

# THE DESIGN ARGUMENT

The next argument we shall use to reveal the existence of God (or to point to the clues of God) is the design argument. This is also known as the teleological argument. (*Telos* is Greek for “end” or “purpose.” The teleological argument concerns the purpose for which God made everything.)

The universe and its contents fill us with wonder; they bear witness to God. As the English poet Gerald Manley Hopkins (1844-1889) writes in his poem, *God’s Grandeur*, “The world is charged with the grandeur of God.” The universe appears to be designed by our Creator. When astronomers look into space and see distant galaxies, they see beautiful pictures that reveal patterns. When we look at nature, including animals, we see a level of complexity that is amazing. The way the simplest cell functions reveals the presence of machine-like systems made out of molecules. All of this suggests that the universe and its contents were designed for a purpose.

Even atheists acknowledge the appearance of design in the universe. Richard Dawkins, chief atheist and neo-Darwinist, claims, “One of the greatest challenges to the human intellect has been to explain how the complex, improbable appearance of design in the universe arises.” He then explains this challenge away by claiming that the design hypothesis leads to the greater issue of “who designed the designer.” Therefore, in his opinion (which he asserts as fact and necessary conclusion), Darwinian evolution by natural selection is clearly the answer.<sup>1</sup>

Dawkins’s answer to the question of why the universe is filled with the appearance of design is contrary not only to Christianity, but also to common sense. Can we assume that time plus chance plus mutations equals design? I don’t think so. Macroevolution (the change from one species into another) by natural selection is extremely improbable. In addition, it cannot account for the complex forces such as gravity that must be “tuned” to a very certain number to allow for human life to exist in the first place. The simplest answer to the appearance of design is that a Designer planned and made the universe. Not only is this the simplest answer, but it also accounts for all the evidence we have.

## THE ARGUMENT

The design argument can be formulated in many ways. The simplest form of the argument is:

1. Every design had a designer.
2. The universe has highly complex design.
3. Therefore, the universe had a Designer.<sup>2</sup>

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<sup>1</sup> Richard Dawkins, *The God Delusion* (New York: Houghton Mifflin, 2006), 157-58.

<sup>2</sup> Norman L. Geisler and Frank Turek, *I Don’t Have Enough Faith to Be an Atheist* (Wheaton, IL: Crossway, 2004), 95.

To which I would add:

4. And that Designer is God.

Of course, the atheist would challenge this argument by stating that the universe has merely an *appearance* of design. There are two ways to counter that objection, both leading to the same conclusion. One is to show that the appearance of design must be accounted for by chance, design, or some combination thereof. From there, we can show that only design (perhaps with some admixture of chance) can account for the appearance of design. Another would be to define design more stringently. If there is a way to define scientifically what design is (as opposed to just trusting our gut when we see something in nature and say, “Hey, that looks designed!”), then we can show that the universe is indeed designed. That is what the Intelligent Design movement seeks to do.

Let’s take this simple form of the argument and flesh it out a bit.

### **EVERY DESIGN HAD A DESIGNER**

This statement is so obvious that it hardly needs explanation. It is what philosophers call a tautology, because it is necessarily true. It is like saying, “Every child had a mother,” or, “Every invention had an inventor.” If the apparent design is actually a design, then at some point it had a designer.

### **THE UNIVERSE HAS HIGHLY COMPLEX DESIGN**

This second premise of the argument is the one that must bear the most weight. We must show that the universe actually has complex design, not an appearance of complex design. We can do this in various ways. However, in argumentation, we need only to show that this statement is more plausible than its denial, “The universe does not have highly complex design.”

The design argument has a long history, from Greek philosophers such as Plato and Aristotle to Christians such as Thomas Aquinas. Perhaps the most famous design argument comes from William Paley (1743-1805).

#### **Paley and his watchmaker**

William Paley was a Cambridge-educated philosopher and Anglican priest. In *Natural Theology* (1802), he presented a famous case for design. Overall, his attempt to prove design in nature encompassed many examples from science. “Paley combed the sciences of his day for evidences of design in nature and produced a staggering catalogue of such evidences, based, for example, on the order evident in bones, muscles, blood vessels, comparative anatomy, and particular organs throughout the animal and plant kingdoms.”<sup>3</sup> Paley begins his book with a famous philosophical argument. It is worth quoting the passage at length.

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<sup>3</sup> William Lane Craig, *Reasonable Faith*, 3<sup>rd</sup> ed. (Wheaton, IL: Crossway, 2008), 101.

In crossing a heath, suppose I pitched my foot against a stone, and were asked how the stone came to be there, I might possibly answer, that for any thing I knew to the contrary it had lain there for ever; nor would it, perhaps, be very easy to show the absurdity of this answer. But suppose I had found a *watch* upon the ground, and it should be inquired how the watch happened to be in that place, I should hardly think of the answer which I had before given, that for any thing I knew the watch might have always been there. Yet why should not this answer serve for the watch as well as for the stone; why is it not as admissible in the second case as in the first? For this reason, and for no other, namely, that when we come to inspect the watch, we perceive—what we could not discover in the stone—that its several parts are framed and put together for a purpose, e.g. that they are so formed and adjusted as to produce motion, and that motion so regulated as to point out the hour of the day; that if the different parts had been differently shaped from what they are, or placed after any other manner or in any other order than that in which they are placed, either no motion at all would have been carried on in the machine, or none which would have answered the use that is now served by it. To reckon up a few of the plainest of these parts and of their offices, all tending to one result: We see a cylindrical box containing a coiled elastic spring, which, by its endeavor to relax itself, turns round the box. We next observe a flexible chain—artificially wrought for the sake of flexure—communicating the action of the spring from the box to the fusee. We then find a series of wheels, the teeth of which catch in and apply to each other, conducting the motion from the fusee to the balance and from the balance to the pointer, and at the same time, by the size and shape of those wheels, so regulating that motion as to terminate in causing an index, by an equable and measured progression, to pass over a given space in a given time. We take notice that the wheels are made of brass, in order to keep them from rust; the springs of steel, no other metal being so elastic; that over the face of the watch there is placed a glass, a material employed in no other part of the work, but in the room of which, if there had been any other than a transparent substance, the hour could not be seen without opening the case. This mechanism being observed—it requires indeed an examination of the instrument, and perhaps some previous knowledge of the subject, to perceive and understand it; but being once, as we have said, observed and understood, the inference we think is inevitable, that the watch must have had a maker—that there must have existed, at some time and at some place or other, an artificer or artificers who formed it for the purpose which we find it actually to answer, who comprehended its construction and designed its use.<sup>4</sup>

Should we stumble upon a watch and inspect its craftsmanship, we would be forced to acknowledge it had a maker. This seems clear enough.

Even if we had never seen a watch before, Paley continues to argue, we would still recognize design. It would be like tripping across an ancient artifact whose purpose we no longer know. We would still recognize the work of a “human agent.”

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<sup>4</sup> William Paley, *Natural Theology* (1802; repr. New York: American Tract Society, 1881), 9-10. This work can be read online at <http://archive.org/details/naturaltheology00pale> (accessed May 26, 2012).

Also, if the watch sometimes didn't function correctly, we would still recognize that it was designed. "It is not necessary that a machine be perfect, in order to show with what design it was made."<sup>5</sup>

Moreover, even if we don't know exactly how the watch functions and even if there are some parts we have yet to discover, that still does not make us uncertain as to the fact that the watch was made by a watchmaker.

Paley also rules out natural causes that could have formed the watch, as well as the possibility of the watch parts being formed together by some natural laws. He seems to anticipate much of Darwin's arguments, which would come over fifty years later.

Paley reasons that the "works of nature" are far more complex than the mechanics of a watch. As an example, he discusses the complexities of the human eye, to which he compares animal eyes. He concludes that a creative intelligence—namely, God—is responsible for the complexity of nature.

Paley's argument was a powerful one then, and it remains powerful over two hundred years later. Naturally, Paley's argument has been the subject of much scorn from Darwinian evolutionists. As discussed above, Dawkins doesn't even properly refute the argument; he simply asserts that Darwinian evolution by natural selection must be true.

This argument is powerful because we don't necessarily need scientific knowledge in order to recognize nature. We can even distinguish things that have apparent design from things that are actually designed. For example, in New Hampshire there used to be a rock formation on a mountain that looked like the profile of a man's face. It was a famous symbol for New Hampshire—the image appears on the state quarter. It was called the Old Man of the Mountain. I say "used to be" because in 2003, the rock face gave way. The Old Man is no more.

I remember seeing the Old Man when I was younger. (I grew up in Massachusetts and we would travel to New Hampshire multiple times each year.) From a certain distance and angle, the rock formation definitely looked like the silhouette of a man's head. But when you see pictures of it, you can tell that a number of jagged rocks comprise the Old Man's face. You can tell that it was not the work of a sculptor.

Contrast the Old Man of the Mountain with Mount Rushmore. Imagine some post-apocalyptic scenario in which nuclear war has wiped out most of the population of the earth. There is no more America or any other country. Only a few survivors are left. Say some people from another country happen to wander into western South Dakota. They know nothing of Mount Rushmore and they don't recognize the faces of Presidents Washington, Jefferson, Roosevelt, and Lincoln. When they see this mountain, are they to think that these faces are the result of nature? No, they would recognize that these faces were chiseled out of the mountain by human intelligence.

I first became aware of Paley's argument when I read *The Language of God* by Francis Collins. Collins was the head of the Human Genome Project, which mapped the human genome

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<sup>5</sup> Ibid., 11.

(the entirety of hereditary information, encoded on DNA). He is now the Director of the National Institutes of Health. He also happens to be a Christian.

In his book, Collins states that Paley's argument was flawed. He summarizes Paley's argument this way:

1. A watch is complex.
2. A watch has an intelligent designer.
3. Life is complex.
4. Therefore, life also has an intelligent designer.<sup>6</sup>

That is a fair summary, though I suppose it would be better to write *Intelligent Designer* in the conclusion. By using a supposedly parallel argument, Collins tries to show the flaw in Paley's argument.

1. Electric current in my house consists of a flow of electrons.
2. Electric current comes from the power company.
3. Lightning consists of a flow of electrons.
4. Therefore, lightning comes from the power company.<sup>7</sup>

I hope you see a problem here. The problem is that it's not really a parallel argument. First of all, it doesn't deal with intelligent design. But granted the differences in subject matter (from design to provision), it still has a problem. The only way to make the arguments parallel is to change Paley's comment to claim that an actual watchmaker made the universe, or to alter the second argument's second premise and conclusion (statements 2 and 4) to focus on the fact that both electric currents in the home and in nature come from an intelligent source.

The point is that Collins has created a straw man argument, not a parallel one. He did this because he believes in theistic evolution, a concept he simply renames BioLogos. (Apparently, he wanted it to sound like a novel concept that touches on theology.) I suppose Collins sincerely believes that God created all species through the process of macroevolution. He bases his belief on the similarity in DNA between animals and humans. I suspect, however, that one of the reasons Collins doesn't want to support Intelligent Design is that it is not acceptable to the scientific world at large. Many powerful scientists in labs and universities reject Intelligent Design simply because it opens the door to the possibility that God exists. Scientists in favor of Intelligent Design may lose their jobs or not be granted promotions. I suppose that if Collins supported Intelligent Design when he wrote this book in 2006, he never would have been named Director of the NIH in 2009.

If neither the atheistic evolutionist Dawkins nor the theistic evolutionist Collins can prove Paley wrong, I suppose his argument actually quite a bit of strength. Stephen Barr, a Catholic

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<sup>6</sup> Francis S. Collins, *The Language of God* (New York: Free Press, 2006), 87.

<sup>7</sup> *Ibid.*, 87-88.

and the director of the department of physics and astronomy at the University of Delaware, finds Darwin's theory of evolution to be far more incredible than Paley's watchmaker argument. (Darwin believed that highly complex living creatures evolved over time, through chance mutations and natural selection. He actually knew nothing of the great complexity of cells and their DNA.) Barr finds neo-Darwinian arguments by the likes of Richard Dawkins no more credible. This is what Barr writes:

What Dawkins does not seem to appreciate is that his blind watchmaker is something even more remarkable than Paley's watches. Paley finds a "watch" and asks how such a thing could have come to be there by chance. Dawkins finds an immense automated factory that blindly constructs watches, and feels that he has completely answered Paley's point. But that is absurd. How can a factory that makes watches be less in need of explanation than the watches themselves?<sup>8</sup>

Barr's conclusion: "Paley was right all along."<sup>9</sup>

### **Intelligent Design**

If there is a flaw in Paley's argument, it is that he did not define design carefully enough. He didn't provide away to prove empirically design. The movement known as Intelligent Design (ID hereafter) attempts to correct this oversight.

ID started two to three decades ago when a number of scientists, philosophers and one prominent lawyer questioned the theory of evolution. Charles Thaxton, Walter Bradley, and Roger Olsen, three scientists, wrote *The Mystery of Life's Origin* (1984), which concluded that a Creator is the best explanation for life as we know it.<sup>10</sup> An Australian molecular biologist, Michael Denton (who is not a Christian), challenged the evidential basis of Darwinism and neo-Darwinism in *Evolution: A Theory in Crisis*, published in 1986.<sup>11</sup> One of the major players in ID is a lawyer named Phillip Johnson, famous for *Darwin on Trial*, originally published in 1991.<sup>12</sup> After starting a successful career as a law professor at the University of California at Berkeley, Johnson converted to Christianity in his late thirties. He has written several books that question the naturalistic philosophy that lies behind Darwinism. Other significant ID figures include Michael Behe, a biochemist and author of *Darwin's Black Box*<sup>13</sup> and William Dembski, who has earned PhDs in mathematics and philosophy and has authored books such as *Intelligent Design* and *The Design Revolution*.<sup>14</sup> These ID leaders, along with many others, are intelligent and well-

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<sup>8</sup> Stephen Barr, *Modern Physics and Ancient Faith* (Notre Dame: University of Notre Dame Press, 2003), 79; quoted in Dinesh D'Souza, *What's So Great About Christianity?* (Carol Stream, IL: Tyndale House, 2007), 156. Barr is referring to Richard Dawkins, *The Blind Watchmaker* (New York: Norton, 1986).

<sup>9</sup> *Ibid.*, 157.

<sup>10</sup> Charles Thaxton, Walter Bradley, and Roger Olsen, *The Mystery of Life's Origins: Reassessing Current Theories* (New York: Philosophical Library, 1984.)

<sup>11</sup> Michael Denton, *Evolution: A Theory in Crisis* (Bethesda, MD: Adler & Adler, 1986).

<sup>12</sup> Phillip Johnson, *Darwin on Trial* (Downers Grove, IL: InterVarsity Press, 1991).

<sup>13</sup> Michael J. Behe, *Darwin's Black Box* (New York: Free Press, 1996).

<sup>14</sup> William A. Dembski, *Intelligent Design* (Downers Grove, IL: InterVarsity Press, 1999); *idem.*, *The Design Revolution* (Downers Grove, IL: InterVarsity Press, 2004).

educated. Their arguments for design are compelling for those who wish to follow the actual scientific evidence where it leads.

Dembski has introduced a method of detecting design. This method is based on information theory and probabilities. He uses the term “specified complexity” to describe something that is designed. In his own words, “An event exhibits specified complexity if it is contingent and therefore not necessary, if it is complex and therefore not readily reproducible by chance, and if it is specified in the sense of exhibiting an independently given pattern.”<sup>15</sup>

We can best understand this by thinking about a hypothetical Scrabble board. You probably know how Scrabble works: you draw seven tiles, each with one letter on it, and you make words out of all or part of those tiles. So imagine you entered into a room in which two people had been playing Scrabble. For whatever reason, they left the room midgame, leaving the board with tiles spelling words, but also their tile racks upon which sit seven letters. Suppose one tile rack has these letters, in this order: HGZEIFT. There is some measure of complexity in the arrangement of these tiles. After all, if each letter were selected from a possible twenty-six letters, the probability of that arrangement is one out of 8,031,810,176. (Since Scrabble contains an unequal amount of the twenty-six letters, the actual probability of drawing and arranging those tiles would actually be different.) But this seven-letter arrangement is not specified, because HGZEIFT is not a word in any language, as far as I know.

Now imagine you look at the second tile rack, and you see this seven-letter arrangement: GODHEAD. The probability of that arrangement is the same, so it is complex. And it is also specified, because those letters spell a recognizable word. That means these letters fit a specified pattern.

What are we to assume from these two tile racks? It appears that player one, who had HGZEIFT on his rack, apparently did not arrange these letters in an intentional way. In other words, it doesn't look like he designed that arrangement. (It is possible that he had arranged these letters according to some inscrutable pattern. Dembski acknowledges that the specified complexity criterion for intelligent design can yield false negatives.<sup>16</sup>) However, the second player, who had GODHEAD on his tile rack, must have recognized he had the letters to spell that particular word. In other words, he designed the arrangement of those letters to hope he could play them.

We would assume that GODHEAD is the product of design because it is not likely to be the product of chance (that particular arrangement of letters is improbable) or necessity. By necessity, we mean physical necessity. No force or law of nature requires seven tiles to emerge from the bag of tiles and appear on a rack in that particular arrangement. Since GODHEAD fits a specified pattern (it spells a word that we recognize), it is not only complex, but also specified.

That is a simple example of how to detect design. Dembski's criterion for detecting design is actually far more stringent. The probability of any pattern or event must be far lower to

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<sup>15</sup> William A. Dembski, “Intelligent Design: A Brief Introduction,” in *Evidence for God*, ed. William A. Dembski and Michael R. Licona (Grand Rapids, MI: Baker Books, 2010), 105.

<sup>16</sup> Dembski, *Intelligent Design*, 139ff.

yield a positive case for design. (The lower the probability is, the greater the complexity. Dembski suggests a threshold of  $10^{-150}$ , which means that the probability of an event or pattern must be lower than that to yield a positive for design. The probability is incredibly low so that his test for design cannot yield a false positive.)

If the above sounds too complex, rest assured that the concept is not. (Just remember Paley's argument.) Design has long been recognized in many scientific fields, such as forensic science, cryptography, and archaeology. If a police detective wants to determine whether a death has been caused by homicide, suicide, or accident, he or she will look for evidence of a designed death. If a cryptographer is trying to crack a code, he or she will look for a design. An archaeologist looks at design to determine whether an artifact was designed (as a tool, an object of worship, or something else). Even when the purpose of an artifact is unknown, design can still be detected. "There is a room at the Smithsonian filled with obviously designed objects for which no one has a clue about their purpose."<sup>17</sup>

The most important discoveries of ID are being made in biology, particularly at the molecular level. Michael Behe, a biochemist, has written about the amazing complexity found in cells. He has introduced the idea of irreducible complexity. "By *irreducibly complex* I mean a single system composed of several well-matched, interacting parts that contribute to the basic function, wherein the removal of any one of the parts causes the system to effectively cease functioning."<sup>18</sup> This system could not have developed by evolving through gradual steps, because without each part in place, the system does not function. "Since natural selection can only choose systems that are already working, then if a biological system cannot be produced gradually it would have to arise as an integrated unit, in one fell swoop, for natural selection to have anything to act on."<sup>19</sup>

Again, this concept is hard to understand without a concrete example. Behe illustrates this concept with a simple mousetrap. A mousetrap consists of a wooden platform that acts as a base; a metal hammer, which crushes the mouse; a spring with extended sides that press against the platform and the hammer when the trap is charged; a catch that releases the hammer when pressure is applied; and a metal holding bar that connects to the catch, to hold the hammer back when the trap is charged.<sup>20</sup> Without any one of these five simple parts, the mousetrap would be useless. This trap couldn't evolve by adding parts together, because four parts would be useless. If a mousetrap were an organism, it wouldn't survive without all five parts in place. As Behe said above, natural selection can only choose systems that are already working.

The mousetrap is a simple, hypothetical example. Actual examples, which are far more complex, exist in biology. Behe describes several irreducibly complex biological systems such as the bacterial flagellum, which is like a small outboard motor that powers the movement of the bacterial cell. We will explore these examples below. For now, it is enough to know that our knowledge of such biological complexity has only existed for the last several decades. Darwin

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<sup>17</sup> Ibid., 151.

<sup>18</sup> Behe, *Darwin's Black Box*, 39.

<sup>19</sup> Ibid.

<sup>20</sup> Ibid., 42.



knew nothing of such molecular machines. What he did know, however, was that discovery of such complexity would challenge and invalidate his theory of evolution. “If it could be demonstrated that any complex organ existed which could not possibly have been formed by numerous, successive, slight modifications, my theory would absolutely break down.”<sup>21</sup> Such complex systems have been found and Darwin’s theory has broken down. The naturalist clings to Darwin’s theory because it justifies his lack of faith in a supernatural God. However, if truth prevails, Darwin’s theories will be exposed.

### **Fine tuning**

An example of design in the universe is the apparent “fine tuning” of many physical forces in the universe. According to William Lane Craig, “The discovery of cosmic fine-tuning for intelligent life has led many scientists to conclude that such a delicate balance of physical constants and quantities as is requisite for life cannot be dismissed as mere coincidence but cries out for some sort of explanation.”<sup>22</sup> The balance of these constants and quantities necessary for human existence is the subject of the anthropic principle. (The Greek word *anthropos* means “human being”; *anthropic* means “having to do with mankind.”)

What are these constants? Norman Geisler provides a partial list of the evidence for a universe fine-tuned for human existence.

1. Oxygen comprises 21 percent of the atmosphere. If it were 25 percent, fires would erupt, if 15 percent, human beings would suffocate.
2. If the gravitational force were altered by 1 part in  $10^{40}$  (that’s 10 followed by forty zeroes), the sun would not exist, and the moon would crash into the earth or sheer off into space. Even a slight increase in the force of gravity would result in all the stars being much more massive than our sun, with the effect that the sun would burn too rapidly and erratically to sustain life.
3. If the centrifugal force of planetary movements did not precisely balance the gravitational forces, nothing could be held in orbit around the sun.
4. If the universe was expanding at a rate one millionth more slowly than it is, the temperature on earth would be 10,000 degrees C.
5. The average distance between stars in our galaxy of 100 billion stars is 30 trillion miles. If that distance was altered slightly, orbits would become erratic, and there would be extreme temperature variations on earth. (Traveling at space shuttle speed, seventeen thousand miles an hour or five miles a second, it would take 201,450 years to travel 30 trillion miles.)
6. Any of the laws of physics can be described as a function of the velocity of light (now defined to be 299,792,458 miles a second). Even a slight variation in the speed of light would alter the other constants and preclude the possibility of life on earth.
7. If Jupiter was not in its current orbit, we would be bombarded with space material. Jupiter’s gravitational field acts as a cosmic vacuum cleaner, attracting asteroids and comets that would otherwise strike earth.

<sup>21</sup> Charles Darwin, *On the Origin of Species*, 6<sup>th</sup> ed. (1872; repr. New York: New York University Press, 1988), 154; quoted in Behe, *Darwin’s Black Box*, 39.

<sup>22</sup> Craig, *Reasonable Faith*, 157.

8. If the thickness of the earth's crust was greater, too much oxygen would be transferred to the crust to support life. If it were thinner, volcanic and tectonic activity would make life untenable.
9. If the rotation of the earth took longer than 24 hours, temperature differences would be too great between night and day. If the rotation period was shorter, atmospheric wind velocities would be too great.
10. Surface temperature differences would be too great if the axial tilt of the earth were altered slightly.
11. If the atmospheric discharge (lightning) rate were greater, there would be too much fire destruction; if it were less, there would be too little nitrogen fixing in the soil.
12. If there were more seismic activity, much life would be lost. If there was less, nutrients on the ocean floors and in river runoff would not be cycled back to the continents through tectonic uplift. Even earthquakes are necessary to sustain life as we know it.<sup>23</sup>

That is quite an impressive list. But that's just a start. Consider that the properties of this universe had to be just right in order for the Big Bang to occur. The rate of the expansion of the universe had to be perfect or else the universe either would have collapsed upon itself or expanded too quickly. According to Stephen Hawking:

If the rate of expansion one second after the big bang had been smaller by even one part in a hundred thousand million, million, the universe would have recollapsed before it ever reached its present size. On the other hand, if the expansion rate at one second had been larger by the same amount, the universe would have expanded so much that it would be effectively empty now.<sup>24</sup>

In addition to the rate of expansion, the electric charge of the electron and other constants had to be just right. Just how precise did these forces need to be for the Big Bang to occur? Roger Penrose (like Hawking, a physicist and an atheist) puts it this way:

The Creator's aim must have been [precise] to an accuracy of one part in [10 to the 10<sup>123</sup>th power<sup>25</sup>]. This is an extraordinary figure. One could not possibly write the number down in full in the ordinary denary notation: it would be 1 followed by 10<sup>123</sup> successive "0"s! Even if we were to write a "0" on each separate proton and on each separate neutron in the entire universe—and we could throw in all the other particles as well for good measure—we should fall far short of writing down the figure needed. [This is] the precision needed to set the universe on its course.<sup>26</sup>

Martin Rees, an astrophysicist, has determined that the existence of human life boils down to "just six numbers." If these forces and constants did not exist or were changed to the

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<sup>23</sup> Norman L. Geisler, *Baker Encyclopedia of Christian Apologetics* (Grand Rapids, MI: Baker Books, 1999), 26-27.

<sup>24</sup> Stephen Hawking, *The Theory of Everything* (Beverly Hills, CA: New Millennium Press, 2002), 104; quoted in Douglas Groothuis, *Christian Apologetics* (Downers Grove, IL: IVP Academic, 2011), 250.

<sup>25</sup> I couldn't write a superscript on top of a superscript with my computer. That's how ridiculous this number is.

<sup>26</sup> Roger Penrose, *The Emperor's New Mind* (New York: Oxford University Press, 1989), 344; quoted in Dembski, *Intelligent Design*, 266.

smallest degree, there would be no stars or complex elements, let alone life. These six numbers are:

1. The strength of the force that binds atomic nuclei together and determines how all atoms on earth are made.
2. The strength of the forces that hold atoms together divided by the force of gravity between them.
3. The density of material in the universe—including galaxies, diffuse gas and dark matter.
4. The strength of a previously unsuspected force, a kind of cosmic anti-gravity, that controls the expansion of the universe.
5. The amplitude of complex irregularities or ripples in the expanding universe that seed the growth of such structures as planets and galaxies.
6. The three spatial dimensions in our universe.<sup>27</sup>

What is interesting is that all of these constants are independent of one another. There does not seem to be any unifying theory that relates them to each other. (If the measurement of one constant would change, it wouldn't affect the others.) Therefore, each constant must be precisely tuned. This fourth number, the so-called cosmological constant, is fine-tuned to about one part in  $10^{120}$ . This tiny number represents the rate at which the universe's expansion is accelerating.

What does all of this mean? The fact that so many constants must be so precisely tuned in order for anything to exist suggests that the universe is no accident. The various laws of physics exist in such a way as to allow life to occur. One can imagine a picture of God in some metaphysical control room, turning many large dials, each representing a constant, to particular settings. If the dials were adjusted differently—even by a hair—there could be no life on earth.

This is stunning information. There are two ways that atheists have reacted to this fine-tuning argument. One way is to be impressed by the improbability of the universe. Astronomer Fred Hoyle, an atheist, said, “A commonplace interpretation of the facts suggests that a super intellect has monkeyed with physics, as well as chemistry and biology, and that there are no blind forces worth speaking about in nature.”<sup>28</sup> Christopher Hitchens, a prominent atheist, admitted in the documentary *Collision* that the fine-tuning argument presented the greatest challenge to his atheism.

The other reaction is to suggest that our universe is but one of many. This is the multiverse theory. The idea is that in each universe (of which there could be a potentially infinite number), a different set of constants would exist. Ours just happens to be this way. This is the theory that Stephen Hawking and Martin Rees maintain.

One illustration shows how incredible the multiverse theory is. This illustration comes from Alvin Plantinga by way of Tim Keller.

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<sup>27</sup> This summary of these six numbers appears in Groothuis, *Christian Apologetics*, 251. It is based on Martin Rees, *Just Six Numbers* (New York: Basic Books, 2000).

<sup>28</sup> Fred Hoyle, “The Universe: Past and Present Reflections,” *Engineering and Science* (November 1981): 12; quoted in Geisler and Turek, *I Don't Have Enough Faith to Be an Atheist*, 106-107.

Alvin Plantinga gives this illustration. He imagines a man dealing twenty straight hands of four aces in the same game of poker. As his companions reach for their six-shooters the poker player says, “I know it looks suspicious! But what if there is an infinite succession of universes, so that for any possible distribution of poker hands, there is one universe in which this possibility is realized? We just happen to find ourselves in one where I always deal myself four aces without cheating!”<sup>29</sup>

Clearly, this poker player’s statement would not move his fellow players. It is physically possible to deal twenty straight hands of four aces, but, more than likely, the man is cheating.

Atheists can also react to the fine-tuning argument by shrugging their shoulders and saying, “We are fortunate to exist in a universe that seems to be in just such a condition to allow life to exist. If things were different, we wouldn’t exist. It’s just the way things are.” In other words, we shouldn’t be surprised that things are the way that they are. If they were any different, we wouldn’t be here. The philosopher John Leslie shows how incredible this thought is. Dinesh D’Souza retells his illustration.

Imagine a man sentenced to death, standing before a firing squad of ten shooters. The shooters discharge their rifles. Somehow they all miss. Then they shoot again and one more time they fail to hit their target. Repeatedly they fire and repeatedly they miss. Later the prisoner is approached by the warden, who says, “I can’t believe they all missed. Clearly there is some sort of conspiracy at work.” Yet the prisoner laughs off the suggestions with the comment, “What on earth would make you suggest a conspiracy? It’s no big deal. Obviously the marksmen missed because if they had not missed I would not be here to have this discussion.” Such a prisoner would immediately, and rightly, be transferred to the mental ward.<sup>30</sup>

If the fine-tuning of this universe seems improbable, it’s because it is improbable. But not only is the fine-tuning improbable (or highly complex), it is specified, because it allows life to exist. As Douglas Groothuis observes, “If there is only one universe, the chances of it containing the vast panoply of life-permitting features are amazingly infinitesimal.”<sup>31</sup> To argue for the existence of other universes (something we could never know or prove) is to dodge the issue. The multiverse theory can never rise above speculation and it smacks of being an ad hoc hypothesis (one adopted specifically for this case).

One must also deal with the issue of why a universe should have any set of laws, any constants or forces, in the first place. Then again, we should wonder why the universe even exists, which brings us back to the cosmological argument. This universe (along with its attendant physical properties) exists because God created it and designed it.

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<sup>29</sup> Timothy Keller, *The Reason for God* (New York: Riverhead Books, 2008), 135. He quotes Alvin Plantinga, “Dennett’s Dangerous Idea,” in *Books and Culture* (May-June 1996): 35.

<sup>30</sup> D’Souza, *What’s So Great About Christianity?*, 136.

<sup>31</sup> Groothuis, *Christian Apologetics*, 258.