**Scientific Apologetics 1 – Intelligent Design**

**Romans 1:20** “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.”

1. **Christian Roots of the Scientific Revolution**

Science as a human endeavor used to embrace this reality stated in **Romans 1:20**. Give a historical sketch of the development of Modern Science (modern science arose within a worldview that acknowledged exactly what Romans 1 affirms – the creation itself points to the reality of God. It does this very clearly; so much so, that you are without excuse if you refuse to acknowledge God as the creator of all things). Human beings made in the image of God are uniquely capable of conceiving of something like science and mathematics to describe physical reality.

The scientific revolution forged by men like Galileo, Kepler, Copernicus, Sir Isaac Newton, Robert Boyle, Louis Pasteur, Michael Faraday, James Clerk Maxwell, Lord Kelvin and many others was led by Christians with Biblical convictions. Many more could be cited, and many disciplines discovered or started by such scientists who were Christians. Christian worldview assumptions led to the birth of modern science. These men sought to see and learn more of God through the creation and how He set it up.

- The doctrine of the Creator (God created the world so that all men everywhere and at all times could know Him and glorify Him through it) justifies or provides a basis for the presuppositions assumed by scientists in order to do science.

- The example of James Clerk Maxwell, etc.

James Clerk Maxwell, Scottish mathematical scientist, for example over his lab (the Cavendish Laboratory – the University Physics lab at Cambridge he had engraved in Latin **“Great are the works of the LORD, studied by all who delight in them” (Psalm 111:2)**. By the way, the new lab built in 1973 has it in English. – Maxwell is known mostly for his equations and theory of electromagnetism, work on optics and kinetic theory of gases. His work laid the foundation for our understanding of radio waves, microwaves, and light. He paved the way for quantum mechanics and Einsteins theory of special relativity. Einstein said of him “The work of James Clerk Maxwell changed the world forever.” He had a portrait of Maxwell on the wall of his study. He was also a Presbyterian elder in the Church of Scotland.

1. **Rise of Scientific Naturalism or Materialism**

But in the last 150 years or so science took a different approach and came to embrace a different set of goals and presuppositions.

Science has largely come to be an enterprise that assumes no God or God is not involved in the creation in any significant or detectable way, and our scientific explanations are designed to replace God and push God further and further away with ever improved naturalistic explanations for everything. Only natural causes are allowed to be invoked because that is all science is suitable for studying. This new operating principle is sometimes called ***scientific naturalism or materialism***.

Rise of scientific naturalism in 1800s and 1900s (no teleology or purposes with design and a designer, especially after Darwin). Science studies and finds natural causes for effects, and it can do this very well (note the success of science in the last 200 years). And therefore, science has come to be thought of as being defined by only seeking natural causes. Anything outside of natural causes (like asserting an intelligent cause) is viewed as a science stopper or a “god of the gaps” argument. *So, a limitation of science (it can only study physical and material entities) has come to be viewed as a limitation on reality.* Only what “science” can study is real.

Quote from Richard Lewontin as a representation of how all-encompassing the naturalistic worldview and methodology has come to dominate modern mainstream science.

1. **The recent Intelligent Design (ID) Movement**

That brings us to this morning’s topic: ***Discoveries being made in science are more and more pointing to God, not away from God.*** See the quote by Pasteur.

The more we learn about the natural world / the natural order, the more impossible it becomes to explain it with mere natural causes or natural laws. Things that were once thought to be simply explained or not needing an explanation, now have opened up and the sheer intricacy and complexity have frustrated attempts to give a simple naturalistic understanding.

Now most of us are not professional scientists. There may be a handful of people here that are and the vast majority of the people we interact with daily are not either. But we do interface with science everyday in school, museums, sometimes at work, media sources etc. and therefore as Christians we need to be able to deal with apologetics issues that pertain to science. We are not going to be able to delve deeply into every area of science and challenge at that level. However, as David White encouraged us in our Tactics class a few weeks back, we can **ask questions** and I want to encourage that this morning as our primary tool when it comes to these issues. We may be able to “put a stone in sceptic’s shoe” so to speak.

The recent development of Intelligent Design in the last 40 or 50 years has taken place within or on the edge of mainstream science.

Intelligent Design scientists and philosophers have been at the forefront of pointing out the inadequacy of natural causes and processes to account for the origin of life or the universe as it has come to be understood. Men like Phillip Johnson, Michael Behe, John Lennox, and Stephen Meyer. And many more or course.

So for example, Stephen Meyer’s most recent book has had him making the rounds on the big podcasts and media outlets lately. It is called *The Return of the God Hypothesis*. He wrote earlier *Signature in the Cell* and *Darwin’s Doubt*. He along with the other ID scientists have had as their strategy to focus on the singular question (their wedge issue), **“what will science do when the evidence is pointing to intelligent causes and not materialistic ones?”** Will scientists stick to their fundamental commitment as it has come to be of only material causes? Or will it follow the evidence wherever that leads – even if it points to intelligent causes? If the evidence is pointing to an intelligent agent, is that unscientific?

Well that is what they have been doing in the ID movement. Looking at the origin of life, looking at the explosion of different life forms at the Cambrian Explosion in the fossil record, looking at the ultimate beginning of the universe, and looking at the many lines of fine tuning in the universe, solar system and earth for sustaining life and even enabling discovery.

The ID Methodology (these are scientists looking at scientific evidence and **seeking to provide the best scientific explanation for that evidence without using the Bible)**

What are the ID guys saying?

* Most prominent spokesperson now (Dr. Stephen Meyer) Director of Discovery Institute, PhD in philosophy of science from Cambridge with focus on origin of life studies, 3 important books (Signature in the Cell, Darwin’s Doubt, and recently The Return of the God Hypothesis)

The case Meyer is making is this:

1. **The Biological Information Problem**

The best explanation for the digital code/information now known to exist and be carried by the DNA molecule in the cells of all living things is an intelligent cause not a materialistic one like a chemical/physical law or something like chance assemblage or mutations & natural selection. In fact, you can’t even have natural selection until you have a mutating replicator which is what can’t be adequately explained without a mind. Even the simplest cell or life form is far too improbable to originate by either natural laws (chemistry and physics) or chance. Darwin thought the cell was simple (**undifferentiated blob of protoplasm – quote Thomas H. Huxley**), we now know it is like a factory or city with nano machines, storage, transmission and processing of digital code capabilities, circuitry and many other irreducibly complex interworking and functional parts with amazing complexity. Irreducible complexity at every level. Failure of all naturalistic attempts to get life – at best they show the need for intelligent agents to manipulate and control all parameters to get even building blocks. But still not close to making life. To explain a living cell, you must account for the coded information in DNA and natural laws cannot do this.

* 1. Bill Gates (quote in Powerpoint slide)
  2. Richard Dawkins (quote in Powerpoint slide)
  3. So, the digital code or alphabetic and symbolic nature of the DNA (language or software programming) definitely points to a mind – a designing intelligence
  4. This is similar to Paley’s watchmaker argument (1802) and it is an example of a *teleological* argument for the existence of God. It is an argument that says the complexity of this thing requires a designing intelligence that can plan, coordinate and integrate all of the various parts of this so that it performs a purpose. The universe and living things are like this so they point to a designer. Criticisms of this type of argument came from people like Hume and then especially Darwin who thought the mechanism of natural selection removed all need for such design explanations. Meyer is arguing that Darwin does not do away with the need for intelligent causes. **Sometimes natural causes are not adequate for the thing in question.** Darwin assumed life – but that is what must be explained. (analogy) – Darwin’s assuming life to start with is like saying you can pick an 8 digit combo lock – just give me the first six digits and I can figure it out or another analogy would be to claim you can beat Usain Bolt in a 100meter race and then you line up 50 meters ahead of him. That just will not do to pretend like mutations and natural selection can do the job when you can’t even get the mutating replicator. The digital or coded language of DNA is not the kind of thing we ever see arising from natural causes. Blueprints, digital code or typographical language, always come from an intelligent, conscious mind. Furthermore, you can’t get the first life by chance and then say it evolved from there on. It’s too complicated and integrated and information-filled to get even a simple life form by chance or natural law (**Dawkins says the information in a simple single celled life form like an amoeba is equivalent to 1000 Britannica encyclopedias**).
  5. Meyer’s second book (*Darwin’s Doubt*) looks at the fossil record and what bothered Darwin about it. The discontinuous abrupt appearance of many forms of life and then stasis followed by extinction with no ancestors throughout but especially at the Cambrian Explosion. Meyer especially focuses on the information problem again of getting such diverse body plans (tremendous amounts of genetic information increases is required but the time to do so is too short). Calculations have now been made (Douglas Axe). Mutations and natural selection don’t have enough time even given the billions of years scenario. Additionally, the vast majority of mutations to the genetic code are harmful or neutral but they degrade the information. Think of how well Microsoft Word would work if the software underwent random changes to its code. Or if the letters of text on a book began to randomly be changed, how long would it take before the meaning was gone. Much quicker than how long it would take before your text evolved into a new meaningful message with additional information. In fact, Michael Behe has shown that most mutations that somehow benefit an organism are actually breaking something and losing information. Genes get broken but this can confer an adaptive advantage sometimes (like antibiotic resistance in bacteria or polar bear from brown bear). But this is loss of information not gain. Darwinism requires information increases. **Epigenetic information** has exacerbated the problem. There are other forms of information necessary in cell, tissue, organ, and body plan development that are beyond and outside of the DNA. Mutations and natural selection are simply not adequate to explain all of this – they don’t even come close. Mutations and natural selection can make adaptive changes (microevolution) to organisms like Darwin’s finches beaks but they can’t explain the origin of birds in the first place (macroevolution). **Mutations are real and so is natural selection – they just can’t do what Darwin thought they could do – molecules to man “tree of life” evolution.** The fossil record and DNA evidence are inconsistent with Darwinian expectations.
  6. So, this is a major argument of Meyer. The information problem is real. And we should ask this question in thoughtful ways whenever we can with people we interact with on these kinds of issues – **“WHO OR WHAT WROTE THE CODE? The DNA CODE WHICH IS THE LANGUAGE OF LIFE. WHAT IS THE NATURALISTIC EXPLANATION FOR THE ORIGIN OF GENETIC CODE OR THE INFORMATION CONTAINED IN THE DNA MOLECULE?”** Can you tell me how the DNA language originated from natural causes like chemistry and physics? Everywhere we look – in all our experience, software programs, typographical messages, digital code, blueprints, etc. only come from minds (i.e., intelligent causes) – never do they arise from chemistry, physics or any other blind, repetitive, natural law.
  7. Reviews and critiques of Meyer have not addressed his central claims. They have not refuted his argument with evidence. Rather they accuse him of trying to bring religion into science. Or they say he is invoking a “God of the Gaps” type argument. Inserting a “god” into our explanation of something as a place holder until we have a natural explanation. Meyer denies a “god of the gaps” method – **his point is that our uniform and repeated experience tells us that some things only come from minds.** Codes and symbolic languages, or computer programs (digital information), no matter what the medium is, never come from chemistry or physics (not any more than chemistry and physics of ink and paper control the message of a text written on them). Messages always come from minds. Those who think a natural explanation for the origin of information rich messages in the genome are the ones making the gaps argument. They hope and have faith that a natural explanation will be discovered but the more we learn, the more implausible this hope becomes. They are ignorant of something – they put their belief in some unknown natural law to produce informational messages when no known mechanism exists. Information always comes from a mind.
  8. Meyer points out that he is using the same methodology that Darwin used. INFERENCE TO THE BEST EXPLANATION by looking at clues and evidence in the present. This historical or forensic science approach is what Darwin employed but he just didn’t know what we now know. If Darwin was doing science, then ID scientists like Meyer are doing science too. It’s not two different methods but just different conclusions arrived at in a similar fashion.
  9. Similarly, **SETI research** that seeks to discern intelligent causes in radio signals, presumably from advanced alien civilizations in other parts of our galaxy, utilizes a similar methodology to Meyer. Also the Rosetta Stone with it’s 3 languages when they cracked the code – the scientists studying this object weren’t prevented from considering intelligent causes for the inscriptions. To allow only natural causes like wind and erosion is not how many other areas of science operate.

After Meyer and others made the case from DNA and irreducible complexity for an intelligent cause or designer, many asked them “who is this unseen designer?” – many have asked the ID guys this very question.

So, ID proponents are now going further. They are pointing to features of the cosmos and galaxies. They are pointing to the ultimate beginning of the universe and the fine tuning of the universe, solar system and earth systems to show that the designing intelligence we are detecting in biology is not some agent ***within the universe*** like an advanced alien form of life that evolved elsewhere and that seeded life on earth.

Scientific materialists like Dawkins and even Francis Crick (discoverer of the structure of DNA) have entertained such ideas as intelligent aliens seeding life on earth (**directed panspermia**). Other brilliant scientists like Fred Hoyle, and Stephen Hawking have also suggested similar ideas.

A good question to ask people that we talk to about origins is this – **“WHY WOULD BRILLIANT SCIENTISTS HAVE TO APPEAL TO EVOLUTION HAPPENING ELSEWHERE OUT IN SPACE AND THEN THOSE EVOLVED BEINGS SENDING LIFE TO EARTH IF THE FACTUAL DATA BEING STUDIED HERE ON EARTH IS SUCH A SLAM DUNK CASE FOR NATURAL EXPLANATIONS?”**

**(2) The realization by science that the universe had a beginning (matter is not eternal)**

1. The argument from the ultimate beginning of the universe goes like this: Prior to 20th century, cosmologists and theoretical physicists thought the universe could be understood as eternal. It was an eternal system and there was no need to explain the origin of matter and energy. It just was. Matter and energy had always existed and had no beginning. But evidence has been accumulating that the universe (space, time, and matter) did have a beginning. They extrapolate back in time from what they interpret as an expanding universe until they get to a “***singularity***” at the beginning. In fact, very few scientists deny an ultimate beginning to the universe anymore. So, the universe had a beginning. This is not what scientific naturalists wanted to admit. It smacks too close to **Genesis 1:1.**
2. If the universe, (space, matter and time) had a beginning at some finite point in the past, then there must be a cause for such an effect. This is a version of the **cosmological argument for the existence of God**. The argument goes something like this. Whatever has a beginning, or whatever begins to exist, has a cause. The universe began to exist, therefore it has a cause. What could be the cause of (space, time, and matter). Well it can’t be any of those things because they didn’t yet exist. There was no matter that materialists believe everything has been derived from. To be consistent and not self-defeating, the cause of space, matter, and time must be an entity that is spaceless, timeless (outside of time), and immaterial. It must be very powerful, given the immensity of the universe (with perhaps 2 trillion galaxies). It has to be very intelligent given the fine tuning of the universe (which we will get to) and the complexity of information in all life. And it has to be personal or volitional not like a natural law like gravity that just does the same thing over and over. It could freely choose to do something like create something. Considering these deductions, they sound much like attributes of the God of the Bible.
3. **2 options** – No one created something from nothing. Or Someone created something from nothing. Materialists like option 1. Both are miraculous, but at least there is a miracle worker in option 2. Option 1 strikes at the very heart of the law of causality and would undermine all thought and science. Nothingness is very problematic and you can see that materialists have to be deceitful to try to get around it (Lawrence Krauss) or just say we don’t know (Neil deGrasse Tyson). Materialists like option 1 but it is self contradictory. There is no MATTER or ENERGY there to create. You are trying to explain the effect of the physical universe. Physical objects aren’t an option for the cause. It has to be spaceless, timeless, immaterial. Also must be very powerful to create 2 trillion galaxies. Must be incredibly intelligent to fine tune and create the intricacies and information of life. Most be personal or volitional (not like natural laws like gravity that do the same thing over and over) but able to choose to do something different like create something. Sounds more and more like the attributes of the God of the Bible.

Third argument ID guys emphasize:

1. **The FINE TUNING OF THE UNIVERSE (“Goldilocks principle”)**
2. Fundamental constants like gravity, the strength of nuclear forces, or the speed of light have to be very close to what they are or the elements don’t exist, basic chemistry as we know it couldn’t exist, the universe can’t be sustained or habitable, and life could not survive. Sir Fred Hoyle – an atheistic materialist scientist himself discovered some of these fine tuning features of the universe and said the following: **“A commonsense interpretation of the facts suggests that a super intellect has monkeyed with physics, as well as chemistry and biology, and that there are no blind forces worth speaking about.”** This was unsettling to him.
3. It’s probably easier to grasp some macro examples instead of mathematical constants of theoretical or quantum physics. Let’s put it into terms of the earth and solar system. -

* Change the size of the earth (bigger or smaller) just a little bit and it would not be able to keep an atmosphere like we have for sustaining life. The magnetosphere would be altered and not be able to keep cosmic ray bombardment at the level needed to sustain atmosphere and life.
* Change distance of earth from sun slightly and you burn us up or freeze us.
* If water were different and like most substances, its frozen form would be denser. It floats and so life is not cut off from ponds and water bodies freezing up from the bottom.
* Take away Saturn and Jupiter (gas giants way out there) – just little specks of light to us. They filter out by their size and gravity, comets, asteroids, meteors so they rarely collide with earth. When one does reach earth it is bad news. For example: the Tunguska explosion – June 30, 1908 over Eastern Siberia. Explosion flattened and burned 80 million trees over an area of 830 square miles. Meteor presumably was about 160-200 feet in diameter and approached at about 60,000 mph. Exploded at an altitude of about 3 to 6 miles up.
* Even the recent solar eclipse (moon and sun have to be just so to make that happen). And eclipses are important tools for scientific discovery. Light from stars being bent by gravity has been confirmed at total eclipses as predicted by Einstein’s theory of relativity.

So, that is the case that the ID guys are making in addition to other things that show the inability of Darwinian Evolution to account for the fossil record patterns, the irreducible complexity in living things, etc. The science of modern molecular biology and genetics point to an intelligent designer (teleological argument); the modern science of cosmology, astronomy, and theoretical physics points to an ultimate beginning of the universe (Big Bang cosmology) and a fine-tuned universe that would also require an intelligent designer. The beginning of the universe demands an adequate cause and it can’t be material (Cosmological argument).

Materialists like Richard Dawkins or Neil deGrasse Tyson say “we don’t know what caused the ultimate beginning of the universe.” They admit it that they don’t know. Or they will postulate a *multiverse* (some mechanism is spitting out parallel universes with different properties). We hit the jackpot for all the right parameters and wala – we are here. The fact that we are here, and one universe being so fine-tuned and overcoming so much impossible improbability, is the only evidence they have for a multiverse. There is zero evidence for other universes. This multiverse idea is just a very desperate attempt to overcome impossible odds. Dawkins and Tyson have publicly acknowledged they don’t know.

Well – are the kinds of arguments and discoveries that ID scientists are speaking about impacting and causing anyone to reconsider naturalism and Darwinism? As a matter of fact they are. Do you know about **Anthony Flew**? For 50 years he wrote in favor of atheism but in 2004, he announced that he had changed his mind, precisely because of the DNA evidence and fine tuning arguments. He was just following the evidence. Meyer has indicated that many inroads have been made by ID. Some scientists being won over are covert to protect their positions as faculty or in scientific societies.

**Some problems with this ID methodology (as Biblical Christians, there are some deficiencies with ID methodology)**

1. **Inference to the best explanation has limitations – inferences can be logical and scientific but still wrong (unbiblical)**
2. As Meyer points out, what they are doing is tied to scientific *evidence* at any given time. In Darwin’s day, they didn’t know about the intricacies of cells and the information in DNA. So, their reasoning was flawed. But 100 years from now, additional things will be known, so the limitation of science is that it is always changing. The reality and truth of Christianity is not based on a changing foundation. Christianity is not true now but not in Darwin’s day. It’s true always.
3. Inference to the best explanation may be very scientific, accurate, meticulous, logical and persuasive. But still wrong. Historical events by their very nature cannot be ascertained by the scientific methods that put someone on the moon or builds nuclear weapons. Here’s an analogy from Scripture that exposes this problem. At the wedding of Cana, Jesus turned water into wine. *A hypothetical scenario* - Now suppose we could time machine a modern expert wine chemist back to 1st century Israel with his lab (I know – a stretch). The task – analyze the wine that Jesus made scientifically. After doing all of the detailed lab work, microscopy, measurements, chemical analysis, spectrographic studies, molecular studies, age dating measurements, x-ray, mass spectrometry and any other possible technical studies that could give relevant data about the wine, a report would document the scientific results. It could be submitted for peer review in the top biochemical or other scientific journals. Whatever process would be described for where this wine came from and how it was created, would be very scientific and based on measurable tests – logical, scientific, and yet **dead wrong**. It would be the testimony of the eyewitness servants that would be able to state the truth about the origin of the wine Jesus made from water. Whatever process the scientific information might indicate may be scientific and logical but it would not be correct. There are other inferences that ID scientists are making about the origin of life forms or the origin of the solar system that do not line up with the Biblical description of what God did. The Bible says something very different from the inferences scientist come up with by looking at present processes.
4. **Distinctions need to be made between operational/experimental science and historical/forensic science**

Let’s finish out with a discussion of *historical or forensic* versus *empirical or operational* science – “here and now” science. This difference is real and I cannot over-emphasize the importance of making this distinction. We rightly should be impressed with the enormous body of knowledge that legitimate here and now science has brought us. As Christians, we do subject ourselves to plane flights, we use computers and cell phones. We trust that medical science is onto something when they utilize sophisticated surgical laser tools and anesthesia. But that is all operational science – “here and now” science. None of that contradicts anything in the Bible. Now consider historical science – how did the moon-earth system originate? How did the first life arise? These questions are deemed part of modern science too. But the answers to those questions is going to largely be determined by what type of explanations are allowed (naturalistic/materialistic answers only), and by consensus of what naturalistic/materialistic scientists think is a good theory. Worldview assumptions and presuppositions are wildly important as are financial and political pressures. It simply is not the same kind of science and therefore, these kinds of questions being answered in the name of science do not need to intimidate Christians. There is a lot more than just facts in this situation. Testable and repeatable is not possible. And how do we know that the experts are really good at knowing what is required given that they haven’t seen even one occurrence of these to even know what it takes to get a moon like ours orbiting an earth like ours. ID proponents are quite happy to embrace historical inferences to the best explanation without any biblical constraints. This is why they have no problem embracing many of the same reconstructions of earth and planetary and cosmological evolution with its billions of years etc., even though the Bible says things happened a different way. Biblical Christians need to be aware of this and only utilize ID arguments to the extent that they are consistent with revealed Scriptural truth. We rest confidently on the constraints of Scripture for how things have actually originated, even if naturalistic scientists believe that they can infer processes to explain the origin of something in the past.

**Some Potential Questions that we can be asking when conversations arise:**

Who wrote the DNA code? Can chemistry or physics alone explain this?

Why would explanations such as “aliens with directed panspermia” or “multiverse” or “we are living in a simulation” be the kinds of theories our best naturalistic scientists are having to resort to to explain the known universe and the origin of life?

How is it that Darwinism is assumed to explain anything about the origin of living things given the fact that it can’t even account for the origin of the first mutating replicator which you must have to get any life at all?

Why is it that when the mutation and natural selection mechanism is tested mathematically (given a stress test so to speak) to see if it can actually perform the wonders that it is claimed to be able to do and mathematically it is shown to be inadequate; The assumption always made is that there is something wrong with the math and not the mechanism or theory itself. Why is that? It seems that the reason is because of a prior commitment to naturalism. People are just assuming that something like Darwinism must be true – simply because we are here (and they exclude the possibility of God).