affirm both that this establishes a *non-reciprocal* relationship of *intimate dependence* of the creation upon God and also that the creation has a *real existence* distinct from God. In consequence, God (the prime Cause) has endowed and upholds the universe with *secondary causes* embedded within physical, material, biological, behavioural and social

existence. In Christian understanding, it is these secondary causes and the specific entities upon which they operate that are the proper and necessary domain of scientific enquiry. The *reliability* of God underpins the existence, reliability and discoverability of scientific laws, which have sometimes been transcended in miraculous events, such as the resurrection of Jesus Christ from the dead.

Creation *with* time

Recognition of the metaphysical, non-temporal nature of absolute creation enables us to see that the universe has been created *with* time, rather than *in* time. That time is an aspect of the created universe – on a comparable level to space - was an explicit insight of the great 4thC theologian Augustine, centuries before Albert Einstein’s gravitational theories that placed space and time on a similar footing. From this, it follows that the entire unfolding of cosmic and human history in space and time, *in whatever form it takes or has taken*, is part of divine providence. Christian theology cannot specify in advance the precise form of cosmic historical unfolding, as the universe is a ‘*contingent*’ place – it might have been otherwise from what, little by little, we find it to be. The experimental natural sciences are necessary to examine and explore the world in its complexity and to discover the underlying laws and patterns of behavior, including the ‘fine tuning’ of physical constants that is necessary for organic life.

Can science explain everything?

In principle, the secondary causal network is complete without the regular need to invoke *additional* divine action or localized ‘intelligent design’ to plug critical gaps. So we reject a ‘god of the gaps’. *In practice*, there are manifold details still to be discovered, explained and understood in scientific terms. Some key processes within the created order we properly label *random* or chance, but that is more a measure of their *complexity* and our relative *ignorance!* The rich hierarchy of levels of reality (eg. physiological /cellular /molecular /atomic /nuclear/ etc) often requires multiple, *complementary* levels of *scientific* explanation. Even within a single discipline, such as chemistry, it is frequently appropriate to explain phenomena *both* in terms of overall energetics (thermodynamics) *and* in terms of (kinetic) mechanisms. Experienced scientists do not argue that complementary explanations are superfluous. More importantly, *there are many central domains of human life and rational conviction where scientific explanation or justification is neither feasible nor necessary*. Physics, for example, is causally incomplete because it doesn’t encompass human thoughts and intention. We regularly and correctly make metaphysical assumptions, such as the existence of other minds and the reality of the external world, which cannot ‘scientifically’ be proven. Similarly we make aesthetic and ethical value judgments. Even science itself *presupposes* logical and mathematical truths. The key to solving many controversies is acknowledgement of the propriety and necessity of descriptions of the same phenomena on different levels of reality. For example, a book can be explained both as paper/ink and as the author’s message.

Why is science possible?

A key component of Christian appreciation of science is to marvel at the extent to which our minds are attuned to discover hidden secrets of our cosmic home. "The most incomprehensible thing about the world is that it is comprehensible" (Einstein). Allied to this is "The unreasonable effectiveness of mathematics in the natural sciences" (EP Wigner). But if we have been created in the image of the God who has ordained the ‘out there’ then we can more readily expect to find a comprehensible world. Allied to this is the surprising fact that in the history of philosophy, the overwhelming majority of leading philosophers have taken the view that cosmic Mind is somehow antecedent to the material world, rather than the converse. This is also the testimony of the *New Testament*: "In the beginning was the Word".

The Theatre of God’s glory

Overall, Christian belief affords a rich, intellectually coherent matrix within which the scientific enterprise can flourish, and where discoveries heighten our appreciation of the power, wisdom and beauty of God. The Christian faith has necessarily dis-enchanted pagan and animist misunderstandings of nature, but has supplied spectacles with which to view the world as the theatre of God’s glory. This is not to close our eyes to human suffering, natural evil and “the groaning of creation”, but to appreciate more fully the Christian-historical trajectory of Creation, Fall, Redemption and Consummation. So the believing scientist is called to work in hope, knowing that his or her labour is not futile, since we are not end-products of meaningless processes in an impersonal universe but made in the image of a personal God.