

"God or the Big Bang?"

Talk by the Revd Dr Rodney Holder

Dressed in a dapper bow tie, Dr Holder looked every inch the Cambridge academic, (he is Emeritus Course Director of The Faraday Institute, no less) as he addressed a packed audience at the Corn Exchange on a freezing cold Thursday evening in February. And he did not disappoint all those who attended. He combined a wonderful and joyful enthusiasm towards his subject, with the confidence of a world leader in his field.

He started with the story of George Lemaitre, one of the leading cosmologists of the twentieth century, and a Catholic priest. He proposed the theory that we were not living in a steady state universe, but that we were still experiencing the fall-out from a single point of creation - what we refer to as Big Bang. Dr Holder then went on to survey the evidence that has backed up Lemaitre's theory since. Penzias and Wilson, for example, (researchers who went on to win Nobel prizes) had argued that if Big Bang had taken place then there had to be background radiation from such an event. They therefore made it the focus of their work to establish whether background radiation was present or not.

One day in 1965, they decided that their telescopic antennae needed cleaning. Too much noise was emanating from pigeon droppings on the antennae, or so they thought. Having thoroughly cleaned the antennae, the noise continued, and, as they say, the rest is history - Penzias and Wilson discovered that the 'noise' was Cosmic Microwave Background (CMB) Radiation. Lemaitre heard the news that his theory had been validated on the day he died.

Dr Holder continued his argument for a "created" beginning by looking at the all the variables that had to be met and combined for life to survive on earth - what he referred to as the "fine tuning argument". For example, for order to evolve in a life-sustaining manner, the universe must have maintained an extremely precise overall density. The precision of density must have been so specific that a change of one in 10^{15} (i.e. 0.0000000000001%) would have resulted in a collapse, or big crunch.

This is just one of a huge number of immensely fine-tuned variables that all had to come together in a micro second. Sir Fred Hoyle (no friend of religion) also argued for a fine-tuned universe later in his life. He said:

A common sense interpretation of the facts suggests that a super-intellect has monkeyed with physics, as well as with chemistry and biology, and that there are no blind forces worth speaking about in nature. The numbers one calculates from the facts seem to me so overwhelming as to put this conclusion almost beyond question

Of course, Dr Holder admitted we may have got lucky. Or there may just have been so many potential universes out there, that we were the one that didn't get crunched and that actually worked. But then believing in this is just as much an act of faith (possibly an even bigger one with less evidence) as believing in a God who had a plan and purpose all along.

In many ways, we are back at where we started with these talks. Science will never prove or disprove God. But hopefully these talks have helped put an end to the myth that faith is simply not credible in the twenty first century. Whether people in the audience were people of faith or not, I couldn't help think that – like me - most walked home that evening, looked up and felt an even greater sense of the sheer wonder, awe and beauty of the universe we live in.

John Coleman