

Up to this point we have kept the focus on the more "religious" aspects of apologetics. Today, and for the next two classes, we are going to be heading "beyond the religion", looking at science, philosophy, logic, etc. and see what we can do with those disciplines in defending our faith. We will discuss science and religion today and the next two classes will be on logic and reasoning, and then we will be diving into specific arguments we might use in our apologetics for the existence of God, such as the argument from contingency and the Kalam cosmological argument.





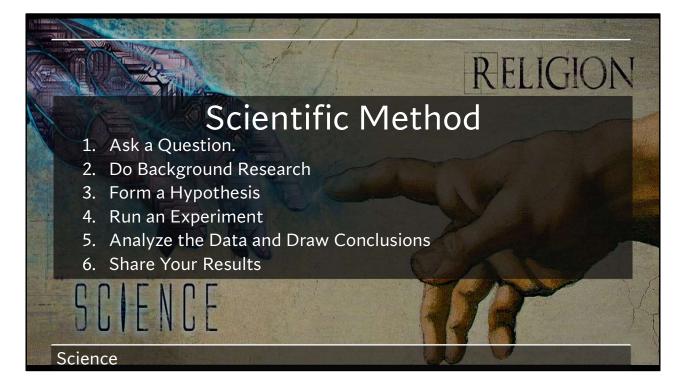


What is science?

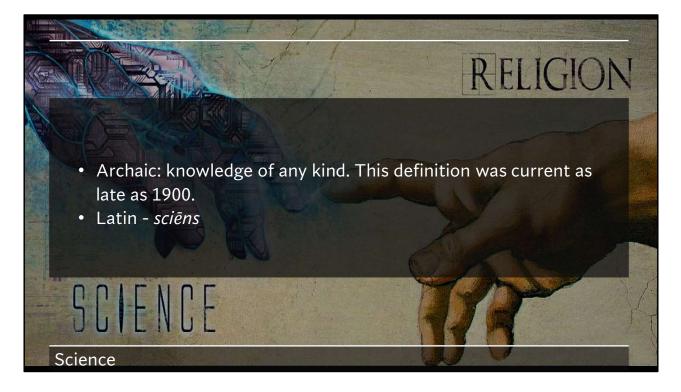
Why would we even need to consider science when we engage in apologetics?



This is what most people today will understand science to be.



- 1. Based on an observation, you ask a question
- 2. Start doing research. Gather all the information you can on the topic.
- 3. Make an educated attempt to answer your question that can be tested.
- 4. Run tests to support or toss your hypothesis
- 5. Analyze the data you've gathered from the tests and draw a conclusion. Your hypothesis will either be supported or will need changing.
- 6. Communicate your results.



Coming from the latin word sciens meaning "knowing". It is where we get our word omni-scient. As you can see. the meaning of science has drastically changed. It is now generally only limited to the natural, physical world, a.k.a. natural science. However, there are many things that natural science is incapable of studying yet are completely rational to accept,. For example:

Logical and mathematical truths – Science presupposes these truths. To do science requires the laws of logic and abstract objects like numbers to function. It presupposes these truths and uses them in its methodologies. So, to prove these truths by science would be to argue in a circle

Metaphysical truths – There are other minds than my own. The external world is real. Value of discipline, education, or even life/existence.

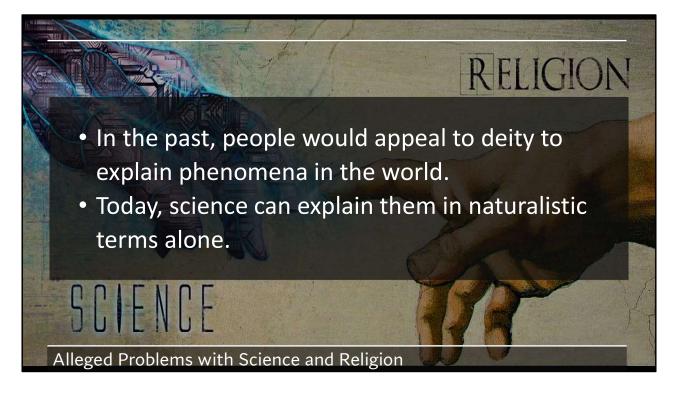
Ethical beliefs – Statements of ethical/moral value. What is good vs evil? Science can't tell us the holocaust or torture is evil. This is one of the major points that apologetics push today. The naturalist/scientistic atheist has no ground to stand on when it comes to good and evil.

Aesthetic judgements – beauty, like the good, cannot be scientifically proven. Art, music, poetry, physique(beauty), etc. Science cannot be used to make judgements on these things.

Science – science cannot be justified by the scientific method. Science is permeated with unprovable assumptions. We simply don't know everything there is to know of the universe and how things work and so certain assumptions are made, and stated, to allow for an experiment when providing "solutions" to certain things. For example, special theory of relativity – hinges on Speed of light is constant in one-way direction, but it cannot be proven. It is assumed.

Because of the redefining of science, we seem to run into some "alleged" problems.





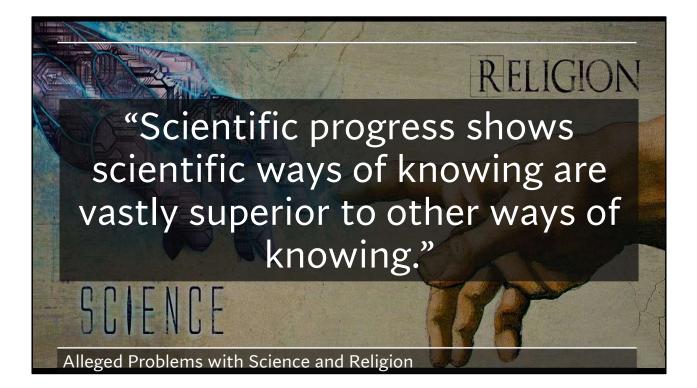
The argument goes like this... appeal to deity. This is one of the more common arguments brought up when it comes to opposing the existence of God. A natural disaster, such as a hurricane occurs, it must be the result of angering a god.

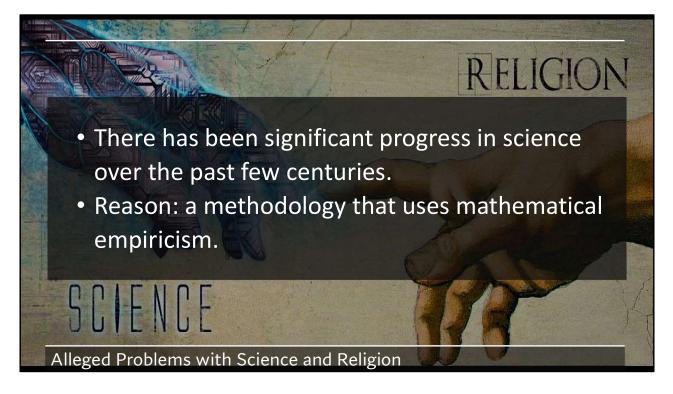
Science tells us it is the result of warm ocean water and moist air interacting. Pressure changes and wind causes water vapor to form and rise to form clouds. As it rises, it cools and the warm clouds above it begin to move outwards and a circular motion begins to form.

Who knows what "God of the gaps" is?

God of the gaps – This is when someone will "fill in" the gap where knowledge is not with God. We, as Christians, need to be very honest and careful when we engage in apologetics to not dig a whole and fall into it when it comes to this. The Bible is not a science textbook. So, when science says something, we don't need to get defensive and then start freaking out. Sure, we have an understanding that the universe is in the hands of God and nothing occurs without His knowing and permitting, but this is not how we should be approaching gaps in knowledge. I will give an example later on to contrast this and you may understand more what the atheist feels when a Christian uses this argument. In the end, we can acknowledge what people are finding in science AND not have our faith shaken.

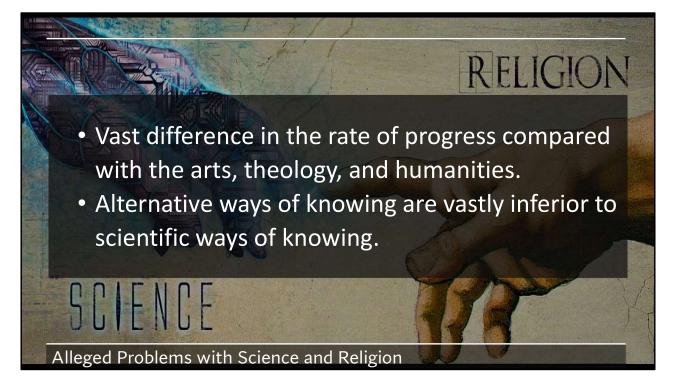
The other issue with this argument is there is the viewpoint that science alone explains any and all things, but again they limit this with a naturalistic view. The underhanded claim also being made is that science has "figured it all out," eventually. Time is all that keeps us from knowing all things.





The amount of progress made in the past couple hundred of years gives the confidence people have today in science.

Using math and through observation and experience, science can reason through all things(to which math can be applied)



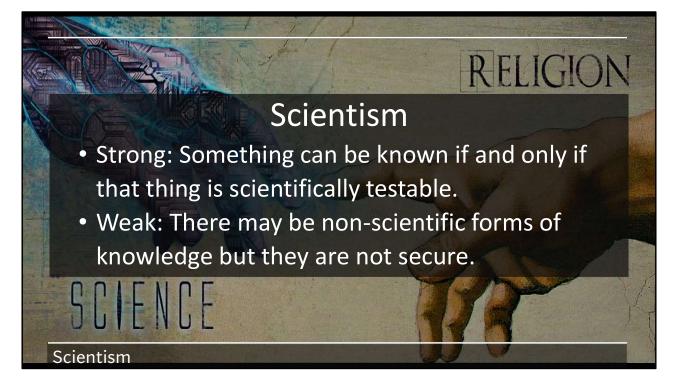
Because of the amount of progress made, especially compared to other forms of knowledge, they use it as proof this way of knowing is superior. This means that unless you come to the knowledge of something without the use of science, it is vastly inferior. For example, if you can't use science to come to know that Jesus Christ was the son of God, then it is not a very secure knowledge. And some would go further and say you cannot know it.

"you can't REALLY know He was the son of God."

What do they mean by progress?

What about when knowledge is lost? We can't even look to history a few hundred years ago and know what was lost to time.

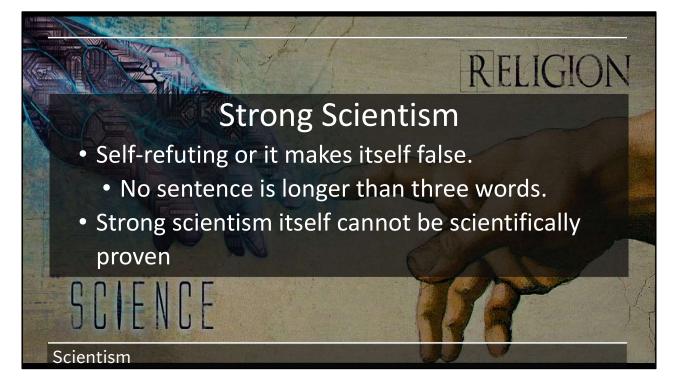
The idea that scientific ways of knowing are vastly superior has led to what is referred to as scientism.



Strong scientism says the only knowledge possible is scientific knowledge. If we can't test it, it cannot be known. This results in the use of the atheist's viewpoint of faith. The idea you have faith without evidence or reason which of course opposes true Christian understanding that "faith without works is dead." Many in the church will have this "blind faith" and this has only worked to strengthen the atheist claim and push to scientism as the only or superior way of knowing. The humanities are essentially gone.

Weak scientism accepts there may be other forms of knowledge but they just are not very strong or important. Scientific knowledge is vastly superior. There are many forms of knowledge that fall into this category, specifically moral and aesthetic knowledge. What is good or evil, beautiful or ugly? As mentioned previously, scientific testing cannot be applied to these forms of knowledge.

Scientism is just simply false.



Statements are about a subject matter. Apologetics is being taught in this class today. Dogs are man's best friend.

The subject matter is apologetics or dogs in these sentences.

Sometimes a statement itself is part of the subject matter.

No sentence is longer than three words is about sentences. This is a sentence about sentences. When a statement is about its own subject matter and the statement makes itself false, it is self-refuting.

I can't speak in English.

Never say never.

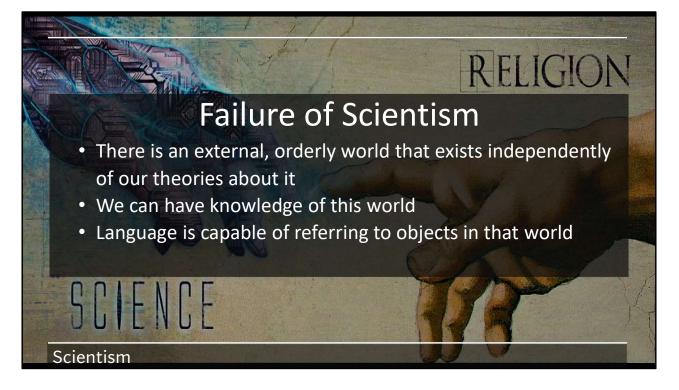
You should not judge.

I don't believe anything.

I can't think of anything.

I can't know anything unless I test it with my five senses – is self-refuting. This statement cannot be tested using my five senses.

Strong scientism says that something can only be known if and only if that thing is scientifically testable. What scientific test would you perform to verify the validity of this statement?



Both versions, weak and strong, fail to allow for the asserting and defending of the presuppositions of science.

The idea is that what science is doing is trying to make sense of this world. The world before them is orderly and exists independent of our theories about it. When we run an experiment to test how heat transfers through an object, we presuppose that should we run the same exact test under the same exact conditions and parameters it will conclude with identical results. Through these experiments we can then begin to understand and gain knowledge of this world and that we can apply language to makes sense of what we've learned. Non of these presuppositions can be tested scientifically.

The assumptions of science and the defending of those assumptions is what theology and philosophy can do. Theologically, we believe in a creator of the universe and that He made it with natural laws, etc. We see in Genesis the very application of language to refer to things in this world. Light, darkness, calling the light day, and darkness night, calling the waters "seas", etc.

Science cannot engage in these presuppositions.



Another assumption

How does evolution work?

Natural selection. Mutation of genes. Advantageous mutations are passed along and so on. Creatures must feed, reproduce, fight and flee for survival. Cognitive or sensory faculties may arise but the process of evolution does not care about the accuracy of those things. The accuracy of sensations or the truth of beliefs do not matter. All that matters is that its advantageous genes are passed along.

Science claims truth and rationality, but to do so they must assume the reliability of our cognitive and sensory faculties.

The Christian worldview allows for this presupposition, since God, who is a rational being, gave us reliable faculties to accurately convey information.

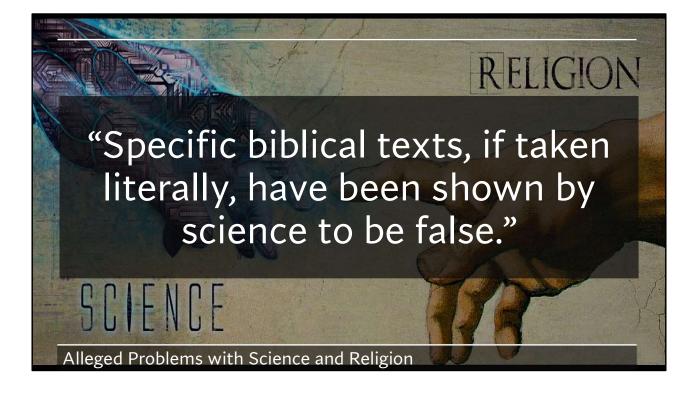


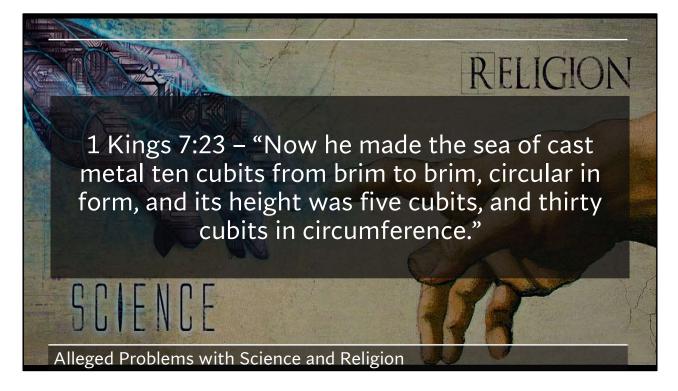
Mathematical truths – Science presupposes mathematical truths and so can't be used to know it.

Metaphysical truths – I know my beliefs, thoughts, feelings, and which body is mine without the use of scientific methods.

Ethical beliefs – Statements of ethical/moral value. Torturing babies for fun is wrong or kindness is a virtue are things that scientific methods cannot determine.

At the end of the day, we have multiple examples of knowledge that can be known outside of science.

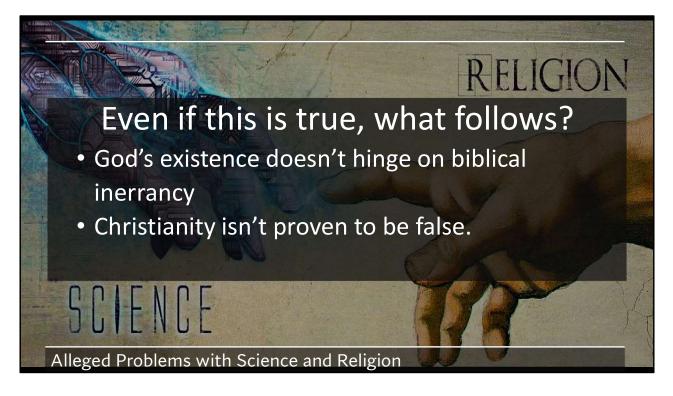




This verse describes a cylindrical vessel. $C=(pi) * D = \rightarrow 30$ cubits = (pi) * 10 cubits therefore (pi) = 3 when its really 3.14159.... This is a matter of precision.

Cubits, btw is the length of the arm from the elbow to the tip of the middle finger.

So one of the things you should do when approached with this argument, that specific biblical texts are shown to be false by science, is to evaluate the argument in full. Is this really a good argument?



Looking at the extreme scenario – Let's say we grant the atheist every single argument they put forth showing science has proven a text, if taken literally, to be incorrect, what follows?

What follows is it doesn't show there is no God. God's existence does not in fact hinge on biblical inerrancy. As a matter of fact, when we went over this in a previous class, I pointed out very clearly transmitted texts that were simply inerrant such as "the adulterous" Bible where the word "not" was omitted from "Thou shalt commit adultery" or in the "sin on" bible, where a verse says "sin on more" instead of "sin no more." We also affirmed that inerrant transmission of Scripture is not promised and so, does the argument even come from the autographic text of the original documents? And does the error take away from achieving the measure of focused truth with which the authors aimed? Is the focus REALLY the number of pi or is the author simply conveying a rough estimate for the size of this vessel Solomon sought to be built. None of what I just said takes away from the existence of God.

It also doesn't mean Christianity is not true.

Let's grant them for argument's sake the Bible is errant. Where does that lead?

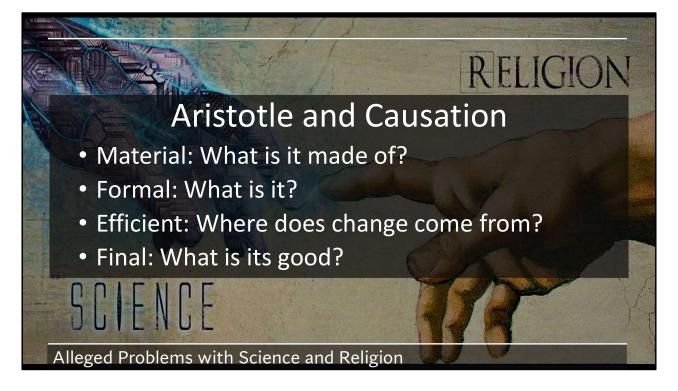
"The kingdom of heaven is like a grain of mustard seed which a man took and sowed in his field; it is the smallest of all seeds, but when it has grown it is the greatest of shrubs and becomes a tree" (Matthew 13:31-32) The mustard seed is not the smallest of all seeds. The point of this passage is not a lesson on botany, but is used to describe the coming of the Kingdom of God, starting small then growing significantly in size, starting with the disciples and resulting in the establishment of His Kingdom in full at His return.

Early Christians did not have a Bible! It started and flourished without one! Oral tradition was the norm and who ever told the story may or may not add their own little flair.

The other thing we need to look at his HOW we read the passage being used in the argument. IF TAKEN LITERALLY – is the key to their argument. We need to go back and read in context. Who is the author? What is the time period and what is occurring there? What is the purpose of this writing? What is the genre? Who is the target audience and what knowledge would they have to understand what is being taught? Etc.



Before we continue forward we need to take a quick look at Aristotle and Causation, the relationship stating A causes B.



Material cause – What is something made of? We look at the tables in front of us, the laptop I'm using to hold my notes, and the air we breath and we ask what are these things made of? The table is made of plastic molded into shape, held up by steel tubing and components. The laptop on a high level is composed of a screen, a cpu, graphics, circuit boards, etc. The focus is on the stuff.

Formal cause – While I may have plastic and steel tubing and various components, a screen, cpu, graphics, circuit boards, etc. until it is actually assembled, these are just components. The table is only a table once the components are assembled so that the board has legs to stand on. My laptop is only a laptop once all the components are assembled and in the correct way. The table isn't one if the legs are assembled on the sides instead of underneath.

Efficient cause – that by means of which an effect is produced. You have the component of the and laptop and you decide to assemble them. YOU were the efficient cause. If you were to play some pool/billiard. A billiard ball hits another; we see that the first ball is the efficient cause of the motion of the second ball. The second ball is affected by the first ball. The efficient cause of a house is the builders.

Final cause – This is the teleological goal of the object. That for the sake of which an effect is produced. The purpose the object serves. The teleological goal of the table is to provide a raised platform upon which things can be placed. The teleological goal of the laptop is to allow for computing to be done easily on the go and at different locations without lugging around a bulky set up. The billiard ball being struck to enter the pockets of the billiard table. Home for someone to live in.

What we see clearly is that modern science stresses the material and efficient causes but rules out final causes (yet, it may use that kind of language). Scientist are only concerned with what stuff is made of and the efficient causes that lead to events.

What are the implications of this? How would a modern scientist describe a heart?



Hearts are not for pumping blood. A heart at a higher level is made up of an inner lining, layer of muscle, outer layer of tissue, sac that surrounds and protects it, a fibrous skeleton, and an impulse conduction system. This is the material cause. All this material assembled as it is, is the formal cause, which is a human heart. The efficient cause is electrical signals that travel through the heart to cause contraction. What can science say is the final cause? What is the purpose of the heart? If there is no God, science must say, and scientist DO say, the heart's final cause is not to pump blood. That is to say the heart beats in order to pump blood, for the sake of pumping blood, for the purpose of pumping blood. A scientist would not make that statement. They would say:

"Some hearts pump blood and those convey reproductive advantages to those organisms."

"Some hearts do not pump blood and those did not convey reproductive advantages to those organisms."

"Therefore, hearts today pump blood because hearts in prior organisms pumped blood and that allowed the pumping of blood to be passed on to us." Hearts beat to pump blood vs hearts pump blood. It just so happens that, statistically, hearts overwhelmingly pump blood, but that wouldn't be their purpose.

The result of this is that it rids the world of teleological goals, final causes, purpose, etc. There is no longer any functions or dysfunctions. A scientist can't say something isn't functioning as it "ought to" function, because that implies a final cause. If a scientist says the heart is not functioning as it should, he means the heart is not statistically normal.

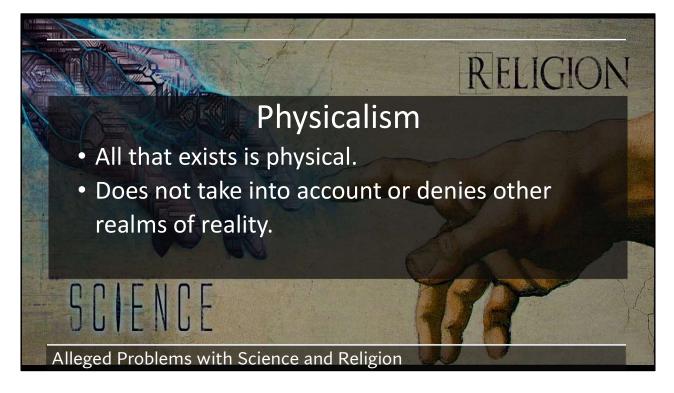
Human Action

- 1) If I raise my hand to vote, what caused my hand to go up? I did, as the efficient cause.
- 2) It was not my desire to vote that raised my hand. My desire was the final cause.
- 3) Psychology is experiencing strong attempts to embrace scientific methodology.

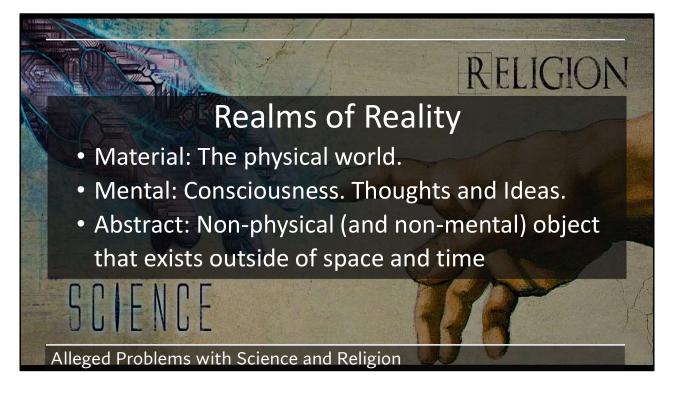
In order to be "treated" among the sciences, psychology is trying to follow what other sciences have done. They are looking to make psychology a measurable, empirically testable science. This would result in for example, the psychologist saying that desire is a "state inside of me." This means that what caused my hand to go up was not I, but the desire inside of me; the desire to raise my hand and vote. It wasn't me the person, but a state running alongside of me. The desire produced by the environment, my upbringing, or something else is the efficient cause of me raising my hand, and not the final cause. The environments I grew up in shaped my desires and my desires acted.

What are the implications of that? "I" am no longer responsible. Sin in my life is not because "I" made the decision to, but instead the desire inside me as a result of something else. My desires of the flesh and eyes, just do what they do and I watch it happen. Instead of being demon possessed, I am "desire possessed."

In the end, final causes don't help science in researching anything. It doesn't do the scientist any good to know the purpose of life. They want to know what is a human made of, how do the things we are comprised of function, and interact and to continue up the chain of causes. A home's material composition and how it reacts to weather harsh storms is what the scientist is looking to research, not that the home is for living in. Some might agree, yes of course a home is for living in, but ultimately modern science has no need for final causes.



Science demands we be physicalists. All that exists is physical or collections of matter. The person, "I", does not exist outside of my physical brain. I am my body and nothing more. There is no soul or spirit.



Material: All things in the physical universe.

Mental: Thoughts and ideas.

Abstract: Platonist - It is not a physical object and it exists outside of the mind. Numbers, for example, do not have "bodies" and would exist if there was no mind to think upon them.

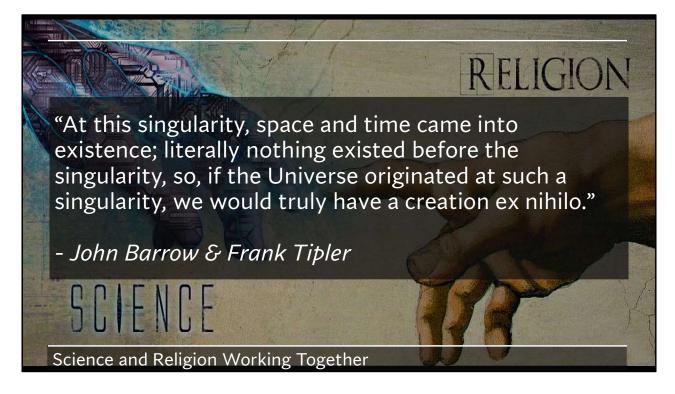
Non-Platonist – Abstract objects solely exist in the mind. The abstract world is a subset of the mental realm.

Next we will explore four ways in which science and religion, more specifically the Christian faith, can work together.



The Bible teaches us that the universe had a beginning.

Ancient Greek philosophy and modern atheism opposed this teaching and it would not be until 1929 that evidence for it was discovered. The expansion of the universe verified that the universe had a beginning. The discovery found that if you were to trace the expansion back in time all the galaxies in outer space got closer and closer together until they formed the singularity. The singularity, an infinitely hot and dense single point, represents the origin of the universe. This point then rapidly expanded at unimaginable speeds and continues to expand to this day.



Physicists John Barrow & Frank Tipler

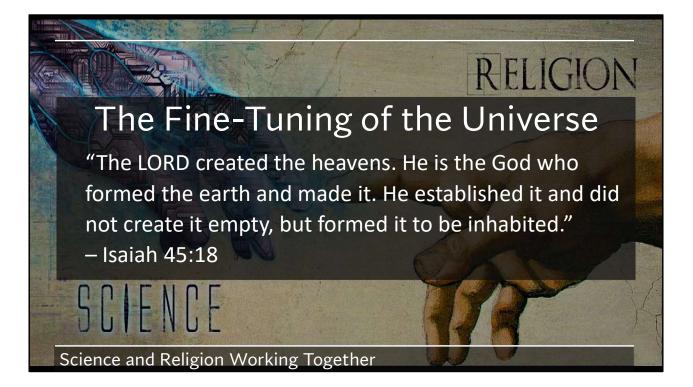
Science has verified the Bible's "prediction" of the beginning of the universe.

There are some theorists who have alternative explanations besides the Big Bang Theory, such as an oscillating universe where the universe expands and collapses into eternity past.



J.M. Wersinger, a professor of Physics at Auburn University.

Nearly all the evidence continues to support the beginning of the universe.



The Bible makes it clear that God designed the universe. He formed the earth to be inhabited. Scientists have begun to discover how incredible a feat it is to design a universe habitable by life forms. They originally thought that whatever the initial conditions were, life would eventually evolve the complex life forms we see today. However, over the last few decades, scientists have been stunned by the discovery of how complex and delicate a balance of initial conditions must be given in the Big Bang itself to permit the existence of intelligent life anywhere in the cosmos.

Scientific discoveries have repeatedly shown that the existence of life depends on a delicate balance of physical constants and quantities given in the Big Bang. If any one of these were to be slightly altered, the balance would be destroyed, and life would not exist. The universe appears to be incomprehensibly fine-tuned from the moment of its inception for the production of intelligent life. For example, changes in the gravitational force by only one part in 10 to the 60th power would have prevented the existence of life. That's 1 followed by 60 zeroes. For reference, the number of cells in the human body is 10^14 or the number of seconds that have passed since the beginning of time is 10^20.

If the expansion rate of the universe altered by 1 part in 10^120 the universe would

expand too rapidly or slowly resulting in a life-prohibiting universe. The distribution of mass and energy is even more precise.

There are dozens of these initial conditions, 26 on the list I have seen, that must not only be individually fine-tuned, but must be fine-tuned in relation to one another in order for life to exist.



It would be like going to the casino and having dozens of roulette wheels all simultaneously landing on a specific number AND each one is some ratio of another. The first wheel lands on two, the fourth wheel must be twice the first, the second wheel must land on a number that is odd, but also be half the number on the third wheel and all at the same time!

The numbers on the roulette wheel are limited to a small range, but the possibilities of ranges for the physical constants and quantities are far greater and these numbers are perfectly dialed to an astonishingly precise value that falls within an exceedingly narrow life-permitting range. The odds of a life permitting universe are incomprehensibly overwhelming.



This is an error in logic.



Let's say you were arrested or captured by enemy forces. You are sentenced to execution by firing squad. You stand before 100 rifles aimed at your heart. The commands are given; ready, aim, fire! The deafening roar of 100 rifles going off fills the space. The smoke clears. You find yourself still standing and not a single marksman hit you.

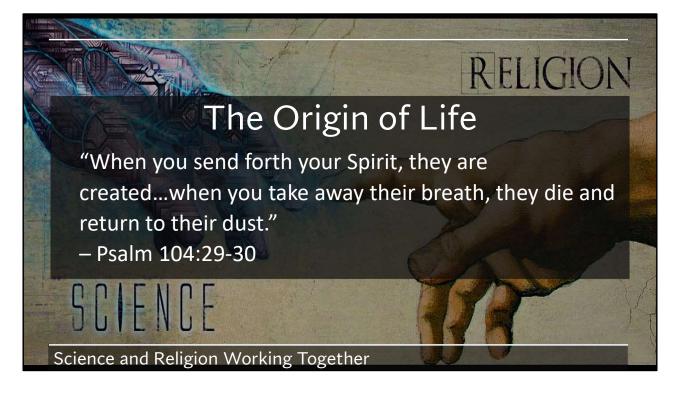
What would you conclude?

"Well, I guess I shouldn't be surprised they all missed. If they hadn't all missed I wouldn't be here to be surprised about it. Given that I am here, I should expect them all to miss. Nothing to be explained here!" Of course this is not correct thinking.

You would begin to suspect they all missed on purpose. The whole thing was a setup for some reason by someone. You wouldn't be surprised that you don't observe that you are dead. Because if you were dead you wouldn't be there to observe it. You should be surprised that you do observe that you are alive given the improbability that all the trained marksmen missed.

Given the incomprehensible improbability of the fine-tuning of the universe for life, it

is reasonable to conclude that this is not due to chance, but to design. It is far more plausible to believe as the Bible says, that this was the result of intelligent design, then to believe that the universe when it popped into being uncaused out of nothing just happened to be fine-tuned to an incomprehensible precision for the existence of life.



Despite the fine-tuning of the universe, the initial cosmic conditions do not guarantee that life will arise anywhere in the universe. Life cannot come to exist without them, but they do not guarantee life will exist. Given the incomprehensible probability of the fine-tuning of the universe for life, the origin of life remains just as incomprehensibly improbable.

Biblically, Genesis tells us God brings forth living creatures and breaths life into everything that has breath. The psalmist reflects... God is the ultimate cause of life on earth.

Scientifically, the origin of life is still unknown and remains a mystery. The current view is that life originated in the primordial soup by change chemical reactions. Experiments in the past have tried to synthesize the building blocks of life in ideal conditions in the hopes of creating life, but none would be successful.

Two steps required for life – the building blocks themselves need to be formed. Then those building blocks have to be organized into a cell. For example, the frame of a shed. You first need to form the 2x4's from whatever is there and then you need to form those 2x4's into a frame suitable for a stable structure. The same is said for life.

You need the building blocks then they need to be organized into a stable cell. Science has NO understanding of either step.

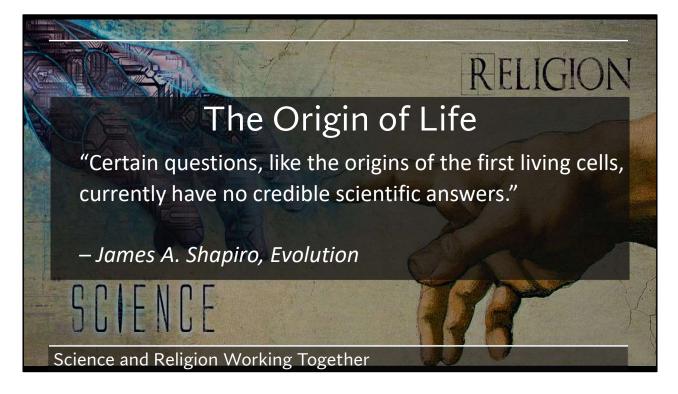
Four major building blocks – Carbohydrates, Proteins, DNA/RNA, and Fats and Lipids. These are essential to living things and no one knows where they came from.



The formation of these macromolecules by chance alone is so astronomically improbable that some scientists have felt forced to appeal to the reaches of outer space to claim them. These macromolecules formed somewhere else! Despite millions of dollars and countless hours invested, scientists have been unable to synthesize such macromolecules.

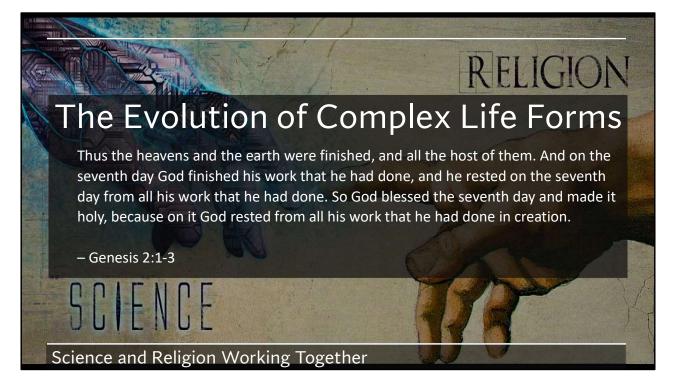
Scientists then begin to appeal to an infinite universe. If the universe is infinite then by chance alone, life would EVENTUALLY come to exist. The issue with this is that it can be used to explain away any improbable event. It would be an "infinite universe of the gaps" argument! They have simply replaced God with an infinite universe and just as they hold Christians to the fire when that argument is used, we can do the same for an infinite universe. We can no longer have rational discussions when they appeal to an infinite universe.

All of this is just in discussion about the building blocks of life. We haven't even discussed how these building blocks come to be organized into a living cell. A single living cell is so complex that scientists have essentially no understanding of how such a thing could come to exist.



This is where the state of science currently stands.

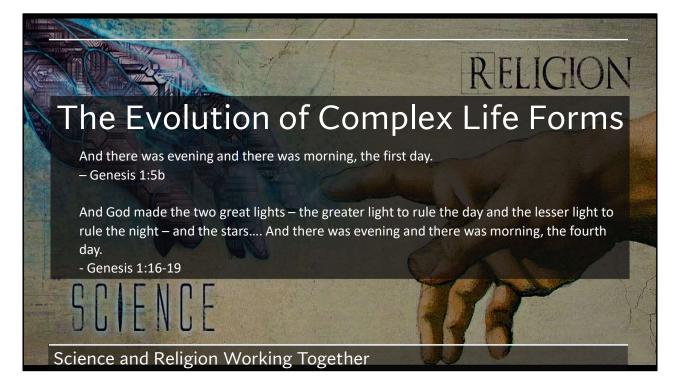
When we engage in apologetics, be aware that even scientists do not have all the answers! Christians do not have all the answers and neither do scientists!



Given the fine-tuning of the initial conditions for life in the universe and given the origin of cellular life itself, there's no guarantee that life would develop into complex, multicellular organisms.

Genesis describes the development of the earth into a habitable environment for life. Now we get into some internal church discussion on the interpretation of the Genesis accounts. Some look at the six days of creation as literal, while others do not. There are clues that a literal reading of creation week is not intended. A literal reading is one legitimate interpretation, but it cannot claim to be the only interpretation of the text.

For example, the seventh day has not ended and is clearly not a 24 hour period of time.



"And there was evening and there was morning, the first day." The Hebrew refers to sunset and sunrise, yet the sun was not created until the fourth day.



It is highly doubtful that the writer of Genesis thought the primordial oceans drained away within 24 hours allowing for the dry land to appear. – the same author wrote the story of Noah. After the flood, it took months for the water to drain away and just the mountains to be visible.



The author of Genesis would also need to write the third day and believe that the earth put forth vegetation in 24 hours. The author was not oblivious to how nature worked around him and so writing vegetation popping into existence would not seem to be the intention of the writer, especially if it was to be believed. What I've spoken of so far is purely based on the Biblical text alone. This is an internal church discussion.

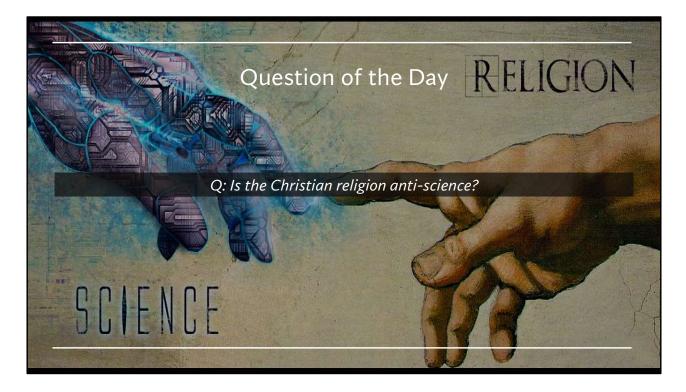
I have not at this time introduced science. The Bible also does not tell us HOW creation came into being. Did he create them from nothing? Did he use the process of evolution and other scientific understanding of planet and space bodies formation to bring them into existence?

I understand this may be new or difficult to accept and I acknowledge that. Genesis' interpretation is still hotly debated within the church. I am not going to dive into evolution and try to convince you of its validity, because at the end of the day it is still just a theory. Evolution itself has evolved since its inception. It has gone through multiple stages as more information is obtained through scientific inquiry. I questioned whether or not to include the last portion here, the evolution of complex life forms because of the controversy surrounding it and how it is often used as a

weapon to beat Christians up.

However I chose to include it because I wanted to drive home that science and religion can actually work together, even with the most commonly contested theory. The Bible is not a science book. The purpose of Genesis is to tell us that God is the creator of everything in the universe and it does not tell us how creation came into being. This allows the Christian to follow the evidence wherever it may lead, even to evolution!

In conclusion, while science has been used as a tool in opposition to religion, we can clearly see it is not without its faults and it is incapable of grasping the fullness of life and creation. It does not and cannot provide all the answers. And given the origin of the universe, the fine-tuning of the universe, the origin of life, and the evolution of complex life forms, we can see there is no conflict between science and religion. Taking all these things into account, the existence of God is not out of the question and is, in fact, quite reasonable.



Reflect on what was discussed in this class and then on this question.

Christianity is not against the scientific method. It is in opposition to scientism. God brought the universe into existence. It is a universe of order and so it can be understood. He also created human beings with rational minds who have the capacity to reason and come to understand the "secrets" of the universe. Christianity also provides a worldview that gives us the necessary preconditions which make the laws of the universe possible. A Christian worldview gives us a way into understanding the universe that science cannot provide.

Benediction: (Phil 4:7) And the peace of God, which surpasses all understanding, will guard your hearts and your minds in Christ Jesus. Amen

