
Simon Singh

Big Bang

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Q: What's the most important 20th century discovery that you discuss for which the physicist never won a Nobel Prize?

A: I think Ralph Alpher's theoretical work has been greatly overlooked. He predicted that the Big Bang could explain the amount of helium in the universe and he also showed how it would leave a fossil in the form of microwave radiation filling the universe. He was right on both counts. However, the microwave afterglow of the Big Bang was only discovered fifteen years after Alpher's prediction, by which time he had been largely forgotten. Perhaps this is why he missed out on a Nobel Prize.

Q: Physicists have a reputation for being eccentric. Who do you think is the most eccentric of the bunch?

A: I think physicists are normal. It is the rest of the world who are eccentric. To me it seems normal to be curious about the universe. However, I know what you mean. But this eccentricity is nothing more than a result of their obsession with their research. When artists become obsessed then this is tolerable and they are called passionate, perhaps because it is easier to see why they become excited. Physicists exhibit similar passion, but it is misinterpreted and relabeled as eccentricity.

Q: In the course of your book, you talk extensively about the role of the Church. Do you think the loosening of restrictions by the Church after Copernicus and Galileo allowed science to flourish or did it merely encourage the inevitable?

A: I think that the march of scientific understanding about nature is inevitable, it is merely the rate of progress that varies. When there is plenty of money, an atmosphere of questioning, and religious tolerance, then scientists can go about their business. When money is tight, people follow orthodoxy and the Church becomes dogmatic, then scientific freedom suffers.

Q: From your research, and what you know about science today, why do some people still refuse to accept that the universe has a beginning?

A: I think there are two reasons why people do not accept the Big Bang model of the universe. First, there are scientists who doubt the model on scientific grounds. I think they are wrong and they are in the minority, but that is fine. Second, there are people who prefer to believe a religious explanation for the history of the universe, and that is fine too. They might believe that the universe is 6,000 years old and they may not believe in evolutions and so on, but that is fine. It is not a rational view of the world, and it is based in entirely on faith, so I cannot engage in any reasonable discussion. However, I think most people with a religious conviction are prepared to take a less fundamentalist view of the universe, and can tolerate scientific explanations for the universe, while retaining religious explanations for the spiritual universe.

Q: As you know, experiments are being carried out today to try and determine if the universe will expand forever, or if it will contract down to nothing. If you were a betting man, which would you choose?

A: I am a betting man mainly blackjack and poker. But this one is a tough call. At the moment, I would guess that the universe will expand forever.