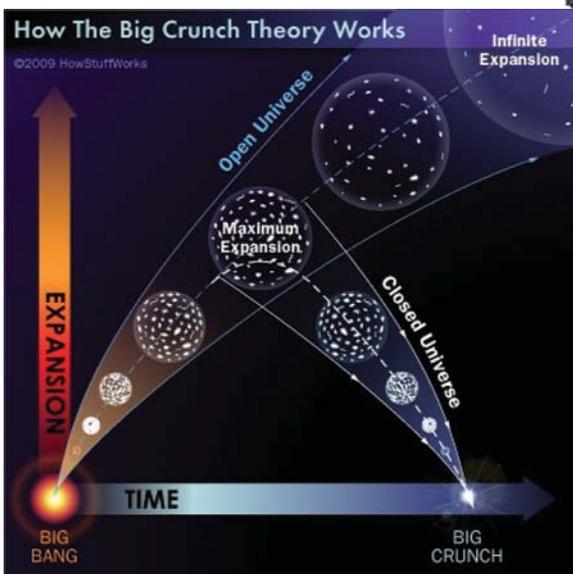


In the
Interim

JWR
4.2 9



In the Interim

JWR 4.29

The Bible tells us how to go to Heaven, not how the Heavens go.

-Galileo Galilei

13.7 billion years ago everything in the entire universe, which is to say everything that has ever existed, exists, and will ever exist, was smaller than the smallest part of an atom, all compressed in a tiny ball - the primeval atom. We accept it, but we don't fully understand it, this hypothesis first proposed by a Roman Catholic priest named Georges Lemaître. The big bang is only a description of the aftermath of when that tiny ball of everything exploded. Today the visible universe consists of 125 billion galaxies; the Milky Way galaxy contains 200 billion stars and is 100,000 light years across. The universe is 156 billion light years across... which is a little strange seeing as how nothing can travel faster than the speed of light and if the universe is 13.7 billion years old, then it should be no bigger than 27.4 billion light years across. The eggheads get around this by theorizing that the laws of relativity didn't exist at the dawn of the universe and the four interactive forces of nature (gravitation, electromagnetism, strong interaction and weak interaction) were then one force. This negated the theory of relativity and allowed for faster than light, exponential



expansion, after which the interactive forces separated. This all took place in well under one second, say in one millionth of a second.

I don't remember where I first heard about this possible fate of the universe, but I like it the best. Because scientists are lame, they call it the big crunch. The idea is that the universe's expansion will slow and then will reverse. The ensuing compression would eventually bring everything back into one hot, dense spot - back to the primeval atom. Obviously this allows for the life of the universe to be cyclical. I like the stability of it. I'm no scientist, because once I heard about this ending, I wouldn't have cared to look further. The timeframe for this is more than 100 billion years.



In the beginning, God created the Heavens and the Earth. In six days He made everything, and after the sixth day, He looked at all He created and He said, "It's all good." He was finished. And on the seventh day, He rested. A bit later Adam was unhappy, lonely, and God made one more thing despite saying He was done after the sixth day, almost as though He didn't know Adam wouldn't be satisfied with what He had done.

In the Library of Alexandria, among the million scrolls, there was a now lost three-volume set called "The History of the World" written by a Babylonian priest named Berossus. The first volume contained the history of the world from Creation to the great

flood, the antediluvian period, which Berossus concluded took place over 430,000 years.

Another theoretical ending for the universe is called the vacuum metastability event. The concept is that a small region of the universe will quantum tunnel into a lower energy state causing everything within that region to be instantaneously destroyed. The region will expand at near light speed, bringing destruction without any forewarning. There is no timeframe for this event because it could happen at any time and you'd never see it coming.

The Bible infers the antediluvian period was 1,656 years long.

The first humans that landed on Mars were shocked to learn that the red planet was not only a flat disc, but the far side of the planet was incomplete. In fact, it looked exactly like a Hollywood sound stage just out of range of the camera's lens with wood framing and cables snaking across the floor feeding lights and blinking LEDs. God never thought that man would go to the red planet since He made the Earth so awesome.



The big rip assumes that dark energy will increase without limit. The expansion rate of the universe will increase also without limit. If you could watch it happen, the stars and galaxies in the sky would fly away from you so fast eventually even their light would no longer be visible - it'd never reach you.

Gravitationally bound systems will be torn apart: first clusters of galaxies, then galaxies, and then individual solar systems. The expansion will become so rapid that even the electromagnetic forces that hold molecules and atoms together will be overcome. The timeframe for this is at least 20 billion years.



Hydrogen protons smashing into carbon nuclei create an unstable isotope of nitrogen. This soon is transformed into a form of carbon, then into stable nitrogen, with a release of gamma rays as energy. When the nitrogen is again struck by protons, an isotope of oxygen is created, and it turns into another stable nitrogen isotope. When this nucleus splits, it results in two nuclei - one of helium, the other of carbon. The chain begins all over again. This is how the sun continues to shine and radiate light without quickly burning up. Thank you, Hans Bethe.

A man returned a fishing pole he purchased the day before because it broke when he used it. The store gave him credit for it and they returned the fishing pole to the fishing pole distributor from where they bought it. The store received its credit and the distributor returned the fishing pole to the company that assembled it. The company that assembled the fishing pole gave the distributor credit and determined the part of the pole that broke was the rod and returned the rod to the rod manufacturer. The rod manufacturer issued credit and determined the poor quality of the bauxite in the rod caused its brittleness, so they returned the rod to the bauxite refinery who issued credit to the manufacturer. The refinery determined which mining company sold them that particular batch of bauxite by lot number and returned

the rod to them. The mining company gave credit to the refinery and determined which miner mined that particular cache of bauxite (don't ask how) and docked his pay. The miner asked God why He would place poor quality bauxite for him to mine, but God neither answered nor did He issue credit.

The big freeze, considered the most likely of fates, is a continued expansion of the universe. Energy will be distributed evenly and then it will slowly dissipate. Over time, existing stars will burn out, new stars will cease to be created, and the universe will go dark. Long after the suns die, galaxies and black holes will evaporate into space. This is a hundred trillion years from now.

Why do representations of nothingness use grey? I would think white or especially black would be better choices.

Some say the world will end in fire,
Some say in ice.
From what I've tasted of desire
I hold with those who favor fire.
But if it had to perish twice,
I think I know enough of hate
To say that for destruction ice
Is also great
And would suffice.

-Robert Frost

-John