Climate Change

Dr. Ray Bohlin looks at the science behind climate change alarmism and encourages you to be skeptical of what you hear from much of the media.

Are Human Beings Threatening All We Hold Dear through Climate Change?

The phrase "climate change" can mean very different things. It can be a rallying cry against the shameful practice of burning fossil fuels that will cause supposedly imminent worldwide disaster. The climate change bandwagon is a way to bring about global cooperation as we fight against the danger of too much carbon dioxide in our atmosphere. OR, the climate change agenda is a way for scientists who are becoming increasingly political to push for a more socialistic policy on generating electricity. In this article I examine what's really going on with the science and make an argument for not believing anything you read or hear in the regular media.

There is no longer much of a middle ground. I have addressed global warming or climate change before, and I am becoming increasingly convinced that the entire enterprise of human-induced climate change is a monumental and brazen attempt to hoodwink the global public into thinking we have jeopardized our future, and drastic action is necessary.

Essentially, a group of climate scientists have used the power of the United Nations and their own reputations as scientists to proclaim that we must cut back severely on the use of fossil fuels, such as coal, oil, and gas. This will prevent the rising levels of carbon dioxide in our atmosphere from generating a runaway global warming that will lead to droughts, flooding, hurricanes, tornadoes, rising sea levels, etc., that will endanger our future on the earth.

This apocalyptic vision can seem quite threatening. Scientists are objective, right? They are not going to promote something the evidence doesn't support, are they? Well, scientists are human, and their worldview will affect their conclusions and I am convinced that some scientists are presenting a scenario of human-induced global warming that the scientific evidence simply does not support.

The supposed villain in this scenario is the gas carbon dioxide. You might not know that this natural and necessary gas is such a bad guy according to the doomsayers!

In this next section, I investigate the history of carbon dioxide in our atmosphere and the potentially negative and positive effects of increasing its concentration in the air we breathe.

What's all the Fuss about Carbon Dioxide?

In this article I am discussing the possibility that humans, through the excess burning of fossil fuels, are jeopardizing the future of the entire planet. Previously this has been referred to as Anthropogenic (meaning human) Global Warming but is now referred to simply as Climate Change.

The evil villain in this scenario is carbon dioxide—what you get from burning coal, oil, and gas products. Carbon dioxide is known to be a greenhouse gas. No one disputes this. The relevant question remains, are humans putting too much carbon dioxide into the atmosphere, producing a warming that may not stop until the planet exceeds a livable temperature?

As I mentioned, carbon dioxide is a greenhouse gas. This means that when sunlight hits the earth's surface, some of that energy is radiated back into the atmosphere and captured by carbon dioxide. The carbon dioxide then remits this radiation as heat, warming the atmosphere. This is a good thing. Water,

CO_2, methane and a few other gases allow the earth to keep enough of the sun's radiation and provide a cozy temperature for life around the earth.

But as we all know, there can be too much of a good thing. Many climate scientists are exclaiming that we have added too much CO_2 over the last 150 years too fast, and the resulting warming is jeopardizing the greenhouse balance.

The earth has warmed over the last 150 years by about 1 degree Celsius or 1.5 degrees Fahrenheit. But is carbon dioxide to blame? CO_2 levels rose from around 280 parts per million in 1900 to 400 parts per million today. There does seem to be a correspondence. However, we can obtain temperature data for the last 4,000 years from various sources deemed quite reliable in published documents.

The data show that the peak temperature around 1500 BC was 2 degrees Celsius warmer than today. Around 200 BC temperatures were 1.5 degrees Celsius warmer than today, and around AD 1100, temperatures were a full degree Celsius warmer than today. Those warmings could not have been induced by the burning of fossils fuels.

Carbon Dioxide – Part 2

Certainly, carbon dioxide levels have been increasing due to the burning of fossil fuels over the last 150 years. And the average global temperature has risen by 1 degree Celsius or nearly 1.5 degrees Fahrenheit. But are the two linked in any way? Has the increase in atmospheric carbon dioxide caused the temperature increase?

First, carbon dioxide is a trace gas in our atmosphere. 78% of our atmosphere is nitrogen gas and 21% is oxygen gas. The remaining 1% is mostly argon gas and CO_2 comprising only 0.04%.

So, when we are told that carbon dioxide has risen from 280 parts per million around 1900 to 400 parts per million today, that means the level of CO_2 has risen from about 3 parts per 10,000 to 4 parts per 10,000. That's not a lot of CO_2.

Second, carbon dioxide is plant food. Photosynthesis takes carbon dioxide from the air and water from the ground and uses the energy from sunlight to make the sugar glucose, the foundation of nearly all plant and animal life. The terrific book, *Inconvenient Facts: The Science That Al Gore Doesn't Want You to Know*{1}, tells us the increased CO_2 means more plant growth, more food production, and increased soil moisture since the plants don't need to keep their "pores" open as long and therefore lose less moisture through their leaves, leaving more moisture in the ground.

Third, if we use the age of the earth as estimated by the climate change community, we learn that our current level of carbon dioxide is as low as it has ever been. I don't know how they arrive at these estimates, but published data say that carbon dioxide levels have been as high as 20 times what they are now, and temperatures were certainly not 20 times higher.

To sum up what I have reviewed above: carbon dioxide is necessary for plant growth, carbon dioxide is a trace gas and simply doesn't have the power to alter climate by itself, and carbon dioxide has been many times higher in the past.

In the next section I address the far-fetched predictions of climate catastrophe coming our way and look at what the data says.

Hurricanes, Tornadoes and Droughts, Oh My!

One of the tactics of the climate change community is to publish and threaten that increased global temperatures will

result in more severe and more frequent extreme weather events. Droughts will become more frequent and severe, local flooding will become more frequent and severe. Catastrophic storms like tornadoes and hurricanes will become more frequent and severe. Basically, any form of severe weather will only get worse.

One source said that "the impacts of climate change are expected to increase the frequency, intensity, and duration of droughts."{2} So, let's look at a few. The EPA's own drought index shows far more severe droughts in the 1930s and 1950s than we have experienced in the last 60 years. Even globally, the frequency and severity of droughts has declined as global temperatures and CO_2 increase.

Another form of severe weather that is supposed to increase are tornadoes. In 2011, Paul Epstein said in *The Atlantic* that "The recent trend of severe and lethal tornadoes is part of a global trend toward more storms."{3} Well, guess what? The actual trend of severe tornadoes at F3 or above is decreasing, and overall the number of tornadoes is decreasing. In fact, 2016 saw the fewest tornadoes in the United States ever recorded. So once again, the models and extremists are wrong.

Concerning hurricanes, you need to be careful. The U.S. National Climate Assessment of 2014 stated that the intensity, frequency, and duration of North Atlantic hurricanes . . . have all increased since the early 1980s."{4} That's true! But if you look at the long-term trend going back to 1920, instead of just the last few decades, the trend is downward. If you look at the frequency and severity of hurricanes for the whole earth, the trend is slightly downward. And the period between 2006 and 2017 saw no major hurricanes make landfall in the United States.

Whenever a severe weather event occurs in the United States, you can be sure the media will seize the opportunity to exclaim about how climate change is increasing storms overall.

Just don’t believe it.

Rising Sea Levels, Antarctic Ice and Polar Bears

In this article I’ve been talking about the threats of increasing extreme weather as a result of human-caused global warming or climate change. As I’ve tried to show, all these threats have no basis in the scientific evidence.

You have probably heard that because of the excessive warming, glaciers will melt, and sea levels are expected to rise and inundate low lying island chains and coastal communities. Simply put, NO. Sea levels have been rising for a few thousand years and the rate of increase went up way before humans began burning fossil fuels. Sea levels are rising about one inch per decade and the rate of rise is not changing.

So, what about glaciers, the Arctic ice and Antarctica? Well, Arctic ice has been receding over the last 30 years, but that will not cause sea levels to rise since that is floating ice. Some glaciers indeed have been receding, but they began doing so before humans began burning all that fossil fuel. But even as some of these glaciers recede, they are revealing remnants of forestation, proving that they had receded previously—with no help from humans. Lastly, some Antarctic ice is receding but overall, Antarctica is gaining ice, not losing it. And polar bears are doing just fine, increasing in numbers, not declining.

In closing, let me offer a few words of advice. First, disregard almost everything you read and hear in the regular media outlets. Most of these journalists or reporters have little scientific training and they are simply repeating what they have heard from extremist environmental groups whom they trust.

Second, ignore what you hear from most government officials, elected or appointed. They have bought the narrative for their own political gain and don't likely understand the science involved.

Last, let me suggest you research two organizations for more balanced information. First, the Cornwall Alliance, a group of evangelical Christian who are concerned about the environment and accurate information. Second is a group known as CFACT and their website Climate Depot. They repeatedly attend various climate change conferences around the world and consistently stump climate change extremists.

Bottom line: I encourage you to be skeptical concerning just about anything you encounter when it comes to climate change.

Notes

1. Gregory Wrightstone, *Inconvenient Facts: The Science That Al Gore Doesn't Want You to Know* 2017, Silver Crown Productions, LLC.
2. Ibid, p. 65.
3. Ibid., p. 89.
4. Ibid., p. 93.

Are We Alone in the Universe? A Biblical View of Aliens

Dr. Ray Bohlin provides a Christian view on the probability and meaning of life on other planets. From a biblical perspective, what would it mean to find evidence of life beyond this earth?

 *This article is also available in Spanish.*

Life on Mars?

There was great excitement in the media when a group of scientists from NASA announced they had found evidence of life on Mars. Their evidence, an alleged Martian meteorite, was vaulted to center stage, and everyone from CNN to *Nightline* ran special programs with interviews and video footage of the scientists and their prized specimen. President Clinton was so excited by the announcement that he praised the U.S. space program and took the opportunity to establish a bipartisan space summit headed up by Vice President Al Gore to study the future of U.S. space research. Aren't we already doing that?

Anyway, clearly this announcement took the country by storm. Some of the scientists were embarrassingly gushing about how significant these findings were. The media frenzy was prompted by the early release of an article from the journal *Science*, the premier scientific journal in the U.S. The article was due out the following week, but *Science* decided to release it early because it had leaked out.

Here's what the excitement was about. A group of scientists had studied a meteorite that had been found in the ice of Antarctica. Previously, it had been determined that this meteorite had originated on Mars by studying the gaseous content of glass-like components of the meteor. The gas composition matched very well the atmosphere of Mars. This conclusion seems reasonable.

So, they presumed they had a meteor from Mars. Next they looked for evidence of life on and in the crevices of the meteor. They found two types of molecules that can form as a result of life processes, carbonates and complex molecules called polyaromatic hydrocarbons or PAHs. They also found shapes in the rock that resembled those of known microfossils on Earth. Microfossils are fossils of one-celled organisms

which are rather tricky to interpret.

Well, what does this mean? Obviously, the NASA scientists felt the things just mentioned provided ample evidence to conclude that life once existed on Mars. However, the chemical signs could all be due to processes that have nothing to do with life, and the supposed microfossils are 100 times smaller than any such fossil found on Earth. Other groups that studied this same meteorite concluded that either the temperature of formation of the chemicals was far too high to allow life (over 700 degrees C) or that other chemical signals for life were absent. John Kerridge, a planetary scientist from the University of California at San Diego, said, "The conclusion is at best premature and more probably wrong." But listen to the concluding statement in the paper in *Science:*

> *Although there are alternative explanations for each of these phenomena taken individually, when they are considered collectively, particularly in view of their spatial association, we conclude that they are evidence for primitive life on Mars.{1}*

In plain English, there are reasonable non-life explanations for each of the evidences presented, but we just think that they mean there is life on Mars. The evidence ***is*** very equivocal and was challenged by many other scientists, but the media did not report that as fully. But maybe they are right! In fact, there is one simple explanation that is consistently ignored by media and scientists alike. If there really is, or has been, life on Mars, what could that possibly mean for evolution, and more importantly, does it somehow refute creation? We'll look at that next.

What Would Life on Mars Mean?

Because of the recent announcement of signs of life on Mars, many people were encouraged in their belief that we are not

alone in the universe. These signs are far from certain and probably wrong, but if it's true, what would these results mean to evolutionists? Moreover, is there any reason for Christians to fear confirmation of life on Mars?

Let us assume, then, for the moment that the evidence from this Martian meteorite is legitimate evidence for life on Mars—life that at some point in the past actually existed on Mars. What would it mean?

For evolutionists the evidence is perceived as confirmation that life actually arises from non-life by purely chemical processes. In addition, evolutionists draw the conclusion that life must be able to evolve very easily since it did so on two adjacent planets in the same solar system. Therefore, even though origin of life research is actually at a standstill, such a discovery seemingly confirms the notion that *some* chemical evolution scenario *must work*. I will address this assumption later.

On the other hand, some have stated that if there is life on Mars, creationism has been dealt a death blow. They rationalize that since (1) we now know that life can evolve just about anywhere, and (2) the Bible never speaks of life anywhere but on Earth, the Bible is, therefore, unreliable. Besides, they reason, why would God create life on a planet with no humans? However, since the Bible is absolutely silent on the subject of extra-terrestrial life, we can make no predictions about its possibility. God is certainly free to create life on planets other than Earth if He chooses.

Getting back to the evolutionists' glee at the possibility of life evolving on other planets, the real question is whether this is the proper conclusion if life is indeed found on Mars? The simple answer, inexplicably avoided by the media, is NO! The simplest answer to the possible discovery of life on Mars is that the so-called "Martian life" actually came from Earth!

Think about it this way. The meteorite that was found is supposed to have existed on Mars previously. How did it get to Earth? Well, it is hypothesized that a large meteorite crashed into Mars throwing up lots of debris into space, some of which finds its way to Earth and at least a few of which are found by Earthlings. If you are thinking with me, you now realize that the same scenario could have been played out on Earth.

Evolutionists suggest that the Earth was under heavy meteor bombardment until at least 3.8 billion years ago—about the time they say life appeared on Earth. Christian astronomer Hugh Ross states it this way:

> *Meteorites large enough to make a crater greater than 60 miles across will cause Earth rocks to escape Earth's gravity. Out of 1,000 such rocks ejected, 291 strike Venus, 20 go to Mercury, 17 hit Mars, 14 make it to Jupiter, and 1 goes all the way to Saturn. Traveling the distance with these rocks will be many varieties of Earth life.{2}*

Ross also documents that many forms of microscopic life are quite capable of surviving such a journey. All this is quite well known in the scientific community, but I have not seen it mentioned once in any public discussion. I believe the reason is that the possibility of life having evolved on Mars is too juicy to pass up.

The Improbability of Life Elsewhere in the Universe

I would like to address the amazing optimism of so many that the universe is teeming with life. No doubt this is fueled by the tremendous success of such science fiction works as *Star Wars* and *Star Trek* which eloquently present the reasonableness of a universe pregnant with intelligent life forms.

Inherent within this optimism is the evolutionary assumption

that if life evolved here, certainly we should not arrogantly suppose that life could not have evolved elsewhere in the universe. And if life in general exists in the universe, then, of course, there must be intelligent life out there as well.

This is the basic assumption of the SETI program, the Search for Extra-Terrestrial Intelligence. This is the program, now privately funded instead of federally funded, that searches space for radio waves emanating from another planet that would indicate the presence of intelligent life. But is such a hope realistic? Is there a justifiable reason for suspecting that planets suitable to life exist elsewhere in the universe?

Over the last two decades scientists have begun tabulating many characteristics of our universe, galaxy, solar system, and planet that appear to have been finely-tuned for life to exist. Christian astronomer and apologist, Dr. Hugh Ross documents all these characteristics in his book *Creator and the Cosmos,*{3} and is constantly updating them. In the book's third edition (2001), Ross documents 35 characteristics of the universe and 66 characteristics of our galaxy, solar system, and planet that are finely-tuned for life to exist.

Some examples include the size, temperature, and brightness of our sun, the size, chemical composition, and stable orbit of Earth. The fact that we have one moon and not none or two or three. The distance of the Earth from the sun, the tilt of the earth's axis, the speed of the earth's rotation, the time it takes Earth to orbit the sun. If any of these factors were different by even a few percent, the ability of Earth to sustain life would be severely compromised. Recently it has been noted that even the presence of Jupiter and Saturn serve to stabilize the orbit of Earth. Without these two large planets present exactly where they are, the Earth would be knocked out of its present near circular orbit into an elliptical one, causing higher temperature differences between seasons and subjecting Earth to greater meteor interference. Neither condition is hospitable to the continuing presence of

life.

Ross has further calculated the probabilities of all these factors coming together by natural processes alone to be 1 x 10^{-166}; that's a decimal point followed by 165 zeroes and then a one. A very liberal estimate of how many planets there may be, though we have only documented less than 100, is 10^{22} or 10 billion trillion planets, one for every star in the universe. Combining these two probabilities tells us that there are 10^{-144} planets in the entire universe that could support life. Obviously this is far less than one; therefore, by natural processes alone, we shouldn't even be here—let alone some kind of alien life form.

So unless God created life elsewhere, we are alone, and for the materialistic evolutionist, this is a frightening thought.

Problems with Chemical Evolution on Earth

The statistics given above mean that we are really alone in the universe and that there is no hope of finding intelligent civilizations as in the television program *Star Trek.* While it means there is no one out there to threaten our survival, there is also no one out there to save us from our own mistakes.

This observation highlights why I believe the scientific community and the media became so excited about the possibilities of life on Mars. Efforts to determine how life could have evolved from non-living matter have been so fraught with problems that it makes the possibility of life elsewhere extremely remote. But if it could be proved that life evolved elsewhere, then it would demonstrate that life springs up rather easily, and we just haven't found the right trick here on Earth to prove it. But this just leapfrogs the problem.

But is the evolution of life from non-living chemicals really

that impossible? The difficulties fall into three categories, the Chemical Problem, the Thermodynamic Problem, and the Informational Problem. These issues are presented comprehensively in a book by Thaxton, Bradley, and Olsen titled *The Mystery of Life's Origin*{4} and in a chapter in the edited volume by J. P. Moreland, *The Creation Hypothesis*.{5}

Chemical Problems are illustrated by the difficulty in synthesizing even the simplest building block molecules necessary for life from inorganic precursors. Amino acids, sugars, and the bases for the important nucleotide molecules that make up DNA and RNA were all thought to be easily synthesized in an early Earth atmosphere of ammonia, methane, water vapor, and hydrogen. But further experiments showed this scenario to be unrealistic. Ammonia and methane would have been short-lived in this atmosphere; the multiple energy sources available would have destroyed the necessary molecules and water would have broken apart into hydrogen and oxygen. The oxygen was scrupulously avoided in all prebiotic scenarios because it would have poisoned all the necessary reactions.

Thermodynamic Problems arise from the difficulty in assembling all these complex molecules that would have been floating around in some prebiotic soup into a highly organized and complex cell. To accomplish the task of achieving specified complexity in life's molecules such as DNA and proteins, the availability of raw energy for millions of years is not enough. All systems where specified complexity is produced from simple components requires an energy conversion mechanism to channel the energy in the right direction to accomplish the necessary work. Without photosynthesis, there is no such mechanism in the prebiotic Earth.

The Informational Problem shows that there is no way to account for the origin of the genetic code, which is a language, without intelligent input. Informational codes require intelligent preprogramming. No evolutionary mechanism can accomplish this. Life requires intelligence.

So you can see why evolutionists would get excited about the possibility of finding evolved life elsewhere. It's because life is seemingly impossible to evolve here. So, if it did happen elsewhere, maybe our experiments are just missing something.

Independence Day, The Movie

In the movie *Independence Day,* an alien battle force swoops down on Earth with the intention of destroying the human race, sucking the planet dry of all available resources and then moving on to some other unlucky civilization in the galaxy. But, those indomitable humans aided by good old American ingenuity outsmart those dull-witted aliens and Earth is saved. The story has been told many times, but perhaps never as well or never with such great special effects. The movie was a huge success.

But why are we continually fascinated by the possibility of alien cultures? The movie gave the clear impression that there must be great numbers of intelligent civilizations out there in the universe. This notion has become widely accepted in our culture.

Few recognize that the supposed existence of alien civilizations is based on evolutionary assumptions. The science fiction of *Star Trek* and the *Star Wars* begins with evolution. As I've stated earlier, evolutionists simply rationalize that since life evolved here with no outside interference, the universe must be pregnant with life. Astronomer Carl Sagan put it this way after he had reviewed the so-called success of early Earth chemical evolution experiments:

> *Nothing in such experiments is unique to the earth. The initial gases, and the energy sources, are common throughout the Cosmos. Chemical reactions like those in our laboratory vessels may be responsible for the organic matter in*

> *interstellar space and the amino acids found in meteorites. Some similar chemistry must have occurred on a billion other worlds in the Milky Way Galaxy. The molecules of life fill the Cosmos.{6}*

Sagan strongly suggests that the probabilities and chemistry of the universe dictate that life is ubiquitous in the galaxy. But as I stated earlier, the odds overwhelmingly dictate that our planet is the only one suitable for life in the universe. And the chemistry on Earth also indicates that life is extremely hard to come by. The probability of life simply based on chance occurrences is admitted by many evolutionists to be remote indeed. Many are now suggesting that life is inevitable because there are yet undiscovered laws of nature that automatically lead to complex life forms. In other words, the deck of cards is fixed. Listen to Nobel Laureate and biochemist, Christian de Duve:

> *We are being dealt thirteen spades not once but thousands of times in succession! This is utterly impossible, unless the deck is doctored. What this doctoring implies with respect to the assembly of the first cell is that most of the steps involved must have had a very high likelihood of taking place under the prevailing conditions. Make them even moderately improbable and the process must abort, however many times it is initiated, because of the very number of successive steps involved. In other words, contrary to Monod's affirmation, the universe was—and presumably still is—pregnant with life.{7}*

The only problem with de Duve's suggestion is that we know of no natural processes that will lead automatically to the complexity of life. Everything we know of life leads to the opposite conclusion. Life is not a product of chance or necessity. Life is a product of intelligence.

Without Divine interference we are alone in the universe and

without Christ we are—and should be—terrified. The gospel is as relevant as ever.

Notes

1. *Science,* 16 August 1996, 273:924-30.
2. *Creator and the Cosmos,* NavPress, 2001, p. 210.
3. Ibid., pp. 145-199.
4. Lewis and Stanley, 1984.
5. InterVarsity Press, 1994, pp. 173-210.
6. *Cosmos,* Random House, 1980, p. 40.
7. *Vital Dust*, Basic Books, 1995, p. 9.

UFOs and Alien Beings – A Christian Worldview Response

Michael Gleghorn addresses issues related to reports of UFO and alien sightings. He considers the various possible causes before closing with a biblical, Christian perspective pointing out these reports are often presented like false gospels. At the end of the day, even an alien cannot take away from the importance of faith in Christ.

 *This article is also available in Spanish.*

A Tale of Two Hypotheses

It seems that almost everyone is interested in reports of UFOs and alien encounters. But how should these reports be understood? Where do these "unidentified flying objects" come from and what are they? Are intelligent beings visiting us

from another planet or some other dimension? Or are UFO reports merely a collection of hoaxes, hallucinations, and misidentified phenomena? Can all UFO reports be adequately explained, or are there some that seem to defy all natural explanations? These are just a few of the questions we want to consider in this article.

First, however, it's essential to note that most UFOs (unidentified flying objects) become IFOs (identified flying objects). John Spencer, a British UFO researcher, estimates that as many as 95 percent of received UFO reports "are turned into IFOs and explained satisfactorily."{1} For example, the report might be found to have been a clever prank or to have some natural explanation. Planets, comets, military aircraft, and rockets (among many others) have all been mistaken for UFOs. But even if 99 percent of UFO reports could be satisfactorily explained, there would still be thousands of cases that stubbornly resist all natural explanations. These are called *residual* UFO reports.

If residual UFOs are not hoaxes, hallucinations, or some natural or man-made phenomena, then what are they? Most UFO researchers hold either to the extraterrestrial hypothesis or the interdimensional hypothesis. The extraterrestrial hypothesis holds that technologically advanced, interplanetary space travelers are indeed visiting our planet from somewhere else in the cosmos. Stanton Friedman, a representative of this view, states clearly, "The evidence is overwhelming that some UFOs are alien spacecraft."{2}

The interdimensional hypothesis agrees "that some UFOs are real phenomena that may exhibit physical . . . effects."{3} However, unlike the extraterrestrial hypothesis, this view does not believe that UFOs and alien beings come from somewhere else in our physical universe. So where *do* they come from? Some suggest that they come from some other universe of space and time. But others believe that they come from some other dimension entirely, perhaps a spiritual realm.{4}

How might we tell which, if either, of these two hypotheses is correct? Astronomer and Christian apologist Dr. Hugh Ross suggests that we employ the scientific approach known as the "process of elimination." He writes, "Mechanics use it to find out why the car won't start. Doctors use it to find out why the stomach hurts. Detectives use it to find out who stole the cash. This process can also be used to discover what could, or could not, possibly give rise to UFO phenomena."{5}

So what happens if we apply this process to the extraterrestrial hypothesis? Although quite popular here in America, there are some serious scientific objections to this viewpoint.

The Extraterrestrial Hypothesis

In the first place, it is highly improbable that there is another planet in our cosmos capable of supporting physical life. Dr. Ross has calculated the probability of such a planet existing by natural processes alone as less than 1 in 10^{174}. You actually have "a much higher probability of being killed in the next second by a failure in the second law of thermodynamics (about one chance in 10^{80})."{6} Thus, apart from the supernatural creation of another suitable place for life, our planet is almost certainly unique in its capacity to support complex biological organisms. (See the Probe article "Are We Alone in the Universe?") This alone makes the extraterrestrial hypothesis extremely improbable. But it gets even worse!

Suppose (against all statistical probability) that there *is* a planet with intelligent life elsewhere in the universe. What is the likelihood that such creatures are visiting our planet? And what sort of difficulties would they face in doing so?

Probably the greatest challenge to interstellar space travel is simply the immense size of the universe. One group of

scientists, assuming that any alien spacecraft would likely maintain communication with either the home planet or with other members of their traveling party, “scanned all 202 of the roughly solar-type stars within 155 light-years of Earth. Not one intelligible signal was detected anywhere within the vicinity of these stars.”{7} This implies that, at a minimum, E.T. would have to travel 155 light-years just to reach earth. Unfortunately, numerous galactic hazards would prevent traveling here in a straight line. Avoiding these deadly hazards would increase the minimum travel distance to approximately 230 light-years.{8}

Dr. Ross estimates that “any reasonably-sized spacecraft transporting intelligent physical beings can travel at velocities no greater than about 1 percent” of light-speed.{9} Although this is nearly 7 million miles per hour, it would still take about twenty-three thousand years to travel the 230 light-years to earth! Of course, a lot can go wrong in twenty-three thousand years. The aliens might run out of food or fuel. Their spacecraft might be damaged beyond repair by space debris. They might be destroyed by a contagious epidemic. The mind reels at the overwhelming improbability of successfully completing such a multi-generational mission.

In light of these facts, it doesn’t appear that the extraterrestrial hypothesis can reasonably survive the process of elimination. Does the interdimensional hypothesis fare any better? A growing number of serious UFO researchers believe it can. Let’s take a look.

The Interdimensional Hypothesis

The interdimensional hypothesis holds that residual UFOs “enter the physical dimensions of the universe from ‘outside’ the four familiar dimensions of length, height, width, and time.”{10} Where do they come from? Some believe that they come from another physical universe of space and time. But this does not seem possible. General relativity forbids “the

space-time dimensions of any other hypothetically existing universe" from overlapping with our own.{11} For this reason, many researchers believe that residual UFOs must come from some other dimension entirely, perhaps even a spiritual realm.

What evidence can be offered for such a bold hypothesis? Many point to the strange behavior of residual UFOs themselves. Hugh Ross contends that residual UFOs "must be nonphysical because they disobey firmly established physical laws."{12} Among the many examples that he offers in support of this statement, consider the following:{13}

1. Residual UFOs generate no sonic booms when they break the sound barrier, nor do they show any evidence of meeting with air resistance.
2. They make impossibly sharp turns and sudden stops.
3. They send no detectable electromagnetic signals.

For example, "relative to the number of potential observers, ten times as many sightings occur at 3:00 A.M (a time when few people are out) as at either 6:00 A.M. or 8:00 P.M. (times when many people are outside in the dark)."{14} If residual UFOs were simply random events, then we would expect more sightings when there are more potential observers. The fact that these events are nonrandom may suggest some sort of intelligence behind them. This is further supported by the fact that some people are more likely to see a residual UFO than others. Numerous researchers have observed a correlation between an individual's involvement with the occult and their likelihood of having a residual UFO encounter. This may also suggest some kind of intelligence behind these phenomena.

Finally, residual UFOs not only appear to be nonphysical and intelligent, they sometimes seem malevolent as well. Many of those claiming to have had a residual UFO encounter have suffered emotional, psychological, and/or physical injury. A few people have even died after such encounters. In light of these strange characteristics, many researchers have reached

similar conclusions about the possible source of these phenomena.

The Occult Connection

Many serious UFO investigators have noticed a striking similarity between some of the aliens described in UFO reports and the demonic spirits described in the Bible. Although it may not be possible to know whether some aliens are actually demons (and I certainly do not claim to know this myself), the well-documented connection between UFO phenomena and the occult cannot be denied.

In 1969 Lynn Catoe served as the senior bibliographer of a publication on UFOs researched by the Library of Congress for the U.S. Air Force Office of Scientific Research. After a two-year investigation, in which she surveyed thousands of documents, she drew explicit attention to the link between UFOs and the occult. She wrote, "A large part of the available UFO literature . . . deals with subjects like mental telepathy, automatic writing and invisible entities . . . poltergeist manifestations and 'possession.' Many . . . UFO reports . . . recount alleged incidents that are strikingly similar to demonic possession and psychic phenomena."{15} Veteran UFO researcher John Keel agrees. After surveying the literature on demonology he wrote, "The manifestations and occurrences described in this imposing literature are similar if not entirely identical to the UFO phenomenon itself."{16} The bizarre claim of alien abduction may lend some credibility to these remarks.

Many (though not all) of those who report an abduction experience describe the aliens as deceptive and hostile. Whitley Strieber, whose occult involvement preceded the writing of both *Communion* and *Transformation*, at times explicitly referred to his alien visitors as "demons." For example, in *Transformation* he described his emotional reaction to the aliens with these words: "I felt an absolutely

indescribable sense of menace. It was hell on earth to be there, and yet I couldn't move, couldn't cry out, couldn't get away . . . Whatever was there seemed so monstrously ugly, so filthy and dark and sinister. Of course they were demons. They had to be. And they were here and I couldn't get away."{17}

Nevertheless, in spite of the fact that abduction is often physically and emotionally painful, Mr. Strieber tends to believe that its purpose is ultimately benevolent. When integrated correctly, the abduction experience can provide a catalyst for spiritual growth and development. Still, he candidly admits that he is really not sure precisely *who* or *what* these beings actually are, and he continues to warn that many of them are indeed hostile and malevolent.{18} In light of this, one can't help wondering about the experiences related in Mr. Strieber's books. If his encounters with aliens were not merely hallucinatory, or due to some mental disorder, isn't it at least possible that his sinister visitors really were demons? As noted above, many UFO investigators would indeed consider this (or something very much like it) a genuine possibility.

Another Gospel?

In his letter to the Galatians the Apostle Paul delivered a stirring indictment against every gospel but that of Christ. "But even though we, or an angel from heaven, should preach to you a gospel contrary to that which we have preached to you, let him be accursed. As we have said before, so I say again now, if any man is preaching to you a gospel contrary to that which you received, let him be accursed" (1:8-9). Evidently, the purity of the gospel was deeply important to Paul.

In today's pluralistic society a variety of gospels are being preached. And among the great throng of voices clamoring for our attention are many UFO cults. Since the 1950s a number of these cults have arisen, often around a charismatic leader who claims to be in regular contact with otherworldly beings.

Interestingly, unlike the abduction phenomenon, most contactees do not claim to have ever seen the aliens with whom they communicate. Rather, they claim that the aliens communicate with them psychically or telepathically. The contactee is simply a channel, or medium, through whom the aliens communicate their messages to humankind. This method of contact is rather intriguing for those who favor the interdimensional hypothesis. As John Saliba observes, "Many contactees . . . write about UFOs and space beings as if these were psychic phenomena, belonging to a different time/space dimension that lies beyond the scope . . . of modern science."{19}

So what sort of messages do the aliens allegedly communicate to contactees? Often they want to help guide us to the next stage of our spiritual evolution or give us advice that will help us avoid some global catastrophe. Strangely, however, many of them also want to deny or distort traditional doctrines of biblical Christianity. Oftentimes these denials and distortions concern the doctrine of Christ. For example, the Aetherius Society "views Jesus Christ as an advanced alien being . . . who communicates through a channel and travels to Earth in a flying saucer to protect Earth from evil forces."{20} As a general rule, "UFO religions . . . reject orthodox Christology (Jesus' identity as both God and man) and thus reject Jesus Christ as the . . . Creator and . . . Savior of humankind."{21}

A deficient Christology, combined with an acceptance of biblically forbidden occult practices like mediumistic channeling (see Lev. 19:31; Deut. 18:10-12; etc.), make many UFO cults spiritually dangerous. By preaching a false gospel, they have (perhaps unwittingly) placed themselves under a divine curse. By embracing occult practices, they have opened the door to potential demonic attack and deception. Nevertheless, there is hope for those involved with these cults. There is even hope for those tormented by hostile

beings claiming to be aliens. The Bible tells us that through His work on the cross, Jesus disarmed the demonic rulers and authorities (Col. 2:15). What's more, for those who flee to Him for refuge, He makes available the "full armor of God," that they might "stand firm against the schemes of the devil" (Eph. 6:11). Regardless of *who* or *what* these alien beings might be, no one need live in fear of them. If Jesus has triumphed over the realm of evil demonic spirits, then certainly no alien can stand against Him. Let those who live in fear turn to Jesus, for He offers rest to all who are weary and heavy-laden (Matt. 11:28).

Notes

1. John Spencer, ed., *The UFO Encyclopedia* (New York: Avon Books, 1991), s.v. "identified flying objects (IFOs)," cited in Hugh Ross, Kenneth Samples, and Mark Clark, *Lights in the Sky & Little Green Men* (Colorado Springs, Colorado: NavPress, 2002), 25.
2. Jerome Clark, *The UFO Encyclopedia,* 2d ed., vol. 1 (Detroit: Omnigraphics, 1998), s.v. "Friedman, Stanton Terry," cited in Ross, et al., *Lights in the Sky,* 31.
3. Ross, et al., 32.
4. Ibid., 109.
5. Ibid., 34.
6. Ibid., 39.
7. Ibid., 57.
8. Ibid.
9. Ibid., 59.
10. Ibid., 109.
11. Ibid.
12. Ibid., 69.
13. Ibid., 69-70.
14. Ibid., 116.
15. Lynn Catoe, *UFOs and Related Subjects: An Annotated Bibliography* (Washington D.C.: U.S. Government Printing Office, 1969), p. iv (prepared under Air Force Office of

Scientific Research Project Order 67-0002 and 68-0003), cited in John Ankerberg and John Weldon, *The Facts on UFO's and Other Supernatural Phenomena* (Eugene, Oregon: Harvest House Publishers, 1992), 17.
16. John A. Keel, *UFOs: Operation Trojan Horse* (New York: Putnam's, 1970), p. 215; cited in Ankerberg and Weldon, *The Facts on UFO's*, 18.
17. Whitley Strieber, *Transformation: The Breakthrough* (New York: Morrow, 1988), p. 181; cited in Ankerberg and Weldon, *The Facts on UFO's,* 23.
18. For example, his recent online journal entry, "How We Can Protect Ourselves," (Aug. 28, 2003) at www.unknowncountry.com/journal/. 19. John A. Saliba, "Religious Dimensions of UFO Phenomena," in *The Gods Have Landed,* ed. James R. Lewis (New York: State University of New York Press, 1995), p. 25; cited in Ross, et al., *Lights in the Sky,* 145.
20. Ross, et al., *Lights in the Sky,* 150.
21. Ibid., 164.

God's Amazing Creatures

Dr. Ray Bohlin marvels at God's creativity in making three magnificent creatures: the mantis shrimp, the woodpecker, and the monarch butterfly with its amazing migration story.

The Woodpecker Tongue

In this article I highlight several of God's amazing creatures: the woodpecker, the mantis shrimp, and the migration of the monarch butterfly from North America to the Central Highlands of Mexico.

So, what about woodpeckers?

They're rather strange birds; they bang their heads into trees! No doubt you've heard the rhythmic drumming of a woodpecker in your yard or in the forest. They come in many shapes and sizes. But what they all have in common is some form of pecking. You may not know that this behavior is not just about searching for insects, but most woodpeckers do not sing like other birds; instead, drumming is their form of communication.

Usually the pecking behavior is used to uncover small tunnels containing insects or larvae. When the tunnel is exposed, the woodpecker inserts its tongue and searches up and down the tunnel.

The woodpecker tongue can extend up to three times the length of its beak! The tongue, from the tip at the end of the beak, does not attach to the lower jaw as most bird tongues do, but it makes a loop into the throat, comes up around the back of the skull, and sometimes extends into the right nostril and

into the upper beak.

The tongue lengthens by reattaching between the eyes, the loop in the throat flattens out, and out comes the tongue—far beyond the tip of the beak. Now, evolving a long woodpecker tongue poses a unique problem. Two things must be accomplished at once. The tongue must get longer and at the same time a retraction mechanism must be accomplished at the same time. These two processes need to be coordinated for everything to be optimized. Evolution can't accomplish that.

The tongue usually has bristles at the tip and a sticky saliva so insects can't wiggle off. However, for the woodpecker to chisel into tree bark and the wood of the tree, it needs to generate some real force. Next I'll discuss the rapidity of pecking and how the woodpecker survives the shock of its pecking.

The Woodpecker's Ability to Absorb Shock

The woodpecker has a long tongue, but its pecking also generates some real force and it needs to be able to deal with that without getting a severe headache or even a concussion. Suffering like that would not allow woodpeckers to survive very well. But God has designed ways for the woodpecker to redistribute the shock, and the structure of its skull and brain aid in that function.

Surrounding the human brain is a layer of cerebrospinal fluid. When the brain receives a hard blow, it pushes that fluid aside, and the brain is bruised when it meets the skull. This is a concussion. God designed the woodpecker to avoid this kind of shock, first because the brain is smaller, and there is not much fluid between the brain and the skull.

The woodpecker has a sort of shock absorber of muscle and cartilage at the back of the bill and in front of the skull. Also, the lower part of the bill is slightly longer than the

upper part of the bill, and this hits the tree first. This allows some of the shock to bypass the skull and connect with the spinal cord, and then the shock travels down the spinal cord into the stiff tail feathers placed against the tree—and the shock flows back into the tree with little effect on the woodpecker.

The woodpecker can drum up to twenty times per second. God created the neck muscles to be strong and able to recover quickly to maintain that kind of speed.

Lastly, pecking wood results in wood chips spraying out from the tree, which could damage the woodpecker's eye. But the woodpecker has a third eyelid called a nictitating membrane that shields the eye, and just before impact, the regular eyelids close. Thus, no chips in the eye. God did that.

The Mantis Shrimp Packs a Punch

You likely have never heard of the mantis shrimp. This fascinating crustacean is neither a mantis nor a shrimp. Technically, they are from the family of stomatopods.

They look somewhat like shrimp, and the club variety has an appearance like a praying mantis. I'm interested in the club variety of the mantis shrimp. They use this club to strike a snail or a crab to break the snail open or to separate a limb from a crab. They can generate a tremendous amount of force with this club. The acceleration is about the same as a 22-caliber bullet.

I found a video from Maya De Vries from the Scripps Oceanographic Institute on a cruise ship. She shows a video of the mantis shrimp strike on a snail. When the club hits a snail, you see a flash of light and heat that is followed by a similar flash but slower. The linear velocity of the strike is 14 to 23 meters per second. The heat generated is the temperature of the surface of the sun. These flashes of light are caused by cavitation bubbles. The club moves so fast that it creates negative pressure, causing the cavitation bubble. When the bubble implodes, that releases light and heat.

You can't keep a mantis shrimp in an ordinary aquarium. You need reinforced glass for the walls of the aquarium, otherwise the mantis shrimp can break the glass. I found another video of a fisherman who pulls in a mantis shrimp, and the club smashes into his new booties as he calls them, pierces through and gives him a bleeding cut.

The Mantis Shrimp's Eyesight

Another remarkable feature of the mantis shrimp is its eyes. Like most animals, they have two eye sockets. However, there are three pupils in each eye. With our two eyes with one pupil in each, we have binocular vision that gives us depth perception. Mantis shrimp have six pupils, so they have hexnocular vision.

We have little idea of what this looks like, but we do know that each pupil can be used independently of the others. On top of this, its compound eyes, like that of a fly or a bee, are composed roughly 10,000 photoreceptive units. These are capable of instantly processing information, instead of needing to send the information to the brain first.{1}

A second aspect of mantis shrimp vision is their color perception. As humans we have three color receptors in our eyes: red, green and blue. These three colors mixed in a multitude of ways allow us to see the colors of the rainbow and more. The mantis shrimp, however, has twelve color receptors, from ultraviolet to infrared. This means it can see colors we can't even imagine! Again, what this looks like to the mantis shrimp we really don't know, but that's just amazing.

One last feature of their vision is their ability to see polarized light. They use this ability as a secret code. They have a pair of appendages that produce circular polarized light. Their eyes are the only eyes we know of that can detect this kind of light. The mantis shrimp is very territorial, and they use this ability to signal that "this hole is occupied." Engineers are currently studying the mantis shrimp's vision to develop the next generation of imaging technology.{2}

God gave this small stomatopod the fastest attack in the animal kingdom and also the most unique eyesight.

The Monarch Butterfly's Migration

You've probably seen a monarch butterfly with vibrant orange and black coloration. When in North America, the monarchs feed and lay their eggs on milkweed plants. If you are able to buy a few milkweed plants in the spring, you can enjoy the butterflies, their caterpillars, and the chrysalis.

Before we get to the monarch's migration, let's talk about

what happens in the chrysalis. Basically, the caterpillar melts down into a soup. There are a few remaining cells that take the organic soup and construct a completely new body plan, the butterfly. The caterpillar cannot reproduce, but the butterfly can. The caterpillar essentially dies in the chrysalis. For caterpillar death to make any sense, there must already be in place a plan to construct a reproducing butterfly. But evolution has no foresight. It depends on randomly produced mutations for nature to select from, going forward. The transformation inside a chrysalis is a genuine evolutionary mystery.

The eastern monarch butterflies have been known for centuries to migrate south in the fall. But where did they go? It wasn't until 1975 that in a fir forest, 10,000 feet above sea level about 70 miles west of Mexico City, the monarchs were found. Literally millions of monarchs flutter among the trees in a beautiful cascade of orange and black. The monarchs make the journey with instinct. In North America, once the monarchs arrive in the spring, the multiple generations that are hatched only live for a few weeks. None of the monarchs who travel south have made the trip before. The generation that does make the trip south can live for up to nine months. They are called the Methusaleh Generation. These are the same monarchs that migrate north in the spring. And they have the same DNA as the monarchs that only live a few weeks!

I hope you enjoyed my discussions of woodpeckers, mantis shrimp and butterflies. It's a joy to bring it to you.

Notes

1. https://live.stemfellowship.org/mantis-shrimp-20-20-20-20-20-20-vision/
2. https://nature.sciencearray.com/mantis-shrimp-vision-hyperspectral-color-technology

---

Inconvenient Truth 2.0

Kerby Anderson revisits Al Gore's claims of environmental alarmism in the 20-year-old film An Inconvenient Truth.

Next month is the 20th anniversary of Al Gore's film, *An Inconvenient Truth,* which hit theaters in May 2006. Bjorn Lomborg reminds us that "the film, with its dramatic visuals and dire warnings, transformed the issue of climate change from a niche ecological concern into a front-page crisis."

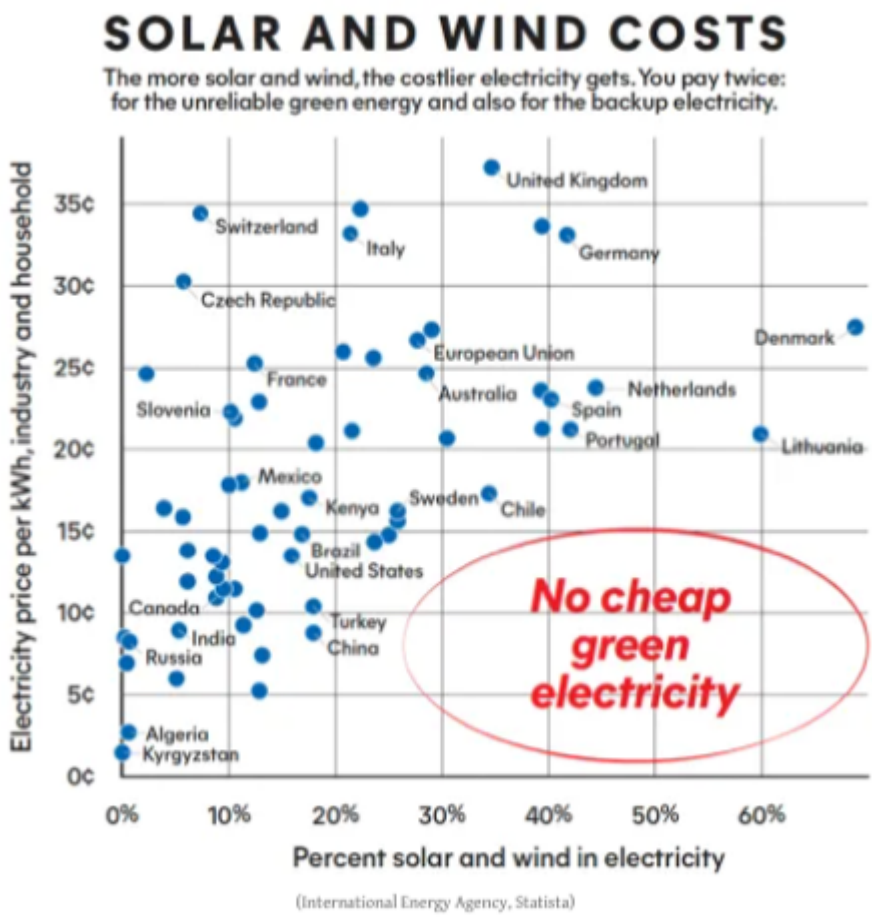
The film's predictions about escalating catastrophes did not materialize, and its policy prescriptions failed. He also reminds us that approximately $16 trillion has been spent in pursuit of its vision, and yet it has delivered few benefits.

The film painted a bleak picture of the future with climate change driving ever-worsening disasters. For example, the film warned of polar bears vanishing, using computer-generated images of them drowning because of melting ice. But polar bear populations have doubled. The film predicted a significant increase in hurricanes. Global data from satellites have shown a slight decline.

The proposed policies cost trillions and had little impact. We were told that wind and solar were the cheap solutions to climate change. All we had to do was swiftly implement these technologies to save the planet.

Instead, nations have found that as they ramp up their share

of such renewables, electricity prices soar. As his chart shows, there is no cheap green electricity.



Perhaps the worse fallout from the film has been climate hysteria that encourages activists to glue themselves to roads and to vandalize paintings. Bjorn Lomborg believes climate change is a challenge, but not a catastrophe. Twenty years later, the biggest catastrophe is the film.

This post was first published at pointofview.net/viewpoints/inconvenient-truth-2-0/ on April 17, 2026.

Transhumanism and Artificial Intelligence

Kerby Anderson provides an overview of transhumanism and AI, considering its impact on us and our families.

Over the last few years, we have heard more pundits and futurists talk about transhumanism. What is this philosophy? How will it affect our families and us? How should a Christian think about transhumanism?

Transhumanism is an intellectual and cultural movement that seeks to transform the human condition. The leaders of this movement want to use the developing technologies to eliminate aging and enhance human potential (physical, psychological, and mental).

Nick Bostrom explains that transhumanism views human nature as a "work-in-progress, a half-baked beginning that we can learn to remold in desirable ways." He goes on to explain the transhumanist vision: "Transhumanists hope that by responsible use of science, technology, and other rational means we shall eventually manage to become posthumans, beings with vastly greater capacities than present human beings have."{1}

Two primary ways they want to do this is through genetic engineering and artificial intelligence. They want to genetically create "the new man," and they want to use technology to merge humans with machines.

The genetic part of this equation claims that we can use gene splicing and other genetic modification techniques so that genes can be easily transferred between species. But we should be concerned about geneticists who want to create a superhuman race. Leon Kass warned that "Engineering the engineer seems to differ in kind from engineering the engine."{2}

The other part of the equation concerns technology. The leaders of transhumanism believe we are on the cusp of a technological threshold in both artificial intelligence and human-machine technology.

The "humanism" in transhumanism reminds us that this is a philosophy rooted in Enlightenment humanism. But it is different. Whereas the goal of humanism was to develop the ideal human, the goal of transhumanism is to transcend what we have traditionally considered human.

The Transhumanist Declaration provides eight key points to describe what the signers believe should be the future of humans.{3} It begins with this claim: "Humanity stands to be profoundly affected by science and technology in the future. We envision the possibility of broadening human potential by overcoming aging, cognitive shortcomings, involuntary suffering, and our confinement to planet Earth."

Two Principles of Transhumanism

Now I would like to look at the two foundational principles of transhumanism.

The first principle is "metaman." Futurists predict that our current human condition will evolve into being a cyborg (short for *cybernetic organism*). Our bodies will be joined to machines as we "evolve" through technological progress.

Transhumanists believe we will have immense knowledge and information because of the rapid advances in artificial intelligence and computing power. These advances will eventually exceed human intelligence. Meanwhile, advances in genetic engineering will allow scientists to modify the human body to keep pace with these technological advances.

This is the two-fold hope of the transhumanists: artificial intelligence and genetic engineering. One represents biological change through mixing and matching genes. The other

presents the merging of human intelligence with artificial intelligence.

In fact, the hope is to create a superorganism through the transference of genes between species. This may even eradicate the differences between species. One scientist even suggested that tampering with the genetic codes of all plants and animals on this planet would cause the "definition of human beings to drift."{4} Humans would merge with the rest of nature, thereby creating a planetary superorganism he calls "Metaman."

In essence, transhumanists would like to erase any distinction between human, other forms in nature, and machines. Humans would now control the future direction of evolution and merge all forms of life and non-life together in one enormous superorganism.

The second principle is "the singularity." Transhumanists wait for the arrival of a technological threshold that will be achieved through artificial intelligence. Futurists predict that sometime in the middle of this century, we will achieve what transhumanists call "the singularity."{5} The current distinction between humanity and nature and machine will fade and there will no longer be any barriers between the natural world and artificial world.

This utopian view assumes that humans will be able to transcend the limitations of our biological bodies and brains. There will no longer be any distinction between humans and machines. And this, say the transhumanists, will allow humanity to no longer be resigned to death as the end. All of this, they predict, will usher in a technological millennium.

History of Artificial Intelligence

The term artificial intelligence was coined in 1956 by the American computer scientist John McCarthy. He defines it as

“getting a computer to do things which, when done by people, are said to involve intelligence.” Unfortunately, there is no standard definition of what constitutes AI. Part of the problem is the lack of agreement on what constitutes intelligence and how it relates to machines.

McCarthy proposes that “Intelligence is the computational part of the ability to achieve goals in the world. Varying kinds and degrees of intelligence occur in people, many animals, and some machines.”{6} This would include such capabilities as logic, reasoning, conceptualization, self-awareness, learning, emotional knowledge, planning, creativity, abstract thinking, and problem solving.

Researchers have for decades hoped to build machines that could do anything the human brain could do. Progress was slow for many decades but has accelerated in the last few years. A significant breakthrough occurred in 2012, when an idea called the neural network shifted the entire field. This is a mathematical system that learns skills by finding statistical patterns in enormous amounts of data.

The next big step came around 2018 with large language models. Companies such as Google, Microsoft, and OpenAI began building neural networks trained on vast amounts of text including digital books, academic papers, and Wikipedia articles. Surprisingly, these systems learned to write unique prose and computer code and to carry on sophisticated conversations. This breakthrough has been called “generative AI.”

These AI algorithms are based on intricate webs of neural networks and allow for what is considered “deep learning.” These advanced AI systems collect huge amounts of data and can correct mistakes and even anticipate future problems.

The benefits are significant. Factory automation, self-driving cars, efficient use of resources, correlating massive amounts of data, and fewer errors in medical diagnoses are just a few

of the many ways in which AI will improve our lives in the 21st century.

Unfortunately, AI poses dangers to us.

Dangers of Artificial Intelligence

Although artificial intelligence offers some significant benefits, it also poses many dangers. The authors of the open letter on AI warn that human beings are not ready for a powerful AI under present conditions or even in the foreseeable future. What happens after AI becomes smarter than humans? That is a question that bothered Eliezer Yudkowsky. In his opinion piece for *Time* magazine, he argued that "We Need to Shut It All Down."{7}

He warned that "Many researchers steeped in these issues, including myself, expect that the most likely result of building a superhumanly smart AI, under anything remotely like the current circumstances, is that literally everyone on Earth will die." He doesn't think this is merely a possibility but believes it is a virtual certainty.

He uses this illustration to drive home his point: "To visualize a hostile superhuman AI, don't imagine a lifeless book-smart thinker dwelling inside the internet and sending ill-intentioned emails. Visualize an entire alien civilization, thinking at millions of times human speeds, initially confined to computers—in a world of creatures that are, from its perspective, very stupid and very slow."

Bill Gates understands both the benefits and dangers of AI. He explains that the "development of AI is as fundamental as the creation of the microprocessor, the personal computer, the Internet, and the mobile phone." While these changes in how we work, learn, and communicate are good, there is also "the possibility that AIs will run out of control."{8}

He asks, "Could a machine decide that humans are a threat,

conclude that its interests are different from ours, or simply stop caring about us?" He recognizes that "superintelligent AIs are in our future" and that they "will be able to do everything that a human brain can, but without any practical limits on the size of its memory or the speed at which it operates." However, these "strong AIs" will "probably be able to establish their own goals." Those would likely conflict with our best interests.

Notice the number of dystopian movies where the machines have taken over. That would include movies like *2001: A Space Odyssey*, *Avengers: Age of Ultron*, *I, Robot*, the *Matrix* series, and the *Terminator* series. That is why many people fear how AI will be used in the future.

Biblical Perspective

How should Christians respond to transhumanism? We should begin by looking at the philosophical foundation of this movement. It begins with a belief that there is no God and we are responsible for our own destiny. It also is based upon an evolutionary foundation that assumes that we are the product of millions of years of chance process.

The leaders of transhumanism see genetic engineering as a tool to be used to speed up the process of evolution. We can use genetics to enhance and improve the human race. If we believe that humans are merely the product of the undirected force of evolution, then certainly intelligent scientists can "improve on nature."

The evolutionary argument goes like this. Humans die due to some technological glitch (e.g., heart stops beating). Therefore, "Every technical problem has a technical solution. We don't need to wait for the Second Coming in which to overcome death. A couple of geeks in a lab can do it. If traditionally death was the specialty of priests and theologians, now the engineers are taking over."{9}

The leaders of transhumanism believe we should use technology to improve the human race so that we are perfect and immortal. In many ways, this technological imperative harkens back to the Tower of Babel (Genesis 11). Instead, we should use technology wisely as we exercise dominion over the world (Genesis 1:28).

Here are a few biblical principles. First, we begin with the reality that each human being in created in God's image (Genesis 1:26-27, Psalm 139:13-16, Isaiah 43:6-7, Jeremiah 1:5, Ephesians 4:24). We have been given dominion and stewardship over the creation (Genesis 1:28, Colossians 1:16) and should reject any form of technology that would usurp or subvert that stewardship responsibility.

Second, humans are created as moral agents. Computer technology can aid us in making moral decisions because of its powerful ability to process data. But we can never cede our moral responsibility to those same computers. God will hold us responsible for the moral or immoral decisions we make (Roman 2:6-8, Galatians 5:19-21, 2 Peter 1:5-8). We should never give computers that authority.

We should reject the vision of transhumanism that looks forward to the day in which man and machine become one in the singularity. We must reject the idea that this is the next step in human evolution. We should reject the worship of technology and reject the idea that AI will make us more human. And we should reject the false utopian vision of a world when machines are given co-equal value to humans created in the image of God (Genesis 1:26-27).

Notes

1. Nick Bostrom, "Transhumanist Values," *Ethical Issues for the Twenty-First Century* (2005): 3-14.
2. Kass, Leon. "The New Biology: What Price Relieving Man's Estate?" *Science*, 19 November 1971, 779.
3. Transhumanism Declaration,

www.humanityplus.org/the-transhumanist-declaration.
4. Gregory Stock, *Metaman: The Merging of Humans and Machines Into a Global Superorganism*, NY: Simon and Schuster, 165.
5. Ray Kurtzweil, *The Singularity Is Near*, NY: Penguin, 2005.
6. John McCarthy, "What is AI/Basic Questions," jmc.stanford.edu/artificial-intelligence/what-is-ai/index.html
7. Eliezer Yudkowsky, "Pausing AI Developments Isn't Enough. We Need to Shut it All Down," *Time*, March 29, 2023.
8. Bill Gates, "The Age of AI has Begun," March 21, 2023, www.gatesnotes.com/The-Age-of-AI-Has-Begun.
9. Yuval Noah Harari, *Homo Deus: A Brief History of Tomorrow*, London: Penguin, 2016, 23.

For Further Reading

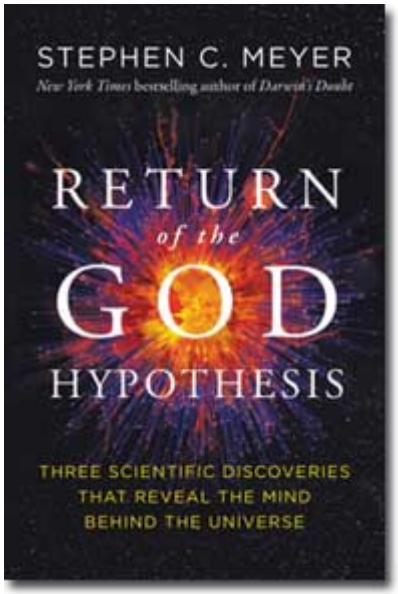
Kerby Anderson, *Christian Ethics in Plain Language*, Nashville, TN: Thomas Nelson, 2005, chapter 20.
Kerby Anderson, *Technology and Social Trends* Cambridge, OH: Christian Publishers, 2016, chapter 3.
Jacob Shatzer, *Transhumanism and the Image of God* Downers Grove, IL: IVP Press, 2019.
Lawrence Terlizzese, *Into the Void: The Coming Transhuman Transformation*, Cambridge, OH: Christian Publishers, 2016.

'Return of the God Hypothesis' for Regular People

Dr. Ray Bohlin provides an overview of Stephen Meyer's book Return of the God Hypothesis*, looking at how recent scientific*

discoveries provide evidence for an intelligent creator.

Was There a God Hypothesis Prior to Scientific Materialism of Today?



In this article I give an overview of Stephen Meyer's ***Return of The God Hypothesis: Three Scientific Discoveries that Reveal the Mind Behind the Universe*** {1}. The three discoveries are first, the discovery in the 20th century of the Big Bang Model for the origin of the universe, second, the continuing discovery of the extreme fine-tuning of a universe that is friendly toward life, and third, the grand amount of genetic and cellular information needed for the origin of the first life and the Cambrian Explosion, where nearly all animal phyla suddenly appear with no ancestors.

But we need to cover a little history first. Meyer's title is "Return of the God Hypothesis." This implies that there was previously an accepted "God Hypothesis" in science. Then it was lost, and the time and evidence are right for that God Hypothesis to return. Early, Meyer quotes Richard Dawkins, "The universe we observe has precisely the properties we should expect if there is, at bottom, no design, no purpose, no evil, no good, nothing but blind pitiless indifference."{2} So according to Dawkins, science has shown God to be superfluous.

This has been the position of most scientists since the late 19th century, when two authors detailed a long-standing warfare between science and religion. Most of the scientific community followed along to the present day.

But Meyer goes on to document that most if not all historians of science today agree that the Christian worldview greatly influenced, some say was even necessary for, the rise of modern science. Three key Christian concepts were, first, God's ability to choose what kind of universe He wanted to create. That meant that we can't just reason what nature *should* be like, we had to *discover* it. Second, nature is intelligible. Humans, being created in the image of God, could discover how nature operates (Romans 1:18-20). And last, human fallibility. Humans are sinful; therefore, one man's conclusions about the operation of nature must be subject to review of other scientists to ensure they are accurate. Christianity is the only worldview capable of developing modern science.{3}

So, what happened? Well, the Enlightenment happened where philosophers began to think only human reason is necessary or even proper to use in discovering the nature of humanity and nature around us. In the next section, I begin to investigate the three scientific discoveries that warrant a return of the God hypothesis.

Scientific Discovery #1: The Big Bang

The subtitle of Stephen Meyer's book, ***Return of the God Hypothesis is "Three Scientific Discoveries That Reveal the Mind Behind the Universe***." Now we will look at the first of these discoveries, the Big Bang.

First, I know that some of our readers don't accept the concept of the Big Bang since they are convinced that our universe is much younger than 13.7 billion years. I understand your position, [please read my article "Christian Views of Science and Earth History at probe.org/christian-views-of-science-and-earth-history/] but let's look at this then as an argument you can use with an atheist to show that his own dating of the universe and the Big Bang requires a Mind.

In the early 20th century, scientists like Edwin Hubble began to observe that the universe was not static as previously accepted, but was actually expanding. It took several lines of evidence, more powerful instruments, and many astronomers and mathematicians to come to this conclusion. The novel result was thinking about running the clock backwards. If the universe is expanding now, if you go back in time the universe gets smaller and smaller. Eventually you get to a point where they say the universe was contained in a "particle" that was infinitely dense and occupied no space.

We know now the universe had a beginning. Astronomers and cosmologists had assumed the universe was static and existed for eternity. This conclusion was disturbing to some astronomers. Some rejected the Big Bang for philosophical reasons not scientific. Mathematician Sir Arthur Eddington said,

> "Philosophically, the notion of a beginning is repugnant to me. . .. I should like to find a genuine loophole."{4} "We [must] allow evolution an infinite time to get started."{5}

Edmund Whitaker wrote what many were thinking: "It is simpler to postulate creation ex nihilo—divine will constituting nature out of nothingness."{6}

And finally, Robert Jastrow wrote, "For the scientist who has lived by his faith in the power of reason, the story ends like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries."{7} So, God creating matter and energy out of nothing explains the Big Bang, where any naturalistic idea simply cannot explain the evidence.

Scientific Discovery #2: The Fine-tuning of the Universe for Life

Let us now turn our attention to the second of the discoveries in Stephen Meyer's book, the fine-tuning of the universe for life.

This has also been referred to as the "Goldilocks Universe," meaning a lot of things turned out to be just right for the universe to be friendly to life. For instance, you may be aware that there are four
fundamental forces in the universe: gravity, electromagnetism, and the strong and weak nuclear forces. Each of these forces is expressed as an equation that contains a unique constant, and each one could have had a range of values at the Big Bang.

Meyer reveals that the gravitational constant alone is fine-tuned to $1/10^{35}$—that's one chance in 100 billion trillion trillion. The other three constants are also fine-tuned, but even further, the constants are also fine-tuned in relation to each other. This adds another number of at least 1 part in 10^{50}.

Meyer had the opportunity to hear Sir John Polkinghorne at Cambridge during his doctoral work in the history and philosophy of science. Polkinghorne used an illustration of a universe generating machine with numerous dials and adjustable sliders, each representing one of the many cosmological fine-tuning parameters. Any slight change in the dials and adjusters of these parameters would render a universe hostile to life in any form. Polkinghorne would later say in an interview that a theistic designer provided a much better explanation than any materialistic hypothesis.{8}

Later, Meyer shows that including entities such as entropy and black holes, the odds of generating a life friendly universe are in this context 1 part in 10 to the power of 1 followed by

122 zeroes.{9} It would take several lines to write this number. This is an insanely impossible number to be arrived at by chance.

Nobel-Prize-winning physicist Charles Townes said, "Intelligent design as one sees it from a scientific point of view, seems to be quite real. This is a very special universe: it's remarkable that it came out just this way."{10} This intelligence is perfectly consistent with the God of the Bible.

Scientific Discovery #3: Genetic Information for the First Cell

In this section I'm discussing the third scientific discovery; the need for complex specified genetic information for the first cell and new groups of organisms throughout time.

In Darwin's time, the first microscopes were being used and cells could be seen. Of course, scientists understood little of what they were seeing. Most of the cell appeared to be filled with something called protoplasm, a jelly-like substance that was thought to be easily derived from combining just a few substances. I've often said that if Darwin knew of the amazing complexity and the need for information storage, processing and regulation, evolution would have never been offered as a chance process.

Now we understand that the need for information to compose the first living, growing, and reproducing cell, is enormous. The first cell needed DNA to store information, specific proteins and RNA to produce additional proteins for the cell to function, and a controlled means to copy DNA accurately.

For instance, life uses 20 different amino acids to link together to form proteins, the workhorses of the cell. The number of combinations of two amino acids is 400. A four amino

acid stretch has 160,000 different combinations. A small protein of "just" 150 amino acids has 10^{195} possible combinations. But how many of these could be a protein with some function? Just one in every 10^{77} sequences.

But also, new groups of organisms appear suddenly throughout the fossil record. Nearly all large groups of animals, or phyla, appear in the Cambrian explosion. Animal and plant phyla rapidly diversified in at least 13 more explosions within phyla and classes into new classes, orders and families with no precursors, from flowering plants and winged insects to mammals and birds. All these explosions would require massive amounts of new genetic and developmental information.

The evidence supports the need for an intelligent designing mind to create all the needed information. Minds create information all the time. Natural processes simply can't do it.

Do These Three Evidences Point to Theism?

The three discoveries discussed in Stephen Meyer's book, ***Return of the God Hypothesis: Three Scientific Discoveries that Reveal the Mind Behind the Universe*** are the Big Bang, the extreme fine-tuning of the laws of physics to provide a life-friendly universe, and the necessary complex and specified information for the origin of life and the progression of complex life-forms through the fossil record.

But where does that leave us? Do these discoveries warrant a return of the God Hypothesis? Meyer examines four different worldviews to ask, would the universe we have, be expected by any of these worldviews? He uses a scientific approach called "the inference to the best explanation."

So, given a universe that is not only friendly toward life but contains living organisms, which worldview would best explain

this universe? He begins with scientific materialism. Materialism has no explanation for the beginning of the universe. There was no matter or energy before the beginning, so matter and energy cannot account for the beginning of the universe. Moreover, for the origin of complex specified information needed for life, naturalism has no answer. In fact, only theism posits an entity, God, that has the causal power to produce genetic information.

Let's move to pantheism. Pantheism does not propose a personal God but an impersonal god. This "god" is one and the same with nature. Then pantheism suffers the same fate as naturalism in that the beginning can't be explained by what doesn't exist yet, matter and energy.

But what about theism and deism? To explain the notion of a beginning, an entity outside the universe is required. Both theism and deism propose a transcendent, intelligent agent, God. Both can explain the beginning and the fine-tuning. But what about the appearance of complex specified genetic information on the earth? Deism and many forms of theistic evolution require a front-loaded beginning: all the information for life was present at the beginning and natural laws took over from there—God did not intervene. But how was this information retained over billions of years until life arose on earth? And natural laws simply can't produce complex specified information. Deism and theistic evolution won't work. Only theism remains.

On pg. 298, Meyer states, "As one surveys several classes of evidence from the natural sciences—cosmology, astronomy, physics, biochemistry, molecular biology, and paleontology—the God Hypothesis emerges as an explanation with unique scope and power. Theism explains an ensemble of metaphysically significant events in the history of the universe and life more simply, more adequately, and more comprehensively than major competing metaphysical systems."

Notes

1. Stephen Meyer, *Return of the God Hypothesis* (New York: HarperCollins, 2021).
2. Richard Dawkins, *River Out of Eden* 133, quoted in Meyer, *Return of the God Hypothesis*, 14.
3. *The Soul of Science: Christian Faith and Natural Philosophy* (Wheaton, IL: Crossway Books, 1994) by Nancy Pearcey and Charles Thaxton.
4. Arthur Eddington, "The End of the World: From the Standpoint of Mathematical Physics" *Nature*, vol. 127 (1931) p. 450.
5. Arthur S. Eddington, "On the Instability of Einstein's Spherical World," Monthly Notices of the Royal Astronomical Society 90 (May 1930): 672. Quoted in Hugh Ross, *'A Matter of Days: Resolving a Creation Controversy*(Kindle Locations 484-485). RTB Press. Kindle Edition.
6. Cited in Robert Jastrow, 1978. *God and the Astronomers*. New York, W.W. Norton, p. 111-12.
7. Jastrow, *God and the Astronomers*. p. 113-114, 116.
8. *Return of the God Hypothesis*, p. 143-144.
9. Ibid., p. 150.
10. Bonnie Azab Powell, "'Explore as Much as We Can': Nobel Prize Winner Charles Townes on Evolution, Intelligent Design, and the Meaning of Life," *UC Berkeley NewsCenter*, June 17, 2005, www.berkeley.edu/news/media/releases/2005/06/17_townes.shtml. Cited in Meyer, *Return of the God Hypothesis,* p. 146.

Theistic Evolution: A Theological Critique

Dr. Ray Bohlin concludes a four-part series covering some of the big ideas in Dr. Stephen Meyer's book 'Theistic Evolution' by examining some of the theological problems with this perspective.

Did God Create a World with Pain and Suffering Already In It?

In this article I review the theological critique of theistic evolution from the book, *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*. (I have previously written on the scientific problems here and here, and the philosophical problems here.) First, I review a chapter in the philosophical section, "Bringing Home the Bacon: The Interaction of Science and Scripture Today" by Colin R. Reeves. I'm focusing on Reeves's section on theistic evolution's problem with theodicy.

A theodicy seeks to explain God's reasons for allowing evil. He says that many conservative Christians who have embraced theistic evolution simply view natural evil as having always existed. He writes, "If natural evil is of necessity a part of evolutionary history, and if evolution is the process instituted by God to, in the end, result in creatures on earth with whom he could have a relationship, then it follows that God is the direct cause of natural evil – it is part of his plan."{1} Reeves quotes evolutionary philosopher David Hull: "The God implied by evolutionary theory . . . is careless, wasteful, indifferent, almost diabolical . . . not the sort of God to whom anyone would be inclined to pray."{2} Hull's solution is to simply reject any notion of God. He mentions

theologian Christopher Southgate struggling with this problem. How does one "redeem" the notion that pain, suffering, and death are intrinsic to evolution, which Southgate accepts? Southgate settles for an underwhelming notion of what he calls a "pelican heaven," symbolizing the hope that everything will be fine in the end. That is just bizarre. This seems to recognize the problem, but seeing no solution, this idea simply hopes that God has it figured out somehow.

Reeves refers to Denis Alexander, who simply recognizes that "God created a tough world . . . in which there is pain and death." For many theistic evolutionists, since humans evolved from a population of at least 10,000 individuals, there was no Adam and Eve and therefore, no Fall. He then references John Schneider who seems to say that we just shrug our shoulders and stop worrying!

If I were a theistic evolutionist, I would be very worried. But since they embrace evolution with no hesitation, they figure there just *must* be a way out of this dilemma, so don't make a big deal about it.

Did Adam and Eve Even Exist for Theistic Evolutionists?

Now I will focus on theologian Wayne Grudem's opening chapter in the theological section of the book. He briefly discusses twelve points at which theistic evolution (as currently promoted by its prominent supporters) differs from the biblical creation account if it is taken as historical narrative. Now I'll address the first three points:

1. Adam and Eve were not the first humans.
2. Adam and Eve were born of human parents.
3. God did not directly or specially create Adam out of the dust of the ground.

Something that needs to be understood concerning theistic evolution—or evolutionary creation as is now preferred—is that the human species came about as any other species, through naturalistic evolution. Calculations from some evolutionary creationists conclude that the human species can only be reduced to a population of around 10,000 individuals, certainly not just two. Some have even gone so far as to explicitly say that Adam and Eve did not exist. Others are willing to say that God chose a man and a woman from this population as Adam and Eve. But even this concession has problems of its own.

The primary question at this point is whether Genesis 1 to 3 is historical narrative. For evolutionary creationists, the simple answer is *no*. These initial chapters in Genesis are considered theological or allegorical but not a description of any actual events. But are they?

Grudem makes a significant case that these three chapters have always been understood as historical narrative and to consider them otherwise, one must bring an evolutionary viewpoint to the text. The text itself does not lead you to this conclusion.

Even if one assumes that God chose Adam and Eve out of the population of 10,000, they were born of human parents. God did not do anything supernatural to bring them into existence. This brings problems further down the line.

Were Adam and Eve Sinless?

Three more doctrines will be upturned if humans came about through a naturalistic evolutionary process. First, Eve wasn't formed from Adam's rib or side; second, Adam and Eve were not sinless; and third, if they weren't sinless, they didn't commit the first sin.

For evolutionary creationists, humans evolved and were not

specially created. Therefore, Eve was not formed from Adam's rib or side. But this raises some important questions. In Genesis 2, Adam gives names to all creatures (of course, theistic evolutionists say this didn't happen either). But he doesn't find a suitable helper. So, God creates Eve from Adam. Jesus refers to this passage in Matthew 19 where He addresses marriage. The context is that since Eve was taken from Adam, he is to hold fast to his wife. Paul also adds that man was not made from woman but woman from man (1 Corinthians 11:8). Elsewhere, he confirms that Adam was formed first, then Eve (1 Timothy 2:13). In both cases Paul indicates that Genesis 2 is historical narrative. It really happened this way.

Now we come to the issue of sin. If humans evolved and were not created, then all humans would have acted selfishly for the benefit of themselves and their offspring. This is a key feature of an evolutionary system. They likely cheated on their mates, stealing food or shelter. In other words, all humans were sinners from the beginning! However, at the end of day six (Genesis 1:31), God says that everything He made that day was not just good, but ***very*** good. This would preclude sin! According to theistic evolution, humans were not sinless, and Adam and Eve could not have committed the first sin. Indeed, God would have made a very difficult world, and humans were a part of that harsh reality. I think you can begin to see that theistic evolution plays fast and loose with significant doctrinal issue.

Were All Humans Descended From Adam and Eve?

To recap: In theologian Wayne Grudem's opening chapter in the theological section of the book *Theistic Evolution: A Scientific, Philosophical, and Theological Critique*, he briefly discusses twelve points at which theistic evolution (as currently promoted by its prominent supporters) differs

from the biblical creation account if it is taken as historical narrative.

I will now focus on points 7 to 9, which are rather distinct from each other.

7. Human death did not begin because of Adam's sin.
8. Not all human beings are descended from Adam and Eve.
9. God did not directly act in the natural world to create different kinds of plants and animals.

According to most if not all versions of theistic evolution, humans began as a population of at least 10,000 individuals. And since they evolved from an ape-like ancestor, death of humans had been around for hundreds of thousands of years. But when God informs Adam of the penalty of eating from the tree of the knowledge of good and evil, He says, "You will surely die" (Genesis 2:17). Not something you would say to someone who already knew he was going to die. In addition, Paul tells us in Romans 5 that sin came into the world through one man and with it, death! In 1 Corinthians 15, Paul links death through the one man, Adam, with life through the one man, Christ. Death entered for humans through Adam's sin.

The next problem we see is that theistic evolutionists contend that not all humans descended from Adam and Eve. This should appear rather obvious, since Adam and Eve were supposedly just two of thousands of humans at the time. Humanity would have descended from this population, not just Adam and Eve. But later in Genesis (3:20), we read, "The man called his wife's name Eve because she was the mother of all the living," meaning all humans.

Last, it should seem obvious that theistic evolutionists accept that all life evolved and just about all of Genesis 1 is not historical. But in all of Genesis 1, God repeatedly *acts*. He doesn't just let matter alone do the work.

Evolutionary creation dismisses not just the historical

accuracy of Genesis but also many New Testament doctrines.

Summing Up the Problems with Theistic Evolution

Finally, I'll review the last three of the twelve events in Wayne Grudem's chapter and summarize his critique. Essentially, the last three events are:

1. Did God rest from anything on the seventh day?
2. Was the original creation a safe place?
3. After Adam and Eve's sin, there was nothing new. Thorns and thistles already existed.

As I have stated throughout this article, according to evolutionary creationists, God did not act in any kind of a direct way to bring anything into existence except matter and the physical laws of how matter operates. This means there was nothing for God to rest from. But Exodus 20:11 states clearly that God made heaven and earth and all that is in them and then rested. This is the basis for resting and keeping holy the Sabbath. Why would man need a rest day if God didn't?

Genesis is clear that the earth and specifically, the Garden of Eden was a safe environment and all that changed with their sin. Things were now much more difficult. Adam and Eve would sweat to get their bread. Thorns and thistles would grow where apparently, they hadn't before. God had cursed the ground so it wouldn't yield its fruit as easily. But evolutionary creationists affirm that nothing could have changed since there never was an idyllic Garden. So there was no curse on the land.

Grudem concludes with eleven significant Christian doctrines that are undermined or denied by theistic evolution. Time prohibits mentioning all of them, but some of them are the truth of the Bible, evidence in nature for God's existence,

and God's wisdom. Grudem closes with this paragraph: "Because theistic evolution denies the historicity of these twelve events, it also denies or undermines eleven significant doctrines. In sum, belief in theistic evolution is incompatible with the truthfulness of the Bible and with several crucial doctrines of the Christian faith." Amen. We heartily agree.

Notes

The Biology of Human Uniqueness

Dr. Ray Bohlin demonstrates unique biological attributes that set humans apart because we are made in the image of God.

What's So Special About Humans?

As humans we tend to think of ourselves as rather unique in the created order of things. As Christians, we understand ourselves to be created in the image and likeness of God as we learn in Genesis 1:26. But what does this really mean? Certainly being made in God's image does not refer to our physical construction; God is spirit and therefore does not have a physical body. But God's plan from the beginning was to rescue us from our sin through the incarnation, God becoming man. Jesus was and is the Son of God, Messiah, the God-Man. Therefore it is not a stretch to suggest that our bodily make-up is meant to be the unique earthly home of Jesus and His Spirit within us. Therefore, I suggest that our biological make-up is unique in the animal kingdom since no other animal

is made in His image.

But what does this really mean? I am going to borrow from several sources, principally Michael Denton's *Nature's Destiny*{1}, to discuss the biological uniqueness of humans. The Discovery Institute is also in the process of producing a film series based on Denton's work, titled *Privileged Species: How the Cosmos is Designed for Human Life.*

We are able to point out numerous qualitative abilities in the human species found nowhere else in the animal kingdom. I will discuss these in detail below, but I'll provide a brief overview now to whet your appetite.

First, I'll be discussing our unique intelligence. Humans' ability to think abstract thoughts appears to be absolutely unique. It is difficult to arrive at a selective advantage in an evolutionary sense to this type of thinking, so where did it come from?

Second, and related to our intelligence, is our unique language capability. Most animals communicate with their own species, but no other species, including primates, actually use *language*. As toddlers we accumulate language by simply being around it. Chimps and gorillas have to go through painstaking trial and error and still can't communicate as a three-year-old does.

Third, our excellent vision allows us to use our intelligence, language and other capabilities to manipulate our surroundings in precise and advantageous ways.

Fourth, our excellent manipulative tool, the hand, is unsurpassed in other primates. We have both strength and fine motor control in our hands, allowing us to combine a strong grip and delicate finger movements that allow a wide range of movements. This, combined with our upright stance, provides an ability to restructure our immediate surroundings as no other

species can.

We are also a highly social species which allows for quick distribution of ideas to everyone’s benefit. And all these combine to allow us to be the only species to use and manipulate fire, which brings a host of unique abilities.

Human Intelligence and Language

As I mentioned above, our intelligence separates us from any other primate species. Our brain is three times the size of the brain of a chimp. But beyond that, the number of neurons and connections between neurons far surpasses any other mammal. Michael Denton cites that in each cubic millimeter of the human cortex, are 100,000 cells, about 4 kilometers of axonal wiring and 500 meters of dendrites, and around 1 billion synapse connections between neurons. We have 10 million more of these synapses than a rat brain.

The size and scope is one thing, but our mental capabilities are indeed unique. As mentioned above, humans are capable of abstract and conceptual thought. No other primate exhibits any signs of this capacity. In addition, our mathematical reasoning is completely *other* compared to other animals. You might suspect that some animals can count. But it is a learned response attached to reward. We don’t really suspect the rat/horse/chimp knows what they are doing. Comparing calculus to simply counting bananas is just no comparison at all.

When you stop to consider our appreciation of the arts, there is no place to go but humans. James Trefil is a physicist fascinated by biology and evolution. But when considering the arts he says, “No matter how hard I try, I can’t think of a single evolutionary pressure that would drive the ability of humans to produce and enjoy music and dance. . . . This has always seemed like a serious problem to me—perhaps even a more serious problem than that perceived by most of my colleagues.”

When we turn to language, our uniqueness is informed even further. Plants and animals all communicate in one form or another, but not by language as humans communicate. We communicate both new information and abstract concepts, something other species don't even approach. We possess the proper equipment to both produce and receive language and speech. And by proper equipment I mean both the brain processes and the anatomical necessities for actual speech (e.g., teeth, tongue, voice box, etc.). There is also a social ability that can utilize these upper levels of communication.

But we've heard about chimps and gorillas learning language. Kanzi, a bonobo chimpanzee, learned words and even symbolic use of a keyboard. Kanzi also learned through hearing the use of new words. But that is where it stopped.

To quote James Trefil again, "If we take the claims being advanced for Kanzi at face value, where are we? We have a member of the most intelligent primate species, a veritable Shakespeare of non-human animals, raised under special and unusual conditions, performing at the level of a human child of two and a half. But remember that in humans, real language begins just after this age. . . . Then we have to conclude that even in this optimal case, animals other than humans cannot learn real human language."

Human Vision and the Hand

Now I'd like to introduce two features we can easily take for granted, our hands and our eyes.

Ordinarily we don't think of our hands as being anything special. But just try to think of any other creature that can do the many and diverse things we can do with our hands. The closest match is the hand of a chimp. But
chimp hands are larger, stronger, and even clumsy. Simple things like using all ten fingers to type, peel an apple, or

tie a knot are beyond what chimps can do.

The strength in our fingers comes from larger muscles in the forearm and the fine manipulative control comes from much smaller muscles in the hand itself. Our ability to manipulate our environment with our hands is unparalleled. Using our intelligence we even devise additional tools for our hands to further extend our mastery of the world around us. Full use of our hands comes about from our upright and bipedal gait, allowing our hands the freedom not found in any other mammal.

In his book *Nature's Destiny* Michael Denton asks about the human hand "whether any other species possesses an organ approaching its capabilities. The answer simply must be that no other species possesses a manipulative organ remotely approaching the universal utility of the human hand. Even in the field of robotics, nothing has been built which even remotely equals the all-around manipulative capacity of the hand."

But in order to even use our hands well, we need exceptional vision to be able to detect all the little things our minds notice to manipulate. Given the physics of visible light and the dimensions and molecular process of detecting light in our eyes, the resolving power of the human eye is close to the optimum for a camera-type eye using biological cells and processes.

Some animals such as high-flying hawks and eagles detect motion from far greater distances that we can, and some organisms see much better in the dark than we do, but for all-around color vision, detail and resolution, our eyes seem to be the best there is. Combined with our highly interconnected brain, our upright gait for easily seeing straight ahead, a swiveling neck to see side to side, and our overall size, our eyes open the world to us as for no other species.

Developing science and technology, communicating to thousands

and even millions through the written word, and simply exploring the world around us, are only possible through an integrated use of our unique intelligence, social structure and speech, hands and vision.

The Use of Fire

As I have explored the biology of human uniqueness, I have focused on some of our individual capacities such as our intelligence, speech, our marvelous hands, and our unique all-around color vision. I have used throughout, the wonderful book by Michael Denton, *Nature's Destiny*. Now I'm looking at one of our key distinguishing characteristics which combine all of these. Humans are the only biological creatures that have mastered the use of fire. If you think for a minute, every other animal has nothing but fear when it comes to fire. We are also fearful of fire and the damage it can do, but we have also managed to harness it and use it.

There are a couple of obvious advantages for the use of fire. First it provides additional light after sundown that extends our activity into the evening. Second, fire provides additional warmth in the evening and allows us to venture into colder climates. Third, fire allows us to cook food, particularly meat which is a very significant source of fat calories and protein. Cooking our food certainly distinguishes us from any other creature and has allowed us to add the necessary energy to fully use that big brain of ours which is a major drain on our energy stores, even at night.

But beyond these, if we never harnessed the energy and power of fire, we would not have been able to develop tools involving metal. Using heat to forge ever more powerful hand tools and weapons revolutionized human culture. Without fire we could not have developed any form of chemistry and especially the use of electricity. Electricity has revolutionized human existence in the last 100 years. Fire is

an influential and powerful tool indeed.

But how have we been able to do this? First, we need to take advantage of our intelligent capability for abstract thought and reasoning. As I said earlier, we too fear fire, but we need to be able to think about it and be curious enough to not only rationalize that we might be able to harness its power, but that it would also be useful. This ability to deduce the control and use of fire requires high-level reasoning.

Denton also points out that for a fire to be sustainable it needs to be at least 50 centimeters across (or about a foot and a half). To create a fire of this size we need our upright stance to walk the distance to gather the right amount and size of branches. That means that our upright stance, free arms, the manipulative tools of our hands, and our discerning vision work together to allow us to create a sustainable fire.

Therefore, the control and manipulation of fire requires a combined use of most of our unique biological capacities. Think about this the next time you sit around a campfire or grill your supper on a warm summer day. It’s part of what makes us human!

Human Anatomy and Genome

In this article I have been focusing on aspects of human biology that make us unique in the universe of living organisms. I discussed in some detail our unique intelligence, allowing us complex and abstract thought. We have a unique ability to communicate audibly and through a symbolic written word. These combine with our stereo vision and unique manipulative tool the hand, to allow us sole possession of the ability to use and manipulate fire. All of these capabilities are made possible by several unique aspects of our anatomy.

Humans have the largest brain of any primate species. Whales, dolphins, and elephants have larger brains, but size is not

the main distinctive. Our human brain is structured like no other. If you were to open up just one cubic millimeter of our brain you would find over 100,000 cells with 4 kilometers of cell wiring and 1 billion connections between neurons. The structure and organization of our brain is definitely without parallel. Studies of our entire genome compared to chimpanzees indicate vast differences in non-coding sequences that influence the production of brain proteins. These changes are in the thousands.

In 1999, famous MIT linguist Noam Chomsky, reflected that "Thus, in the case of language, . . . (new research) is providing interesting grounds for taking seriously an idea that a few years ago would have seemed outlandish: that the language organ of the brain approaches a kind of optimal design, that it is in some interesting sense an optimal solution to the minimal design specifications the language organ must meet to be usable at all." Without our unique brain structure, our language ability would not be forthcoming.

When comparing our skeletal structure to those of our supposed closest ancestors according to an evolutionary explanation, there are major changes that would have been needed to be accomplished in a relatively short time. Casey Luskin from the Discovery Institute does an admirable job digging into these differences and makes some sweeping conclusions. Numerous studies indicate that between the lineage of *Australopithecus* and *Homo* there would need to be significant changes in shoulders, rib cage, spine, pelvis, hip, legs, arms, hands and feet. But of these major transitions, the fossil record is silent.

Luskin also refers to a study by Durrett and Schmidt in 2007 that estimates that a single-nucleotide mutation in a primate species would take 6 million years to become fixed. But what is needed are multiple mutations in multiple segments of the skeletal system and in the physiology of the brain. *Homo sapiens* are far more unique than many have suspected. The more

we learn, the more unique we become.

Since humans are created in the image of God, we expect human biological uniqueness. Even more significantly, bearing His image indicates an affinity for humans by the Creator we cannot fully comprehend.

Notes

1. Michael Denton, *Nature's Destiny: How the Laws of Biology Reveal Purpose in the Universe* (New York: The Free Press, 1998).

The Common Woodpecker: Chance or Design?

Dr. Ray Bohlin gave this presentation at the Discovery Institute's 2025 Dallas Conference on Science and Faith.