# THE EVIDENCE FOR GOD

Now that we have discussed the important background issues of apologetics—including its biblical basis; the issues of truth, knowledge, and faith; and the concept of worldview—we need to examine the evidence for the Christian worldview.

In our discussion of the gospel, we looked described the message of Christianity in terms of God, man, Jesus, response. Because our goal is to share the gospel, it is helpful to order our evidence for Christian faith in the same format. Therefore, we begin the evidence for God.

There are many different philosophical ideas about how best to defend the Christian faith. Some people believe we should use only (or primarily) Scripture. Others offer classical arguments for God (the ontological, cosmological, teleological, and moral arguments). Still others point to historical evidence, such as the evidence for the resurrection. I find that all of these arguments are useful.

In the course of defending or rationally presenting the faith, there is often no standard way of beginning. Our conversations with people rarely will be organized, progressing in a systematic fashion. Usually, our gospel conversations are a bit disorganized, perhaps even messy. We need to prepare to use any evidence and any sound arguments. We may start with a conversation about Jesus (with the deist or with someone who believes in another religion) or we may argue for the existence of God (with an atheist).

With that understanding, I will try to proceed in an organized way. I will start with some classical arguments for the existence of God. These arguments will present a picture of a God who created everything, including the universe, the design in the universe, and our sense of morality. However, these arguments will fall short of presenting all the attributes of God. From there, we will look at the evidence for the Bible, because this is how we know anything specific about God. It is through the testimony of Scripture that we know that Jesus became a man, died on a cross, and rose again. Therefore, we will discuss how and why we have the sixty-six books that comprise the Bible.

Along the way, we will have to deal with challenging issues. We will look at scientific issues, since they present challenges to Christianity. We will also discuss the doctrine of the Trinity, since it is important to know that the one God exists in three persons.

Therefore, we shall start with non-biblical evidence for God, and then move to the biblical evidence. There are actually over twenty arguments for the existence of God. Some are not as powerful as others are, so we will focus only on a few. It is important to note that no single argument is likely to convince everyone. However, when presented cumulatively and as a whole, these arguments are very persuasive. The first bit of non-biblical evidence is the universe. The very existence of the universe bears witness to the Creator.

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<sup>&</sup>lt;sup>1</sup> Peter Kreeft and Ronald K. Tacelli, "Twenty Argument for the Existence of God," in *Handbook of Christian Apologetics* (Downers Grove, IL: InterVarsity Press, 1994). See also Alvin Plantinga, "Two Dozen (Or So) Theistic Arguments," http://www.calvin.edu/academic/philosophy/virtual\_library/articles/plantinga\_alvin/two\_dozen\_or\_so\_theistic\_arguments.pdf (accessed May 18, 2012).

# THE COSMOLOGICAL ARGUMENT

The cosmological argument concerns the cosmos, or universe. And what an amazing this the universe is, filled with galaxies, stars, and planets, including our own. Earth itself is an amazing thing, teeming with complex life. When we consider the universe, we are filled with a sense of awe. The philosopher C. Stephen Evans calls this "cosmic wonder." He writes, "For different people it is engendered in different ways. For some it comes from contemplating the wonders of nature, gazing into a vast, starry sky or pondering a soft, dreamy sunset. For others, it comes at a birth or at the death of a friend or relative. But I am convinced that this experience is genuine and almost universal."

This cosmic wonder may cause us to wonder why we exist, or why anything exists. Those of us given to philosophical reflection might ask, "Why is there something rather than nothing?" The existence of the universe is the subject of the cosmological argument.

Before we look at the cosmological argument, we should consider something very important. We are trying to present evidence for a God who is not bound by space, time, physics, chemistry, or biology. He is spirit, not a man of flesh and bones. We cannot see God, or conduct an empirical test that proves he exists. Therefore, all our evidences of God are somewhat indirect. Tim Keller calls them the "clues of God."<sup>2</sup>

By trying to find the clues of God, we are like detectives. We look for evidence. We cannot recreate the beginning of the universe in a lab. It is a one-time historical event. Some atheists require that we present airtight proofs for God. However, this is unreasonable, and something that they don't ask of themselves. (They cannot provide airtight proof for evolution, and they certainly cannot empirically disprove the existence of God.)

Consider the following discussion of searching for the evidence of God.

When a Russian cosmonaut returned from space and reported that he had not found God, C. S. Lewis responded that this was like Hamlet going into the attic of his castle looking for Shakespeare. If there is a God, he wouldn't be another object in the universe that could be put in a lab and analyzed with empirical methods. He would relate to us the way a playwright relates to the characters in his play. We (characters) might be able to know quite a lot about the playwright, but only to the degree the author chooses to put information about himself in the play. Therefore, in no case could we "prove" God's existence as if he were an object wholly within our universe like oxygen and hydrogen or an island in the Pacific.<sup>3</sup>

<sup>3</sup> Ibid., 126-27.

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<sup>&</sup>lt;sup>1</sup> C. Stephen Evans, Why Believe? Reason and Mystery as Pointers to God (Grand Rapids, MI: Eerdmans, 1996), 34.

<sup>&</sup>lt;sup>2</sup> Timothy Keller, *The Reason for God* (New York: Riverhead Books, 2008). See chapter 8, "The Clues of God."

Similarly, in an essay, C. S. Lewis writes, "I believe in Christianity as I believe the sun has risen, not only because I see it, but because by it I see everything else." We cannot look directly at the sun (well, not for long, and we shouldn't do it if we value our eyesight), but we can learn much about the sun by seeing how it illuminates the world and helps vegetation grow. In much the same way, we can learn about God.

At the risk of overkill, I will add one more quote that makes a similar point. It is one worth stressing, because atheists and agnostics must realize that our knowledge of God cannot be acquired through scientific testing. This is what Winfried Corduan advises:

Don't bother trying to invent some kind of a spiritual magnifying glass to try to see God. God's own nature keeps this from becoming a possibility; after all, if he exists he must be an infinite, invisible spirit, just the kind of being who is impossible to detect directly. But what you can do is to look at the actual world to see if it is put together in such a way that it must have been created by God. In fact, someone who believes in God is very likely to say:

Unless there were a God, there could not be any world.

Someone who expresses this sentiment is not just looking for one specific attribute of the world. It is the very existence of the world that leads a person to realize there must be a God who created it.<sup>5</sup>

This is what the cosmological argument addresses. The universe exists; therefore, God exists.

## THE ARGUMENT

Prominent Christian theologians, philosophers, and apologists have used various forms of the cosmological argument over the years. The Dominican priest, Thomas Aquinas (1225-1724), used it as one of his five proofs for the existence of God in his magisterial *Summa Theologica*. German mathematician and philosopher G. W. F. Leibniz (1646-1716) used a different form of the cosmological argument. Going back further in history, a Muslim theologian, Al-Ghazālī (1058-1111), formulated the *kalām* cosmological argument. His argument: "Every being which begins has a cause for its beginning; now the world is a being which begins; therefore, it possesses a cause for its beginning." We will use a modified version of this argument. While it may seem strange to borrow a theistic argument from a Muslim, we must remember that all truth is God's truth. "Moses was instructed in all the wisdom of the Egyptians" (Acts 7:22), and Daniel was instructed in the literature, language, and wisdom of the

<sup>&</sup>lt;sup>4</sup> C. S. Lewis, "Is Theology Poetry?" in *The Weight of Glory and Other Addresses* (New York: HarperCollins, 2001), 140.

<sup>&</sup>lt;sup>5</sup> Winfried Corduan, "The Cosmological Argument," in *Reasons for Faith*, ed. Norman L. Geisler and Chad V. Meister (Wheaton, IL: Crossway, 2007), 202.

<sup>&</sup>lt;sup>6</sup> Kalām is an Arabic word for "speech."

<sup>&</sup>lt;sup>7</sup> Al-Ghazālī, *Kitab al-Igtisad fi 'l-I'tiqad*; quoted in William Lane Craig, *Reasonable Faith*, 3<sup>rd</sup> ed. (Wheaton, IL: Crossway, 2008), 96.

Chaldeans (Dan. 1:4, 17). We, too, can learn some things from people of other faiths, even if their faith is wrong. Sometimes it is necessary to plunder the Egyptians.

The following is a formal statement of this argument:

- 1. Whatever begins to exist has a cause.
- 2. The universe began to exist.
- 3. Therefore, the universe has a cause.

To which we can add:

4. The cause of the universe is God.<sup>8</sup>

We will examine the first two premises to see if they are true. If they are true, sound logic makes the conclusion inevitable. And the conclusion (the universe has a cause) should lead us toward God.

#### WHATEVER BEGINS TO EXIST HAS A CAUSE

This premise should be self-evident. As Peter Kreeft and Ronald Tacelli wryly state, "Most people—outside of asylums and graduate schools—would consider it not only true, but certainly and obviously true."

It is important to know that this premise says, "Whatever begins to exist has a cause." It does *not* say, "Whatever exists has a cause." Many atheists try to twist this argument into that shape. Bertrand Russell once wrote, "If everything must have a cause, then God must have a cause. If there can be anything without a cause, it may just as well be the world as God, so that there cannot be any validity in that argument." Richard Dawkins likes to say, "Who did God?" or "Who designed the Designer?" (This latter question is supposed to be a refutation of Intelligent Design.) These are classic straw man arguments. They build up a false or weak argument (the straw man), only to knock it down.

The real argument says that everything that *begins* to exist has a cause. This means everything that is not eternal, that is not infinite, has a cause. We can call these things finite or contingent things. What constitutes such a thing or being? Corduan provides a list of conditions regarding a contingent/finite thing:

- 1. It is restricted by time and space.
- 2. It can be changed by something other than itself.
- 3. It has a beginning in time.

<sup>&</sup>lt;sup>8</sup> This is the way Douglas Groothuis frames the argument in *Christian Apologetics* (Downers Grove, IL: IVP Academic, 2011), 214. He is borrowing from the work of Craig in *Reasonable Faith*, 111-56.

<sup>&</sup>lt;sup>9</sup> Peter Kreeft and Ronald K. Tacelli, *Handbook of Christian Apologetics* (Downers Grove, IL: InterVarsity Press, 1994), 58.

<sup>&</sup>lt;sup>10</sup> Bertrand Russell, *Why I Am Not a Christian and Other Essays on Religion and Related Subjects*, ed. Paul Edwards (New York: Simon & Schuster, 1957), 6-7; quoted in Groothuis, *Christian Apologetics*, 209. Similarly, Daniel Dennett asks, "What caused God?" in *Breaking the Spell: Religion as a Natural Phenomenon* (New York: Viking, 2006), 242; quoted in Craig, *Reasonable Faith*, 114.

- 4. It needs things other than itself to continue existing.
- 5. Its attributes, whether essential or accidental, are to some extent influenced by other things. 11

The only thing or being that does not meet these conditions is God. He is not bound by time and space; he cannot be changed by others and he is unchanging; he has no beginning (and no end); he needs nothing from anyone else; and his attributes are not influenced by others (though we can debate how much his actions and plans are influenced by prayer.)

It is also important to remember that in Christian theology, there is a distinction between the Creator and the creation. God, by his very nature, is eternal and uncaused. He simply exists. As he told Moses, "I AM WHO I AM" (Exod. 3:14). In different eastern religions and New Age thought, there is no distinction between God and creation. In atheism, there is only creation. (Of course, they would simply talk about the universe or the cosmos.) But in Christianity, there has always been a clear distinction. This doctrine is not one created to support the cosmological argument; rather, it is as old as the Bible.

Not only does this first premise support the message of Christianity, it is obvious from experience. Everything we see and experience has had a cause. You and I have causes (our parents), and they had causes, and those causes had causes, and so on. As we move backwards in time, through the great chain of causes, we realize that everything must have a cause, and at the end of that regress, there must be one uncaused cause.

Still, as we will see, some atheists try to deny this first premise. According to Quentin Smith, "the most reasonable belief is that we came from nothing, by nothing, and for nothing." <sup>12</sup> To such a comment, William Craig Lane responds, "To suggest that things could just pop into being uncaused out of nothing is to quit doing serious metaphysics and to resort to magic." <sup>13</sup> He observes that this claim is not scientific, but metaphysical, or philosophical. However, if something could truly come from nothing, how could this be? The question Craig asks is, "if prior to the existence of the universe, there was absolutely nothing—no God, no space, no time—how could the universe possibly have come to exist?"<sup>14</sup> Clearly, for something to come from nothing would be against all known laws of physics, in addition to being contrary to common sense.

Though some atheists may disagree with this first premise, it would seem the burden of proof rests on their shoulders. As Douglas Groothuis points out, "All we need for a legitimate and successful argument form is that the premise be more likely than its denial." <sup>15</sup> Certainly, "Whatever begins to exist has a cause" is more likely than, "Whatever begins to exist does not have a cause."

Corduan, "The Cosmological Argument," 204.
Quentin Smith, *Theism, Atheism, and Big Bang Cosmology* (Oxford: Clarendon, 1993), 135; quoted in Craig, Reasonable Faith, 112.

<sup>&</sup>lt;sup>13</sup> Craig, Reasonable Faith, 111.

<sup>&</sup>lt;sup>14</sup> Ibid., 113.

<sup>&</sup>lt;sup>15</sup> Groothuis, *Christian Apologetics*, 217.

#### THE UNIVERSE BEGAN TO EXIST

We will have to spend more time defending this second premise. Of course, Christianity has always claimed that the universe had a beginning, because the Bible tells us so. However, various ideas concerning the universe have existed over the years. Certain Greek philosophers, such as the Stoics, believed that the world went through cycles of destruction and regeneration. So, even before the rise of science, some people thought the universe was eternal.

### Scientific evidence

At the beginning of the twentieth century, most scientists thought that the universe was eternal, with no beginning and no end. According to such a thought, the universe was in a fixed state. Scientifically, this created some problems, as people wondered how the force of gravity did not compel the universe to contract and collapse upon itself. However, no alternative hypotheses presented themselves.

However, at the beginning of the twentieth century, scientific evidence began to reveal that the universe did have, in fact, a beginning. In 1913, Vesto Melvin Slipher, an American astronomer, discovered that several galaxies within the range of his telescope appeared to be traveling away from the earth at incredible speeds—sometimes up to two million miles an hour. Slipher presented his findings at a meeting of the American Astronomical Society in 1914. In the audience was Edwin Hubble, who would later be an instrumental figure in observing the expansion of the universe.

A few years later, on the other side of the Atlantic, Albert Einstein published his theory of general relativity in 1917. This theory chiefly concerns gravity. Einstein was trying to provide a mathematical model for a static universe, one that was not expanding. Privately, a Dutch astronomer named William de Sitter realized that these equations predicting an expanding universe, one in which galaxies were moving farther away from one another. However, it was World War I and communications were interrupted.

It turns out that Einstein had made a mathematical error in his equation—at one point he divided by zero, something you cannot do. This error was observed by Alexander Friedmann, a Russian mathematician. (George Lemaitre, a Belgian astronomer, made the same observation later.) By 1923, Einstein admitted his mistake. He would later call it the greatest mistake of his life. Apparently, he made this mistake because he didn't want there to be a universe with a beginning. "He was disturbed by the idea of a Universe that blows up, because it implied that the world had a beginning." Surely, this was because such a universe implied a Creator.

By 1925, Slipher had recorded the velocities of 42 galaxies that were moving away from the earth. "These accomplishments placed Slipher in the ranks of the small group of men who have, by accident or design, uncovered some element of the Great Plan." <sup>19</sup>

<sup>&</sup>lt;sup>16</sup> The information relies heavily on Robert Jastrow's *God and the Astronomers*, 2<sup>nd</sup> ed. (New York: Norton & Company, 1992).

<sup>&</sup>lt;sup>17</sup> Francis S. Collins, *The Language of God* (New York: Free Press, 2006), 63.

<sup>&</sup>lt;sup>18</sup> Jastrow, God and the Astronomers, 20.

<sup>&</sup>lt;sup>19</sup> Ibid., 21. I should point out that Jastrow calls himself an agnostic.

At this time, Hubble was working at the Mount Wilson Observatory in Los Angeles, the home of a 100-inch telescope, the most powerful instrument of its kind at that time. (Slipher only had a 24-inch telescope at his disposal.) Hubble and his assistant, Milton Humason, were able to see galaxies that were up to 100 million light years away. (A light year is the distance light can travel in one year, moving at the speed of 186,000 miles per second. This calculates to roughly six trillion miles.) This powerful telescope showed that these galaxies were very large, though they appear small because they are at a great distance from earth. He started to judge their distance by the brightness of the stars: a brighter star meant the galaxy was closer; the more dim the star, the farther away the galaxy was.

After calculating the distance of the galaxies, he was able to figure out how fast they moved. He discovered something amazing, known as Hubble's law: the farther a galaxy is, the faster it moves. This revealed that all of space was expanding, not just the stars. This is hard for us to imagine, but this same law is at work in expanding balloons. Imagine taking a balloon and putting stickers on it, each sticker one inch apart from the other. Now you blow up the balloon. Even though all the stickers begin one inch apart, as the balloon expands, the stickers that are farther away actually move faster. That way, they retain their relative position on the expanding balloon.

Robert Jastrow explains this same phenomenon using the example of a lecture hall. Imagine the seats are spaced apart evenly by a distance of three feet. Now imagine the lecture hall rapidly doubles its size. If you are in the middle of the hall, some neighbors are now six feet. "However, a person on the other side of the hall, who was originally at a distance from you of, say, 300 feet, is now 600 feet away. In the interval of time in which your close neighbors moved three feet farther away, the person on the other side of the hall increased his distance from you by 300 feet. Clearly, he is receding at a faster speed."<sup>20</sup>

The way that Slipher, Hubble, and Humason were able to measure the speeds of the galaxies is quite fascinating. They noticed that as a galaxy moved away from the earth, its color became redder. This is called the red shift. Jastrow explains:

The effect occurs because light is a train of waves in space. When the source of the light moves away from the observer, the waves are stretched or lengthened by the receding motion. The length of a light wave is perceived by the eye as its color; short waves create the sensation that we call "blue," while long waves create the sensation of "red." Thus, the increase in the length of the light waves coming from a receding object is perceived as a reddening effect.<sup>21</sup>

This red shift was measured by attaching a prism-like device to the telescope. This would show the light from the moving galaxy in a band of colors, a spectrum. This spectrum was recorded on a photographic plate, which was then compared to a nonmoving source of light. Essentially, the inherent brightness of the star was measured against the apparent distance of the star. The

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<sup>&</sup>lt;sup>20</sup> Ibid., 53-54.

<sup>&</sup>lt;sup>21</sup> Ibid., 55.

distance between the two revealed the distance of the star. (A more precise way of measuring the distance was provided by Enjar Hertzsprung, who used a method of triangulation to compare stars in our galaxy with more distant stars.<sup>22</sup>)

All of this revealed an important fact: the universe is rapidly expanding. It is not static. Judging from the current rate of expansion and extrapolating this data backwards would suggest that at one point the universe was very small and very dense. It would also suggest that the universe expanded from a single point roughly 15 billion years ago.

Of course, we don't have astronomical records that date back that far. But astronomers do have something very old to look at: the light generated by stars. Consider this: the light emitted from the sun takes a little over eight minutes to reach the earth. (The sun is about 93 million miles away from the earth and light travels at 186,000 miles per second, which means it takes eight minutes and 19 seconds for the light of the sun to reach us.) If we dare to look briefly at the sun, we are not seeing the sun as it currently is. We are seeing the sun as it was a little over eight minutes ago. When we look at more distant stars, we see them not as they are now, but as they were thousands or even millions of years ago. "The farther out we look in space, the farther back we see in time."<sup>23</sup>

Hubble was able to plot the distance and speeds of many galaxies on a graph. Once again, the farther away the galaxy, the faster it moved. The galaxies and speeds charted on the graph were plotted along a straight line. Follow that line back a theoretical 20 billion years and you get to the Big Bang. In addition to this measurement, Allan Sandage and Gustav Tammann, who built on Hubble's work, have also measured the age of the universe by testing the age of globular clusters in our galaxy. "Globular clusters are large clusters of stars that were formed when the Universe was about one billion years old, shortly after the Galaxy itself had condensed out of the primordial gases. The age of these clusters is approximately 14 billion years old."24 That means the universe is 15 billion years old. The difference between these two figures shows that the expansion of the universe has slowed down a bit over time.

The evidence of an expanding evidence lead to an inevitable conclusion: the universe had a beginning. But many scientists did not like that conclusion, for nonscientific and philosophical reasons. That is, they didn't want there to be a beginning of space (and time, which functions as a fourth dimension), because that would suggest evidence for God. Three British astronomers, Thomas Gold, Hermann Bondi, and Fred Hoyle, developed the steady state theory in 1948. They conceded that the universe is expanding, but they argued that the universe is still eternal. They claimed that new material could be created continuously out of nothing in the empty spaces of the universe. It is a far-fetched theory based on philosophy, not science. As Edgar Andrews writes, "For entirely philosophical reasons, they were allergic to the idea of a 'big bang' origin."25

<sup>&</sup>lt;sup>22</sup> Edgar Andrews, Who Made God? (Carlisle, PA: EP Books, 2009), 102.

<sup>&</sup>lt;sup>23</sup> Jastrow. *God and the Astronomers*. 61.

<sup>&</sup>lt;sup>25</sup> Andrews, Who Made God?, 99.

Other evidence that pointed to a Big Bang also shot down the steady state theory. (It should be noted that Hoyle coined that term, "Big Bang," around 1950. In his view, it was a derogatory term.) At the end of World War II, physicists Ralph Alpher and Robert Herman, working with George Gamow, predicted that a cosmic explosion would "have been filled with an intense radiation in the first moments following the explosion." This radiation would be similar to that of a hydrogen bomb. If the universe "banged" into existence, this radiation should be found on the edge of space, in a cooled and harmless form. In other words, there should be evidence of this hot, dense explosion.

In 1965, a couple of physicists, Arno Penzias and Robert Wilson, working at the Bell Telephone Labs, found this cosmic background radiation. They were working on a satellite designed to detect microwave radiation and they found that such radiation was coming to earth from all directions of space. They found the very thing predicted should there have been a Big Bang.

There are further lines of evidence that support a Big Bang. These include the elements found in the universe. A Big Bang theory predicts that 30 minutes after the explosion, 25 percent of the matter in the universe would have been helium. (The initial explosion featured only hydrogen, the lightest and simplest element. When hydrogen molecules combine, they can form heavier elements.) By measuring the helium found in the oldest stars, scientists find that they consist of approximately 25 percent helium. The Big Bang model also shows how the hydrogen could lead to all of the other elements in the universe. (Burning hydrogen produces other elements like carbon, oxygen, and aluminum. Supernovae—exploding stars—spray material into space that combines with fresh hydrogen to form the other elements.)

In 1992, the Cosmic Background explorer, a satellite, discovered more ripples of cosmic radiation. George Smoot, leader of this project, said, "What we found is evidence for the birth of the universe. . . . It's like looking at God." This discovery confirmed what Penzias and Wilson discovered in 1965. It also confirmed evidence reported in 1990 that showed that the temperature of this background radiation was very cold, about three degrees above absolute zero (or 3° Kelvin or -270° Celsius). This temperature was also very uniform throughout the universe. This shows that the entropy of the universe is very large. Entropy is the measure of disorder in a system. It describes the amount of heat that has dissipated. A low entropy system is a very hot, very ordered system (the hot and dense matter that exploded in the Big Bang). A high entropy system is increasingly disordered and increasingly cooler. Only a cosmic explosion could account for the massive amount of entropy found in our universe.

The entropy found in our universe also supports the idea that the universe is not eternal. The dissipation of heat throughout the universe from the time of the cosmic explosion until now shows that the universe is not eternal. If the universe were eternal, all the energy of the universe

<sup>&</sup>lt;sup>26</sup> Jastrow, God and the Astronomers, 69.

<sup>&</sup>lt;sup>27</sup> Associated Press, "U.S. Scientists Find a 'Holy Grail': Ripples at Edge of the Universe," *London International Herald Tribune*, April 24, 1992, page 1; quoted in Hugh Ross, *Creation and Time* (Colorado Springs, CO: NavPress, 1994), 129.

would have dissipated and the universe would reach "heat death" by now. This is the way Douglas Groothuis summarizes this argument:

- 1. If the universe were eternal and its amount of energy finite, it would have reached heat death by now.
- 2. The universe has not reached heat death (since there is still energy available for use).
- 3. Therefore, (a) the universe is not eternal.
- 4. Therefore, (b) the universe had a beginning.
- 5. Therefore, (c) the universe was created by a first cause (God). <sup>28</sup>

Let's summarize the evidence:

- 1. Astronomers such as Silpher and Hubble discovered that the universe is expanding.
- 2. The equations of Einsteins's theory of general relativity, when solved properly, suggest that the universe had a beginning ("t=0, a first moment of time, when everything was compressed into a point with no dimensions"<sup>29</sup>).
- 3. The cosmic background radiation found in the later twentieth century confirms the Big Bang hypothesis.
- 4. Entropy supports the idea of a finite universe.

All this evidence certainly points to God. Hugh Ross explains:

The big bang together with the equations of general relativity tell us there must be a simultaneous beginning for all the matter, energy, and even the space-time dimensions of the universe. This beginning occurred only a few billion years ago and places the cause of the universe outside, that is, independent of, matter, energy, space, and time. Theologically this means that the Cause of the universe is independent of and transcendent to the universe. The Christian faith is the only religion among the belief systems of humankind that teaches such a doctrine about the Creator.<sup>30</sup>

When Penzias won the Nobel Prize in 1978 (along with Wilson), he said, "The best data we have concerning the big bang are exactly what I would have predicted, had I nothing to go on but the five books of Moses, the Psalms, the Bible as a whole."<sup>31</sup>

Groothuis, *Christian Apologetics*, 226.
C. John Collins, *Science and Faith: Friends or Foes?* (Wheaton, IL: Crossway, 2003), 233.

<sup>&</sup>lt;sup>30</sup> Ross, Creation and Time, 129.

<sup>&</sup>lt;sup>31</sup> This was reported in *The New York Times*, March 12, 1978; quoted in Andrews, *Who Made God?*, 94.

Stephen Hawking, a British physicist who essentially holds atheistic views, realized what the Big Bang meant. "So long as the universe had a beginning, we could suppose it had a creator. But if the universe is really completely self-contained, having no boundary or edge, it would have neither beginning nor end; it would simply be. What place then for a creator?"<sup>32</sup>

Hawking, realizing what a universe with a beginning entailed (the presence of a creator) came up with a different idea of how the universe (one without beginning or boundaries). It is too complicated to recount here, but the key element was an evasion of a singularity, a moment of creation or beginning of the universe. But the only way to make this work was to insert imaginary numbers into Einstein's equation to yield a universe that has no boundaries. An imaginary number is the square root of a negative number. However, this number cannot exist in reality. (The square root of 4 is 2 or -2. But you cannot have a square root of -4, not with real numbers, anyway.)

Atheistic scientists have tried to dodge the beginning of the universe in other ways.<sup>33</sup> The oscillating model suggests that the universe has been in an infinite Big Bang-Big Crunch cycle. In other words, the universe continually expands and contracts. This would require the universe to stop expanding at a certain point and then start contracting upon itself, reversing the Big Bang until the universe was once again incredibly dense. But there is no evidence that the universe will stop expanding.

There are many different theories that suggest that there are other universes out there and that ours is one of many (the multiverse theory) or that our universe is the product of an infinite regress of universes. For example, the "baby universe" theory can be explained this way: "It has been conjectured that black holes may be portals of wormholes through which bubbles of false vacuum energy can tunnel to spawn expanding baby universes, whose umbilical cords to our universe may eventually snap as the wormholes close up, leaving the baby universe an independently existing spacetime."<sup>34</sup> That is science fiction, not science, and no data support such a view.

If there were such a thing as a multiverse, a collection of potentially infinite universes, we would have no way of knowing they exist. And even if they did, we would still have to account for their origins. As Andrews observes, "There is not the slightest scientific evidence—or any other kind of evidence if you rule out UFOs—to support the multiverse concept. It can never be more than an inference from scientific data. It might or might not be true, but that is something we shall never know."<sup>35</sup>

Because other hypotheses are not rooted in science or reality, we can safely assume the Big Bang hypothesis is the most accurate scientific account for the beginning of the universe. However, it doesn't really tell us how or why the universe was started. We need God to tell us that. Let us consider the words of Jastrow, an agnostic:

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<sup>&</sup>lt;sup>32</sup> Stephen J. Hawking, A Brief History of Time (New York: Bantam, 1988), 140-41.

<sup>&</sup>lt;sup>33</sup> Craig reviews many of these in *Reasonable Faith*, 128-50.

<sup>&</sup>lt;sup>34</sup> Ibid., 145.

<sup>&</sup>lt;sup>35</sup> Andrews, Who Made God?, 209.

A sound explanation may exist for the explosive birth of our Universe; but if it does, science cannot find out what the explanation is. The scientist's pursuit of the past ends in the moment of creation.

This is an exceedingly strange development, unexpected by all but the theologians. They have always accepted the word of the Bible: In the beginning God created heaven and earth. To which St. Augustine added, "Who can understand this mystery or explain it to others?" The development is unexpected because science has had such extraordinary success in tracing the chain of cause and effect backward in time. We have been able to connect the appearance of man on this planet to the crossing of the threshold of life on the earth, the manufacture of the chemical ingredients of life within stars that have long since expired, the formation of those stars out of the primal mists, and the expansion and cooling of the parent cloud of gases out of the cosmic fireball.

Now we would like to pursue that inquiry farther back in time, but the barrier to further progress seems insurmountable. It is not a matter of another year, another decade of work, another measurement, or another theory; at this moment it seems as though science will never be able to raise the curtain on the mystery of creation. For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries.<sup>36</sup>

# A philosophical argument

In addition to the scientific evidence that supports a beginning to the universe, there is one philosophical argument that comports with the beginning of the universe. This argument is hard to grasp, but it essentially questions the possibility of an infinite universe. If there were no beginning to the universe, then the universe would be an actual infinite number of years (or months or days, etc.) old. However, an actual infinite does not actually exist in reality. (We can say the same thing about the number of causes and effects in the universe. There must be an actual number, not an actual inifinity.

We must differentiate a potential infinite from an actual infinite. A potential infinite is a series of numbers that has a beginning and keeps increasing but never reaches an upper limit. You can simply keep adding one to this number. This verse from "Amazing Grace" proves that point:

When we've been there ten thousand years, Bright shining as the sun, We've no less days to sing God's praise, Than when we've first begun.<sup>37</sup>

<sup>&</sup>lt;sup>36</sup> Jastrow, God and the Astronomers, 106-107.

<sup>&</sup>lt;sup>37</sup> John Newton, "Amazing Grace" (1772). Groothuis uses this example in *Christian Apologetics*, 217.

Why will we have no less days? Because we can simply add one more to our number as our potentially infinite number of days increases.

An actual infinite, however, consists of an actual number. It belongs to theoretical mathematics and set theory, not to real life. Imagine you had this actual infinite number. Then you divided it in half. What would you have? Would you still have an infinite number, or half of infinity? Of course, you cannot divide infinity by half. If time were actually infinite (with no beginning and no end), we would never arrive at "now." Perhaps it is easier to think of this in distance. As Groothuis writes, "We can neither count from one to infinity nor count down from infinity to one. There is always an infinite distance to travel, so we never arrive."<sup>38</sup>

Similarly, we could never have an infinite series of causes, because there needs to be a first cause that set the series in motion. There cannot be a chain of cause and effects (imagine them in a circle, so each cause has a previous cause and a subsequent effect, with no discernible beginning or end). The reason for this is because some cause would ultimately have to cause itself, or the chain would never exist in the first place.

Therefore, the universe cannot actually be infinite or eternal. Only God can be eternal, without beginning or ending, because he is beyond time and space. It is important to note that existence can be potentially infinite, because it has a beginning. Christians had a time when they came into existence, but they will never cease to exist.

Can God be eternal, then? Of course. When God created the universe, he created time in a physical sense. It would seem that at that time he created the laws of physics and mathematics and all other natural laws. Before that moment, God existed (he always has), but not in a way that is differentiated into moments, hours, days, or years. We must remember that God is not bound by his creation, including time.

## THEREFORE, THE UNIVERSE HAS A CAUSE

It seems that the two premises of the argument are true. Everything that begins to exist must have a cause, and the universe began to exist at one point. Therefore, the universe must have had a cause. But does this mean that cause is necessarily God?

#### THE CAUSE OF THE UNIVERSE IS GOD

Let us consider the nature of this cause. This entity must transcend space and time. The cause must be beginningless and uncaused. Ockham's Razor dictates the simplest answer, which means we should not have two or more uncaused causes (such as multiple gods). This entity must be extremely powerful, able to create something out of nothing. There would be no way of detecting this first cause through science, because it stands outside of space and time, and therefore must be immaterial. We will learn from the design argument that the universe is full of information, seemingly the product of intelligence, which must come from a mind, which means

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<sup>&</sup>lt;sup>38</sup> Groothuis, *Christian Apologetics*, 219.

this entity must be personal. If the cause is not personal, then it is impersonal, and it seems incredible to think that an impersonal force could create persons.

Of course, these attributes belong to the true, living God we read about in the Bible. Judaism and Islam could also use this argument, as could deists. We have already seen problems in the deist's worldview, and we will address other religions such as Judaism and Islam at a later time. For now, we must content ourselves with the knowledge that the cosmological argument shows that there must be a God. Other arguments, particularly from Scripture, reveal the character and nature of the true God.

#### POSSIBLE OBJECTION FROM CHRISTIANS

At this point, I want to address a very real issue. Some Christians might feel uncomfortable using this argument, because it relies on scientific evidence that shows that the universe is billions of years old. Some people think that such a position is not compatible with the Bible. I understand this concern and appreciate it. I will address the contents of Genesis 1 and 2 later, but for now, I will say that I don't think the Big Bang theory contradicts what the Bible actually says. Many evangelical Christians would agree with me. However, to understand how science and the Bible interact will require an in-depth study of what the Bible says about the age of God's creation.

It should be enough to say right now that the Big Bang does not necessarily support evolution. It does not support a universe that has come into existence through material or natural causes. After all, the Big Bang theory suggests that at the beginning of the universe, some infinitely dense ball of hydrogen came, well, out of nowhere. Only God could account for that.

We will continue to discuss how science and faith interact. Please try to keep an open mind, knowing that I have no interest in Scripture twisting.

Scientific truth will never contradict the truth of the Bible, because both the Bible and the universe declare the glory of God to us. Remember that Psalm 19:1 states, "The heavens declare the glory of God." Day and night "speak" of God (Ps. 19:2-6). Romans 1:18-20 also says that nature reveals some of God's attributes. The revelation found in nature is assumed to be true, because the ungodly and unrighteous men suppress the truth and exchange it for a lie (Rom. 1:18, 25). So if scientists, using actual data, acquired and honestly and interpreted rightly, will never come up with information that contradicts that which is in the Bible.