

Arguments From Science

By

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What is "science" and what are "arguments from science"?

Science is defined as:

- the state of knowing: knowledge as distinguished from ignorance or misunderstanding (Merriam-Webster)
- the study of the nature and behavior of natural things and the knowledge that we obtain about them (Collins Dictionary)
- The intellectual and practical activity encompassing the systematic study of the structure and behaviour of the physical and natural world through observation and experiment (Oxford Dictionary)

The Apostle Paul wrote about "science" to Timothy in the Greek language –

"O Timothy, keep that which is committed to thy trust, avoiding profane and vain babblings, and oppositions of science falsely so called." (1 Timothy 6:20, KJV)

The Greek word translated as "science" is the word $\gamma v \omega \sigma \epsilon \omega \zeta$, which is usually translated as "knowledge." Greeks, Romans and others in the ancient world viewed knowledge in a similar sense to how we view "science" today.

Science

Our English word "science" comes from the Latin word *scire*, which means "know." The basic idea of "science" is gaining knowledge by learning.

So, what does it mean when someone says they use "science" to argue for a particular position about a subject? It would seems to mean that the person would use the latest information about the subject that had been "learned."

How does that impact discussions Christians have with non-Christians about a wide variety of subjects? How does the growing "knowledge" of our world impact those discussions?

I became a Christian almost 50 years ago based on the process of investigating the available "science" for many subjects. Knowledge about many of those subjects has grown since I left atheism for Christianity, so has new "knowledge" changed my mind about my decision to leave atheism for theism?

Not at all. In fact, new knowledge has deepened my conviction about becoming a Christian. I am currently writing a series about the "knowledge" that led me to Christ in 1971 and will write a future companion series about the advances of knowledge in the years since that time.

The purpose of this article is to share some thoughts about how Christians can, and I believe 'should,' discuss the advances of science (knowledge) with non-Christians in the vast arena that is our world of knowledge and understanding today about a wide range of subjects.

I will also add at this point that many Christians do not agree on some of these important subjects (e.g. abortion, evolution, age of the earth, sexuality, gender, gay marriage). There are many others (one blogger has listed 100 issues that divide Christians!), but learning how to deal with a few is a good place to start. Once we understand the scientific process we can begin to solve most of the divisions between Christians and Christians and non-Christians.

So, what are we to do? I think the answer is easy to understand, but hard to do.

We need to investigate all available information carefully and methodically and reach conclusions that **are based on evidence**.

Arguments From Science

So, what is an "argument" from science? It means we use "knowledge" in our discussions with people. Where do get that knowledge? From people who "know." How do they know? They use a variety of learning processes that are based on their particular interests/expertise.

Have you heard this from an atheist or other non-Christian?

"Science says there is no God."

My response?

"Which science and how does that science 'say' anything?"

That response often derails the atheist's plans. If they want to seriously address their truth claim that science says there is no God, they will have to answer the question.

Some atheists have responded to my question, "which science," by saying

"All of them."

My response to that has been -

"Select one and we'll start there."

Few atheists have taken me up on that offer. I remember one atheist who challenged me to select the discipline we would discuss. I chose astrophysics and the discussion ended. Astrophysics was one of the scientific disciplines that captured my attention as an atheist and helped point me to the God who created the universe.

Most non-Christians, I have found, are not prepared to answer specifics about science (knowledge) that point toward the Christian God. They are used to making sweeping claims about science without having to support their claim with evidence.

As for science **saying** something, science doesn't **say** anything. Science is not something that can investigate, choose, decide or speak. Science is "knowledge." Scientific "knowledge" is gained by **people** who investigate, choose, decide and speak. **Scientists** are the people who gain knowledge and speak about it. *Scientists* **say** things, not *science*.

There are scientists who say God **doesn't** exist and there are scientists who say God **does** exist. Scientists make those claims, not science. So, who do we believe? Depends on their evidence.

Even a brief study of the history of science demonstrates that scientists change what they say about some things because what they "know" about those things changes. That's the nature of scientific investigation. New information about a subject can change how that subject is viewed, understood, explained, taught, etc.

So, is there such a thing as "settled science?"

Settled Science?

Something I hear often from atheists is the phrase "settled science." Atheists have told me for decades that I was "stupid" and an "idiot" to question Darwinian evolution because evolution was *settled science*. I used to believe that Darwinian evolution answered all the questions necessary to understand the world around us. However, I don't believe that anymore. Is it because I suddenly became stupid and an idiot or could it be that I checked out the knowledge claims for Darwinian evolution and found they didn't match the evidence very well.

Let's begin with a basic question: what do the words "settled science" mean?

- to place so as to stay (Merriam-Webster)
- not likely to change or move (Oxford Dictionary)
- A settled situation or system stays the same all the time (Collins Dictionary)

We've already seen that the definition of **science** is *knowledge*, so we could define **settled science** as *knowledge that stays the same and is not likely to change or move*.

Back to the claims of atheists and others who are not followers of Jesus Christ. Does Darwinian evolution meet the definition of *knowledge that stays the same and is not likely to change or move*? Based on the 150+ years of debate about the topic, I would say the answer to that is an overwhelming **NO**. Darwinian evolution is **NOT** settled science. There are many scientists who would say Darwinian evolution is not even good science, but it is certainly not settled knowledge.

Why do atheists, agnostics and others say things like that? Why would they claim that something as unsettled as Darwinian evolution is settled science? I think some actually believe that Darwinian evolution is settled science, so they're just wrong about that. I think others make that claim to intimidate Christians. Nobody likes being called stupid or an idiot, so that tactic works on many Christians. That's unfortunate because the evidence that Darwinian evolution is wrong is strong. Christians have every reason to question evolutionists and being called names shouldn't stop them from raising questions.

No Evidence?

Another favorite tactic of atheists, agnostics and others is to say "there is no evidence" for the existence of God. My response to that statement is to ask a question.

Christian – "Really? No evidence at all for the existence of God?"

Atheist – "That's right. None."

Christian – "So, the mountain of evidence that theists have for the existence of God doesn't exist?"

Atheist – "You don't have any evidence."

Christian – "Are you willing to discuss the evidence I have for the existence of God?"

Atheist – "You don't have any evidence."

Christian – "Sounds like you don't want to hear the evidence for God."

Atheist – "You don't have any evidence."

Christian – "I think what you have is confirmation bias."

Atheist – "I do not have confirmation bias. You do."

Christian – "Why do you think I have confirmation bias when I am offering to discuss the evidence with you?"

Atheist – "You don't have any evidence. You believe what you want to believe because you don't have any evidence to back it up."

Christian – "How about if I present one piece of evidence at a time and discuss each one to see what merit it has?"

Atheist – "You don't have any evidence."

The continued proclamation by the atheist that Christians have no evidence becomes a barrier to a fruitful conversation about the evidence that exists.

Confirmation Bias

So, what about confirmation bias?

"Confirmation bias, the tendency to process information by looking for, or interpreting, information that is consistent with one's existing beliefs. This biased approach to decision making is largely unintentional and often results in ignoring inconsistent information. Existing beliefs can include one's expectations in a given situation and predictions about a particular outcome. People are especially likely to process information to support their own beliefs when the issue is highly important or self-relevant." Encyclopaedia Britannica

"Confirmation bias occurs from the direct influence of desire on beliefs. When people would like a certain idea/concept to be true, they end up believing it to be true. They are motivated by wishful thinking. This error leads the individual to stop gathering information when the evidence gathered so far confirms the views (prejudices) one would like to be true." Psychology Today

"In psychology and cognitive science, confirmation bias (or confirmatory bias) is a tendency to search for or interpret information in a way that confirms one's preconceptions, leading to statistical errors." Science Daily

Confirmation bias is where two or more people can look at the same evidence and reach different conclusions based on that evidence. It can happen to anyone, so we all have to be careful with whatever processes we use to investigate evidence.

I had to watch out for that when I was atheist investigating the claims of theism and Christianity. My bias was toward the non-existence of God and belief that anyone who believed in God was ignorant. I did my best to set that bias to the side while I conducted an orderly investigation into theist claims.

In this next part of our series we'll look at an example of using scientific investigation to determine whether a controversial claim is true or false.

Abortion

Many people view the scientific arguments about abortion to be "settled science." In other words the science used in arguing for the legalization of abortion in Roe v. Wade is "settled." Keep in mind that those arguments were made 45 years ago. Can we agree that scientific arguments from the early 1970's are "settled science"?

Is it true that the "science" concerning the issues raised in Roe v Wade has not changed in 45 years?

I remember when "abortion" became a theme for discussion between Christians and Christians and Christians and non-Christians. It was 50 years ago. I had just started my first full-time position in broadcast journalism. 1968 was a very challenging year for our country with the assassinations of Robert Kennedy and Martin Luther King. The anti-war movement was becoming bolder and led massive protests that led to tens of thousands of protestors battling with police in the streets of Chicago at the Democratic National Convention.

1968 was also a year where the movement to legalize abortion was building toward what we now know as *Roe v. Wade*. Less than one year earlier, a freshman state legislator introduced a bill that would allow abortions if a woman's physical or mental health was threatened, if the

pregnancy was caused by rape or incest, or if the unborn child might have birth defects. The bill passed quickly and the governor signed it into law.

New York's governor signed a bill three years later that repealed a 140-year-old law that banned abortion except to save a woman's life. The New York law allowed abortion on demand up to the 24th week of pregnancy. Other states followed New York's lead.

The U.S. Supreme Court took on the issue of abortion as early as 1971 (United States v. Vuitch) and ruled on Roe v. Wade in 1973. Abortion on demand was the law of the land.

I covered local protests and meetings about the abortion issue as a journalist during those years. I didn't care about it personally as an atheist. People could do anything they wanted to do with anything in or on their body because I believed life had no meaning or purpose outside of what each individual determined for themselves. Everything was an accident of evolution and didn't matter. A God or gods did not exist, so everyone could do whatever they wanted to do with themselves and their possessions.

One of the major aspects of late term abortion is the issue of **personhood** – when the "unborn" become a human person. The Pro-Choice/Abortion group has long claimed that an unborn baby is a non-person. That's why they do not believe abortion is murder, because the killing of a non-person is not murder. The Pro-Life/Anti-Abortion group has long claimed that an unborn baby is a person. That is why they believe abortion is murder, because the pre-meditated killing of a person is murder.

I remember this argument in the early days of legal debate in Roe v. Wade. Supreme Court Justice **Harry Blackmun** wrote this as part of the Court's **majority opinion** – "If this suggestion of personhood is established, the appellant's case, of course, collapses, for the fetus' right to life would then be guaranteed specifically by the Amendment."

"The appellee and certain amici argue that the fetus is a "person" within the language and meaning of the Fourteenth Amendment. In support of this, they outline at length and in detail the well-known facts of fetal development. If this suggestion of personhood is established, the appellant's case, of course, collapses, for the fetus' right to life would then be guaranteed specifically by the Amendment. The appellant conceded as much on reargument." University of Missouri-Kansas City School of Law

This statement is often referred to as "Blackmun's Hole." Justice Blackmun seemed to be stating that if the personhood of an unborn child could be proven, then the baby would find protection in Amendments to the U.S. Constitution.

Justice Blackmun also wrote this about the medical implications of when a person becomes human –

"Texas urges that, apart from the Fourteenth Amendment, life begins at conception and is present throughout pregnancy, and that, therefore, the State has a compelling interest in protecting that life from and after conception. We need not resolve the difficult question of when life

begins. When those trained in the respective disciplines of medicine, philosophy, and theology are unable to arrive at any consensus, the judiciary, at this point in the development of man's knowledge, is not in a position to speculate as to the answer.

It should be sufficient to note briefly the wide divergence of thinking on this most sensitive and difficult question...Substantial problems for precise definition of this view are posed, however, by new embryological data that purport to indicate that conception is a "process" over time, rather than an event, and by new medical techniques such as menstrual extraction, the "morning-after" pill, implantation of embryos, artificial insemination, and even artificial wombs." University of Missouri-Kansas City School of Law

Notice Justice Blackmun's words — "at this point in the development of man's knowledge." Blackmun mentions "new embryological data" and "new medical techniques" that were part of **man's knowledge** in 1973: "menstrual extraction, the 'morning-after' pill, implantation of embryos, artificial insemination, and even artificial wombs."

What about the last 45 years since Roe v. Wade? At what point are we in 2018 "in the development of man's knowledge"?

Medical science has added DNA paternal testing and ultrasound to "the development of man's knowledge." Even as the Supreme Court majority used the available knowledge of man in 1973, shouldn't the Supreme Court of the United States now use the available knowledge of man in 2018 to reconsider the earlier decision? It seems only right that if a majority of Supreme Court Justices used the available science of 1973 to determine the personhood of an unborn child, the current Supreme Court Justices should use the available science of 2018 to determine the personhood of an unborn child. Since much of Roe v. Wade was decided on available medical science, it would seem that the Court would be sensitive to the advancement of science into the issues of pregnancy and personhood.

Personhood

The definition of "personhood" is fairly simple – "The state or fact of being a person." (Dictionary.com) The definition of "person" is even simpler – "human being." (dictionary.com)

As we reported in an earlier post about paternal DNA testing, unborn children can be proven to be "human" during the **first trimester** of a mother's pregnancy. DNA testing was not available when the Supreme Court heard arguments in Roe v. Wade in 1973, but it is available now and has been for many years. So, why hasn't the Supreme Court reconsidered its initial ruling based on evidence that the personhood of an unborn child within the first trimester has been proven scientifically?

Good question, but not one the national press/media is asking. Since it is the job of the press/media to cover news factually and fairly, why weren't news managers and reporters covering the aspect of personhood during the Gosnell trial in 2013? It seemed like a "natural angle" to the story. (Read more about the news media's coverage of the Gosnell Trial here.)

I think the answer is obvious – bias on the part of the press. What else can it be? The scientific/medical facts were laid out for all to see. An unbiased press would report the facts and follow them through to the point of asking the tough questions news managers, reporters and producers are supposed to do every day with every story. It's not hard to do. In fact, asking tough questions is one of the best parts of being a journalist. Some of my best memories of being a reporter were turning on the camera and asking tough questions of powerful people. Isn't that what reporters do? or should do?

Why is the press biased about abortion? Some members of the news media have strong, personal beliefs about the right of mothers to choose what happens to their body and they do not want that choice taken away from them. Others have had their journalistic judgment clouded by philosophical arguments that do not belong in the rational, reason-oriented, fact-finding atmosphere of a working newsroom (or what it should be).

Just the Facts

"Just the facts" has always been a good philosophy of news gathering and reporting and it was needed in the press and news media coverage of the Gosnell murder trial. It's needed now as the issue of abortion has taken center stage in national reporting again.

Fact: Medical science has advanced tremendously since the Supreme Court's majority ruling in 1973.

Fact: DNA paternal testing proves that the unborn are human persons from the early part of the first trimester of pregnancy.

Fact: The "zygote" (fertilized egg cell that results from the union of a female gamete (egg, or ovum) with a male gamete (sperm) – Britannica.com) is composed of human DNA. It contains genes from two human parents and carries two sets of chromosomes. The zygote is a new human person, not a part of another human person. It is unique.

Fact: "A zygote is the beginning of a new human being. Human development begins at fertilization, the process during which a male gamete or sperm ... unites with a female gamete or oocyte ... to form a single cell called a zygote. This highly specialized, totipotent cell marks the beginning of each of us as a unique individual." (Keith L. Moore, *The Developing Human: Clinically Oriented Embryology*, 7th edition. Philadelphia, PA: Saunders, 2003. pp. 16, 2.)

Fact: "Fertilization is the process by which male and female haploid gametes (sperm and egg) unite to produce a genetically distinct individual." (Signorelli et al., Kinases, phosphatases and proteases during sperm capacitation, CELL TISSUE RES. 349(3):765 (Mar. 20, 2012)

Fact: "Fertilization ... the process of union of two gametes whereby the somatic chromosome number is restored and the development of a new individual is initiated." (*Medline Plus Merriam-Webster Medical Dictionary*, 2013)

Fact: "In that fraction of a second when the chromosomes form pairs, the sex of the new child will be determined, hereditary characteristics received from each parent will be set, and a new life will have begun." (Kaluger, G., and Kaluger, M., *Human Development: The Span of Life*, page 28-29, The C.V. Mosby Co., St. Louis, 1974**)

** Published the year after the Supreme Court ruled on Roe v. Wade.

Fact: "It should always be remembered that many organs are still not completely developed by full-term and birth should be regarded only as an incident in the whole developmental process." (F Beck *Human Embryology*, Blackwell Scientific Publications, 1985 page vi)

Fact: "Although it is customary to divide human development into prenatal and postnatal periods, it is important to realize that birth is merely a dramatic event during development resulting in a change in environment." (*The Developing Human: Clinically Oriented Embryology* fifth edition, Moore and Persaud, 1993, Saunders Company, page 1)

Fact: "The predominance of human biological research confirms that human life begins at conception—fertilization. At fertilization, the human being emerges as a whole, genetically distinct, individuated zygotic living human organism, a member of the species Homo sapiens, needing only the proper environment in order to grow and develop. The difference between the individual in its adult stage and in its zygotic stage is one of form, not nature. This statement focuses on the scientific evidence of when an individual human life begins." (When Human Life Begins, American College of Pediatricians, 2017)

Fact: The DNA of the zygote has its own design features that will guide all future development.

Fact: The U.S. Constitution and Amendments protect the rights of human persons.

Fact: Based on science and legal precedent, the U.S. Constitution and Amendments should then protect the right of unborn human persons.

Fact: The earliest human embryo is alive and meets all biological criteria for life as a human being (e.g. metabolism, growth, stimuli reaction, reproduction).

Fact: Fetal surgery is a medical speciality designed to save the life of the unborn child. The same types of surgeries are performed on babies after birth. Doctors are performing human surgeries whether the child is in or out of the womb.

"As medical techniques have become increasingly sophisticated, Malloy said, she has felt this tension acutely: A handful of medical centers in major cities can now perform surgeries on genetically abnormal fetuses while they're still in the womb. Many are the same age as the small number of fetuses aborted in the second or third trimesters of a mother's pregnancy. "The more I advanced in my field of neonatology, the more it just became the logical choice to recognize the developing fetus for what it is: a fetus, instead of some sort of sub-human form," Malloy said. "It just became so obvious that these were just developing humans." The Atlantic.com, Science is Giving the Pro-Life Movement a Boost (Colleen Malloy, a neonatologist and faculty member at Northwestern University)

Question from the Facts

Should Roe v. Wade stand as "settled law" in light of the new scientific evidence that has surfaced in the last 45 years? Should the Supreme Court send the issue back to the states where the people can make an informed decision based on the evidence?

If we say we believe what "science" tells us, the answer seems simple.

Yes. The people of every state should make an informed decision now that science has told us so much more than was known in 1973.

Resources

10 Things You Should Know About Abortion

The origin of human life at fertilization: Quotes from medical textbooks and peer-reviewed scientific literature.

A Secular Case Against Abortion – Pro-Life Humanists (many atheists are pro-life because of the science involved)

<u>Alexander Tsiaras: Conception to birth — visualized</u>

When Does Life Begin? Just The Facts

In this next part of our series, we'll look at another example of using scientific investigation to determine whether a controversial claim is true or false.

Evolution

I used to believe in Darwinian evolution. The public school system I attended during the 1950s and 1960s taught it exclusively. There was no other viewpoint taught or even discussed. Darwinian evolution was presented as "settled science."

I continued to believe in Darwinian evolution until challenged to think about other possibilities – specifically of direct creation by God. I was an atheist at the time, so the idea of God creating anything was absurd. How could something that didn't exist create anything? However, I took on the challenge of looking at a variety of sciences and changed my mind about Darwinian evolution.

That was in the early 1970s, so the question could be asked whether there have been any new developments in science that would lead us to a more definitive determination about whether Darwinian evolution is settled science. The answer is **yes**.

The Growth of Knowledge

Scientists work in the field and laboratories day after day, month after month, year after year, on a wide range of projects. Their experiments and findings in their fields of study add to the growth of knowledge at a staggering rate compared to what we knew just a century ago.

Many scientists publish their findings, which helps people who are not scientists stay on top of the latest research on topics they find important to their life: food, health, personal safety, etc. The issue of creation/evolution is a topic of importance to me and many other people, so how has the body of knowledge grown in that area in the last century or so?

Let's begin toward the end of the 19th century to see what scientists were saying. Keep in mind that Charles Darwin first published *On the Origin of Species by Means of Natural Selection, or The Preservation of Favoured Races in the Struggle for Life* on November 24, 1859. The book was very popular and had gone through six editions by 1872. Darwin and his book are viewed by most people as the foundation of evolutionary biology.

On the Origin of Species has had many defenders and detractors through the years. The journal Science, which began publishing in 1880, has covered the debate throughout its history. Some of the early articles addressed how theism, atheism and evolution related. John Michels, the first editor of Science, did not see atheism as a requirement for believing in evolution –

It is possible to believe strongly in the theory of evolution and accept every scientific fact that has ever been demonstrated, and yet receive no shock to a belief in a Divine Providence, while the accumulation of scientific facts in our opinion all tend to confirm such belief, and to demonstrate scientifically that an intelligent Creator has designed and pre-arranged the order of both matter and mind.... Lastly, we say emphatically, that there is no real conflict between Science and Religion at this present day. (Michels J, 1882, Science, 3:1-2)

Alfred Russell Wallace, is viewed as a co-discoverer with Darwin of the theory of evolution by natural selection. Wallace made his discovery separate from Darwin, but shared his research which led to a joint presentation at a meeting of the Linnean Society. *On the Origin of Species* was published the next year.

One difference between Wallace and Darwin was that Wallace did not believe natural selection could explain the human intellect. Wallace believed that a person's "soul springs from a higher source" (Wallace AR, 1886, *Science*, 8:560-563).

More than 150 years have gone by since Darwin wrote *On the Origin of Species by Means of Natural Selection, or The Preservation of Favoured Races in the Struggle for Life.* If you're interested, you can find many books and websites that explain in detail the findings and debates that have followed Darwin and Wallace's theory.

A Mind Changed

It's been almost 50 years since I changed my mind about evolution. What changed my mind initially was the weakness of Darwinian evolution when compared with what was known about life from a scientific perspective. Theism did not impact my change of mind because I was still an atheist when I questioned Darwinian evolution.

A primary issue that impacted my thinking was whether random mutation and natural selection could account for the complexity of life and the appearance of design through the universe. The more I investigated the topic, the less I could accept the case for Darwinian evolution.

So, if Darwinian evolution didn't explain the **origins of the species**, what did? That's where the scientific findings and debates are vital. If Darwinian evolution is not "settled science," then the scientific community needs to keep digging for the truth.

Here are a couple of examples of the scientific research being done that lead to information contrary to Darwinian evolution.

Institute for Creation Research

ICR, Institute for Creation Research, was founded by Dr. Henry Morris in 1970. I interviewed Dr. Morris a few months after he started ICR (read more about that interview here). He played a vital role in my move from atheism to Christianity, so I've followed his work for several decades.

Dr. Morris first wrote about the scientific weaknesses of Darwinian evolution in 1946 (*That You Might Believe*). He worked with Dr. John Whitcomb to publish *The Genesis Flood* in 1961. He wrote *Scientific Creationism* in 1974. Many have called Dr. Morris *The Father of Modern Creation Science Movement*.

Dr. Morris joined with nine other scientists in 1963 to found the Creation Research Society. He started ICR in 1970 in San Diego and later moved the headquarter to Dallas.

ICR focuses on research, education and communication.

"As a research organization, ICR conducts laboratory, field, theoretical, and library research on projects that seek to understand the science of origins and Earth history. ICR scientists have conducted multi-year research projects at key locations such as Grand Canyon, Mount St. Helens, Yosemite Valley, and Santa Cruz River Valley in Argentina, and on vital issues like Radioisotopes and the Age of the Earth (RATE), Flood-activated Sedimentation and Tectonics (FAST), and other topics

related to geology, genetics, astro/geophysics, paleoclimatology, and much more." ICR.org

ICR's team of scientists works diligently to address questions relating to creation and evolution. It's obvious from reading their research that evolution is NOT "settled science." I also appreciate that ICR is committed to peer review.

Intelligent Design

Dr. Morris was the first person to tell me about the **Teleological Argument**. It is the argument for the existence of God from the evidence of order and design in our world and the universe. Darwinian evolution proposes that random mutations are sifted by natural selection through a blind and purposeless process. That sounded fine to me as an atheist until I began looking at the world through the lens of order and design.

The **Intelligent Design Theory** (IDT) is a modern version of the Teleological Argument that proposes many features of the universe and living things are best explained by intelligent design – an intelligent cause. Logical reasoning from the Intelligent Design of the universe is that there is an Intelligent Designer of the universe.

Here are some explanations of Intelligent Design –

- The universe evidences great complexity or design; thus, it must have been designed by a great Designer or God.
- The position that there is positive evidence that life on Earth was created by one or more intelligent agents, but without making any explicit claim as to the identity or divinity of the agent or agents.
- Certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection.

The scientific support for what many call **Intelligent Design** is enormous and growing by the day. More and more scientists are writing papers and books about "The Mind" behind the Design of the universe. Some of the scientific fields represented by those who are concluding that a Great Intelligence is behind the design of the universe are physics, astrophysics, astronomy, biology, and biochemistry. Concepts being discussed among scientists include Irreducible Complexity, Specified Complexity, Fine-Tuned Universe, and the Thermodynamic Argument.

Dr. Morris wrote many books about **origins** from both scientific and biblical perspectives. His final book, Some Call It Science (2006), revealed his view on what he believed was "the religion behind the so-called science of the evolutionary establishment."

"During the past century...the gospel of new life in Christ has been replaced by the Darwinian "gospel of death," the belief that millions of years of struggle and death has changed pond scum into people and that evolutionary progress will continue inexorably toward heaven on earth.

The faith of the evolutionist...is a splendid faith indeed, a faith not dependent on anything so mundane as evidence or logic, but rather a faith strong in its childlike trust, relying wholly on omniscient Chance and omnipotent Matter to produce the complex systems and mighty energies of the universe. The evolutionist's faith is not dependent on evidence, but is pure faith—absolute credulity.

Any other gospel is another gospel and is not the true gospel. Without the creation, the gospel has no foundation; without the promised consummation, it offers no hope; without the cross and the empty tomb, it has no saving power."

ICR is unique among scientific research organizations in their commitment to the absolute authority of the Bible. ICR believes that the biblical record of history in Genesis 1-11 is "factual, historical, and clearly understandable" (ICR's Approach to Scientific Investigation). ICR believes that God created the heavens and the earth, that the biblical Flood was global and the after-effects "explain most of the stratigraphic and fossil evidence found in the earth's crust."

You can read more about the tenets of ICR by clicking on this link.

Discovery Institute

Institute

The Discovery Institute was founded by Bruce Chapman and George Gilder in 1990. While sharing similar views with ICR on the intelligent design of the universe, the Discovery Institute does not take a religious perspective on that design.

"Discovery Institute is a secular think tank, and its Board members and Fellows represent a variety of religious traditions, including mainline Protestant, Roman Catholic, Eastern Orthodox, Jewish, and agnostic." (Discovery Institute FAQ)

The Discovery Institute is headquartered in Seattle, Washington and has scholars and fellows around the world. They have more than 40 Fellows that include biologists, biochemists, chemists, physicists, philosophers and historians of science. Dr. Stephen Meyer, Ph.D. in history and philosophy of science from Cambridge University, is the current director.

"Discovery Institute promotes thoughtful analysis and effective action on local, regional, national and international issues. The Institute is home to an inter-disciplinary community of scholars and policy advocates dedicated to the reinvigoration of traditional Western principles and institutions and the worldview from which they issued. Discovery Institute has a special concern for the role that science and technology play in our culture and how they can advance free markets, illuminate public policy and support the theistic foundations of the West." Discovery

In case you're wondering if Intelligent Design (ID) and Creationism are the same thing, here's one answer from the Discovery Institute –

"No. Intelligent design theory is simply an effort to empirically detect whether the 'apparent design' in nature acknowledged by virtually all biologists is genuine design (the product of an intelligent cause) or is simply the product of an undirected process such as natural selection acting on random variations. Creationism is focused on defending a literal reading of the Genesis account, usually including the creation of the earth by the Biblical God a few thousand years ago. Unlike creationism, the scientific theory of intelligent design is agnostic regarding the source of design and has no commitment to defending Genesis, the Bible or any other sacred text."

Who's Your Daddy?

Another difference between the views of ICR and the Discovery Institute concerns the issue of **common ancestry** (common descent). Here's how Discovery Institute Vice President and Senior Fellow Dr. John G. West explains it –

"As those of us at Discovery Institute have emphasized for a long time, intelligent design is not incompatible with the idea that living things share a common ancestor. In other words, one can believe that nature displays evidence of intentional design, and still believe in common descent.

Indeed, I would argue that one of the forebears of the modern intelligent design movement is none other than Alfred Russel Wallace, who is credited with Darwin as co-discoverer of the theory of evolution by natural selection. Wallace believed that nature displayed powerful evidence of design by an overruling intelligence. Today, Discovery Institute has a number of affiliated scholars who similarly affirm the idea of common descent, including biologist Michael Behe and geneticist Michael Denton. Denton makes his views clear in his book Evolution: Still a Theory in Crisis, which Discovery Institute Press published earlier this year." *Debating Common Descent*, Evolution & Science News Today, May 14, 2016

Dr. Randy J. Guliuzza with ICR wrote several years ago that similar features show design, not universal common descent –

"Inconsistent' is the best word to stress in conversations to describe how evolutionists compare similar features among organisms. This is because similar features are just that—similar—and the myriad of combinations that organisms possess does not necessarily fit branching evolutionary trees. If evolutionists believe a similar feature is from a common ancestor, it is due to "divergent evolution." And if organisms share a similar feature not due to common ancestry, it is conveniently called 'convergent evolution.'

Scientific-sounding lingo is substituted for data to explain why organisms with essentially no common ancestry have extraordinarily similar features, like the camera-like eye shared by squids and humans. At the same time, other facts are selectively deemphasized about organisms that are presumed to be very closely related and yet do not share some surprisingly important features, such as humans having a muscle that moves the thumb's tip that chimpanzees don't have.

The main point is that explanations for the presence or absence of similar features are totally arbitrary. For example, evolutionists assert that whales' distinctive body shape evolved from a lineage of land mammals that slowly readapted to aquatic life. Consider how the leading journal Science elected to pick-and-choose between conflicting features, either molecular or shapes of parts (called 'morphology'), to support this theory:

'Despite this evidence that cetaceans [whales] evolved from artiodactyls [even-toed mammals like deer, sheep, and pigs], substantial discrepancies remain. If cetaceans belong to artiodactyls, then similarities in the cranial and dental morphologies of mesonychians [extinct carnivorous mammals] and cetaceans must be a result of convergent evolution or must have been lost in artiodactyls. Furthermore, molecular data favor a sister-group relationship between whales and hippopotami. This conflicts with the conventional view based on morphology that hippopotami are closer to other artiodactyls than they are to whales.' Rose, K. D. 2001. *Evolution: The Ancestry of Whales.* Science. 293 (5538): 2216-2217.

If features do not conform to preconceived thinking, that is because they could represent "divergence," "convergence," "character reversals," "vestiges," "rudiments," "independent losses," "one-time gains," "parallel derivatives," or any of the jargon tagged to subjective evolutionary explanations. Comparing fossils based on similar features suffers from the same trap of circular reasoning, and gene sequence comparisons suffer from the same prejudices, inconsistencies, and excuses. In fact, comparing different sequences from the same organism can lead to very different presumed evolutionary relationships. These facts provide a conversational opportunity to highlight the plasticlike attribute of evolutionary theory to absorb all observations—even ones that are totally contradictory." Similar Features Show Design, Not Universal Common Descent, ICR, Acts & Facts, October 1, 2010

Evolution 2.0

We began this series with a question –

What is "science" and what are "arguments from science"?

We also looked at whether science can be "settled."

Something I hear often from atheists and agnostics is the phrase "settled science." Does Darwinian evolution meet the definition of *knowledge that* stays the same and is not likely to change or move?

Based on the 150+ years of debate about the topic, I would say the answer to that is an overwhelming **NO**. Darwinian evolution is **NOT** settled science. There are many scientists who would say Darwinian evolution is not even good science, but it is certainly not settled knowledge.

It's important that we look at all sides of any argument concerning knowledge, especially about something as important as the origin of life. Let's look at four sides of the argument.

On one hand we have atheist/agnostic Darwinian evolution scientists -

"Evolution by natural selection is one of the best substantiated theories in the history of science, supported by evidence from a wide variety of scientific disciplines, including paleontology, geology, genetics and developmental biology." Live Science, What is Darwin's Theory of Evolution, Ker Than, February 26, 2018

We have theist Darwinian evolution scientists –

"Opponents of the science of evolution sometimes claim that evolution is a 'theory in crisis.' This claim has had traction among regular church goers, 39% of whom believe that scientists do not generally agree that humans have evolved over time. When respondents are restricted to white Evangelicals, that number goes up to 49%. Such beliefs do not reflect what scientists actually think. When scientists themselves were asked the same question, 99% agreed that humans have evolved over time. There is very little debate among scientists about the central idea of evolutionary theory: common ancestry (including human beings). It is the settled backdrop against which biological research takes place." BioLogos, *Is evolution a 'theory in crisis'?*

We have Creationist scientists –

"Belief in evolution is a remarkable phenomenon. It is a belief passionately defended by the scientific establishment, despite the lack of any observable scientific evidence for macroevolution (that is, evolution from one distinct kind of organism into another). This odd situation is briefly documented here by citing recent statements from leading evolutionists admitting their lack of proof. These statements inadvertently show that evolution on any significant scale does not occur

at present, and never happened in the past, and could never happen at all." ICR, *The Scientific Case Against Evolution*, Dr. Henry Morris

And we have Intelligent Design scientists -

"Intelligent design (ID) is a scientific theory that employs the methods commonly used by other historical sciences to conclude that certain features of the universe and of living things are best explained by an intelligent cause, not an undirected process such as natural selection. ID theorists argue that design can be inferred by studying the informational properties of natural objects to determine if they bear the type of information that in our experience arise from an intelligent cause. The form of information which we observe is produced by intelligent action, and thus reliably indicates design, is generally called 'specified complexity' or 'complex and specified information' (CSI). An object or event is complex if it is unlikely, and specified if it matches some independent pattern. Contrary to what many people suppose, the debate over intelligent design is much broader than the debate over Darwin's theory of evolution. That's because much of the scientific evidence for intelligent design comes from areas that Darwin's theory doesn't even address. In fact, the evidence for intelligent design comes from three main areas: Physics and Cosmology, the Origin of Life, and the Development of Biological Complexity." Discovery Institute, Frequently Asked Questions

Four different responses to the same base of scientific research findings from the last century and a half. Who do we believe?

You may have already chosen sides and that's okay. I had chosen the side of Darwinian evolution as an atheist, yet was convinced by evidence to switch sides. The important thing is to be a student of scientific investigation and follow the evidence wherever it leads.

Beginning or Bang

The first verse of the Bible reads – "In the beginning God created the heavens and the earth." That seems pretty straightforward. A supreme being known as **God** "created" the "heavens and the earth" in the "beginning." Jews and Christians have believed that Bible doctrine (teaching) for thousands of years, long before the development of modern science.

What has the view been outside of Judaism and Christianity about the origin of the universe? Did it have a beginning or has it always been?

Most ancient religions around the world had creation stories that involved their gods and goddesses. Those stories were shared from generation to generation for thousands of years. However, the scientific era began to challenge that idea.

When did the modern scientific era begin? Here's one view of it from a professor of the History of Science –

"If the history of science is to make any sense whatsoever, it is necessary to deal with the past on its own terms, and the fact is that for most of the history of science natural philosophers appealed to causes that would be summarily rejected by modern scientists. Spiritual and divine forces were accepted as both real and necessary until the end of the 18th century and, in areas such as biology, deep into the 19th

century as well." Encyclopedia Britannica, History of Science, L. Pearce Williams, Cornell University

Some historians point to the publication of *On The Fabric Of The Human Body* by Andreas Vasalius in 1543 AD as being the first great work of modern science. Nicolas Copernicus published *On The Revolution Of Celestial Bodies* that same year. Other early works of modern science continued to grow toward the end of the 16th century into the 17th century including the writings of Giordano Bruno, Francois Viets, Galileo Galilei, John Napier, Johannes Kepler, Sir Francis Bacon, Giovanni Borelli and Isaac Newton. King Charles II officially recognized the Royal Society of London in 1662. The Society brought together leading thinkers in an effort to advance scientific investigation.

Most of the early scientists believed the universe did not have a beginning and had always existed. However, that has changed during the past hundred years. The 20th century birthed many ideas about the question of origin. Leading scientists in the universe origin quest have included Albert Einstein, Edwin Hubble, Georges Lemaitre, Alexander Friedman, Vesto Slipher, Fred Hoyle, Thomas Gold, Max Planck, Hermann Bondi, Arno Penzias and Robert Wilson. Much of their investigation led to an idea that a majority of evolutionary scientists have since embraced – the **Big Bang**.

The Big Bang

"One of the best known theories in cosmology is the Big Bang. This is the idea that our universe started out much hotter and denser than it is now and has been expanding since then. This theory is based on observations of our universe, among which are:

External galaxies are receding in such a way that their recessional speeds are proportional to the distance they are away from us (this is called Hubble's Law after Edwin Hubble who first noticed it). This observation is explained well by a uniform expansion of the universe. If the universe is expanding, it must have started out very small some time far in the past. It is this point which has been called the beginning of the universe or the 'Big Bang.'

When we observe the night sky we see an excess of radiation which is called the CMB radiation (cosmic microwave background radiation). It is a perfect black body with a temperature of 3 Kelvin. Taken with the expansion of the universe, this radiation says that the universe must have been much hotter in the past and also opaque to radiation. It turns out that the CMB radiation fits in perfectly with being from the first photons to escape after the universe became transparent. The universe became transparent for the first time when atoms first formed (in an event known inexplicably as recombination)." Cosmology & the Big Bang, Ask An Astronomer, Cornell University

This raises an interesting question: what was there **before** the Big Bang?

"We can define the universe as everything there is, so in that case there is nothing outside of it. We also say that space and time both started at the Big Bang and therefore there was nothing before it.

Another definition for the universe is the observable universe – which is the part of it that we can technically see. We cannot know what is outside of that (since we can't observe it), but we think that physics works the same everywhere and so we think that it should be very similar to the observable universe. We actually think that the universe might be infinite in extent, and so goes on forever, even though we can only see a finite part of it." Karen Masters, Associate Professor in Astronomy and Astrophysics at the Institute of Cosmology and Gravitation, University of Portsmouth, UK, Associate Professor in Astronomy and Physics at Haverford College, Pennsylvania.

Saying that space and time both started at the Big Bang and there was nothing before it raises some questions for scientists. How can *something* come from *nothing*? Some evolutionists see the problem and are honest in their discussion about it. Let's hear first from an agnostic scientist about his views concerning Darwinian evolution –

"We can assume that in a relatively short time — perhaps within 100 million years — the one celled organism evolved into a colony of cells. With the further passage of time, groups of cells within those colonies assumed specialized functions of food-gathering, digestion, the

structural features of an outer skin, and so on; thus began the stage of evolution leading to the complex, many-celled creatures which dominate life today.

The fossil record contains no trace of these preliminary stages in the development of many-celled organisms. The first clues to the existence of relatively advanced forms of life consist of a few barely discernible tracks, presumably made in the primeval slime by soft, wriggling wormlike animals. These are found in rocks about one billion years old. These meager remains are the earliest traces of many-celled animal life on the planet." *Red Giants and White Dwarfs: Man's Descent from the Stars*, Robert Jastrow (1971), p. 249.

Jastrow, who was an astronomer, planetary physicist and NASA scientist, wrote this in his book *God and the Astronomers* 40 years ago –

"When a scientist writes about God, his colleagues assume he is either over the hill or going bonkers. In my case it should be understood from the start that I am an agnostic in religious matters. My views on this question are close to those of Darwin, who wrote, 'My theology is a simple muddle. I cannot look at the Universe as the result of blind chance, yet I see no evidence of beneficent design in the details.'

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." Robert Jastrow, *God and the Astronomers*, 1978

And this in *The Enchanted Loom* a few years later –

"Now we see how the astronomical evidence supports the Biblical view of the origin of the world. The details differ, but the essential elements in the astronomical and Biblical accounts of Genesis are the same: the chain of events leading to man commenced suddenly and sharply at a definite moment in time, in a flash of light and energy.

Consider the enormity of the problem. Science has proved that the universe exploded into being at a certain moment. It asks: What cause produced this effect? Who or what put the matter or energy into the universe? And science cannot answer these questions, because, according to the astronomers, in the first moments of its existence the Universe was compressed to an extraordinary degree, and consumed by the heat of a fire beyond human imagination. The shock of that instant must have destroyed every particle of evidence that could have yielded a clue to the cause of the great explosion.

There is a strange ring of feeling and emotion in these reactions [of scientists to evidence that the universe had a sudden beginning]. They come from the heart whereas you would expect the judgments to come from the brain. Why? I think part of the answer is that scientists cannot bear the thought of a natural phenomenon which cannot be explained, even with unlimited time and money. There is a kind of religion in

science; it is the religion of a person who believes there is order and harmony in the Universe. Every event can be explained in a rational way as the product of some previous event; every effect must have its cause, there is no First Cause. ... This religious faith of the scientist is violated by the discovery that the world had a beginning under conditions in which the known laws of physics are not valid, and as a product of forces or circumstances we cannot discover. When that happens, the scientist has lost control. If he really examined the implications, he would be traumatized." *The Enchanted Loom*, Robert Jastrow, 1981

Theories

We now have many theories about the universe in which we live. The fact that there are so many scientists talking about so many different theories about the origin of the universe reminds us that this is **not** settled science –

- Creation of Universe by God
- Big Bang Theory
- Steady-State Universe Theory
- Plasma Universe
- Eternal Universe Theory
- Multiverse Theory
- Eternal Inflation Theory
- Cyclic Theory (Oscillating Universe)
- String Theory (also Superstring, M-theory)
- Flat Hologram Theory
- Digital Simulation Theory

The scientists who support these various theories believe that "science" is on their side. So, which is it? Which scientific theory about the universe is correct?

The Scientific Method

The process of determining what happened in the far-distant past is a difficult thing for scientists to do. How do they do it? Through something called the **scientific method**.

Depending on who you ask, there are anywhere from three to eight steps to the scientific method. Here are some examples:

Three Steps

"The process of observing, asking questions, and seeking answers through tests and experiments is not unique to any one field of science." Encyclopaedia Britannica

Four Steps

"The scientific method has four steps:

- 1. Observation and description of a phenomenon or group of phenomena.
- 2. Formulation of an hypothesis to explain the phenomena. In physics, the hypothesis often takes the form of a causal mechanism or a mathematical relation.
- 3. Use of the hypothesis to predict the existence of other phenomena, or to predict quantitatively the results of new observations.

4. Performance of experimental tests of the predictions by several independent experimenters and properly performed experiments." Rochester Edu

Six Steps

"At the core of biology and other sciences lies a problem-solving approach called the scientific method. The scientific method has five basic steps, plus one feedback step:

- Make an observation
- 2. Ask a question
- 3. Form a hypothesis, or testable explanation
- 4. Make a prediction based on the hypothesis
- 5. Test the prediction
- Iterate: use the results to make new hypotheses or predictions." Khan Academy

"The steps of the scientific method go something like this:

- 1. Make an observation or observations.
- 2. Ask questions about the observations and gather information.
- Form a hypothesis a tentative description of what's been observed, and make predictions based on that hypothesis.
- Test the hypothesis and predictions in an experiment that can be reproduced.

- 5. Analyze the data and draw conclusions; accept or reject the hypothesis or modify the hypothesis if necessary.
- 6. Reproduce the experiment until there are no discrepancies between observations and theory. "Replication of methods and results is my favorite step in the scientific method," Moshe Pritsker, a former postdoctoral researcher at Harvard Medical School and CEO of JoVE, told Live Science. "The reproducibility of published experiments is the foundation of science. No reproducibility – no science." LiveScience.com

Eight Steps

"Because science offers a way to answer questions about the cosmos in a clear, rational manner, with evidence to support it, a reliable procedure is necessary in order to obtain the best information. That procedure is commonly called the scientific method and consists of the following eight steps: observation, asking a question, gathering information, forming a hypothesis, testing the hypothesis, making conclusions, reporting, and evaluating." Sciencing.com

The quote from LiveScience.com is insightful – "The reproducibility of published experiments is the foundation of science. No reproducibility – no science."

Is that true? Is there no science (knowledge) if experiments cannot be reproduced?

What about the origin of the universe? How can scientists be sure (e.g. settled science) when they cannot reproduce something that happened in the far distant past?

If the scientific method is based on being able to reproduce and falsify or verify an experiment or experiments, it seems impossible that any scientist could do that about the origin of the universe. Therefore, we have "theories" about the origin of the universe rather than settled scientific "facts".

Scientific Theory

A **scientific theory** is different than a **personal theory** we may have about something, so let's look at what it means –

- "... a coherent group of propositions formulated to explain a group of facts or phenomena in the natural world and repeatedly confirmed through experiment or observation." Dictionary.com
- "... systematic ideational structure of broad scope, conceived by the human imagination, that encompasses a family of empirical (experiential) laws regarding regularities existing in objects and events, both observed and posited. A scientific theory is a structure suggested by these laws and is devised to explain them in a scientifically rational manner." Encyclopaedia Britannica

"The way that scientists use the word 'theory' is a little different than how it is commonly used in the lay public,' said Jaime Tanner, a professor of biology at Marlboro College. 'Most people use the word 'theory' to mean an idea or hunch that someone has, but in science the word 'theory' refers to the way that we interpret facts ... Any scientific theory must be based on a careful and rational examination of the facts. Facts and theories are two different things. In the scientific method, there is a clear distinction between facts, which can be observed and/or measured, and theories, which are scientists' explanations and interpretations of the facts." LiveScience.com

A scientific theory, therefore, is not a *guess* by scientists. It is based on **evidence** and the **proper interpretation** of that evidence.

Scientific Evidence

When we say that something is a *scientific theory* we are saying that some scientists believe the theory may be correct based on their interpretation of the *scientific evidence*. So, what would serve as scientific evidence that could be interpreted in determining the origin of the universe?

Let's begin by asking which scientific disciplines would give us the best evidence for the origin of the universe? Most of the scientists who have proposed scientific theories about the universe's origin in the last 100 years have come from these disciplines —

- Astronomy
- Astrophysics
- Cosmology
- Physics (e.g. Theoretical, Quantum)
- Mathematics

Here are some examples -

Big Bang Theory:

- Georges Lemaître astronomy, physics, mathematics
- Edwin Hubble astronomy

Steady-State Theory:

- Hermann Bondi mathematics, physical cosmology
- Halton Arp astronomy
- Thomas Gold astrophysics
- Fred Hoyle astronomy, cosmology

Plasma Theory:

- Kristian Birkeland physics
- Francis Chen plasma physics
- Eric Lerner physics
- Hannes Alfvén plasma physics, electrical engineering

Multiverse Theory:

- Alan Guth theoretical physics, cosmology
- Brian Greene theoretical physics, mathematics
- Alexander Vilenkin physics, cosmology

Eternal Inflation Theory:

- Alan Guth theoretical physics, cosmology
- Andrei Linde theoretical physics
- Paul Steinhardt theoretical physics, cosmology
- Andreas Albrecht theoretical physics, cosmology

Cyclic Theory (Oscillating Universe):

- Paul Steinhardt theoretical physics, cosmology
- Neil Turok theoretical physics
- Lauris Baum physics
- Paul Frampton physics (particle phenomenology)

String Theory:

- Michio Kaku theoretical physics
- Edward Witten theoretical physics, mathematical physics
- Yoichiro Nambu theoretical physics
- Leonard Susskind theoretical physics
- Brian Greene theoretical physics, mathematics

Flat Hologram Theory:

- Kostas Skenderis theoretical physics, mathematical physics
- Gerardus 't Hooft theoretical physics
- Leonard Susskind theoretical physics
- Charles Thorn physics

Hawking-Hertog Theory:

One of the best-known physicists was Stephen Hawking. Hawking researched the origin of the universe for much of his career as a theoretical physicist and cosmologist. Hawking worked with Thomas Hertog to develop a theory of the universe's origin and explained it this way less than a year before his death –

"The usual theory of eternal inflation predicts that globally our universe is like an infinite fractal, with a mosaic of different pocket universes, separated by an inflating ocean' ... 'The local laws of physics and chemistry can differ from one pocket universe to another, which together would form a multiverse." Stephen Hawking's Final Theory on the Origin of the Universe

Based on what scientists in these disciplines have discovered, it appears that the universe contains about 5% visible matter, 27% dark matter, and 68% dark energy.

NASA scientists explain it this way –

"More is unknown than is known. We know how much dark energy there is because we know how it affects the universe's expansion. Other than that, it is a complete mystery. But it is an important mystery. It turns out that roughly 68% of the universe is dark energy. Dark matter makes up about 27%. The rest — everything on Earth, everything ever observed with all of our instruments, all normal matter — adds up to less than 5% of the universe. Come to think of it, maybe it shouldn't be called 'normal' matter at all, since it is such a small fraction of the universe." NASA Dark Energy, Dark Matter

It would seem from those statistics that scientists know very little about the origin of the universe since about 95% of what makes up the universe is still unknown. Might some of the evidence for the beginning of the universe remain to be discovered out of the 95% that is currently unknown?

Another interesting theory is that there is simply no explanation for the origin of the universe. Here's how two physicists explain that idea –

"We can't explain it because there was no definite reason that it happened. It just did. This is not as outlandish as it sounds. It is perfectly reasonable to think that not everything has a reason! Reasonable people don't enjoy thinking so — but it is still a possibility. Maybe something happens just because it does." The Creation of the World — According to Science

Best Explanation

Since none of the theories about the origin of the universe are "settled science," how should we move forward in determining what to believe? From a scientific position the answer would seem to look for the "best explanation." Which of the theories is the best explanation from all of the scientific evidence presented to date?

It would seem that the universe coming into existence at some point in the past fits the "best explanation" test. The questions are **how** and **why**.

Many scientists view the Big Bang theory as the best explanation of the data available.

"The best-supported theory of our universe's origin centers on an event known as the big bang. This theory was born of the observation that other galaxies are moving away from our own at great speed in all directions, as if they had all been propelled by an ancient explosive force." National Geographic

"Our universe began in a tremendous explosion known as the Big Bang about 13.7 billion years ago. Observations by NASA's Cosmic Background Explorer and Wilkinson Anisotropy Microwave Probe revealed microwave light from this very early epoch, about 400,000 years after the Big Bang, providing strong evidence that our universe did blast into existence." NASA

However, one issue that remains is how did something come from nothing? Unless it didn't.

"In the beginning God created the heavens and the earth." Genesis 1:1

Creation of Universe by God fits quite well as the "best explanation" of the origin of the universe. It fits the scientific evidence well in addition to having the support of the credibility of the biblical account of history.

It's interesting that the first thing Moses wrote in the account God gave him about the origin of the universe is that God created the heavens and the earth "in the beginning." Yes, there was a beginning .. not necessarily the Big Bang that scientists refer to .. but a beginning.

God creating the universe answers both questions – how and why? – extremely well.

"Lift up your eyes on high, And see who has created these things, Who brings out their host by number; He calls them all by name, By the greatness of His might And the strength of His power; Not one is missing." Isaiah 40:26

"Bring My sons from afar, And My daughters from the ends of the earth— Everyone who is called by My name, Whom I have created for My glory; I have formed him, yes, I have made him." Isaiah 43:6-7

"For since the creation of the world His invisible attributes are clearly seen, being understood by the things that are made, even His eternal power and Godhead, so that they are without excuse, because, although they knew God, they did not glorify Him as God, nor were thankful, but became futile in their thoughts, and their foolish hearts were darkened." Romans 1:20-21

In Conclusion

The purpose of this series of articles about **Arguments From Science** is to help Christians have a basic understanding of science and how to talk with people about how science relates to the existence of God, the credibility of the Bible, and the reality of the life, death and resurrection of Jesus Christ.

There is no reason for a Christian to think they are "out-gunned" because someone claims that science has proven God does not exist or the Bible is not credible or Jesus Christ did not live, die and rise from the grave. Christianity has strong evidence that should be interpreted properly, then compared to other worldviews – including any views based on scientific investigations.

Christians have no reason to fear discussions about the Bible and science. Christianity is based on reason and evidence. Scientific inquiry is our friend. What is true is true and Christians have no reason to fear truth. In fact, the founder of Christianity said this about truth –

"If you abide in My word, you are My disciples indeed. And you shall know the truth, and the truth shall make you free." John 8:31-32

Resources

Other **Faith and Self Defense** articles you may find helpful in dealing with questions about the Bible and science:

Does Science Disprove God and the Bible?

Can I Trust the Bible? Part 14

Can I Trust the Bible? Part 13

Can I Trust the Bible? Part 12

Convince Me There's A God: The New Testament Part 2

Convince Me There's A God – Archaeology 15

<u>Convince Me There's A God – Thermodynamics</u>

Convince Me There's A God - Causality

<u>Street Epistemologists – On Guard 9</u>

Of Mice and Men, Kangaroos and Chimps

The Existence of God Part 7

The	Existence	of God	Part 6
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The Existence of God Part 5

<u>Seekers, Skeptics, and Scoffers – Knowing the Difference</u>

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