

# THE DESIGN ARGUMENT

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One argument used to demonstrated 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 examine 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 simplest cell reveals the presence of machine-like systems made out of molecules. All of this suggests that the universe and its contents were designed; they are not the result of blind, unintelligent forces.

Even atheists acknowledge the appearance of design in the universe. According to Richard Dawkins, chief atheist and neo-Darwinist, “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 a fact and a 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 (or unintelligent, law-like forces) 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 has a designer.
2. The universe has highly complex design.

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

3. Therefore, the universe has a Designer.<sup>2</sup>

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 HAS 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 a 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

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

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.

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.

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

<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).

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.”

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.

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

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 (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 is theologically nuanced.) 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.

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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.

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 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 a way to prove empirically the existence of design. The movement known as Intelligent Design (ID hereafter) attempts to correct this oversight.

ID started 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*

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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).

and *The Design Revolution*.<sup>14</sup> These ID leaders, along with many others, are intelligent and well-educated. Their arguments for design are compelling for those who wish to follow the scientific evidence wherever 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. Imagine you entered 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; they also left 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 probability of drawing and arranging those tiles would be different. But let’s not complicate things too much.) This seven-letter arrangement is complex, and the chances of drawing those letters in that order are improbable. But that particular set of letters is not specified complexity, 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; the arrangement is complex. And it is also specified, because those letters spell a recognizable word. That means these letters fit a specified pattern. It’s important to note that this pattern existed in advance. A word was not made after the fact to fit this complex arrangement of randomly selected letters.

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

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

<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.

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 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.

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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.

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 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.)

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<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.

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.
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

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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.

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 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 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 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.

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

<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.

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.

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

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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.

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.

## Cells

We can see further evidence of God's design in the life at the cellular level. The cell is the basic structural unit of all living organisms. It is the smallest unit of life that can be classified as a living thing. That is why we have single-cell organisms, such as bacteria.

Cells are incredibly small: we have roughly ten trillion of them in our bodies. But they are also incredibly complex. However, before the twentieth century, scientists (including Charles Darwin) did not realize how complex the cell is. Ernest Haeckel (1834-1919), a German scientist who helped promote Darwin's work, stated that a cell was a "homogeneous globule of protoplasm."<sup>32</sup> He was quite mistaken, but only because scientific instruments in his day could not detect the cell's complex structure.

Robert Hooke (1635-1703) was the first person to discover the cell. In 1665, he published *Micrographia*, a book that described his observations obtained by looking through a microscope. When studying cork, he discovered the cell, so named because each one resembled the cell of a monk. To study the cell, Hooke used an optical microscope, also known as a light microscope. This type of microscope was invented in the early seventeenth century. Some credit Galileo Galilei with the invention of the optical microscope in 1609.

Early optical microscopes were simple, and though other scientists improved on their design, they were still limited. Michael Behe explains the limitations of the light microscope:

The investigation of the cell pushed the microscope to its limits, which are set by the wavelength of light. For physical reasons a microscope cannot resolve two points that are closer together than approximately one-half of the wavelength of the light that is illuminating them. Since the wavelength of the light is roughly one-tenth the diameter of a bacterial cell, many small, critical details of cell structure simply cannot be seen with a light microscope.<sup>33</sup>

In the nineteenth century, when Darwin and Haeckel were formulating and popularizing, respectively, the theory of evolution, the cell was assumed to be relatively simple, because its details could not be observed through an optical microscope.

In the twentieth century, the electron microscope was invented. The electron, the negatively charged subatomic particle, had been discovered in the late nineteenth century. An electron has a wavelength about 100,000 times short than that of visible light. Therefore, an electron microscope is able to provide much greater resolution than an optical microscope. The

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<sup>32</sup> Behe, *Darwin's Black Box*, 101-102.

<sup>33</sup> *Ibid.*, 10.

electron microscope was developed in the 1930s and refined after World War II. “The same cell that looked so simple under a light microscope now looked much different.”<sup>34</sup> Now scientists were able to see the amazing details of the tiny cell.

Cells come in two broad types. There is the simpler prokaryotic cell of bacteria and the more complex eukaryotic cells of plants, fungi, algae, animals, and human beings. Eukaryotic cells are larger and have membrane-bound compartments in which specific metabolic activities take place. Behe describes the functions of a eukaryotic cell:

Just like a house has a kitchen, laundry room, bedroom, and bathroom, a cell has specialized areas partitioned off for discrete tasks. These areas include the nucleus (where the DNA resides), the mitochondria (which produce the cell’s energy), the endoplasmic reticulum (which processes proteins), the Golgi apparatus (a way station for proteins being transported elsewhere), the lysosome (the cell’s garbage disposal unit), secretory vesicles (which store cargo before it must be sent out of the cell), and the peroxisome (which helps metabolize fats). Each compartment is sealed off from the rest of the cell by its own membrane, just as a room is separated from the rest of the house by its walls and door.<sup>35</sup>

Edgar Andrews provides a similar description of the cell and its complexity:

Even the simplest single cell is a highly organized and complex structure. The living cell has aptly been likened to a factory, complete with a boundary fence (the cell wall); gates, docking bays and security systems; entry facilities for raw materials; shipping facilities for finished products; internal transport systems; power plants (mitochondria); waste disposal plants (proteasomes); machines for manufacturing proteins (ribosomes); an army of workers with many different skills (enzymes); messengers (mRNA); stock-pickers (tRNA) and blueprints (DNA).<sup>36</sup>

Andrews calls it cell the “living factory.” Each cell consists of thousands of different protein molecules (groups of atoms linked together by chemical bonds). “Proteins provide all the cellular structural material, they control cell growth and metabolism, and they include hundreds of worker ‘enzymes’ that carry out activity tasks within the cell—by catalyzing chemical reactions that would otherwise occur only slowly or not at all.”<sup>37</sup> These proteins form “molecular machines” that carry out many different functions within the cell. When we look at these machine-like devices that work in the living factory that is the cell, we see that they are irreducibly complex.

Behe offers many different examples of irreducibly complex mechanisms that operate at the cellular level of life. These mechanisms consist of several parts, each of which is needed to

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<sup>34</sup> Ibid.

<sup>35</sup> Ibid., 102.

<sup>36</sup> Edgar Andrews, *Who Made God?* (Carlisle, PA: EP Books, 2009), 179.

<sup>37</sup> Ibid., 181.

perform the task for which the mechanism exists. If one part is missing, the mechanism cannot function. For this reason, Behe argues that the mechanism could not have evolved, because it would not have evolved from a simpler, non-functioning system. (The theory of evolution states that organisms produced a positive trait through genetic mutation. This positive trait helps the organism survive better. Subsequently, that better-functioning organism is “selected” by nature through a survival of the fittest process. The problem is that an irreducibly complex mechanism doesn’t work until all the parts are in place. If these parts were not in place, the incomplete and nonfunctioning mechanism wouldn’t be more likely to survive.)

One example of an irreducibly complex mechanism is the humble cilium. A cilium is a hair-like structure that beats like a whip. It helps a cell to swim (as is the case with sperm) or it helps to move liquids over a stationary cell, such as those that line the respiratory tract. For example, if we inhale a bit of dust or pollen, the cells in the respiratory tract, each possessing several hundred cilia, beat together like the oars of a galley ship, propelling the dust-containing mucus up the throat so we can cough it out.<sup>38</sup>

Every device that moves through liquid—whether it’s a boat or our bodies—requires a minimum of three things to work: a paddle, a motor, and a connector between the two. Without those three things, the system will not function. Cilia have these three components of course, but they are much more complex than that. Each little hair-like cilium consists of several microtubules bound together by proteins. (Think of this structure as a series of hairs “glued” together by some proteins to form a thicker hair.) The collection of microtubules forms the paddle. The motor of the cilium are arms of dynein, a protein. The connectors are nexin proteins that link each microtubule together. When the dynein arms move, it creates a tugging action on the neighboring microtubules. If the nexin connectors were not there, the microtubules would come apart. But because the nexin connectors exist, they produce a kind of counter-tugging, so that the bound microtubules wave back and forth, producing the swimming motion of the cilium.

The structure and function of the cilium is quite a bit more complicated than that. For example, it contains over two hundred different proteins. But the key idea is that each hair-like cilium needs a certain arrangement of parts in order to function. If the cilium did not function, it would not have survived the evolutionary process of natural selection. Therefore, the best hypothesis would not be evolution, but design. It would appear that someone had planned and built the cilium.

Behe observes that thousands of articles have been written about the cilia in scientific journals in recent decades. Yet only two articles attempted to suggest how cilia could have evolved. And those two papers disagreed with each other about how such evolution could take place. Significantly, neither article presented any mechanistic details that could show how the cilium might have evolved.<sup>39</sup>

Another irreducibly complex structure is the bacterial flagellum. The flagellum helps the bacterial cell swim, but instead of acting like an oar, it acts like a rotary propeller. The propeller

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<sup>38</sup> Behe, *Darwin’s Black Box*, 59.

<sup>39</sup> *Ibid.*, 67-69. Behe made this observation in 1996.

of the flagellum is a hair-like structure called the filament, which fits into a universal joint called the hook. The hook attaches the filament to the cell's outer membrane. On the inside of that outer membrane, connecting to the opposite end of the hook, is the rod, which acts as a drive shaft. The rod is connected to the stator, which is embedded in the inner membrane of the cell. Within the stator is the rotor, which rotates the rod, spinning the hook and filament so that the bacteria can "swim." Several O-rings and other parts hold the structure together, and the motor of the flagellum is powered by a flow of acid through the membrane of the cell. The system is complex—irreducibly so.

Behe summarizes the scientific literature devoted to the bacterial flagellum:

The general professional literature on the bacterial flagellum is about as rich as the literature on the cilium, with thousands of papers published on the subject over the years. That isn't surprising: the flagellum is a fascinating biophysical system, and flagellated bacteria are medically important. Yet here again, the evolutionary literature is totally missing. Even though we are told that all biology must be seen through the lens of evolution, no scientist has *ever* published a model to account for the gradual evolution of this extraordinary molecular machine.<sup>40</sup>

Another example of irreducible complexity in biology is blood clotting. When you stop and think about it, blood clotting is amazing. "The function of the blood clotting system is to form a solid barrier at the right time and place that is able to stop blood flow of an injured vessel."<sup>41</sup> Whenever we have a cut and start bleeding, a series of events occurs that results in a clot that saves our lives. To form the clot, a long series of events results in the production of fibrin. Fibrin is produced a protein called thrombin shortens another protein called fibrinogen. Fibrin molecules come together to produce a net-like structure that forms the initial clot. Many other proteins such as enzymes (which catalyze a chemical reaction) are involved in the long series of chemical reactions that results in the web of fibrin forming a blood clot. If any of the steps in this series did not occur, there would be no clot. If there were no clot, we could bleed to death. In other words, the blood clotting system is irreducibly complex.

It is amazing to consider how blood clotting works. If we had a cut that did not clot, we could bleed to death. If we had a cut and the clot formed too slowly or in the wrong place, we would be in trouble. If we had a clot in the wrong place or when we didn't have a cut, we would have a stroke. The fact that that our bodies know when and where to produce a clot through a long cascade of events points to the work of a designer. How else would our bodies know when to produce a clot, when to reinforce the clot (which occurs after the clot is formed), and when to remove the clot (when the wound has started to heal)?

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<sup>40</sup> Ibid., 72.

<sup>41</sup> Ibid., 86.

## DNA

We could multiply examples of specific complexity in biology, but I want to focus on just one more example. This might be the greatest evidence of intelligent design. It is what Francis Collins calls “the language of God”: DNA.

DNA stands for deoxyribonucleic acid. This structure contains all the genetic information of a living being. Because the genetic information is written with a code consisting of four chemicals (represented by four letters—see below), it truly is a language. This is what Richard Dawkins, an atheist, says about DNA: “What has happened is that genetics has become a branch of information technology. The genetic code is truly digital, in exactly the same sense as computer codes. This is not some vague analogy, it is the literal truth. Moreover, unlike computer codes, the genetic code is universal.”<sup>42</sup> Of course, while he marvels at this code, he fails to acknowledge that all codes are the products of intelligent beings. Similarly, Bill Gates concludes, “DNA is like a computer program, but far, far more advanced than any software we’ve ever created.”<sup>43</sup> Of course, neither Gates nor Dawkins suggests that computer codes are the product of natural selection.

DNA is truly amazing. All our genetic information is stored in our DNA, which is contained in each of our cells. Nancy Pearcey and Charles Thaxton describe it this way: “It is a superbly economical solution; compared to its size, the capacity of DNA to store information vastly exceeds that of any other known system. It is so efficient that all the information needed to specify an organism as complex as a human being weighs less than a few thousand millionths of a gram and fits into less space than the period at the end of this sentence.”<sup>44</sup>

Let’s take a look at the structure of DNA. I’ll try to keep this as simple as possible, but some technical details are necessary to show just how complex DNA is.

DNA consists of long-chain molecules called polymers (poly=many; -mer=unit). These polymers consist of nucleotides. The nucleotide consists of a sugar, a phosphate group, and a base. Nucleotides are joined together to produce the famous double helix structure of DNA. If you have ever seen a drawing of this structure, you can imagine how it looks: like a spiral staircase. Now imagine that this spiral staircase was straightened out so it resembled a ladder. The sides of this ladder are made of sugars and phosphates. The “rungs” of the ladder are made of two complementary nucleobases (groups of nitrogen-based molecules). There are about 3,200,000,000 nucleotides in the human genome. The nucleotides form the double helix structure, which is coiled in the twenty-three pairs of chromosomes present in each human cell.

The four bases that form nucleotides are cytosine, guanine, adenine, and thymine. These chemicals are represented by four letters: C, G, A, and T. These bases are designed so that C always pairs with G, and A always pairs with T. This means that there are four possible rungs:

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<sup>42</sup> Richard Dawkins, “Genetics: Why Prince Charles Is So Wrong,” Checkbiotech.org, January 23, 2003, available at [http://greenbio.checkbiotech.org/news/genetics\\_why\\_prince\\_charles\\_so\\_wrong](http://greenbio.checkbiotech.org/news/genetics_why_prince_charles_so_wrong) (accessed June 3, 2012).

<sup>43</sup> Bill Gates, *The Road Ahead*, rev. ed. (New York: Viking, 1996), 228; quoted in Groothuis, *Christian Apologetics*, 316.

<sup>44</sup> Nancy Pearcey and Charles B. Thaxton, *The Soul of Science : Christian Faith and Natural Philosophy*, Turning point Christian worldview series (Wheaton, IL: Crossway Books, 1994), 222.

C-G, G-C, A-T, and T-A. Because of the way the bases connect, the information of DNA can be determined when only half of the ladder is on hand. In other words, each strand of the double helix can be used as a template to replicate more DNA. As Collins writes, “If you split all the pairs in half, cutting your ladder down the center of each run, each half-ladder contains all the information needed to rebuild a complete copy of the original.”<sup>45</sup> Portions of the whole DNA, called genes, are used to build proteins. The “half-ladder” of a gene can be used to build a protein. If DNA did not have this structure of complementary bases, it could not replicate itself or produce proteins.

When the four bases (C, G, A, and T) are formed into three-rung sequences, they form a codon. There are sixty-four possible three-letter codons, which specify which amino acid will be used next to form a protein. (There is a bit of redundancy here: one amino acid can be spelled in different ways. So, for example, glutamic acid can be spelled GAA and GAG.) Amino acids combine to form proteins, the basic structural and mechanical units of the body. The arrangement of these codons, which are similar to words, form “sentences” of genetic information. Some codons even serve as punctuation marks, indicating where an amino acid chain ends and another one begins. In order to make a working protein molecule, the right amino acids must be arranged in the right sequence.<sup>46</sup> It is easy to see how this is analogous to language. I can take any number of letters and mix them together, but only when they are in a specific order do they form words. And those words must be in a specific order to form a meaningful sentence. In DNA, however, the sequencing must be much more precise. A change in one single letter, or one three-letter codon, can mean the difference between health and a debilitating disease.

The gene, a particular bit of genetic instruction, consists of hundreds or thousands of letters of code. A particular gene corresponds to an inherited trait, such as eye or hair color. There are about 20,000-25,000 protein-coding genes in the human body, each one controlling a different trait or function. “All of the elaborate functions of the cell, even in as complex an organism as ourselves, have to be directed by the order of letters in this script.”<sup>47</sup>

What is truly fascinating is how DNA is replicated to form new proteins. This occurs through the use of messenger ribonucleic acid (mRNA). To describe how this all works, I’ll let Collins and Pearcey and Thaxton explain:

The DNA information that makes up a specific gene is copied into a single-stranded messenger RNA molecule, something like a half ladder with its rungs dangling from a single side. That half ladder moves from the nucleus of the cell (the information storehouse) to the cytoplasm (a highly complex gel mixture of proteins, lipids, and carbohydrates), where it enters an elegant protein factory called the ribosome. A team of sophisticated translators in the factory then read

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<sup>45</sup> Collins, *The Language of God*, 102.

<sup>46</sup> Andrews, *Who Made God?*, 185.

<sup>47</sup> Collins, *The Language of God*, 103.

the bases protruding from the half-ladder messenger RNA to convert the information in this molecule into a specific protein, made up on amino acids.<sup>48</sup>

Transfer-RNA (tRNA) rounds up the amino acids. Each tRNA molecule grabs hold of an amino acid with one hand, so to speak, and seeks out a strand of mRNA, where it grabs hold of the appropriate codon with the other hand. It keeps holding on until the necessary chemical reactions take place to link that amino acid onto the end of a growing chain. In this way amino acids are linked together one by one in the correct sequence to form a functioning protein.<sup>49</sup>

Let's think about what this means: DNA is an incredibly complex code constructed of four letters (chemical bases). These letters form into codons, which specify which amino acids will be used to form proteins.<sup>50</sup> This extremely complex language is transcribed onto mRNA, and then this information is translated into a new protein.

Usually, when we see language, we realize it is the product of intelligence. Language does not arise out of natural causes, just as the ink on this paper did not assemble itself into words, sentences, and paragraphs. The DNA molecule is the medium (just like the ink on paper), but not the message. Information operates at a different level than matter. Therefore, information cannot be reduced to material it is written on. The arrangement of the nucleotides into codons and the arrangement of codons into genes is information. This information is used to construct the building blocks of the cell and to regulate human life. We can think of DNA as a set of instructions written with chemicals, just as the arrangement of the ink on this page forms information. Information is therefore more than the sum of its parts. It cannot be reduced to material causes.

Of course, Darwin knew nothing of DNA. If he had, perhaps he would never have come up with his theory of evolution, because DNA seems to suggest a designer.

James Watson and Francis Crick discovered the double helix structure of DNA in 1953. Crick later reflected on the complexity of DNA and the impossibility of DNA evolving out of inorganic compounds (the process of life developing from nonlife is called abiogenesis). According to him, "the origin of life appears to be almost a miracle, so many are the conditions which would have to be satisfied to get it going."<sup>51</sup> Instead of turning to the rational belief that God could have designed life, Crick turned towards a more interesting solution: He claimed that

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<sup>48</sup> Ibid., 104.

<sup>49</sup> Pearcey and Thaxton, *The Soul of Science*, 225.

<sup>50</sup> Only about 1.5 percent of human DNA is used to build proteins. The rest is so-called "junk DNA," the function of which scientists are beginning to discover. Many scientists will argue that this junk DNA is proof of evolution, but such claims create a "Darwinism of the gaps." Christians are often criticized for making a so-called "God of the gaps" when they attribute gaps in scientific knowledge to divine cause. So, for example, if we don't know how something works or we can't explain something now, we can either say "it evolved" or "God did it." Without further evidence, either claim could be true. Instead of making claims based on what we don't know, we should use the evidence available to decide whether evolutionists' claims or Christians' claims are true.

<sup>51</sup> Francis Crick, *Life Itself: Its Origin and Nature* (New York: Simon & Schuster, 1981), 88; quoted in Groothuis, *Christian Apologetics*, 321.

aliens sent an unmanned probe to earth to seed all of human life. This process he called directed panspermia. Groothuis explains:

He realized that the odds of life accidentally coming to earth through an *undirected* process were far too small. But *directed* panspermia was the “miracle” he deemed necessary to explain the origin of life, since life cannot come from nonlife without intelligence. It is a design explanation. However, this appeal to design is a classic case of an ad hoc argument. When naturalism fails to explain the origin of terrestrial life, Crick appeals to an unknown and improvable alien source.<sup>52</sup>

Crick was a Nobel Prize winner. Yet when faced with evidence pointing him toward God, he decided to turn to science fiction instead. And even if his ideas were correct (and they are not), he would then have to deal with the question of where those aliens came from.

### **Summary**

By now, it should be clear that the universe has highly complex design. The fine-tuning of the universe, the complexity of simple cells and biological systems, and the information stored in DNA all point to design, not natural causes achieved by way of time, chance, and mutations. Only those who stubbornly reject the existence of a designer deny that there is design in the universe.

### **THEREFORE, THE UNIVERSE HAS A DESIGNER**

The first premise—every design has a designer—must be true. The second premise—the universe has highly complex design—seems to be true from all that we know. Therefore, the conclusion follows logically. The universe must have had a designer. Now, the only question is, Who?

### **AND THAT DESIGNER IS GOD**

This part of the argument is actually not conclusive. We will need to continue our presentation of evidence for the God of the Bible in order to show that the God who designed the universe is the one who sent Jesus into the world to die on a cross.

While this argument alone may not be conclusive, I believe it shows that God must be the designer. After all, this designer would have to be intelligent and creative, which is certainly true of God. And he would have to exist before the universe, since the universe itself, with its physical laws, seems to be fine-tuned for human existence. He would therefore want to create humans, and the Bible claims that humans are the height of God’s creation. He would have to be extremely powerful and have the ability to design and create the type of universe that he wanted. The God of the Bible fits this description.

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<sup>52</sup> Groothuis, *Christian Apologetics*, 321.

While it is possible the god of deists could be the designer, the true God revealed in the pages of Scripture is a better fit. To show that this designer is God, we will have to demonstrate the trustworthiness of the Bible, the evidence of the resurrection, and the problems inherent to other religions. We will do this in due time. For now, we must be content to use this argument as one of many to prove God's existence. This argument gains strength as it is used alongside many others, such as the cosmological argument and the moral argument, which we shall look at next.

## **OBJECTION**

Those opposed to the design argument speak of apparent flaws in nature, such as the blind spot in the eye<sup>53</sup> or the panda's thumb. Douglas Groothuis summarizes the counterargument this way:

1. If God, an all-powerful and all-knowing being, created life, then it would show no design flaws.
2. Live evidences design flaws. That is, it is not optimally designed because we can imagine another design improving on it.
3. Therefore (a), life is not designed by God.
4. Therefore (b), life is the product of Darwinian evolution (which is non-designed and nondirectional).<sup>54</sup>

Of course, we can admit that there are “flaws” in the design. There are birth defects and diseases, and people have accidental blood clots that lead to strokes and death. However, when people claim that the “flaws” of design are proof that there is no designer, they are making a mistake. They are claiming to know the purposes of the designer. They are assuming that if God (who is perfect) designed something, he would design it perfectly.

The Christian response to this counterargument is an easy one. God did not intend to create a perfect universe—at least not yet. Since the Fall, the universe has been tainted by sin. Somehow, this was part of God's plan (after all, he is all knowing and all powerful, and he works all things according to his will), so he was not taken by surprise. The Bible never claims that the universe exhibits perfect design. It is wonderful and marvelous in many ways, but not perfect—at least not yet.

In Romans 8:20-22, we are told, “For the creation was subjected to futility, not willingly, but because of him who subjected it, in hope that the creation itself will be set free from its bondage to corruption and obtain the freedom of the glory of the children of God. For we know that the whole creation has been groaning together in the pains of childbirth until now.” But one day, there will be a new creation, one without sin. We can only imagine what life in a new,

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<sup>53</sup> For a brief description of the eye's blind spot, as well as a test that reveals this blind spot, see <http://www.doobybrain.com/2008/02/25/the-human-eye-has-a-blind-spot/> (accessed June 7, 2012).

<sup>54</sup> Groothuis, *Christian Apologetics*, 323-24.

perfected creation will be like, but we can be sure it will be far superior to what we experience now.

## A DIFFERENT TYPE OF DESIGN ARGUMENT

The cosmological argument and the teleological argument require some scientific knowledge. It is important to deal with science, because naturalists try to use science to support their belief that there is no God. To disprove their argument, we have to look carefully at the scientific evidence. This is necessary, but it is not always easy and for some people, scientific arguments may leave them cold. However, another type of design argument is easier to understand and it may be more compelling to many people.

Many Christian philosophers have observed that humans have a “God-shaped vacuum” that cannot be filled by anything other than God. We have a spiritual longing that nothing in this earth can satisfy. This is what Blaise Pascal (1623-1662) observed:

What else does this craving, and this helplessness, proclaim but that there was once in man a true happiness, of which all that now remains is the empty print and trace? This he tries in vain to fill with everything around him, seeking in things that are not there the help he cannot find in those that are, though none can help, since this infinite abyss can be filled only with an infinite and immutable object; in other words by God himself.<sup>55</sup>

Humans try to fill this void with everything they can. And if the stuff we have (relationships, money, possessions, entertainments, pleasures) doesn't fill the void, we seek the stuff we don't have (more money, other possessions, new relationships, etc.). But nothing will work. Only Jesus can satisfy the longing we feel. As Augustine wrote in his *Confessions*, “You have made us for yourself, O Lord, and our hearts are restless until they rest in You.”

Most people do not come to Augustine's realization. Once you realize that everyone has a spiritual longing that only God can fill, you see how desperately people try to fill it with other things. I have noticed many friends distract themselves with entertainment in order to avoid dealing with this hole in their hearts. I have seen other friends try to fill the hole with relationships. I had a friend in college who always had a boyfriend; I think she was incapable of going a week without a new love interest. Surely, she was trying to fill that vacuum with the latest fling.

This spiritual longing is often expressed in our culture. I often hear it when I listen to music. In “America,” Paul Simon sings:

"Kathy, I'm lost," I said, though I knew she was sleeping.  
"I'm empty and aching and I don't know why."

That's how most people are: empty and aching, but not knowing why. And when they try to alleviate that spiritual ache with the things of this world, they fail.

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<sup>55</sup> Blaise Pascal, *Pensées* 148/428, ed. and trans. Alban Krailsheimer (New York: Penguin, 1966), 75.

Many people think that void could be filled if only they could go back to that time and place when they were happy. You know how this goes: “If only I could back to when I was young.” “If only I could back to that relationship.” “If only I could have that job again.” I think this sentiment is behind a lot of popular songs that mourn the loss of a relationship or the loss of youth. I remember driving in my car recently, listening to a particular album, and noticing that at least three songs talked about a lost relationship, a lost time, and a lost place.<sup>56</sup> Behind the mournful quality of those songs lies a desire to go back to that person, that time, and that place that was lost. I suppose the thought is that if one could go back, everything would be right, and the emptiness and hurt that one feels would be gone. All of this is a misplaced longing.

Our memories have a way of deceiving us. Our minds become colored by nostalgia and sentimentality to the point where we reinvent the past so that it becomes a veritable Eden. We think we used to be in Paradise and if only we could return, we would be okay. There is some truth to that, of course, because we are outside of Eden. But if we want things to be just as they ought to be, we need to go back farther than our youths, to a better relationship than our lost love, and to a place more special than our favorite vacation spot. We need to go back to a time before sin entered the world, to a relationship with God, and a place where he walked among his people. We need to back to the true Eden. Of course, we can’t go back. Rather, we must go forward in a relationship with Jesus, as we look forward to the new Eden, the new Jerusalem, the new heavens and earth (Revelation 21 and 22).

C. S. Lewis writes about this desire for a “far-off country” that we all have in his sermon, “The Weight of Glory”:

We cannot tell it because it is a desire for something that has never actually appeared in our experience. We cannot hide it because our experience is constantly suggesting it, and we betray ourselves like lovers at the mention of a name. Our commonest expedient is to call it beauty and behave as if that had settled the matter. Wordsworth’s expedient was to identify it with certain moments in his own past. But all this is a cheat. If Wordsworth had gone back to those moments in the past, he would not have found the thing itself, but only the reminder of it; what he remembered would turn out to be itself a remembering. The books or the music in which we thought the beauty was located will betray us if we trust to them; it was not *in* them, it only came *through* them, and what came through them was longing. These things—the beauty, the memory of our own past—are good images of what we really desire; but if they are mistaken for the thing itself, they turn into dumb idols, breaking the hearts of their worshippers. For they are not the thing itself; they are only the scent of a flower we have not

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<sup>56</sup> The album, should you care to know, is *Cold Roses* by Ryan Adams. Adams certainly does not write from a Christian perspective, but his songs are often more thoughtful than most pop and rock songs.

found, the echo of a tune we have not heard, news from a country we have never yet visited.<sup>57</sup>

We all have this desire for a far-off country, for Paradise, for heaven. But we don't realize we are longing for heaven. Instead, we tend to believe that we can satisfy this desire with the things of earth. When we do that, we turn the things of earth into dumb idols, and dumb idols can never satisfy our longing. Thus, they leave us heartbroken.

But this desire, even if misdirected, is a very real thing. We desire for something real, something that exists, even if we cannot put our finger on it. Our desire is a clue that something beyond this world exists that can fulfill us. In *Mere Christianity*, Lewis shows how this desire points us to God.

Most people, if they had really learned to look into their own hearts, would know that they do want, and want acutely, something that cannot be had in this world. There are all sorts of things in this world that offer to give it to you, but they never quite keep their promise. The longings which arise in us when we first fall in love, or first think of some foreign country, or first take up some subject that excites us, are longings which no marriage, no travel, no learning, can really satisfy. I am not now speaking of what would be ordinarily called unsuccessful marriages, or holidays, or learned careers. I am speaking of the best possible ones. There was something we grasped at, in that first moment of longing, which just fades away in the reality. I think everyone knows what I mean. The wife may be a good wife, and the hotels and scenery may have been excellent, and chemistry may be a very interesting job: but something has evaded us.<sup>58</sup>

If the very best of this world cannot satisfy this spiritual desire, we can do one of three things, according to Lewis. One, we can blame the things of this world or fool ourselves into thinking that we should have tried another woman, or holiday, or career. "Most of the bored, discontented, rich people in the world are of this type."<sup>59</sup> Two, we can become disenchanted, attribute our desire to adolescence, and give up on a solution to this desire. Or, three, we can react in the Christian way.

The Christian says, "Creatures are not born with desires unless satisfaction for those desires exists. A baby feels hunger: well, there is such a thing as food. A duckling wants to swim: well, there is such a thing as water. Men feel sexual desire: well, there is such a thing as sex. If I find in myself a desire which no experience in this world can satisfy, the most probably explanation is that I was made for another world. If none of my earthly pleasures satisfy it, that does not prove that the universe is a fraud. Probably earthly pleasures were never meant to

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<sup>57</sup> C. S. Lewis, "The Weight of Glory," in *The Weight of Glory and Other Addresses* (1949; repr. New York: HarperOne, 2001), 30-31.

<sup>58</sup> C. S. Lewis, *Mere Christianity* (rev. ed., 1952; repr. New York: Touchstone, 1996), 120.

<sup>59</sup> *Ibid.*

satisfy it, but only to arouse it, to suggest the real thing. If that is so, I must take care, on the one hand, never to despise, or to be unthankful for, these earthly blessings, and on the other, never to mistake them for the something else of which they are only a kind of copy, or echo, or mirage. I must keep alive in myself the desire for my true country, which I shall not find till after death; I must never let I get snowed under or turned aside; I must make it the main object of life to press on to that other country and to help others to do the same.”<sup>60</sup>

We were made for another country, for heaven. God made us to glorify him, to reflect his glory in his world, and to worship and serve him. When we are not doing the things for which we were made, we feel empty, depressed, frustrated, and lost. Not to do the things we are made for is like not using a hammer to drive a nail, but instead using it to play a violin. Our spiritual longings lead us to seek out our purpose, and this search points us to our Designer and Maker.

We can imagine this type of philosophical argument outlined in a formal way:

1. Each one of us has a deep longing for something.
2. The things of this universe do not satisfy this longing.
3. Therefore, something beyond this universe must satisfy this longing.
4. And this something is God.

Perhaps we cannot prove this argument the way we can the other ones, but it has an emotional and spiritual resonance that science does not. The first and second premises seem to be true, if we are being honest with ourselves. Of course, none of us has the capability of trying to satisfy this longing with everything in the universe, because there are many things that we cannot access, like unlimited wealth, great power, or the ability to travel everywhere we want. But if there is something outside this universe that can satisfy, it must be God, for he alone is beyond space and time.

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<sup>60</sup> Ibid., 121.