

**How to Make a Universe:** is an article by Bill Bryson in which he attempts to explain the Big-bang concept to Readers Digest readers (see August 2004 issue, p 132-146). Bryson is not a scientist but a travel writer, and so, as might be expected, his version of the big-bang runs in the more popular vein. For our purpose, that's fine. All we want to do is gain an overview of the concept. Therefore the following data has been extracted from this Bryson article.

Bryson begins by introducing us to the size of a proton which he presents as such an "insubstantial thing" that five hundred billion ( $5 \times 10^{11}$ ) could fit on the dot over the letter "i." Next we shrink one of these tiny protons down to a billionth ( $1 \times 10^{-9}$ ) of its normal size into a space so small that it would make a proton look enormous. Now pack into that tiny space about 25 grams of matter and you are ready to start an inflationary universe. It should be noted that if you are going to create a non-inflationary universe you will need to gather in additional materials; in fact, you will have to gather up every last particle of matter there is in the whole vast universe and squeeze it into a spot so small that it has no dimensions at all.

**The Big-bang is now ready** to take place. It is reasonable enough for us to visualise this dot as a tiny speck, filled with potential energy, suspended in space waiting for its moment to come. But this would be quite wrong. Outside this infinitely small dot there is no space. Everywhere within the universe now lies inside this dot waiting to burst forth. It should also be noted that time doesn't exist. There was no past for this dot to come from. It literally is the moment of nothing when time = 0.00 hours. And so, from this nothing, our universe begins.

In a single blinding pulse, this dot assumes heavenly dimensions. The first second produces gravity and the other forces that govern physics. In less than a minute the universe is a million billion kilometres ( $1 \times 10^{15}$  km – this is actually a thousand trillion) across and growing fast. There is a lot of heat now, 10 billion degrees (109 deg.) of it, enough to begin the nuclear reactions that create the lighter elements – principally hydrogen and helium, with about one atom in a hundred million ( $1 \times 10^8$ ) of lithium. In three minutes, 98 % of all the matter there is or will ever be has been produced. How much of this is true? None of it; it's just a theory. But let's continue.

Bryson makes the point that although everyone calls this beginning to the universe a big-bang we shouldn't think of it as an explosion in the conventional sense. It was more of a vast expansion on a huge scale. What caused it? No one seems sure. One notion is it's a recurring feature of our universe; that collapse and expansion takes place much like breathing inflates and collapses our lungs. Others refer to a "false vacuum" or a "scalar field" or "vacuum energy" – some quality or thing that introduced a measure of instability into the nothingness that was. If it seems impossible that you can get something from nothing their reasoning is "the fact that once there was nothing and now there is a universe is evident proof that you can." And I might add the stupidity of that reasoning is too laughable to be taken seriously.

**The Time Factor for the big-bang** varies depending on which group of Cosmologists are arguing the case. Some say the moment of creation was 10 billion years ago, others opt for a date of twice that and lately there seems to be a consensus emerging around the time of 13.7 billion years. This isn't surprising as Bryson admits, "these things are notoriously difficult to measure."

However, we ought to appreciate the fact that the big-bang theory isn't so much about the bang itself so much as it is about what happened not long after the expansion began to take place. "By

## ~The Big-Bang Theory~

Evo~001

doing a lot of maths and watching carefully what goes on in particle accelerators, scientists believe they can look back to  $10^{-43}$  seconds after the moment of creation.” We should be careful to note that this is only their belief. They are using an apparatus, under laboratory conditions, to make predictions about things they hope to prove took place under the guidance of chance.

Now  $10^{-43}$  seconds is one ten million trillion trillion trillionths of a second after the big-bang. Bryson continues, “Most of what we know, or believe we know, about the early moments of the universe is thanks to an idea called inflation theory first propounded in 1979 by Alan Guth, then a junior particle physicist at Stanford.” The inflation theory “holds that a fraction of a moment after the dawn of creation, the universe underwent a sudden dramatic expansion. It inflated ... doubling in size every  $10^{-34}$  seconds. The whole episode may have lasted no more than  $10^{-30}$  seconds – that’s a million million million million millionths of a second – but it changed the universe from something you could hold in your hand to something at least  $1 \times 10^{25}$  times bigger.”

It’s important to note that Bryson writes next, he says that the, “Inflation theory explains the ripples and eddies that make our universe possible. Without it, there would be no clumps of matter and thus no stars, just drifting gas and everlasting darkness.” The astute reader will realise that we have now moved away from the big-bang theory into another theory designed to explain the ripples and eddies that make our universe possible. Apparently the big-bang couldn’t do that. A big-bang would give you only what you’d expect. Just drifting matter in the form of gas; something had to be added, and that is another theory – the inflation theory!

**The Inflation Theory takes off** after one ten million trillion trillion trillionths of a second ( $10^{-43}$ ) when gravity emerged. This is followed, after a “ludicrously brief interval” by electromagnetism and the strong and weak nuclear forces “the stuff of physics.” “These were joined an instant later by shoals of elementary particles – the stuff of stuff. From nothing at all, suddenly there were swarms of photons, protons, electrons, neutrons and much else – between  $10^{-79}$  and  $10^{-89}$  of each, according to standard big-bang theory.” Thus, “in a single cracking instant we were endowed with a universe that was vast – at least a 100 billion light years across, but possible any size up to infinite – and perfectly arrayed for the creation of stars, galaxies and other complex systems.”

Then Bryson makes some amazing observations. He says, “What is extraordinary from our point of view is how well it turned out for us. If the universe had formed just a tiny bit differently – if gravity were fractionally stronger or weaker, if the expansion had proceeded just a little more slowly or swiftly – then there might never have been stable elements to make you and me and the ground we stand on. Had gravity been a trifle stronger, the universe might have collapsed like a erected tent without precisely the right values to give it the necessary dimensions and density and component parts. Had it been weaker, however, nothing would have coalesced. The universe would have remained for ever a dull, scattered void. This is one reason why some experts believe that there may have been many other big-bangs, perhaps trillions of them, spread through the mighty span of eternity, and the reason that we exist in this particular one is that this is the one that we could exist in.”

**Chance is required** to play too great a role in the accumulation of all the right conditions for our universe to be as it is today without the intervention of intelligence. All these design specifications with gravity, electromagnetism and nuclear forces coming at just the right time and in the right strengths point to Someone at work in this creation process. In mathematics we speak of the probability of something happening by chance. If the odds raise themselves to 100:1 then the chance of that event happening without the intervention of intelligence is highly unlikely; at 1000:1 a source of intelligence is an absolute certainty. In the case of the odds required

## ~The Big-Bang Theory~

Evo~001

to support the big-bang and the following inflation theory the odds of this happening in the way stated make the event impossible to have occurred in this way.

**The Digest Reader's Response** came in the next issue. "Not all scientists believe Bill Bryson's explanation of the origins of the universe in 'How to Make a Universe.' (August). Hypotheses put forward by cosmologists have varied enormously over time and are, at best, educated guesses. They cannot be proven in the scientific sense of being repeated in another experiment, let alone observed in the first place. No human being was present 'at the beginning.'" (Dr. John Fisher, Ballarat, Victoria).

"How can anyone believe that from an infinitesimal dot billions of times smaller than the tip of a pin, an explosion occurred that produced the universe with its multiple billions of tonnes of rocks in the planets? That's after you squeeze 27 tonnes of stuff into a nonexistent dot. Are we really going to swallow such superlative nonsense? I'd rather accept the sublime statement in Genesis 1.1: 'In the beginning God created the heavens and the earth.'" (Stuart Leigh, Bentleigh, Victoria).

**Something to Think About:** The Size of the Universe is thought to be about at least 156 billion light-years across. However, according to current evolutionary theory, the universe began around 13.7 billion years ago ( $1.37 \times 10^{10}$  years). The problem these two pieces of information create is the distance that light could travel in the time evolution allows for its big-bang. Let's do the calculation and see what happens:

To calculate the distance something could travel when we know its speed and time we simply multiply the speed times the time. The time units cancel out and we are left with the distance. The speed of light is usually given as 300,000 km/s. The actual speed of light in free space is given as  $2.99792 \times 10^8$  m/s but we will accept the popular figure; now let's convert it to meters. To convert kilometres to meters we multiply by 1000 and so our  $300,000 \text{ km/s} \times 1000 = 300,000,000 \text{ m/s}$  or  $3 \times 10^8 \text{ m/s}$ . Now we need to multiply the speed of light times the number of seconds in a year to get the distance light can travel in one year. An ordinary year equals  $365\frac{1}{4}$  days and a day contains 86,400 seconds. Therefore our year has a total of 31,557,600 seconds in it. Now for each of these seconds we are travelling a distance of 3 hundred million meters. In one year we are going to travel  $300,000,000 \times 31,557,600 = 9.46728 \times 10^{15}$  meters. This is usually rounded off to 9.5 trillion km as the distance travelled in a light year.

Now the big-bang took place around 13.7 billion years ago and as the perimeter of the expansion would be extending in all directions at the same time we need to double that time frame to arrive at the diameter of the big-bang universe timescale. Its 27.4 billion years. This means for 27.4 billion years we have been travelling a distance of 9.5 trillion km per year. Therefore our universe ought to be  $2.603 \times 10^{23}$  km wide. How wide is it? Apparently 156 billion light-years. That's  $1.56 \times 10^{11}$  light-years which converts to  $(1.56 \times 10^{11})$  times the conversion factor of  $(9.461 \times 10^{15})$  which equals  $1.475916 \times 10^{27}$  meters; this can be rounded off to  $1.48 \times 10^{24}$  km. The difference between the two diameters is  $1.22 \times 10^{24}$  km.

What this means is, if the big-bang had taken place in a universe that began as a tiny dot with no surrounding space and that matter expanded at the speed of light, then after 13.7 billion years our universe should only be 17.6% of the total area that it currently is. The size of today's universe cannot be accounted for by a big-bang expansion going at the speed of light.

The Science Myth is the perception given by some supporters of Darwin's theory that the facts of science support their evolutionistic model and that those who believe in creation have nothing more than a Genesis "myth" to cling too. Hence a perception is promulgated that science proves

evolution and, as a consequence, creation in six literal days has been disproved. Nothing could be further from the truth. Science doesn't prove anything. All science does is to supply us with certain facts, that we can ascertain as they appear in the present, from which evolutionists and creationists argue their position. As Jonathan Sarfati puts it, "... science deals with repeatable observations in the present, while evolution/long-age ideas are based on assumptions from outside science about the unobservable past. Facts do not speak for themselves – they must be interpreted according to a framework."<sup>1</sup>

Speaking about the formation of the universe Dr. Otto Struve, one time chairman of the astronomy department at the University of California (1950-1959), said with regard to the regularities observed among the orbits of the planets, their axial rotations, satellites, and so on that, "Many of these regularities cannot be due to chance; for example, the fact that all the planets move approximately in the same plane and in the same direction must be a consequence of the manner in which they were formed."<sup>2</sup>

We need to be aware of a subtle distinction here. The regularities that Dr. Struve points out are observations made using the methods we attribute to science, and indeed, measuring and observing how things work is indeed science, but proposing how things came to be using guesses and theories is moving towards the realm of science-fiction. Let's look at the rest of what Dr. Struve says on this page about origins.

"Most later workers continued Kant's efforts to explain these regularities by inventing a suitable primordial medium, such as the hot, spinning, and contracting nebula of Laplace, out of which the sun and the planets were formed, and endowing it with such physical properties as were needed to explain the dimensions of the planetary orbits, the relative masses of the sun and the nine large planets, and so forth; or they postulated an appropriate event, such as the close passage of another star in the theories of Moulton and Chamberlin, of Jeans, and of Jeffrey's. The hypothetical media and their properties, and the catastrophic events were adjusted in such a way as to permit the authors of the various hypotheses to deduce many, if not all, of the observed regularities of the solar system."<sup>3</sup>

All these ideas about Laplacian primordial nebula and Moultonian accidents have one thing in common with the big-bang and Inflation theories – they didn't happen! They are as fictional as star-gate and any other science-fiction story. Just because a scientist puts forward the script and not a movie writer doesn't make it any less a piece of fiction. That's the sad thing about a lot of today's so-called science; people have lost the fine art of discerning what's real and what's just plain made up. Maybe this is a result of cyber-space and too much faith in science.

**The Alternative to believing in stories** made up by people stringing facts of science together with an overactive imagination is to turn to someone who was really there at the moment when all things came into existence. Scripture tells us that, "In the beginning God created the heavens and the earth."<sup>4</sup> It also says that the Bible account was written by the Holy Spirit who was also present in the beginning.<sup>5</sup>

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<sup>1</sup> Sarfati, Dr. J, "In six days," edited Dr. John Ashton, (Strand Publishing: Sydney, 1999), 64.

<sup>2</sup> Struve, Dr. O, "The Universe," (M·I·T Press: Massachusetts, 1962), 3.

<sup>3</sup> Ibid, 3.

<sup>4</sup> Genesis 1:1.

<sup>5</sup> See 2 Tim. 3:16-17; 2 Pet. 1:20-21; and Genesis 1:2.

## ~The Big-Bang Theory~

Evo~001

Unbelievers often like to point out that Genesis isn't a science textbook and then use this statement as a basis for discrediting the Genesis account of origins. However a little reflection on this line of reasoning will soon reveal it makes as much sense as saying, the Bible isn't a medical textbook and therefore all its laws of health are false.

The book of Genesis is a divine account of the world's early history. Specifically the history of how this world came into existence and the beginnings of God's chosen people. Now, let's get strictly honest. The origin of how our world began, is it science or history? Strictly speaking its history! Science can gather facts from materials and experiments about what's there and what's missing; but science cannot create an accurate history of what took place. That history comes from the minds of people who reconstruct events according to their personal beliefs. Now if you don't believe in God or if your God is constrained in any way regarding what He can and cannot do, then Genesis just can't happen.

Now when we read in Genesis that God created the world in six literal days, we are reading the Divine version of history. The Holy Spirit was present when the world began. As this Spirit was also the author of all Scripture, and as the account of God making the world is recounted in many places of Scripture in both the Old and New Testaments, then denying this history is calling the truthfulness of God's word into question. While this is excusable in non-believers, in Christians it is appalling. Genesis chapter one is a sworn historical statement about the origin of the world therefore these notes on astronomy accept the Genesis account of creation and focus on studying what God has done while marvelling at the tremendous power of the Godhead.

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“Quantum leap of faith”

Author: • Alexander Williams

## ‘Paul Davies and the origin of life’

World-famous physicist, author and evolutionist Paul Davies has for many years now been producing popular science books that probe beyond the bare facts of cosmology and seek an understanding of what lies behind the marvellous workings of the universe. In his recent book about the origin of life<sup>1</sup> he found it necessary to use the word ‘miracle’ to explain it. His miracle however was not that of a sovereign personal Creator, but of a clever universe that somehow is able to do the impossible. In a recent article in *New Scientist*,<sup>2</sup> Davies proposes a new solution to the problem of the origin of life— a quantum computer.

He acknowledges at the outset that, despite the continuing claims of Nobel Prize winning evolutionists, the known laws of physics, chemistry and biology do not explain the origin of life. The theory of chemical evolution that stemmed from Miller and Urey’s 1953 production of amino acids from an electric discharge in a mixture of oxygen-free gases ‘did not stand up to scrutiny’. While the Miller-Urey work has shown that ‘amino acids are written into the laws of nature, large and highly specialised molecules such as proteins are certainly not. ... Throwing energy at amino acids will not create delicate chain molecules, just as putting dynamite under a pile of bricks won’t make a house’.

He goes on: ‘We now know that the secret of life lies not with the chemical ingredients as such, but with the logical structure and organisational arrangement of the molecules. ... Like a super-computer, life is an information processing system. ... It is the software of the living cell that is the real mystery, not the hardware.’ But where did it come from? Davies framed the question this way: ‘How did stupid atoms spontaneously write their own software? ... Nobody knows ...’.

In a materialist world (one without any supernatural Creator), the only world that Davies recognises, there are only two possibilities — chance and determinism. Determinism is the idea that there is ‘an in-built bias — even a conspiracy — in nature to create life’. But Davies points out that there is no evidence of such bias in the laws of physics, chemistry and biology. He rules out chance, because the odds against the chance formation of the complex organisation of life ‘are breathtakingly huge’

He therefore turns his attention to the nature of information. He acknowledges that biological information is not encoded in the laws of physics and chemistry ... (and it) cannot come into existence spontaneously. ... There is no known law of physics able to create information from nothing.’ So he proposes that there might be some sort of principle that could explain how information can be garnered from the environment and accumulated in macromolecules.’ He considers ‘molecular Darwinism’ as a possible mechanism, the idea that natural selection could occur at the molecular level, but he then dismisses it because natural selection only works on living

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<sup>1</sup> Davies, P., *The Fifth Miracle*, Penguin, Melbourne, Australia, 1998.

<sup>2</sup> Davies, P., *Life force*, *New Scientist* 163(2204):27—30, September 18, 1999.

## ~Quantum leap of faith~

Evo~002

self-reproducing systems. And he also acknowledges the important point that imperfect molecular machinery would scramble information.

His vote goes to the recently discovered and little understood realm of quantum computing. A quantum computer can theoretically produce all possible solutions to a problem simultaneously. In practice, it would be ‘exponentially faster than classical systems’ at processing information.

His argument is as follows. ‘The riddle of biogenesis is essentially computational in nature — discovering a very special type of molecular system from among a vast decision tree of chemical alternatives, most branches of which represent biological duds.’ That is, if there were a soup of molecular building blocks that could assemble themselves into macromolecules, a quantum computer could quickly calculate which ones would be biologically useful, and in what role and configuration. He does not say how this might happen, and ends the article at this point.

I wonder if indeed he will pursue the idea. Quantum computing, not even properly achieved yet in practice, would represent the pinnacle of current human technological achievement; to invoke this principle as the driving force behind the origin of life is an implicit admission that it requires intelligence to produce information. This is a conclusion that he is no doubt aware of, but to invoke intelligence to explain the origin of life means facing up to the fact that there is a Creator.

In summary, Davies has not contributed anything new to the origin-of-life debate. Refreshingly, he does acknowledge that chemical evolution provides no explanation at all, a position well established by creationists.<sup>3</sup> And he does focus on the primary role of information, but on this subject creationists most decidedly hold the high ground.<sup>4</sup> His latest attempt seems to be nothing more than grasping at a straw that might just hold the case together for evolution. It is therefore a tacit acknowledgment that otherwise, the evolutionary cupboard is bare.

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<sup>3</sup> Thaxton, C.B., Bradley, W.L., and Olsen, R.L., *The Mystery of Life's Origin: Reassessing Current Theories*, Lewis & Stanley, Dallas, USA, 1984.

<sup>4</sup> Gitt, W.. *In the Beginning was Information*, Christliche Literatur-Verbreitung, Bielefeld, Germany. 1997.

**Article:** In “Creation,” Vol. 27 No. 2 [March-May], pp.23-25.

“Secular Scientists Blast the Big-Bang”

Author: • Carl Wieland

**Many** Christian leaders today have not merely tolerated the ‘big bang’ idea, but embraced it wholeheartedly. To hear their pronouncements, believers should welcome it as a major plank in our defence of the faith. ‘At last, we can use science to prove there’s a creator of the universe.’

However, the price of succumbing to the lure of secular acceptability, at least in physics and astronomy, has been heavy. We have long warned that adopting the big bang into Christian thought is like bringing the wooden horse within the walls of Troy. This is because:

- The big bang forces acceptance of a sequence of events totally incompatible with the Bible (e.g. Earth after sun instead of Earth before sun)<sup>1,2</sup>
- The big bang’s billions of years of astronomical evolution are not only based on naturalistic assumptions, they are contrary to the words of Jesus Himself, who said people were there from the beginning, not towards the end of an interminably long ‘creation’ process (Mark 10:6)—see ‘Jesus and the age of the world’.<sup>3</sup>
- The slow evolution of the stars, then solar system and planets (including Earth) in big bang thinking means that ‘big bang Christians’ are invariably dragged into accepting ‘geological evolution’ (millions of years for the earth’s fossil-bearing rocks to be laid down). So they end up denying the global Flood, and accepting death, bloodshed and disease (as seen in the fossils) before Adam. This removes the Fall and the Curse on creation from any effect on the real world, as well as removing the biblical answer Christians have always had to the problem of suffering and evil (God made a perfect world, ruined by sin).<sup>4,5</sup>
- Marrying one’s theology to today’s science means that one is likely to be widowed tomorrow.

In fact, the signs are strong that exactly that is happening, and that those who have ‘bought’ the big bang for its allegedly irrefutable science have been ‘sold a pup’. A bombshell ‘Open Letter to the Scientific Community’ by 33 leading scientists has been published on the internet<sup>6</sup> and in *New Scientist*.<sup>7</sup> An article on [www.rense.com](http://www.rense.com) titled ‘Big bang theory busted by 33 top scientists’ says, ‘Our ideas about the history of the universe are dominated by big bang theory. But its dominance rests more on funding decisions than on the scientific method, according to Eric Lerner, mathematician Michael Ibison of Earthtech.org, and dozens of other scientists from around the world.’<sup>8</sup>

**The open letter** includes statements such as:

- ‘The big bang today relies on a growing number of hypothetical entities, things that we have never observed—inflation, dark matter and dark energy are the most prominent examples. Without them, there would be a fatal contradiction between the observations made by astronomers and the predictions of the big bang theory.’



## ~Scientists Blast Big-Bang~

Evo~003

- ‘But the big bang theory can’t survive without these fudge factors. Without the hypothetical inflation field, the big bang does not predict the smooth, isotropic cosmic background radiation that is observed, because there would be no way for parts of the universe that are now more than a few degrees away in the sky to come to the same temperature and thus emit the same amount of microwave radiation. ... Inflation requires a density 20 times larger than that implied by big bang nucleosynthesis, the theory’s explanation of the origin of the light elements.’ [This refers to the horizon problem—the big bangers’ own ‘light-travel—time’ problem.<sup>9</sup>]
- ‘In no other field of physics would this continual recourse to new hypothetical objects be accepted as a way of bridging the gap between theory and observation. It would, at the least, *raise serious questions about the validity of the underlying theory* [emphasis added].’
- ‘What is more, the big bang theory can boast of no quantitative predictions that have subsequently been validated by observation. The successes claimed by the theory’s supporters consist of its ability to retrospectively fit observations with a steadily increasing array of adjustable parameters, just as the old Earth-centred cosmology of Ptolemy needed layer upon layer of epicycles.’

The dissidents say that there are other explanations of cosmology that do make some successful predictions. These other models don’t have all the answers to objections, but, they say, ‘That is scarcely surprising, as their development has been severely hampered by a complete lack of funding. Indeed, such questions and alternatives cannot even now be freely discussed and examined.’

Those who urge Christians to accept the big bang as a ‘science fact’ point to its near-universal acceptance by the scientific community. However, the 33 dissident scientists describe a situation familiar to many creationist scientists: ‘An open exchange of ideas is lacking in most mainstream conferences ... doubt and dissent are not tolerated, and young scientists learn to remain silent if they have something negative to say about the standard big bang model. Those who doubt the big bang fear that saying so will cost them their funding.’

Evolutionist and historian of science, Evelleen Richards, has noticed that it’s hard even for rival evolutionary theories to get a hearing when challenging the ruling paradigm.<sup>10</sup> This should give some idea of the difficulties biblical creationists face.

But don’t we read, even in the daily newspapers, about many observations’ that only ever seem to support the big bang? In fact, these prominent secular scientists say:

‘Even observations are now interpreted through this biased filter, judged right or wrong depending on whether or not they support the big bang. So discordant data on red shifts, lithium and helium abundances, and galaxy distribution, among other topics, are ignored or ridiculed.’

Science is a wonderful human tool, but it needs to be understood, not worshipped. It is fallible, changing, and is severely limited as to what it can and cannot determine. As AiG has often pointed out, instead of a scientific concept, the big bang idea is more a dogmatic religious one—based on the ‘religion of humanism’.<sup>11</sup> As these big bang opposers point out:

‘Giving support only to projects within the big bang framework undermines a fundamental element of the scientific method—the constant testing of theory against observation. Such a restriction makes unbiased discussion and research impossible.’<sup>8</sup>

Furthermore, contrary to the naïve pronouncements of many who should know better, it is not in any sense a matter of ‘looking into a telescope and “seeing” the big bang billions of years ago’. As always, observations will be interpreted and ‘filtered’ through world-view lenses. Those who developed the big bang were affected by secular worldview filters just as much as those who are now crying that the emperor has no clothes. They wanted a universe that created itself; their opponents want an eternal, uncreated universe. From a Christian perspective, both are in open defiance of their Creator’s account of what really happened.

With Darwinism on the run, the Enemy of Souls is seeking to seduce believers into embracing a more subtle, yet far deadlier way of evading the authority of the Bible. With progressive creationism/big-bangery rampaging through the evangelical community, he must think he is on a winner.

For a powerful, profound exposition of all of the issues involved in this, today’s most important evangelical compromise position, my colleague Dr Jonathan Sarfati’s just-released book *Refuting Compromise* is not just a casual recommendation ‘for further reading’. Chapter 5 pokes holes into the big bang, showing how it has become a ruling paradigm, supported by fallacious logic and ignoring many scientific problems—some confirmed by the above letter from big-bang—dissenting evolutionary cosmologists. It also shows how one can use a ‘first cause’<sup>12</sup> argument (pointing to God as Creator) without needing the big bang. The book is in fact designed to become a Christian classic, a culture, a culture-changing colossus of ‘cut-through-the-smoke-screen’ clarity and logic. I urge all who are reading this to get *Refuting Compromise*, read it, lend it and give it out far and wide.

## References and notes

1. Manthei, D., Two worldviews in conflict, *Creation* 20(4):26–27, 1998.
2. Sarfati, J., How could the days of Genesis 1 be literal if the Sun wasn’t created until the fourth day? <[www.answersingenesis.org/docs/1203.asp](http://www.answersingenesis.org/docs/1203.asp)>.
3. ‘Jesus and the age of the world’ in Wieland, C., The earth: how old does it look? *Creation* 23(1):8–13, 2000.
4. Ham, K. and Sarfati, J., Terrorists and death, <[www.answersingenesis.org/news/20010911\\_wtc.asp](http://www.answersingenesis.org/news/20010911_wtc.asp)>.
5. Ham, K., The god of an old earth, *Creation* 21(4):42–45, 1999.
6. An open letter to the scientific community, <[www.cosmologystatement.org](http://www.cosmologystatement.org)>.
7. Lerner, E., Bucking the big bang, *New Scientist* 182(2448):20, 22 May 2004.
8. Big bang theory busted by 33 top scientists, <[www.rense.com](http://www.rense.com)>, 27 May 2004.
9. Newton, R., Light-travel-time: a problem for the big bang, *Creation* 25(4):48–49, 2003.
10. Professor Evelleen Richards, Science Historian, University of NSW, Australia, *Lateline*, 9 October 1998, Australian Broadcasting Corporation. Science ... a reality check, *Creation* 21(4):47, 1999.
11. What is Secular Humanism? <[www.christiananswers.net/q-sum/sum-r002.html](http://www.christiananswers.net/q-sum/sum-r002.html)>, 10 June 2004.
12. Sarfati, J., If God created the universe, then who created God? *TJ* 12(1):20–22, 1998.

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**"Exploding the 'big bang'!"**

Author: • Gary Bates talks with John Hartnett

How did our Universe come to be? This is one of the 'big' questions, and scientists who study the origin and history of the universe (cosmos) are called *cosmologists*. Nearly all modern cosmologists believe that everything was 'kickstarted' by a 'big bang'<sup>1</sup> about 15 billion years ago, where the universe suddenly emerged from an extremely hot and dense state.<sup>2</sup>

But one dissenter from this ideology is Dr John Hartnett—this makes him a 'rare breed' of physicist. He is one of a relatively small number of Bible-believing creationists worldwide involved in cosmological research and thinking.

**Facts Vs their interpretation:** When they view distant stars that are millions of light-years away from the earth, many folk, including Christians, have trouble accepting the biblical account that God created the universe about 6,000 years ago. But believing the Bible right from the start is not a problem for John, which puts him at odds with his evolutionary counterparts.

Often they will accuse him of denying reality ('look, we can see it—it's obvious'). But John explains that when looking at the universe, it's no different to looking at the fossil record. 'It's the *interpretation* of the evidence', he says. 'Sure, distant stars and galaxies might be millions of light-years away, but that doesn't mean that it took the light millions of years, by our standards, to get here. A light-year is a measurement of *distance*, not time. [It is the distance that light would travel in a year through a vacuum at its current speed of 300,000 km/h 9,461,000,000,000 km.] In other words, it's just an expression used to tell us how far away something is—not how long it took the light to get here.'

John did not always believe in Genesis creation. He explains that he was interested in cosmology from a very young age, and mixed with those of similar interests. When John was 16, he and a friend co-authored a cosmology book that won a local science contest.

**Big bang founded on unprovable assumptions:** He says, 'At that time, I would have described myself as an atheist, believing that the big bang had all the answers, although there was actually very little in the way of specifics about this model. It was this that drove me into further investigation.'

Interestingly, most people think that the big bang has already been worked out, but they don't realize that there are differing versions of the big bang model—and not everyone agrees. By inserting a few unprovable assumptions at your starting point, you can end up with virtually any model you like. The big bang *assumes* that the universe has no centre or edge. Not only is this not proven, some recent research on redshift patterns have badly damaged its credibility by indicating that our galaxy is at, or near to, the centre of the universe.<sup>3</sup>

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<sup>1</sup> The term 'big bang' was coined in derision by its illustrious opponent, Sir Fred Hoyle (1915—2001). See Hoyle's obituary, Demme, G. and Sarfati, J., 'Big-bang' critic dies, TJ 15(3):6—7, 2001; <www.answersin genesis.or g/hoyle>.

<sup>2</sup> However, although most people think of the big bang as an enormous explosion into space, leading big bang proponents picture it as a rapid expansion of space itself, which carried the matter along with it.

<sup>3</sup> Humphreys, R., Our galaxy is the centre of the universe, 'quantized' redshifts show, TJ 16(2):95—104, 2002.

What I really find amusing’, he says, ‘is the way people from various other fields of science often quote the big bang as if it’s “set in stone”. I don’t wish to sound unkind, but because they are not experts in this field, many of them have no idea what the big bang is really all about and misunderstand it.’

At present, John is assisting another creation scientist, Alex Williams, in compiling a book about the big bang from a creationist viewpoint. ‘We really want to show the scientific weaknesses in big bang thinking, and that you can’t fit it into the Bible’, he says. Jokingly, he adds, ‘We actually want to create a big bang of our own among the scientific establishment, and dispel the myth of this cherished icon of evolution.’

**Solving problems:** John is not content simply to point out that a light-year is just a measure of distance, but tries to explain distant starlight from a biblical framework:

‘The way I see it, the Bible is true and the stars were created on Day 4. Yes, the universe is very large but we also have a very great God. My personal view is that the explanation probably involves a certain amount of miraculous activity during Creation Week.’

‘But I don’t believe that we see any false information, like “light created on its way.” This would mean that we would be seeing light from heavenly bodies that don’t really exist; and even light that seems to indicate precise sequences of events predictable by the laws of physics, but which never actually happened. This, in effect, portrays God as a deceiver.’

[This is very different from creating Adam as fully grown, looking like a 20-year-old, say, although he was really only a few minutes old. Here there is no deception, because God has told us that he created Adam from the dust, therefore there cannot be any history of growing for 20 years from an infant. But God has also told us that the stars are real, and that they are signs, not just apparitions from light waves.<sup>4</sup>]

‘There is every reason to anticipate a logical scientific explanation for all that we see. We don’t deny that some research is still needed, as we don’t yet know all the details—just as big bang theorists face various problems and challenges.’

In fact, John thinks this is an exciting time to be a Christian, particularly in the area of cosmology. He thinks that Dr Russell Humphreys’ book *Starlight and Time* has broken new ground for creation researchers in this area.

‘What Humphreys has done’, he says, ‘is show us another parameter of something that most people view as a constant, and that is *time* itself. Using Einstein’s Theory of General Relativity, he has shown how time can vary depending on your position in space—it affects your viewpoint. Time is slowed by gravitational forces. A clock at sea level has been shown to run more slowly than one on top of a mountain, because the one at sea level is affected by more gravity. This is an effect known as *time dilation*, and has been experimentally demonstrated.’

‘Humphreys uses this to great effect in his model to deal with the distant starlight issue. His cosmology starts with the earth near the centre originally, then the universe rapidly expanding in a “white hole” or black hole running in reverse. At the beginning, gravity would slow earth “clocks” far more than clocks further away, especially at the edge of the universe. Therefore, “billions of

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<sup>4</sup> See further discussion of why the ‘light in transit’ is fallacious, and a plausible alternative explanation, Batten, D., (Ed.) et al., *The Answers Book*, Queensland, Australia, 1999.

years” would be available (measured by clocks in those distant regions of space) for light to reach the earth, for stars to age, etc.—while less than one ordinary day is passing on earth (measured by earth clocks, on which biblical time is based).’

**Cutting-edge research:** John’s current work is directly related to this field. As a research fellow with a prestigious secular university, he is part of a team that develops technology for very precise atomic clocks.... He explained that the clocks are so precise that they might only gain or lose about one second of time every 400 million years. ‘They tick so fast—about 10 billion times a second—that we can directly measure infinitesimal losses.’

**Cosmology and Christianity:** John adds that since he became a Christian, he regards it as his ‘calling’ to make cosmology more understandable for the average layperson. He says, ‘Modern ideas about the origin of the universe contain lots of complicated mathematical theories and formulas. Many people are duped into thinking that because two plus two equals four, the maths of the big bang must be right. But in most cases, these formulas are not provable or testable—they remain completely theoretical, and the models they support are based on unprovable starting assumptions. Christians, in particular, should not be worried about this.’

He is particularly critical of Dr Hugh Ross’s beliefs. That is, Ross ‘reinterprets’ Scripture to claim the days of Genesis 1 were long ages, and tries to use the big bang as a proof of Christianity. He observes, ‘Hugh Ross is on very shaky ground—placing his faith in this model, particularly when the real big bang leaders seem not to agree that the theory implies a creator.’

When I asked him about his history as a Christian, he reminisced about his young co-author friend. He recalls, ‘He got saved, and I became quite bitter towards him and other Christians. I used to go along to meetings and torment them. At one meeting I even tipped over a table full of books and stuff. I challenged them on evolution and origins, and they always avoided the subject. Looking back, though, I can remember having some doubts—a sort of belief in God, so if someone could have shown me some scientific basis like creation—in the Bible—I think it would have had a big impact on me.’

Years went by, and John became a Christian during the third year of his undergraduate degree in physics. Meeting other Christians after that, one young man challenged him to read Genesis, saying, ‘Read the first part, and when you’re finished, I’ll come back and talk to you.’ John says, ‘When I started reading it—it was like—wow, unbelievably amazing. Straight away it struck me that this could be completely consistent with the scientific evidence and the knowledge I had at that time. I was being converted into a creationist there and then.’

In their enthusiasm, John (by now married) and his wife strayed for a while into a quasi-Christian cult. He remarks, ‘We thought we were serving God—we were so keen. But looking back, I don’t think we ever really fitted in, and we now realize our mistake.’

John realizes that the distant starlight issue is a major stumbling block to belief in the Bible; the controversy, he says, is aimed squarely at the Genesis account of creation, which is foundational to the gospel. He says, ‘I can understand it being an issue—it was a problem for me, too. But now I know that God did create it all, and when He says He did, I’m just eager to find out more about how. And, in the process, to help Christians give increasingly powerful answers to defend and share their faith.’

**Article:** In “Creation,” Vol. 26 No. 4 [Sep. —Nov., 2004], p.7.

“Big bang can't explain Universe size”

Author: • Focus: News ... .

Most evolutionists and progressive creationists believe that the big bang occurred 13.7 billion years ago. So how big would we expect the universe to be? Even if the universe expanded at the speed of light, then the radius of the universe should be 13.7 billion light-years as an *upper limit*, so the width of the universe is 27.4 billion light-years, right?

Wrong!

From new data collected from a space probe examining the Cosmic Background Radiation, astronomers estimate the universe is at least 156 billion light-years wide. Actually, it's long been known that the universe was a lot wider than 27.4 billion light-years; this latest research tells us how much wider.

According to researchers writing in the journal *Physics Review Letters*, the universe must have expanded much faster than light in its early stage. An atheistic physicist, Alan Guth, proposed this over 20 years ago—the ‘inflation’ model.

It's no wonder that 33 leading scientists have published an ‘Open Letter to the Scientific Community’ rejecting the big bang. They refer to ‘fudge factors’ such as the ‘hypothetical’ inflation idea, which needs a cosmic density 20 times larger than that required for the big bang to make the light elements.<sup>1 2</sup>

[**Editor note:**] Skeptics often challenge creationists to answer how the light could have travelled from distant stars to Earth in 6,000 years. But light-travel time is just as much a difficulty for the big-bangers, called the ‘horizon problem’—see *Creation* 25(4):48—49. And if secular scientists finally throw out the big bang, what will happen to the Christian apologists who reinterpret the Bible to fit into this theory? They will have to reinterpret their reinterpretations!

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<sup>1</sup> BBC News, <[news.bbc.co.uk/1/hi/sci/tech/3753115.stm](http://news.bbc.co.uk/1/hi/sci/tech/3753115.stm)>, 31 May 2004.

<sup>2</sup> New Scientist, 22 May 2004, p. 20.

**Article:** In “Creation,” Vol. 27 No. 1 [Dec-Feb., 2005], pp.18-21.

“Galaxy games”

Author: • Andrew Rigg

**‘Blazars at the beginning of time’**

In another big-bang-fefying discovery, astrophysicists from Stanford University claim to have discovered one of the biggest, most distant black holes ever found.<sup>1</sup>

The supermassive black hole is uninspiringly dubbed Q0906+6930 after the coordinates at which it is found. Astronomers believe it exists at the center of an extremely distant galaxy<sup>2</sup> in the direction of the northern hemisphere constellation Ursa Major (Great Bear). This galaxy is said to have an ‘active nucleus’.<sup>3</sup>

The black hole was detected by narrow jets of high-energy particles being ejected from its poles. Such jets are only visible when they are aimed exactly in the direction of the earth, meaning these types of objects —nicknamed blazars— are only rarely observed.

The black hole is believed to be more than 10 billion times the mass of our Sun and supposedly formed 12.7 billion years ago, when the universe was 1 billion years old.

The big problem presented by this blazar is its size. In big bang terms, it is just too big to have formed in the ‘mere’ billion years since the big bang itself. The scientists behind the discovery have been challenged by its implications, ‘How do you take something big enough to hold 1,000 solar systems and as heavy as all of the stars in our Milky Way galaxy put together, and quickly crunch-collapse it [in such a short period of time]?’<sup>1</sup> Of course size and maturity are not a problem when the Bible, rather than man’s fallible ideas, is used as a starting point.

Some creationist cosmologists believe that the type of galaxy supposedly containing this blazar played an important role in the initial creation process. It is possible that galaxy creation on Day 4 of Creation Week involved galaxies with active nuclei, i.e. black holes.<sup>4</sup>

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<sup>1</sup> Levy, D., ‘Blazar’ illuminates era when stars and galaxies formed, Standford Report, 22 Jun. 2004, online: <news-service.Stanford.edu/news/2004/july7/blazar-77.html>.

<sup>2</sup> Although the ‘parent’ galaxy has not actually been observed, many astronomers believe that supermassive black holes are directly associated with galactic nuclei. That is, they are found at the centers of large galaxies. Our own galaxy is believed to have a supermassive black hole, several million times the mass of the Sun, at its center.

<sup>3</sup> Romani, R.W. et al., Q0906+6930: The highest-redshift blazar, <xxx.lanl.gov/abs/astro-ph/0406252>. 9 Jun. 2004.

<sup>4</sup> Hartnett, J.G., The heavens declare a different story! TJ 17(2):94-97,2003.

# ~Morning has broken~

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**Article:** In “Creation,” Vol. 23 No. 2 [Mar. —May, 2001], pp.51-53.

“Morning has broken ...but when?”

Author: • Russell Grigg

‘Can stars be billions of lightyears away in a young universe?’

Just because our finite minds may not yet have worked out a definitive answer to this question does not mean that the universe has to be billions of years old.

The answer to this mystery is probably not that God created light ‘on its way’, as then we would be seeing things that never really happened (e.g. a star exploding ‘a million years ago’). And possibly not that light allegedly decreased in speed in the recent past, as those who propose this idea have not been able to answer all the problems it poses.

It may be provided in a new creationist cosmology developed by Dr Russell Humphreys within the laws of general relativity, for a finite and bounded universe, with Earth near the centre. This uses the concept that gravity distorts time, and would mean that Adam could have looked up on the sixth Earth-day at stars actually many millions of lightyears away<sup>1</sup>

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<sup>1</sup> See Humphreys, R., Starlight and Time, Master Books, Arizona, 1994, p. 126, or Batten, D., ed., The (Updated and Expanded) Answers Book, chap. 5, Answers in Genesis, Brisbane, Australia / Master Books, Arizona, 1999.