



Prof Chris Done

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How the universe began is one of the big questions addressed by all cultures and religions

Further information

www.cis.org.uk

en.wikipedia.org/wiki/Big_Bang - General introduction to the Big Bang

www.christianity.co.nz/science.htm - Exploring Christianity and science

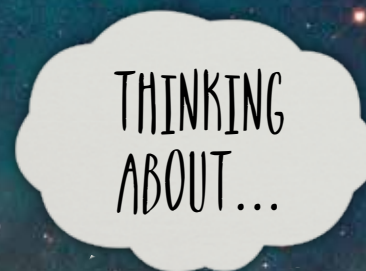
www.leaderu.com/everystudent/easter/articles/josh2.html -

Evidence for the resurrection

Suggested reading

Bancewicz, R., *Test of Faith: Spiritual Journeys with Scientists*, Paternoster, 2009

Poole, M., *Users Guide to Science and Belief*, Lion, 2007



the big bang

how did the universe begin?

ADDRESSING QUESTIONS OF SCIENCE AND FAITH



THINKING ABOUT...

the big bang

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In the beginning God said 'Let there be light...'

In the beginning God said let there be light... and there was a radiation dominated early Universe!

How the Universe began is one of the big questions addressed by all cultures and religions. But one of the most amazing aspects of modern science is that we can also begin to answer this question from evidence. There is solid and compelling evidence that the entire Universe had an origin, termed the 'Big Bang', a moment of creation about 13.5 billion years ago. We see this origin dynamically imprinted on the structure of our Universe – all the galaxies (apart from the very closest ones like Andromeda) are moving away from each other. But if galaxies are currently expanding away from each other, then in the past they must have been closer together. Extrapolating back further still, they would all be on top of each other – hence the idea of an explosive beginning, all matter streaming away from a single point. Space and time are created at this point as well, and the Universe was too hot for matter to exist, even as the most basic particles, so the energy which is now in matter was then in radiation – light.

HOW DID THE UNIVERSE BEGIN?

How do we merge this with the biblical account? In many ways, they resonate well. The scientific evidence points overwhelmingly to a moment of creation in the Big Bang, and the Bible talks of a God who made everything out of nothing – and it even starts with light, which matches to a radiation dominated early Universe for the literal-minded! The only obvious issue with taking the first few sentences of Genesis literally is a timescale; but actually the Bible itself is not that clear about a literal six day creation either. Augustine of Hippo, one of the great theologians and fathers of the early Church, wrote a book called 'The Literal meaning of Genesis' in 408AD, long before anyone had any need to be defensive about a completely literal interpretation of Genesis. Yet in his assessment of the creation account he said, 'what kind of days these are is very difficult and perhaps impossible to understand', and he urged that we should be willing to change our minds about how we interpret it in the light of new evidence.

Augustine, then, would probably have no issue with the current 'Big Bang' picture

IS THE SCIENTIFIC ANSWER IN CONFLICT WITH THE BIBLE?

of the creation of the Universe. Instead of attributing the creation of the world to God only until we have a scientific explanation, we worship God as creator in the light of the scientific explanation. If we only let God have the glory for the amazing things that we cannot explain then it can lead to an unhelpful 'God of the gaps' picture - we cannot currently explain how the Universe came into being, so it must be God; we cannot currently explain how life ultimately began so it must be God; we cannot currently explain human consciousness so it must be God. But then the place of God is only in the 'gaps' in our knowledge. And, as our scientific knowledge grows and some of the gaps get filled in, the space for God seems smaller.

With this view, science can be seen as a threat to faith; whereas for me the more we know about the vast, yet intricate and beautiful Universe we live in, the bigger and more awe-inspiring is the God who made it all. Here, instead of science being a threat to faith, it's a way of understanding more about the greatness of God.

But science alone cannot reveal much more about the nature of God apart from the fact he is infinitely greater than we are. We do not have the power to create a Universe out of nothing, and the

God who has done this is far beyond our understanding, and we can only know him because he chose to reveal himself to us. This is what he has done in the Bible; it is a record of God progressively revealing himself to us. It is not a science textbook – for which we should all be deeply grateful since science textbooks are generally hard work to read and quite dull! Even when the Bible talks about how the Universe began, and how life began, it is not concerned so much with the how (questions which can be addressed by science), but with the why and most importantly, for whom – a question which science simply cannot even ask. Reading the Bible in this way, the creation account in Genesis is then not a necessarily a picture of a radiation dominated early Universe, but a picture of its Creator. And the ultimate revelation of the nature of God is Jesus, through whom God explains his love in a way we can understand.

HOW DO WE INTERPRET GENESIS?

