



Welcome to the first session of **Big History – A Closer Look**! Thank you all for coming.

Let us start by explaining what this 4-part series will address. I say us, because this is really a collaborative work of Daniel Manchester and me. As Daniel is traveling this week and next, you will have to wait to part three to hear from both of us.

There is a series of commonly held views regarding the origin of the universe , the earth, and life in general that have been depicted in a number of videos called **Big History**.

Our 4-part series will take a deeper look into the first four video offerings of **Big History** in order to determine whether or not the material is an honest and accurate explanation for the events it purports to explain.

Each week we will begin by playing a Big History video. We will then examine the claims made in the video to see whether they actually do present an accurate and reasonable explanation for the events in question.

The website for Big History says, ***“Big History focuses on three essential skills - thinking across scale, integrating multiple disciplines, and making and testing claims.”*** Well, we will see just how well they do this...

This is an interactive study. So, please feel free to ask questions throughout the discussion portion after the video. Also, please be respectful of everyone’s views.

So, without further delay, let’s watch the first Big History video.

(Play the video)

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Age of the Universe

- Big History: 13.7 billion years
 - Calculated using Hubble constant
 - Est. the oldest globular clusters
- Other: 23 billion
- Not material to the rest of the narrative



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So you are asking “Why the cat?” I like cats. Otherwise it has nothing to do with this study. This is definitely not how the universe began. Although most cats would disagree with me.

Right off the bat, the video makes a claim. Do you remember what the claim was?

The video claims that the “Big Bang” took place 13.7 billion years ago, and led to the creation of the entire universe.

What’s wrong with that you ask? Well, this claim is simply made as though it was a fact, when we will see that this is far from settled in their own video account, even if it is done with a British accent.

If you are wondering where scientists get 13.7 billion years, then let me say that it is determined using one of two methods, both of which come out around 13 billion years:

The first method uses the Hubble constant, which relates the distance of a galaxy to its velocity. This is used to calculate the length of time it would take for galaxies to reach their current separation. The other method measures the oldest stars in globular clusters.

Neither of these methods nor the supposed age of the universe is really important to the rest of our discussion about video one. There are even other scientists that claim it is really 23 billion years. So, instead, we will push on and get to the meat of the claims in the video.

If you have questions regarding these methods, then we can discuss it after we finish the presentation.
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Big Bang

- “Led to creation of the entire universe”
- Ingredients
= “We can only speculate.”
- Goldilocks Conditions (just right)
= “We can only speculate.”
- “Don’t have much evidence.”

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The video next makes a couple of startling admissions:

“We don’t know much about the ingredients and the Goldilocks conditions that led to this first threshold, because we just don’t have much evidence.”

Why is this startling? Let’s examine what the admissions mean.


Who are the “we” that the video mentions? Yes. They are scientists!

The scientists are saying that they don’t know what “ingredients” went into the Big Bang. In other words, they don’t know what blew up or how it blew up.

Scientists also can only “speculate” or guess about the “Goldilocks” conditions that led to the Big Bang. The “Goldilocks” conditions mean what the “just right” situation was that permitted the Big Bang. So, in addition to not knowing what blew up or how it blew up, scientists don’t know where it blew up!

Still think this is okay?

Well, imagine you took your car in to be repaired, and the mechanic said, “We don’t know much about this vehicle because we don’t have much information on it. We don’t know what its parts are, and we don’t know what makes it run correctly.” Do you think you would have a very high regard for that mechanic or anything the mechanic told you about your car?
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What we (i.e. scientists) don't know

A. What made the Big Bang possible?

B. Why did the Big Bang happen?

C. Was there even space and time before the Big Bang?

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The video moves on to give examples of what scientists don't know about the Big Bang.

They don't know what made the Big Bang possible. Remember they don't know the "ingredients". Well, we will see that this is much worse than they will admit. They try to cleverly misdirect and state theories as facts, but we will get into that in a few minutes.

Scientists don't know why the Big Bang happened. Notice they take as fact that there was a Big Bang! They just don't know an unimportant detail like why it happened!

Scientists also don't know if time and space existed before the Big Bang. Remember this point, because it will help you notice the slight of hand that the video does about space and time.

For believers, these questions have definite answers, which are found in the Book of Genesis and repeated in other books of the Bible. We know who made creation possible. We know why creation happened. And we know whether there was space and time before creation.

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What we do (do we?) know

- A. “The Big Bang provided the raw materials for everything around us today.”
- B. After the Big Bang there was
 - a. Space: “which was rapidly expanding”
 - b. Time (What is time w/o a reference?)
 - c. Matter
 - d. Energy

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The video now moves on to what scientists do know. But, do they really know these things?

The Big Bang provided the raw materials for everything around us today. This is just an astounding statement. Remember that no living person ever saw any of this. And when they speak of “raw” materials, they mean incredibly RAW! We will see momentarily that by raw, the scientists mean only sub-atomic particles. So, we are expected to accept that sub-atomic particles that are moving away from each other at incredible speed after the biggest explosion in all of history somehow manage to combine to become EVERYTHING that exists today! That is a leap of faith that makes the Grand Canyon look like a crack in the sidewalk.

Next the video states that after the Big Bang there was space that was rapidly expanding. You might ask yourself what was space rapidly expanding into, but I digress.

There was also time! However, what is time? Our measurement of time is a construct based upon astronomical events such as the rotation of the earth and the earth’s orbit around the sun. Einstein’s theory of relativity holds that time is relative to the observer. Hence, the twin paradox, where one twin moving at near the speed of light ages little, and the other twin ages dramatically. But, what is the meaning of time in the prehistoric original universe?

Not only space and time pop into existence, but matter and energy show up too. How convenient.

Now imagine that you have a bubble that is rapidly expanding from its origin. Inside the bubble there is a massive number of tiny chicklets gum pieces flying out in all directions, and the pieces are very hot.
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What we do (do we?) know

- C. Universe was so hot that matter and energy were indistinguishable
- a. BUT, “within the first billionth of a second matter and energy separated
 - b. Energy then took different forms including:
 - i. Gravity
 - ii. Electromagnetism
 - iii. How? Why? Other energy?



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Now we are told that the universe was so hot that matter and energy were indistinguishable. Why? Well of course because of the massive explosion! And they were hot because heat energy was created by the explosion, which also created all the matter that there will evcan't er be in the universe. The laws of physics state that matter can neither be created nor destroyed ... except in a really Big Bang.

Fortunately, “within the first billionth of a second”, matter and energy separated! Why? And why in a billionth of a second? All of these supposed events are needed to support the theory. They were not seen, and they be reproduced.

Now, again conveniently, energy took on different forms. This included gravity and electromagnetism. Wasn't that lucky? This is what you need if you are going to attract all of these particles to become something more than particles. But how did we get the other forms of energy? When did they show up? What about light and pressure? Just how loud was the Big Bang?

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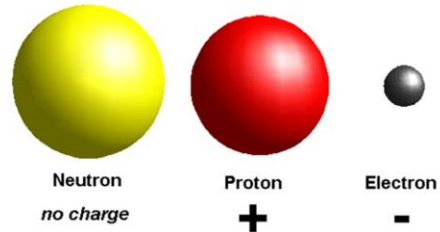
What we do (do we?) know

D. Matter appeared in the form of

- a. Electrons
- b. Quarks

E. Quarks linked up to form

- A. Protons
- B. Neutrons



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The video now treats us to a mind-bending display of just how easy and quick it is for hot energy to become quarks and electrons and for quarks to merge and to become protons and neutrons. This is simply absurd! The video does not even attempt to say how this was done. It just implies that because of gravity and electromagnetism quarks can't wait to get together. Quarks are seen together now, but not easily. And the idea that all these particles go from chaos to order violates the very laws of physics that the video hints at the Big Bang creating.

This leads in the video to the most unbelievable statement of all in answer to, "Why is this important?"

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“Why is this so important?”

“Because nothing had turned into something!”

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I have to stifle a laugh every time I hear this statement!


Stop for a moment and consider the lunacy of this declaration! “Because nothing had turned into something!”

I want you to try this on somebody you know. The next time somebody asks you where you got something new that you have say, “Well, nothing turned into something. It was great!”

Nobody has ever observed nothing doing anything.


But, lets delve deeper into the sneaky trick that is played by the video at this point...

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“Why is this so important?”

BUT, they started by saying they didn’t know the original state, yet now they say there was nothing



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Remember I told you to pay attention to what the video said about space and time?

Initially, the video claimed that scientists did not know whether space and time existed before the Big Bang. Then, the video claimed that the Big Bang created space and time. And now, the video says that the initial state was nothing!

The video started by saying that scientists don’t know the ingredients and the Goldilocks conditions that led to the Big Bang. That is true! Because now they are stating that the ingredients were nothing and the Goldilocks conditions were nothing!

They are stating categorically that first there was nothing and then it blew up ... producing everything!

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“Why is this so important?”

- **If they believe as they state that there was nothing (i.e. the absence of anything) then**
 - How could it explode?
 - There was no matter to explode.
 - There was no energy to ignite an explosion.
 - There was no space for it to explode in.

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Here is the problem with this whole declaration.


Scientists believe that nothing, which is by definition the absence of anything exploded to create the universe and everything in it.

However, if in the beginning there was nothing, then how could it explode?

There was no matter to explode. There was no form of energy that would ignite an explosion. And there was no space for it to explode in.

This is blind religious faith, not science.

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“Why is this so important?”

“The something then had all it needed to eventually create us.”

(If it is random, then it does not “need” anything. This is an anthropomorphism of the universe.)

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Mercifully, we come to the end of the video where another silly declaration is made.

“The something then had all it needed to eventually create us!”

Here, the something is the universe. The universe does not “need” anything! That is anthropomorphizing the universe, which simply means treating the universe as though it were a thinking and feeling person.

The universe is being treated as a sentient entity that eventually had all it needed to create us. This is making the universe the god of the scientists.

This concludes the session.

Any Questions?

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