

## CHAPTER 7

# AN ANCIENT AND DYNAMIC UNIVERSE

## DOES THE BIG BANG PROVE THAT GOD EXISTS?

**T**he universe is old, but it is not infinitely old. It had a beginning in time called the Big Bang. When we use this term, we are referring to a scientific model for the early history of the universe, not an atheistic worldview that the universe somehow created itself. The Big Bang model, if scientifically correct, is simply a description of how God governed the early universe.

The scientific evidence supporting the Big Bang would seem to be a “win” for a theistic worldview. The Big Bang certainly affirms our belief that “In the beginning, God created the heavens and the earth” (Gen. 1:1). But is the scientific evidence for the Big Bang enough to *prove* that God exists?

The history of philosophy includes many attempts to prove God’s existence through argument. One such philosophical attempt is called the *kalam* argument, which has its roots in Islamic thought. It can be summarized as follows:

- ▶ *Premise 1:* Everything that begins to exist has a cause of its existence. This cause must be personal or impersonal.
- ▶ *Premise 2:* The universe began to exist.
- ▶ *Premise 3:* Therefore, the universe has a cause of its existence.
- ▶ *Premise 4:* Scientists do not have a scientific explanation (an impersonal cause) for the causal origin of the universe.
- ▶ *Conclusion:* Therefore, the cause of the universe must be a personal agent.

Premise 2 is supported by scientific evidence; the universe is not infinitely old and had its beginning at the Big Bang. Premise 4 is also supported by current science. While the evidence for the overall Big Bang picture is strong, scientists do not yet understand what happened in the very first moment. What was the source of matter and energy? How did the expansion get started? When physicists calculate back to the first instant, they discovered that the particles were so extremely dense and energetic that the conditions cannot be replicated in laboratories on earth. Neither have theorists been able to explain it. Consequently, premises 2 and 4 are in agreement with the current scientific picture. If you grant premise 1, then an eternal personal being (God) is required to cause the Big Bang.

Some scientists have contested premises 2 and 4 and have proposed alternative scientific explanations. Stephen Hawking developed a different mathematical picture of the first moments of the Big Bang, based on

ideas of quantum gravity (*A Brief History Time*, Bantam Books, 1988). His model is hard to understand. Hawking incorporates ideas from quantum mechanics into general relativity and redefines the space-time of the universe in new coordinates that are shaped in such a way that time never equals zero. (Did we mention it was hard to understand?) If the time coordinate never equals zero, then we can't point to the moment of the beginning, so there was no beginning. If Hawking is right, then premise 2 is false, and the *kalam* proof doesn't work. (The conclusion could certainly still be true, but it would not be proved by this argument.)

Other scientists challenge premise 4. Rather than arguing against the idea that our universe had a beginning, they seek some scientific explanation of a natural process (some impersonal cause) for how the universe started. Typically this takes the form of a "mother" universe, an eternal pre-existing reality that somehow caused the Big Bang of our universe (and presumably many other universes). Various exotic mechanisms have been proposed, such as a quantum fluctuation of an energy field, a black hole singularity, or colliding membranes in a higher spatial dimension. Again, if premise 4 is shown false, then the *kalam* proof doesn't work.

Although these scientific alternatives have some mathematical basis, none has been confirmed experimentally. The mother universe models do make some predictions that might become testable in the next few years as physicists build new experiments. In the meantime, some atheists argue that even the suggestion of a possible mechanism is enough to negate premise 4, and thus negate the *kalam* argument. Some theists argue that such a mechanism needs to be confirmed with observations, and until that happens it is only speculation, and therefore premise 4 still stands and thus the *kalam* argument still stands.

What if one of these alternatives turns out to be true and the *kalam* argument fails? Would that mean that God doesn't exist? Not at all. It would only mean that this particular argument for God doesn't work. It would not mean that an argument against God has been found. Our belief in the God of the Bible does not rest on scientific argument or philosophical proof but on the person of Christ and our experience of the Holy Spirit.

## **Additional Resources**

- ▶ Craig, William Lane, "'What Place, Then, for a Creator?' Hawking on God and Creation," *British Journal of Philosophical Science*, 41 (1990). (For other articles by Craig visit [www.leaderu.com/offices/billcraig/menus/existence.html](http://www.leaderu.com/offices/billcraig/menus/existence.html).)
- ▶ Bruce Reichenbach, "Cosmological Argument," *The Stanford Encyclopedia of Philosophy*, Edward N. Zalta, Editor, Summer 2006 Edition. ([www.plato.stanford.edu/entries/cosmological-argument/](http://www.plato.stanford.edu/entries/cosmological-argument/))