

**Adam & Eve & Evolution
2017 - Class 2 Manuscript
The Rev John Roberts**



Video link: <https://youtu.be/o6v9wJgwSgE>
(this video includes a few minute revision at 70min mark, which makes the teaching on Hubble's redshift more accurate)

Handout Link:
https://b199a966-cb92-436a-9de2-9a2ffbf07539.filesusr.com/ugd/8c239b_e81b6707ac79443595296176f60f42d9.pdf

Discussion Questions Link:
<https://saintmatthiasoakdale.com/2023aee>

Class 2

History of the Rise of Creationism in America (1900 to the Present) [1:00] pages 1-12

Introduction of Six Models for Interpreting the Scientific Findings on Origins [43:15] pages 12-17

Examining the differences between Scientific Terms: Hypothesis, Theory, Law, & Model [1:00:55] pages 18-20

Scientific Findings on the Origin of the Universe [1:08:10] pages 20-25

Adam & Eve & Evolution – Class 2 Manuscript

5 minutes before start: @slide: Livingstone quote@

Opening Quote

“It can be difficult to separate the scientific, political, philosophical, and social dimensions of this issue, but that is scarcely an excuse for abandoning the attempt.”¹

-David Livingstone

At start: @slide: class logo@

Welcome back. Glad y'all joined us for class two of Adam & Eve & Evolution.

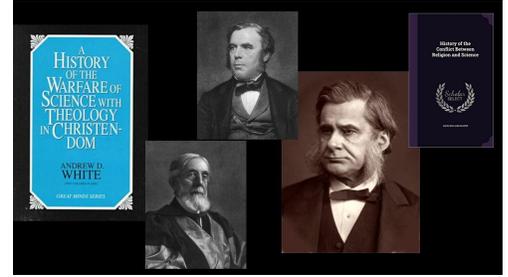
Tonight will be another 90 minute teaching, picking up where we left off last week, when we looked at the history of the church and science, specifically focusing on whether the church and science have actually always been in conflict.

@heliocentrism collage@ And we saw some occasions where the Church did conflict with science, particularly in the Roman Church's response to heliocentrism. **@slide: Augustine / old earth collage@** But we also saw many occasions where the



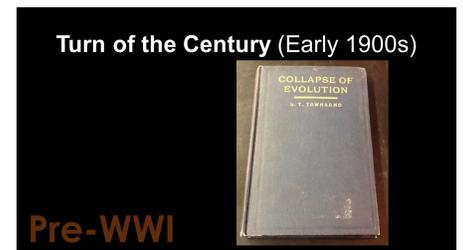
¹ (Livingstone, Darwin's Forgotten Defenders, 1984) 184

Church employed Augustine's doctrine of accommodation to reconcile new scientific discoveries with scripture, such as with the nebular hypothesis, old earth findings, and for some even evolution. @slide: conflict thesis collage@ In fact, we discovered that - surprisingly - the conflict thesis was actually introduced and propagated by those who, for a variety of reasons, were *opposed* to the Church's involvement in science in the, rather than Christians, who originated and propagated the conflict thesis. @slide: darwin finch@ Then, after talking about Darwin and his finches, it probably also came as a surprise when we discussed how many Christians had come to accept human evolution. @slide: Adding Asa to Darwin & Finches@ As we said, by the end of the 1800s: almost all the scientists and as many as half of the churchmen. And while most laypeople still believed Adam & Eve were the first people, astonishingly few of them believed in a young earth and even less believed Noah's flood had anything to do with the layers of fossils that were being excavated. @slide: Adding Asa to Darwin & Finches@ And, apart from the South, no one considered evolution determinative of whether someone was a faithful Christian. @slide: billboard collage@ But, as I alluded to at the end of class 1, much would change in the century that would follow, @slide: class title page@ and that is that is the subject of our first section tonight: examining how the tide could turn so drastically in the last hundred years.



Class Two – Part I
History of the Rise of Creationism in America
 (1900 to the Present)

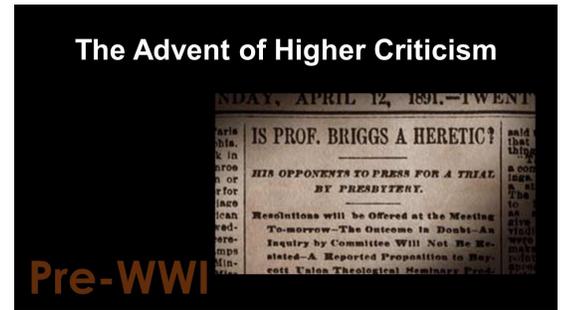
So let's get after it. In an odd way, science itself is somewhat responsible for the church's movement away from and even against Darwin and evolution. As I just mentioned, while the scientific world had become thoroughly convinced of evolution, their acceptance of the mechanism of natural selection was far from unanimous. @slide: turn of the century@ And by the early 1900s, many have become more vocal in their criticism of Darwin on this point. Darwin's name had become so closely associated with evolution that some of the general public and many in the Church interpreted this increased criticism of Darwin to mean that evolution had fallen out of favor with scientists, rather than just natural selection. It was sorta like a bad game of telephone. And this caused some in the church to suspect that those Christians who had accepted evolution had done so too quickly.²



² (Numbers R. J., 2006)52

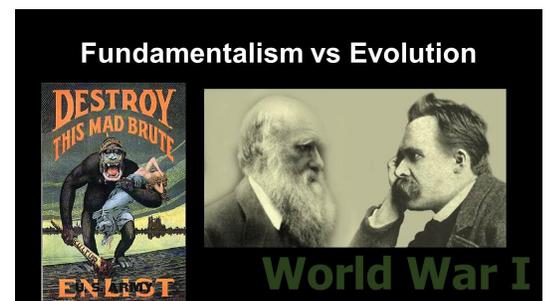
@slide: advent of higher criticism@

But, for the time being, there were larger concerns for evangelical Christians than evolution. Around the same time, a new movement called Higher Criticism had begun catching fire among Protestant intellectuals. Advocates of Higher Criticism viewed the Bible as a helpful historical document, but not as the inspired Word of God. Not surprisingly, Higher Criticism caused Church leaders great alarm as seminaries in almost every denomination saw some of their professors become persuaded by higher criticism. This liberal and unorthodox approach to the Bible led to a string of heresy trials, mostly against a handful of seminary professors. @slide: early fundamentalism@ But this created a militant atmosphere among many in the Protestant church, which by World War I (1914-1918) became what we now know as the Fundamentalist Movement; a movement that is still alive and well today. If you attend here at St. Matthias you have heard me quote a church historian who explained that "a fundamentalist is an evangelical who is angry about something."³ Well, Higher Criticism (or biblical liberalism as it is often referred to now) was the original thing that Fundamentalists within the Church were angry about. And after World War I ended (1918), these two elements collided, and the Fundamentalists placed evolution directly in their crosshairs. And there are three reasons this happens.



@slide: fundamentalism vs evolution 1@

First, even though Charles Darwin was English, as a result of propaganda like this, Americans had come to associate *Darwinism* with Germany, their World War I enemy. This is because German culture had become heavily influenced by Friedrich Nietzsche, whose philosophy drew on Darwinian themes like "survival of the fittest". So, many Americans came to believe that German culture illustrated the logical outcome for any society that embraced evolution. So, even though in hindsight it may seem like a big jump, the association of Darwinism with America's World War I opponents discredited Evolutionary Theory in the minds of many Americans.⁴



³ (Marsden, 1991)108

⁴ (Marsden, 1991)863

@slide: fundamentalism vs evolution 2 – great war over@

A second reason Fundamentalists began to actively oppose evolution after the war ended, is the unfortunate reality that sociologically many people still wanted an enemy. During the war, many Americans had grown accustomed to having somebody or something to blame for things not being what they "should" be (to their minds). So, with the Germans vanquished, now they needed a *new* scapegoat and evolutionary theory fit the bill. Fundamentalists began to blame Darwinism, or Evolutionary Theory, for pretty much everything happening in culture that they *didn't* like. @slide: fundamentalism vs evolution 3 – roaring twenties@



And, at this time there was a lot happening that conservative Americans didn't like! :) American culture was changing rapidly ... art, philosophy, literature, drama, all of these were moving in what seemed to be a very secular direction. And urban areas were beginning to experience the advent of new clubs, theaters, magazines, movies, and jazz music [and clearly the devil was behind all of this:)]. Well, the Fundamentalists concluded that the Biological Evolution now being taught in the schools was to blame for these rapid cultural changes. To them, Evolution was like the gateway drug that was leading young people to forsake the Christian faith and traditional values in droves.^{5 6 7}



@slide: fundamentalism vs evolution 4 – scientist@

A final factor contributing to Fundamentalism's growing intolerance toward Evolution is that even though the Church hadn't really been warring against science, many in *science had been* warring against Christianity. In class 1 we saw how Thomas Huxley and others threw all their support behind Darwin with the aim of severing the ties between religion and science, then John Draper & Andrew White wrote their very influential books propagating the conflict thesis (that the Church and science are at war). Well, by the end of World War I, this campaign against religion in science had progressed to the point that religious influence was no longer acceptable in the field of science at all!⁸



@slide: fundamentalism vs evolution 5 – collage@

So, for all these reasons evolution had become public enemy #1 for fundamentalists.

⁵ (Marsden, 1991)863

⁶ (Marsden, 1991)175

⁷ 4251

⁸ (Marsden, 1991) loc2079

Now, a conflict between science and faith really was being engaged in from (at least some on) both sides. But I want you to note that this is a particularly American movement. The Fundamentalists engaging in this warfare against evolution are almost exclusively in the U.S. And in the early 1920s, they identified some key figures to lead them in this loud and public conflict.

@slide: leading creationist scientist@

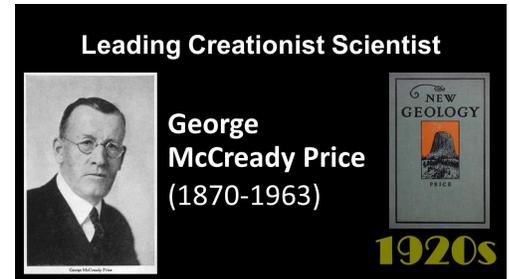
The first person is George McCready Price. Price was a Seventh Day Adventist and it turns out that Ellen White, the founding prophet of the Seventh Day Adventism, claimed to have had a vision where she was carried back to creation and shown that God had indeed created everything in six 24-hour-days and rested on the seventh.⁹ This is what motivated Price, as he devoted his career to confirming White's vision. So, despite having no formal scientific education (!), Price published *The New Geology* in 1923, which argued that the multiple strata – or layers – of fossils that *appeared* to indicate an old earth could all be attributed to the flood in Genesis. And soon thereafter, the Fundamentalists had crowned Price as their “principal scientific authority”.¹⁰

@slide: Bryan campaign poster@

A second key figure at this time, who may be more familiar to you, was William Jennings Bryan. He was a three-time Democratic nominee for President who had *for years* been the politician many Evangelicals supported.

@slide: Bryan slide 2 @ Well, even though privately Bryan did not see scripture and evolution as completely incompatible - and, in fact, he believed in an old earth - he **did** agree with the Fundamentalists in blaming Darwinism for the weakening of Christian values across American society, saying “all the ills from which American suffers can be traced to the teaching of evolution.” In response to this view, Bryan, along with Fundamentalism as a whole, sought to eliminate evolution from public school curriculums.

Well, in the fight against teaching evolution in public schools, Bryan unsurprisingly “found his staunchest supporters and won his greatest victories in the conservative and still

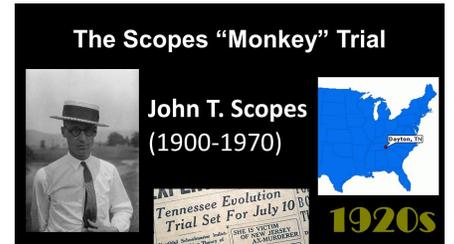


⁹ (Numbers R. J., 2006) 90

¹⁰ 5198 ferngren book

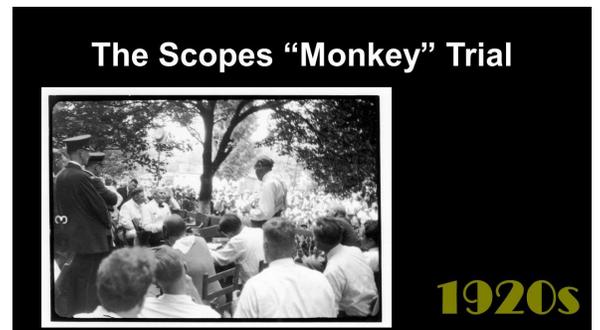
largely rural South.”¹¹ And his first success came in Tennessee in 1925, where Fundamentalist pressure led the state legislature to pass a statute forbidding human evolution from being taught in public schools.¹²

@slide: Scopes Trial 1 – John + map@ However, opponents of this law were able to convince a young science teacher in the small town of Dayton, Tennessee, to accept their invitation to challenge the new law in court. John T. Scopes (1900–1970) agreed to stand trial for teaching evolution. It would come to be known as the “Scopes Monkey Trial”, since the idea that humans evolved from primates was at the heart of the debate. And just as we spent a little extra time in class 1 examining the life of Charles Darwin, I want to take a little extra time to tell you what happened in the Scopes Monkey Trial, because it would have an enormous impact on how the question of human origins has *evolved* in America [see what I did there?:)]



@slide: Scopes Trial 2@

Well, once Scopes was on board and a trial date was set, Clarence Darrow (1857–1938), the famous American trial lawyer, agreed to represent Scopes. This led Bryan to respond by volunteering to assist the prosecution, and the media began to promote it as the “Trial of the Century”. Two hundred reporters arrived in Dayton to cover the story and thousands of miles of telegraph wires were hung to transmit anything said in the court. Of course, Darrow and his team opposing the law had little interest in getting Scopes acquitted. Instead, they wanted to use this spectacle to arouse public opinion against the anti-Evolution movement to prevent similar laws from being passed in other states. However, they almost missed their chance. After the judge ruled that the testimony of the defense’s fifteen national experts in science and religion was irrelevant to whether Scopes had violated the law, the trial appeared to be over, until Darrow invited Bryan *himself* to take the witness stand. Well, despite the protests of his co-counselors, Bryan couldn’t resist this opportunity to defend the faith! “They came here to try revealed religion. I am here to defend it, and they can ask me any questions they please,” said Bryan. **@slide: Scopes Trial 3 - photo@** Well, because the over-packed courtroom



¹¹ 5160

¹² (Larson, 2002)LarsonLoc 5325

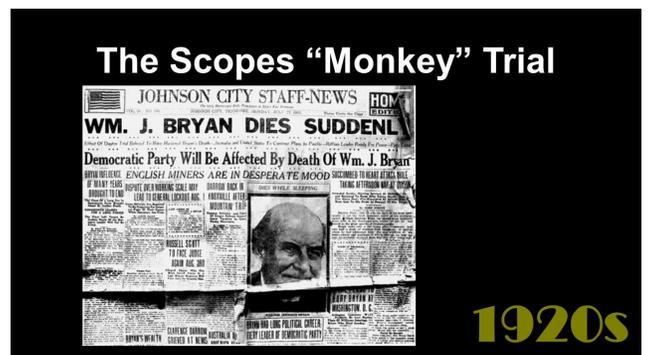
was causing cracks to begin developing in the ceiling on the level below, the judge had to move the afternoon session onto the courthouse lawn and the crowd swelled to 3,000. But when the face-off began, Darrow took an unexpected tack. Instead of asking Bryan about the major topics that Bryan had grown accustomed to raving about, such as humans being made in the image of God and the bodily resurrection of Jesus, Darrow asked Bryan whether Jonah had really lived inside a whale for three days? And how could Joshua lengthen the day by making the sun (rather than the earth) stand still? And where *did* Cain get his wife? But where Darrow really did his damage was in exploiting the fact that Bryan believed in an Old Earth [Bryan subscribed to the Day Age Theory]. So, when Bryan conceded on the stand that the earth could be 600 million years old, the defense pointed out that Bryan had therefore *interpreted* the Bible. In other words, he had interpreted the truth to be something *other* than the straightforward reading of the text. So the defense questioned others (such as those who interpret scripture to accommodate evolution) shouldn't have the same right? @slide: Scopes Trial 4 – blows headline@ Well, Darrow and Bryan almost came to blows over this, leading the judge to end the trial for the day. But he would never resume it. Scopes was found guilty and required to pay a \$100 fine.

@slide: Scopes trial 5 – bryan dies@

But a week later Bryan was dead! (I guess presuming to be the defender of the Christian faith can wear a guy out!)¹³

Well, the impact of the Scopes Trial was enormous, @slide: after scopes@ because from then on the subject of human origins was effectively polarized in American society. In just a few short decades, America had gone from being largely supportive of or indifferent toward evolution, to everyone having an opinion on it and America being virtually *split down the middle*: with about half of Americans supporting evolution while the other half were now against evolution and believed that God created Adam and Eve less than 10,000 years ago.

This meant that the Fundamentalists now faced more opposition as they lobbied states to outlaw the teaching of evolution. @slide:



¹³ (Larson, 2002)

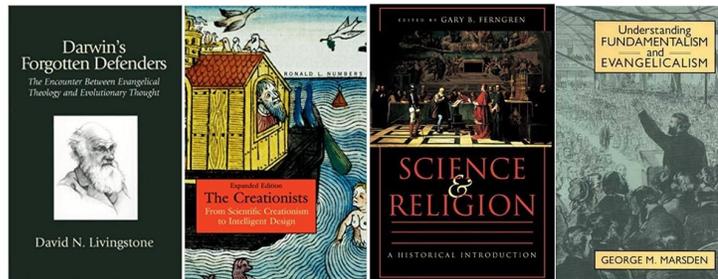
fundamentalism after scopes@ After scopes, they won a few more victories in Southern States, but by 1930 most believed the Fundamentalist movement had faded. But in reality, the Fundamentalists were just shifting their approach. They gave up on lobbying state legislatures and instead began attacking evolution on the local level. This attracted much less attention, but was also more effective. The pressure they put on school boards, textbook publishers, and teachers caused evolution to virtually *disappear* from high school textbooks (!), and not just in the south, but across the country!¹⁴ In fact, I imagine many of you went through public school without any formal teaching on evolution.

Well also, in addition to combatting evolution more discreetly, the Fundamentalists focused the rest of their energy on investing in their local churches and indoctrinating a new generation into a literal, strict reading of Genesis and an anti-evolution attitude, a generation that would come of age just in time for a renaissance of Creationism in the public square that would come in the 1960s. ##

So we're going to take a break, and when we come back we'll finish this history off by looking at the Creationist Renaissance of the 1960s.

@slide: technical support@

Technical Support



@slide: new challenges w/o pictures@

Alright, so we're now in the middle of the century. And the large Fundamentalist movement within the American church has been pretty successful in ridding evolution from most school curriculums. But then, like any good story, they're thrown a few curveballs. @slide: new challenges with pictures@ First, in 1947, Everson v. Board of Education establishes the separation of church and state in America, which would make put Fundamentalists at a severe legal disadvantage moving forward. Second, in the 1950s, the Cold War instigated



¹⁴ cite

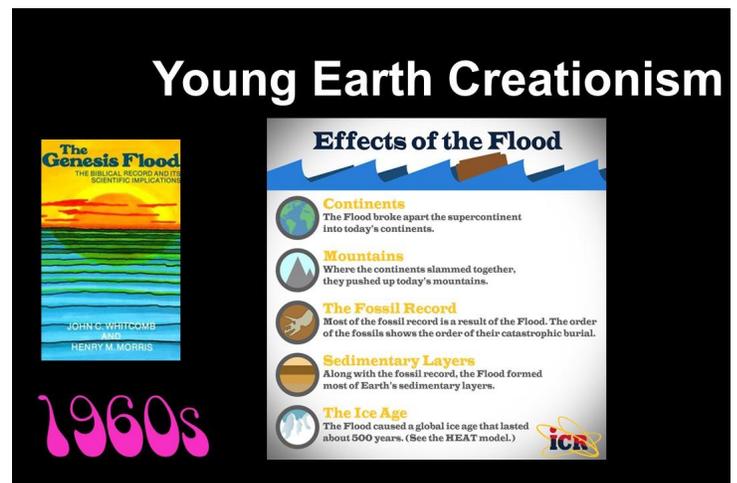
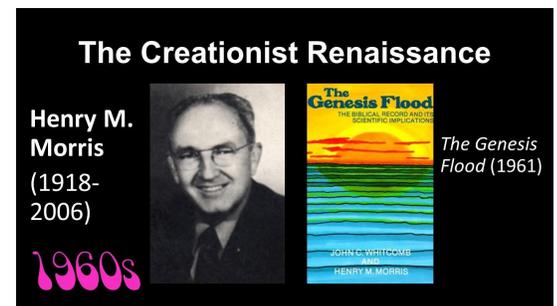
a wave of educational reforms that restructured public education curriculum to become regulated on the state and national levels instead of at the level of local and city government. All of this meant that the grassroots efforts by the Fundamentalists were stymied and Evolution became largely *reintroduced* into the American school curriculum by the end of the 1950s.

Now, stay with me. I know it's quite a tennis match between the Church and science here :) Leading up to the 1960s and 70s, there was a lot of back & forth going on, because American society because it was in transition: unsettled regarding Church and science and culturally having a budding identity crisis.

@slide: the creationist renaissance@

And, the next shift for the church comes quickly in 1961. In that year, two men, a Southern Baptist named Henry Morris who had his PhD in civil engineering and John Whitcomb, a theologian, publish a book titled *The Genesis Flood*. **@slide: young earth@** Their book argued for a recent creation of the universe, but also promoted the Fundamentalist idea re-introduced by Price in the 1920s that attributed the multiple strata of fossils to the Genesis Flood (hence, the name of the book). So, here was this book that looked like a legitimate scientific work, with footnotes and a PhD author. And yet, following its publication, neither Whitcomb *or* Morris were willing to engage in any scientific debate (how peculiar!). Instead, they argued, “the real issue is not the correctness of the interpretation of various details of the geological data, but simply what God has revealed in His Word concerning these matters.”

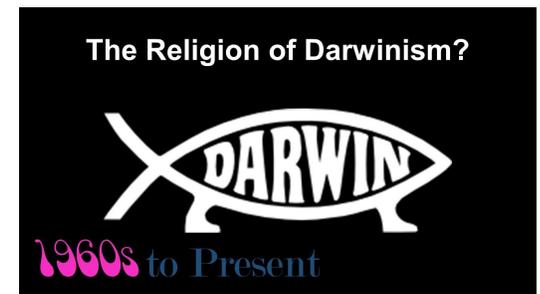
Well, because this book came out right as Evolutionists were gaining ground in the schools, Fundamentalists within the American Church rallied around it and settled on their identity as Young Earth Creationists. Morris and Whitcomb had done it! They had managed to make Young Earth Creationism seem intellectually respectable for the first time in 150 years, leading both fundamentalists and evangelicals to begin embracing Young Earth Creationism in large numbers, and *also* to become increasingly *intolerant* of their fellow Christians who believed in an old earth. While we have seen conflict between Church and science throughout the 1900s, it is at this time (in the early 1960s) when opposition to science within the church



matures or really becomes solidified as Young Earth Creationism.

@slide: the religion of darwinism?@

However, to be fair, the opposition on the other side - those within science that were anti-faith or anti-religion - had also matured or become more polarized. In the hundred years that had passed since Darwin, there had grown up around Darwinism & Evolution a sort of quasi-religion *of its own*. You see, for many atheists, Evolution had become the construct used to explain almost everything, and “survival of the fittest” had become their way to rationalize unrestrained economic competition, political policies of noninvolvement, and so on. So, ironically, although scientists had worked for centuries to separate themselves from religion, because all humans ultimately put their faith in something, they now had essentially created a religion of their own, with its own biases and dogmas and politics. _(ツ)_/ So rather than being a battle of religion vs non-religion, the Fundamentalists intuited that they were engaged in a battle between religions, because for many Darwinism had become just that. #



@slide: the creationist renaissance final slide?@

So while we're talking about the 60s here, this is really how we find ourselves where we are today... largely, or at least loudly, polarized. With the formation of the Young Earth Creationists and the solidification of an anti-Church sentiment in science, the wheels are put in motion and the conflict thesis starts to have some legs. Over the next 40 years, Young Earth Creationists focus and promote their own version of science with the Creation Research Society, which sponsored it includes expeditions in search for Noah's ark and archaeological studies hoping to contradict evolutionary timelines. And, having given up on ridding public school curriculums of Evolution, Creationists put their energy toward having creationism, or more recently intelligent design, receive equal time in public school curricula.



And lastly, since the 60s we have seen the Young Earth Creationist movement expand beyond being an almost entirely American phenomenon, and be exported to Christians all over the world and become a global phenomenon¹⁵ ##

@slide: roman catholic@

Now, so far tonight, some of you might have noticed I have not mentioned the Roman

¹⁵ [5289](#)

Catholic Church. This is because, in contrast to the Creationist surge that began in America in the early 1900s, the Roman Church had a much more gradual and deliberate response to Evolution. From the time of Darwin through the early 1900s, there was very little significant movement from the Roman Church to accept evolution. @slide: pius XII@ As late as 1941 Pope Pius XII made clear that he was still not convinced that evolutionary science had proven anything definitive about human origins. However in 1950, Pius released an encyclical, which is an official papal document, stating that evolution could apply to the creation of the human body but not to the creation of the soul. He wrote, the “catholic faith bid us hold that souls are immediately created by God.”¹⁶ @slide: john paul II@ Then, in the 90s, the Catholic Church was apparently not ready to include evolution in its new Catechism, but Pope John Paul II acknowledged evolution “as more than a mere hypothesis.” @slide: francis dates@ And most recently, Pope Francis has signaled the most significant indication of the Roman move toward accepting evolution, stating in his 2014 address to the pontifical academy of science, @slide: francis quote@

"When we read the account of Creation in Genesis we risk imagining that God was a magician, complete with an all powerful magic wand. But that was not so. He created beings and he let them develop according to the internal laws with which He endowed each one, that they might develop, and reach their fullness. He gave autonomy to the beings of the universe at the same time in which He assured them of his continual presence, giving life to every reality. And thus Creation has been progressing for centuries and centuries, millennia and millennia, until becoming as we know it today, precisely because God is not a demiurge or a magician, but the Creator who gives life to all beings."¹⁷

Furthermore, his 2015 encyclical *Laudato Si* “holds to an evolutionary view of the biological world,” but resists any suggestion that evolution *alone* is sufficient to account for human uniqueness.¹⁸ I think ole Francis gets it... ☺

@slide: roman blank@

Roman Catholic Response to Evolution



Pope Pius XII
(Papacy: 1938-1958)

1940s-1950s

Roman Catholic Response to Evolution

Pope John Paul II
(Papacy: 1978-2005)



1990s

Roman Catholic Response to Evolution



Pope Francis
(Papacy: 2013 to Present)

¹⁶ (Deane-Drummond, 2017)23-24

¹⁷ (Deane-Drummond, 2017) 29?

¹⁸ (Deane-Drummond, 2017) 29?

All of this to be said, the Roman Catholic response to evolution and science had a markedly different tone than that of the Creationists. It was not as loud and consequently not as influential over the landscape of how we, in America, now talk about Genesis, science and human origins.

@slide: what now?@

Over the last class and our time so far today, I hope you have seen that the church and science have not always been in conflict, but that, in our contemporary age, the public conversation has become unpleasant. 😊

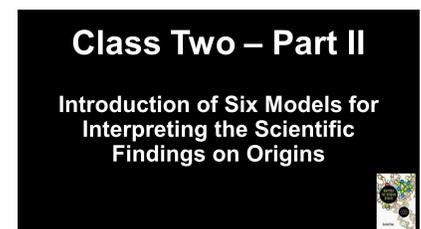
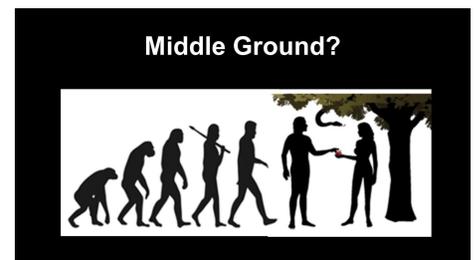
However, I would encourage you that there is still very much a quieter, less visible, but solid segment of the Christian church that believes faith has room for good science. The reality is that, when an issue is as polarized – as the human origins debate has been in America over the past 100 years – the folks at each extreme are the ones who talk the loudest, to the point that they often drown out everyone else. @slide: loudest voices@ In this debate, the Young Earth Creationist Christians are at one extreme and Naturalistic Atheists are at the other. These more extreme voices have made it seem like we have to either choose science or faith, which leads to very little acknowledgement that there might be reasonable positions between these extremes.

@slide: middle ground@

My purpose in teaching this course is to highlight that there is still a middle ground, which includes a variety of approaches that allow one to accommodate an orthodox, traditional, Christian faith to the most recent scientific findings on evolution and origins.

@slide: Part II title slide@

So now that we've looked at the history of how the controversy over human origins came to be what it is today, context, we're ready to turn our attention to science. And this will be the fun part where we begin to learn about how the different schools of thought make sense of it all and re-examine, or at least fine-tune, our own perspectives. @slide: chart slide 1@



And to help us stay organized, I will be primarily utilizing six models of origins put forth by Gerald Rau, in his book *Mapping the Origins Debate*, and at times I will be quoting directly from this book that is available for sale in the back.

{handout}

Table A1.1. Six Models of Origins

Rau, G. (2012). *Mapping The Origins Debate*. Nottingham, England: Inter-Varsity Press, England.

Names						
Used by Rau	Naturalistic Evolution (NE)	Nonteleological Evolution (NTE)	Planned Evolution (PE)	Directed Evolution (DE)	Old-Earth Creation (OEC)	Young-Earth Creation (YEC)
General	materialistic evolution	theistic evolution	theistic evolution	theistic evolution	progressive creation	recent creation
Label used by opponents (submodels)			evolutionary creation		day-age creation, gap model	scientific creation
Label used by opponents¹	Darwinism	Darwinism, deistic evolution			creationism	creationism
Basic Propositions						
Scientific process	random, spontaneous, natural processes	universe created, then undirected natural processes	universe created perfectly, no subsequent intervention		major body plans created separately	each kind created separately
Interpretation of Genesis account	ancient myth, no God	ancient myth, God exists	nonconcordist, ² Adam and Eve not individuals	nonconcordist, Adam and Eve are individuals	concordist, days extended	concordist, days literal
Distinguishing Features						
Theology?	no supernatural	Creator	Creator	Creator	Creator	Creator
Teleology?	no purpose	no purpose	purpose	purpose	purpose	purpose
Intervention?	no intervention	no intervention	no intervention	intervention	intervention	Intervention
Genealogy?	common descent	common descent	common descent	common descent	<i>de novo</i> creation	<i>de novo</i> creation
Cosmology?	old universe	old universe	old universe	old universe	old universe	recent creation
Underlying Philosophy						
Theology	atheistic, agnostic ³	monotheistic, deistic, other ⁴	monotheistic	monotheistic	monotheistic	monotheistic
Relationship between science and religion⁵	overlapping or complementary domains: ⁶ religion inferior	complementary domains: equal	complementary domains: each superior in its area	interacting domains: each superior in its area	Interacting domains: equal	overlapping or complementary domains: ⁷ religion superior
Methodology of science	naturalism: only natural causes	methodological naturalism: only natural causes	methodological naturalism: only natural causes	open inquiry: best natural or supernatural cause	open inquiry: best natural or supernatural cause	imperfect inquiry: secondary to perfect revelation

Table A1.6. Modern Proponents of Each Model

Names						
	Naturalistic Evolution (NE)	Nonteleological Evolution (NTE)	Planned Evolution (PE)	Directed Evolution (DE)	Old-Earth Creation (OEC)	Young-Earth Creation (YEC)
Authors⁸	Dawkins Dennett Gould Mayr Scott Wilson	Barbour de Duve Haught	Collins Galk Lamoureux Miller Van Till	Behe Haarsma Schaefer	Kenyon Meyer Newman Ross	Austin Nelson Bergma Oard n Reynold s Brown s Ham Sanford Humphr Sarfati eys Wise Morris
Organization s⁹	Berkeley ENSI NCSE TalkOrigins		Biologos		RTB	AIG CMI CRS ICR

Multiple-Model Position					Intelligent Design (ID) ¹⁰	
Authors					Dembski Johnson O'Leary	Wells Woodward
Organization					ARN DICSC	IDN ISCID

¹ This highlights the dichotomy in the public debate. The two middle positions are more recent (both popularized since 1995). Each has been classified by opponents with the extremes (Darwinism or creationism), but there are significant difference, as shown by comparing the following distinguishing features.

² See appendix 2 for a comparison of concordist and nonconcordist positions. Interpretations of Adam and Eve tend to follow this pattern, but there are exceptions.

³ Many adherents of NE are secular humanists, an atheistic religion that is essentially existentialist.

⁴ Traditional polytheistic religions rarely try to harmonize their creation story with science. Thus they effectively mirror NTE or YEC positions: either the two represents different realms, answering different questions (as NTE) or the religious teaching is held to be correct based on its inherent merit (as YEC). Many other religions, including Eastern pantheism and New Age reach the same conclusions but for a different reason, contending that the physical is illusory. Since they do not normally attempt to explain the scientific evidence in light of their religious beliefs, they are not part of the debate and thus are not included here, but logically would present arguments mirroring on of these two positions.

⁵ Overlapping means the whole truth can be known by either empirical (scientific) or nonempirical (religious) methods. If this is the case, one must provide a better explanation, eclipsing the other. Diagrammatically, this could be shown as the overlap of two full circles. Complementary means that each tells us about something different, using different methodologies to answer different questions, the perceived relative importance of each differs among models. Diagrammatically this could be shown as two half circles. Interacting means that although each is primarily responsible for one area, the other still has something important to contribute to that area. Diagrammatically, this could be illustrated by a symbol shaped like the yin/yang.

⁶ Overlapping = atheism, complementary = agnosticism

⁷ Overlapping = do not support ID; interacting = support ID

⁸ This list is by no means complete, but will serve as a starting place to identify some of the more prolific and better-known authors.

⁹ Organizations: NE: Understanding Evolution (Berkeley), Evolution and the Nature of Science Institutes, National Center for Science Education, Talk Origins Archive; PE: Biologos Institute; OEC: Reasons to Believe; YE: Answers in Genesis, Creation Ministries International, Creation Research Society, Institute for Creation Research; ID: Discovery Institute Center for Science and Culture, Intelligent Design Network, Access Research Network, International Society for Complexity Information and Design

¹⁰ These authors promote intelligent design, which is compatible with any of the last three models, rather than a specific scientific model. Some author who do take a position on a particular model (Behe, Kenyon, Meyer) also support IF. Not all those in either DE or YEC would support ID. See chapter 2, sec 2.2.4 for further explanation.

A few words of explanation...

First of all, let me be clear that the lines between these schools of thought are not rigid. Everyone does not fit neatly into a category. For example, there could be significant differences between the models of two scientists or two theologians whom we would put into the same category. So don't go putting yourself into one specific camp just yet. Let's have an open mind and recognize that there might be some gray areas for each of us. Nonetheless, it is still useful to break the spectrum of views up into these six general models to facilitate discussion.

So let's talk about them...

On our spectrum of six models, the two models furthest to the left are the ones that are *incompatible* with orthodox Christianity. The first is Naturalistic Evolution. For folks in this model, "there is no reality apart from the material world." And since God is not material or natural, belief in God or the supernatural is not a part of this model. @slide: chart slide 2@ Thus, this is generally where atheists and many agnostics camp out.

@slide: chart slide 1@

Moving to the right we have the Nonteological Evolution. So, proponents of this model believe that there is a God who supernaturally created the world, but that God is impersonal and has not intervened in creation at all since. So there is an emphasis on naturalism, but with an acknowledgement of a divine origin long, long ago. @slide: chart slide 2@ Traditionally this understanding of God has been referred to as Deism, but proponents of this model today

would include Buddhists, Hindus, New Age, and some non-orthodox Christians who do not view the Bible as authoritative, who would conclude early Genesis is simply ancient myth.

@slide: chart slide 1@

In the middle we find two models that fall under the category of "theistic evolution". Planned Evolution (PE) tends to insist on the name "evolutionary creation", because it indicates that first and foremost it is God who creates, but evolution is simply his mechanism. Those in this general category tend to look at Genesis as communicating truths about God rather than a factual or chronological account of the process of material creation. According to this model, God has the capacity to intervene in nature and is active, but God does not need to intervene. And this is where it gets a little detailed. They would say the reason God fully-can-but-does-not-need-to intervene in nature is because God's creation is "fully gifted" from the start. Meaning evolution, or any other natural processes, are all kind of wrapped up into creation from the get-go, waiting to unfold at the appropriate time. Now, wouldn't mean that God doesn't intervene through miracles or through sending Jesus into the world or by responding to prayer. These are orthodox, Bible believing Christians. They just believe that in regard to the unfolding of creation, God has created the cosmos "fully gifted" from the start.

@slide: chart slide 2@

So while the Planned Evolution Model is very *different* from the first two models in how it thinks about God, it is *similar* in the way it thinks about science. Natural processes, including evolution, are very much a part of the "Planned Evolution" model. As the table illustrates, the "Planned Evolution" model is a middle ground model. @slide: **planned evolution@** It has particularly become popular since the 2000s and the go-to resource for this model is the Christian foundation Biologos at biologos.org.

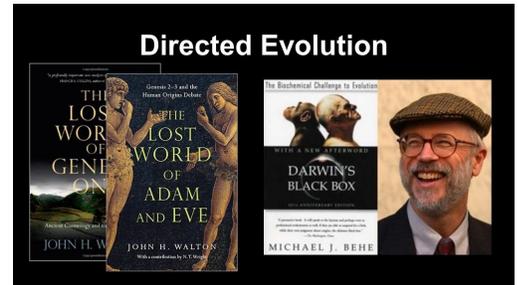


The next model @slide: chart slide 1@ we find in the middle ground here is "Directed Evolution". Like Planned Evolution, people in this camp agree that Genesis is instructive about who God is (e.g. the character of God: that He is sovereign, etc.), but that Genesis is *not* instructive for how God actually created the material world. The difference between Planned Evolution and now Directed Evolution is that where Planned Evolution asserts God has the ability to intervene in creation, but created in such a way that he doesn't need to, Directed Evolution asserts that God created the Universe and very much continues to play an active role in the ongoing creative process. @slide: chart slide 2@ So, in Directed Evolution, God intervenes in creation through creative events that propel the will of God forward. It's not so much that God's intervention is beyond natural laws as much as God directs natural events that otherwise would have *a very low probability of occurring*, hence the name of the model: Directed Evolution. And many who fall into this category still maintain that Adam and Eve were real people, but not progenitors of the whole human race.

But we won't go into detail about this for another few weeks. @slide: directed evolution slide 1@

John Walton (whose books are available in the back) and Michael Behe are in this camp.

Last, @slide: chart slide 1@ on the right side we have the two creationary models who claim there is scientific evidence of God's creative acts and, unlike Directed Evolution, assert that Scripture **does** tell us something about the **method** of creation. @slide: chart slide 2@ "Old Earth Creationists agree with Directed Evolution that science and religion are interacting domains of knowledge, but OEC further asserts that the Genesis account has explicit scientific value, (including) that the order of events in Genesis accurately reflects the order of what happened," including the special creation of humans (known as 'de novo') beginning with Adam & Eve. @slide: old earth creationism@ Currently the most well-known proponent of Old Earth Creationism is Hugh Ross, the most well-known website is called Reasons to believe (reason.org), and the research organization is called the Discovery Institute.



Finally, @slide: chart slide 1@ Young Earth Creationists, the group we saw rise up out of the Fundamentalist movement in our history, claim "that the Bible clearly teaches that God created the world and everything in it in six literal twenty-four-hour days about six thousand years ago, and that *any other view* involves "reinterpreting the Word of God on the basis of the fallible theories of sinful people" (Ham, 2006: 88). Other key tenets of YEC include Adam and Eve, two individuals created (out of nothing) by God, being the first parents of all humans, one act of sin leading to the fall of humankind, no death of any sort before the fall, a worldwide flood and separation of human language groups at the tower of Babel. Essentially, they believe that a straightforward, modern, traditional reading of the Genesis account is how we should understand the origins of the universe and humans.

@ NO SLIDE 2 HERE@ @slide: Young Earth Creationism@ The most famous Young Earth Creationist is probably scientist Ken Ham, and their website Answers in Genesis (answersingenesis.org) seems to be the go-to resource for many fundamentalists and evangelicals today.



But @slide: chart slide 2@ taking a moment to step back and look at the six models as a whole, the four models on the right "believe that

the Bible and the world are equally important revelations of God, and that the two, properly interpreted, will not conflict with each other.” In other words, as we look at creation we should see more deeply the glory of the creator. Creation does not speak against but actually speaks in favor of a Creator. All of them hold to the authority of scripture, the key difference between them is how they understand that the Bible is properly interpreted.

Ironically, what the two models on opposite extremes have in common is the view that their preferred domain is authoritative on questions of **both** science and religion (referred to as “overlapping domains”). So, for Young Earth Creationists, they would say that wherever evidence from natural science *appears* to conflict with what the Bible says, the Bible should be trusted, because it is the inerrant Word of God and science is constantly changing and therefore not to be trusted. On the other hand, Naturalistic Evolutionists would say that wherever evidence from natural science *appears* to conflict with what the Bible says, it is the science that should be trusted. So, in this way, Naturalistic Evolutionists and Young Earth Creationists actually end up being rather similar in their fundamentalist, polarized approach. Consequently, as we mentioned before, it is the proponents of these two models (NE & YEC) that dominate public opinion. They're the ones on your television screens or the voices on your car radio. So for the sake of really nailing it home here, let me loudly and clearly point out again. Don't be misled by the shouting matches in our culture; there is a middle-ground. Look here, right? And even if you land on one of the extremes, remember there is still a lot in between and we do no one any favors by pretending there isn't. ☺

So, why don't we take a break, and you can look over this chart, and come up with any questions...

@slide: technical support@

Technical Support



@slide: Part III title slide@

HYPOTHESIS vs Theory vs Law vs Model

Now, before we get to a discussion of current scientific findings, I do want to take a few minutes to discuss four terms used by scientists when talking about scientific explanations of data.

@slide: hypoth slide 1@

Hypothesis is commonly viewed as the most tentative of these terms, because a hypothesis is only a proposed explanation. However, when scientists make hypotheses, they usually are not just wild guesses, but are usually based on some past research of a subject. A Hypothesis that can be tested can then be accepted or rejected based on the generated evidence. @slide: hypoth slide 2@

For example, this video (link:

https://www.youtube.com/watch?v=frZ9dN_ATew) shows a test of the Galileo's hypothesis that two objects of different mass fall at the same rate due to gravity. If you're wondering how the feather fell so quickly they used a vacuum to suck out all the air resistance.

The term @slide: theory @ "Theory is perhaps the most widely *misunderstood* of the four terms, because the common meaning is very different from the scientific. In nonscientific speech, theory is often used to refer to a *vaguely supported guess*," such as "I have a theory about who shot JFK." But scientifically, a theory is not just a guess, rather a theory takes evidence from a multiple experiments and integrates them together into an explanation of how something complex works. So, in the case of human origins, there is a massive amount of evidence (which we will get to in a later class) that indicates that humans evolved from primates. The theory of Evolution is what ties all of this evidence together to give a coherent explanation of human origins.

Now, it is true that "theories, like all of science, are provisional and may be revised in the light of later discoveries," but it is important for me to emphasize that the term theory "is typically reserved for explanations for which there is a good deal of (scientific evidence) or mathematical support."

Class Two – Part III

Examining the differences between Scientific Terms: Hypothesis, Theory, Law, & Model



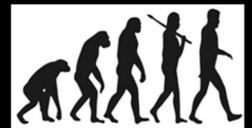
A Scientific HYPOTHESIS

- A proposed explanation
- If tested, can be accepted or rejected based upon the generated evidence



A Scientific THEORY

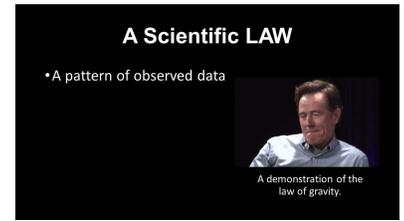
- Different from popular understanding of the word "theory"
- Based on evidence
- A theory ties evidence together to give a coherent explanation for a complex phenomenon



@slide: correcting@

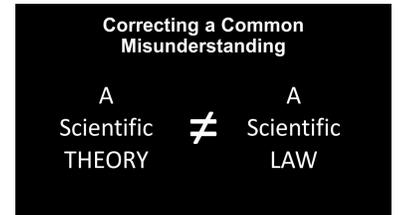
@slide: law 1@

“A law is a pattern that is observed in data”. For example, @slide: law 2 with mic-drop .gif@ if you observe that whenever you release an object (such as a microphone - link: <https://tenor.com/view/bryan-cranston-mic-drop-mgk-gif-12516764>) there is a pattern that that object falls to the ground, you are observing the law of gravity.



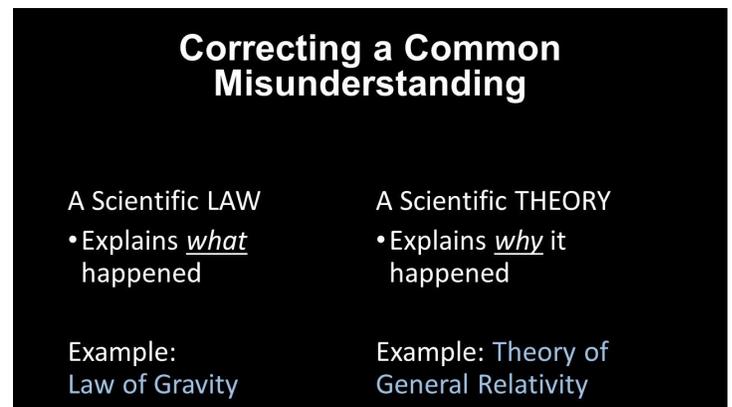
@slide: correcting 1@

Another common misunderstanding is “the idea that an explanation starts as a hypothesis,” then progresses to become a theory, but then will eventually become a scientific law. I think this idea fuels a lot of popular misconceptions about evolution, where some are waiting for it to become a scientific law before they will accept it. But a scientific theory never becomes a law, and a law never becomes a theory.



@slide: correcting 2@

For example, the law of gravity only explains the pattern (that, when released, the mic always falls to the ground when released). The law doesn’t explain *why* the mic always falls to the ground, it just explains that it does. The “why” is what a theory attempts to explain. The reason the law of gravity exists is explained by the theory of general relativity, which I won’t attempt to explain right here.

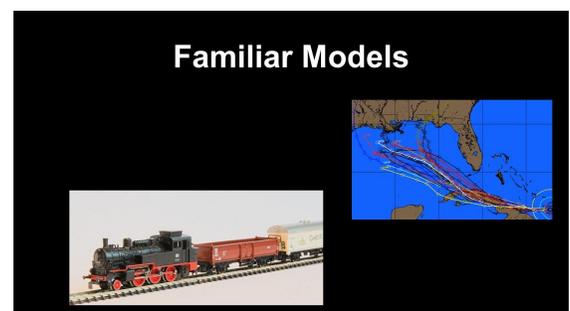


@slide: law 2@

Now, it is true that laws will always have more certainty than theories. In other words, we will always be more certain *that* the mic will hit the floor than *why* it will hit the floor – but that does not mean we should discount scientific theories that are generally accepted as being unsupported by a whole lot of evidence.

@slide: model 1@

Finally, we are all familiar with model trains or models of hurricanes representing to us something much bigger or more complicated. Well, @slide:



model 2@ a scientific model simplifies a very complex situation or phenomenon to tell us how something works. Thus, with our six models, we are able to use two-word summaries for each to explain processes that are actually very complex and multi-faceted.

@slide: Part IV title slide@

Scientific Findings on the Origin of the Universe (Cosmology)

Okay, so we have our tools now... the history between science and the church, the resulting 6 models of thought that we now see in our contemporary society- (Naturalistic Evolution, Nonteleological Evolution, Planned Evolution, Directed Evolution, Old Earth Creationism and Young Earth Creationism), and a brief lesson in scientific terms. Be proud of yourselves, y'all have done a lot!

Now, it's time for us to actually look at current scientific thought and consider what we think? ~~How do people make sense of all this in light of scripture, faith, etc. What does it mean about our origins as a species as creations?~~ This is the meat of why we're here and we'll continue this discussion into next week, but tonight we're going to start with something I'm sure you've all heard of: The Big Bang. And I don't mean the TV show :)

@slide: big bang theory@

The Big Bang is a scientific theory about the origins of our universe. Remember, theories are not just guesses- they are explanations that have a lot of scientific or mathematical evidence. The Big Bang theory speaks to the expanding nature of the universe. @slide: hubble@

Until about 100 years ago, scientists thought the universe was static- meaning they thought it neither contracted nor expanded. But in 1929, Edwin Hubble (you've heard of the hubble telescope, right? well, this is the guy it's named after). Edwin Hubble used the phenomenon of the Red Shift to discover that the Universe is expanding.

@slide: hubble 2@

In a way, you all have experienced this phenomenon yourselves; you just haven't known what to call it :) We've all had a fire truck drive by us- siren blaring, right. Well, as it is coming toward us the pitch of the siren sound gets higher, whereas, after it passes us the pitch gets

A Scientific Model

- A simplifies a very complex situation or phenomenon to tell us how something works

Table A1.1. Six Models of Origins

Names	Naturalistic Evolution (NE)	Nonteleological Evolution (NTE)	Planned Evolution (PE)	Directed Evolution (DE)	Old Earth Creation (OEC)	Young Earth Creation (YEC)
Used in this book						

Class Two – Part IV

Scientific Findings on the Origin of the Universe



lower and lower... Check this video out for an example... <https://www.youtube.com/watch?v=imoxDcn2Sgo>

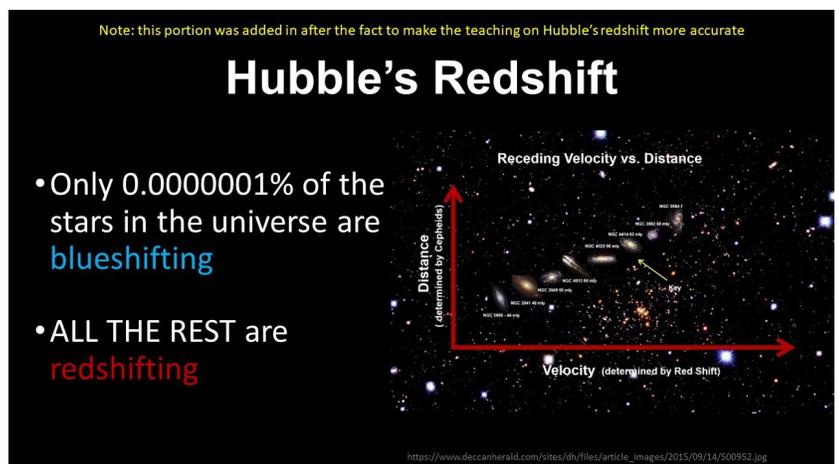
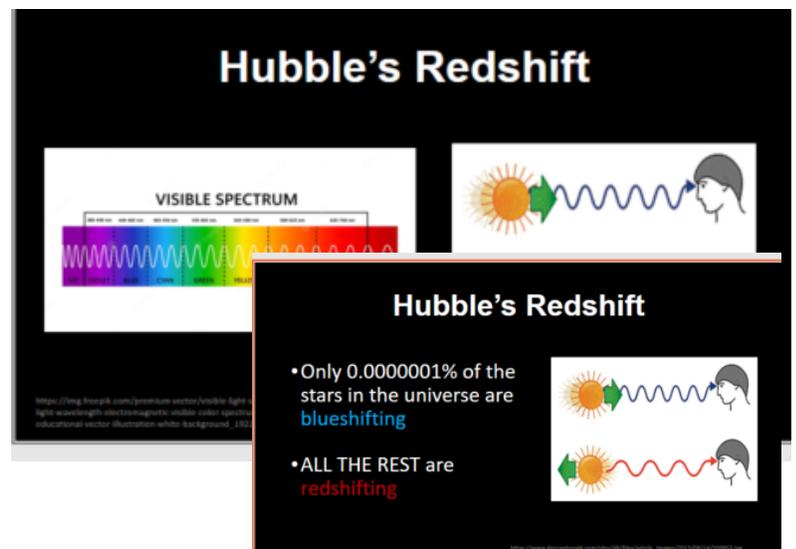
The reason this happens is because as it is coming toward us, the sound waves get compressed (making the pitch higher), but as it gets further away from us the sound waves drop (making the pitch drop) <https://www.youtube.com/watch?v=imoxDcn2Sgo>. This is called the Doppler Effect. And it not only applies to the realm of sound, but light as well.

[@slide: hubble's redshift 1@](#)

With sound, the pitch of a siren gets higher as it gets closer to us – because its sound waves get "squeezed" together – and then gets lower as it moves away – because then its sound waves are getting "stretched" a little. Well, light waves work the same way. Light waves are on the color spectrum. And as the diagram shows, the length of the light waves on the red end are the most stretched out, where the length of the light waves on the blue & violet end are closest or more squeezed together. So if a light source (like a star) is moving further away from earth, its lightwaves become stretched and therefore increase in its redness, this is called redshift. But if a light source is moving toward the earth, its lightwaves become squeezed and therefore will increase in blueness (called blueshift or negative redshift).

[@slide: hubble's redshift 2@](#) Well, in 1929, Edwin Hubble discovered that while there are a few stars (approximately 100) close to us are moving toward us, [@slide: hubble's redshift 3@](#) which therefore exhibit some blueshift in the color of their light (this is 0.0000001% of stars), all of the rest of the stars in the universe exhibit redshift - the light is becoming redder - which means they are moving further away from us.

[@slide: universe expanding@](#)



So Hubble took this new information that the stars were moving away from earth and determined the universe is indeed not static, but expanding.



Okay, so we've got that- the universe is expanding. You may be asking why this is relevant to how we got here... well, if as we look forward in time to see the universe expanding, then the opposite is true- as we look back in time we see the universe was contracting. Contracting all the way back to the point of nothing.

Why Expanding Universe Matters = makes big bang theory pretty convincing

Okay, so we've got that- the universe is expanding. @slide: big bang theory w/ black gif@

You may be asking why this is relevant to how we got here... well, if as we look forward in time to see the universe expanding, then the opposite is true- as we look back in time we see the universe was contracting. Contracting all the way back to the point of nothing. So an expanding universe points directly to the theory known as the "big bang." Now, the term "big bang" is somewhat misleading. It wasn't like your gold miner coming out to CA and blowing up a mountain. It's not a bang, or a blowing up, in the way we may think about a bomb that brings destruction. It's actually the opposite. The Big Bang theory proposes that as the universe expanded from the very beginning it actually created time and space and matter became more organized, not less. The Big Bang wasn't destructive. It was creative in the literal meaning of the word.

@slide: big bang blank@

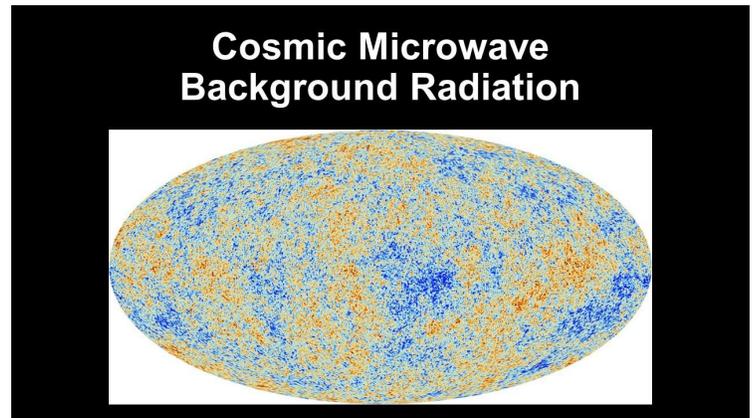
Let's remember this is relatively new information for us. Like the people of Copernicus's time who had to digest the reality that the earth rotated around the sun and not the other way around... it may take some time for us to digest the idea that the universe is expanding and that it had a definitive beginning point. Let's be gracious to ourselves here and recognize that this is new and heady stuff.

CMBR confirms universe is expanding @slide: CMBR@

Of course, the study of the universe expanding and the big bang has continued since Hubble's time. In 1992, the expansion of the universe was confirmed by what's called Cosmic Microwave Background Radiation. CMBR allows science to determine the temperature of the

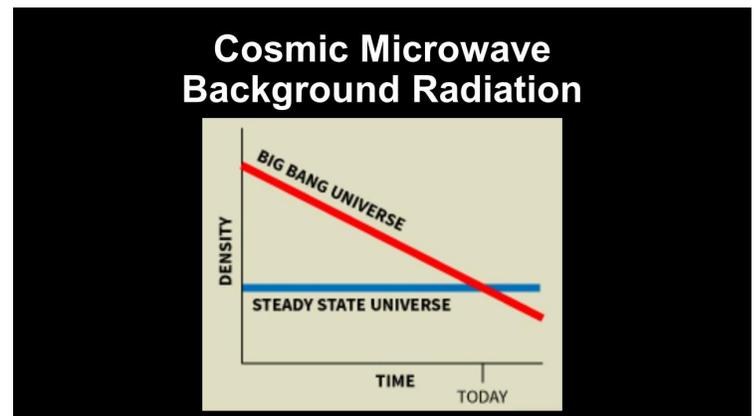
(empty) space between stars using infrared radiation. You may have had the experience of passing your hand over a stove after it was used. As it cools, it emits energy at a lower and lower wavelength until it reaches the temperature of the surrounding room. At first the burner glows red, later it emits infrared radiation we can feel but not see. With a little experience, it is possible to estimate how long it has been since the burner was turned off. I'm sure many of you cooks out there intuitively know when a burner's been turned off long enough not to worry about touching it or placing a dish on it, right? That's the concept behind CMBR. This is the principle behind cosmic microwave background radiation (CMBR).'

This is a picture of the sky – the universe – using this infrared detection, which indicates the temperature of space in different places. This tells us the temperature in space found between stars and has indicated that the temperature of space is cooling.



@slide: CMBR 2@

This is important because the cooling of space is directly correlated with the density of elements decreasing. So space, the universe out there- right now- is cooling and becoming less dense. The (previous) steady state (or 'static') model had proposed that the universe expanded, but by new matter being created to its extreme limits. But this would keep the density of elements in space the same and the temperature of space would remain stable. But under the big bang theory, space is essentially stretched out, causing its density (and therefore, its temperature) to decrease. The cooling of space, which points to the decrease in the density of space points to an expanding universe just as hubble's red shift with the stars did.



Consistency with Theory = crowded universe but no objects beyond a certain age

@slide: age limit@

As you all know, technology has been advancing like crazy in the past 50 years. I don't know if Hubble himself would have even imagined it. We now have telescopes orbiting out in space, specifically the Hubble telescope. Using the Hubble space telescope, scientists have observed...

As scientists have traced the expansion of the universe backwards (and determined that no objects in space are beyond a certain age), their best estimate is that the universe began about 13.8 billion years (and the age of the earth is about 4.5 billion years old).

Limited Age of Objects in the Universe



- Universe Approximately 13.8 billion years old
- Earth approximately 4.5 billion years old

How our different models interpret this evidence

@slide: how interpret 1@

So, how do our 6 different models interpret this evidence. It's somewhat predictable... the four models in the middle- Nonteleological Evolution, Planned Evolution, Directed Evolution, Old Earth Creationism - simply agree with the scientific findings. They affirm the expanding nature of the universe, they affirm a big bang event as a point of origin, and they agree with the scientific dating of the universe as approx. 13.8 billion years old. These four middle models interpret in the science that there had to have been something or someone to initiate the big bang. They would say nothing happens out of nothing. So the scientific findings clearly leave the door open for there to have been a Creator who initiated the Big Bang. @slide: how interpret 2@

Thinking on that, now, those in the Naturalistic Evolution accept that the Big Bang occurred, they just don't believe the big bang is the point of origin for our universe. Since this perspective does not believe in the supernatural (God) and that everything must come from a physical source, their best idea currently is that we are part of multi-universe system (that there is more than one universe). This gets them out of seeing the Big Bang as God's initial point of creating. Although, I would argue it just kicks the can down the road. However, at this time there is no scientific evidence to supports a multiverse system.

How Our Different Models Interpret This Evidence

ACCEPT the Big Bang	DENY the Big Bang
• Old Earth Creationism	• Young Earth Creationism
• Directed Evolution	-Apparent Age theory
• Planned Evolution	-White Hole theory
• Nonteleological Evolution	
• Naturalistic Evolution	⇒ Deny Big Bang as Universe's point of origin

@slide: how interpret 3@

Lastly, we have the Young Earth Creationists. Obviously, the folks within this camp disagree with the dating of the universe as 13.8 billion years. And along with that, they would be obliged to reject the Big Bang. Previously, this group would have explained their perspective by citing a strict reading of Genesis and in a sense saying that God is a master Creator- a master artist- and that all these things that science finds that indicate an older universe were really put there, constructed, by God himself. In other words, the universe may look old scientifically, but it's just because God intended it to look old not that it actually is old. I think we can all understand where this falls short and the young earth creationists eventually seem to agree and so they now largely use a what's called the White Hole Theory. According to this theory, and I quote- "our galaxy is thought to be near the center of a finite, bounded universe. (And) being close to the center of gravity, time runs slower here than it does farther from the center of gravity. Thus during the fourth day of the creation week, 'while one ordinary day was elapsing on earth, billions of years worth of physical processes were taking place in distant parts of the universe.' As a result the stars appear very old, even though the earth is young." Like the Multiverse theory on the other extreme, here the White Hole Theory also does not have a strong backing within science. But, it does allow the Young Earth Creationist to acknowledge scientific findings while maintaining a young earth stance.

@slide: technical sources @

So, as we you leave tonight, I want to encourage you to think over all that you've heard tonight. What resonates? What seems credible to our reason but also to our faith? I genuinely invite you to think on these things with an open mind. Do a little reading. Talk with others. And don't forget to pray. We're here discussing origins because it's interesting but also because it's important. If we believe in a Creator, then pondering what has been created can deepen our faith and our appreciation of the majesty of God.

@slide: class logo screen@

Next week we'll come back and look more specifically at the origin of not just just the universe or the earth, but of LIFE. We'll look at science, but for you all you budding theologians out there, or maybe for you parents who get the inevitable questions about Adam and Eve- we will also look at Genesis chapter 1. So feel free to look over that this week as well.

SCROLL THROUGH 4 bibliography & 4 image citation slides @

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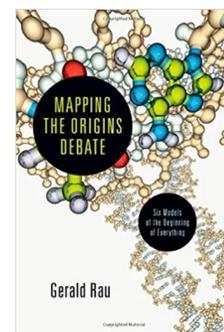


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