Our eternal universe

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Big bang cosmology presents several futures for the universe within the secular worldview. A few of them lead to an inevitable winding down of the universe and its eventual heat death. All possible big bang scenarios result in the dismal end of everything. Decay processes are observed in nature and are described in the Scriptures, yet we also read of miraculous events, such as when our Creator God, through His sustaining power, reversed entropy, hence maintaining or reversing the state of decay. A new biblical hypothesis is presented, based on an understanding of relevant scriptures, wherein even though that decay is continuing in this universe, God will at some stage reverse those losses and bring the universe into a state that will endure forever.

Much has been written about the universe, with its alleged big bang origin 13.8 billion years ago,[1] with its expansion forcing all galaxies away from each other. And about two decades ago it was 'discovered' that the expansion is accelerating, driven by some very strange form of energy—dark energy—that acts like an antigravity force, which is stranger than fiction. Yet the big question remains. *What is the ultimate fate of the universe?* Secular cosmology does not have a precise answer, and I describe several of their scenarios below. However, I believe that the Bible has the answer to this question. That answer may seem to many to be contrary to known science, but the same could be said of the creation of the universe from nothing, whether it be by the action of the Creator God or by secular physics invoking some quantum fluctuation of a metastable false vacuum.

Big bang fate of the universe

Some believe the universe will eventually die in a 'big rip',[2] where space is literally ripped apart. This is alleged to result from the unlimited acceleration of the expansion of the universe due to an unbounded increase in some very strange stuff called dark energy, for which laboratory science knows nothing. In that theory dark energy eventually becomes so strong that it completely overwhelms the effects of the gravitational, electromagnetic and weak nuclear forces, resulting in galaxies, stars, and even atoms themselves being literally torn apart at their core (see figure 1).

Others believe that the universe will end in a 'big crunch'.[3] "Their calculations suggest that the collapse is 'imminent'—on the order of a few tens of billions of years or so—which may not keep most people up at night, but for the physicists it's still much too soon."[4] The big crunch is theorized to occur when the vacuum energy density (cosmological constant) becomes negative due to a change in some hypothetical scalar field changing sign. Details don't really matter because it is really just 'scratchings' on pieces of paper.

Yet another option, they say, is that the universe will end in some unremarkable heat death, where every physical process just peters out. This is known as the 'big chill', 'big freeze' or 'heat death'. In that view, the universe continues expanding while gradually all thermodynamic free energy is dissipated, meaning that all motion eventually ceases. Over a hundred trillion years or so, they say, it comes to a state of maximum entropy at a temperature very close to absolute zero, when the universe simply becomes too old and too cold to sustain life. All that they expect to remain are cold, dead stars, cold, dead planets, and black holes.

These three scenarios (figure 1) are what comprise the secular belief system, the worldview most widely held by cosmologists today. It is based on pure materialism, that matter and energy is all that there is. The atheists believe there is no creator, no God who loves us or has any personal interest in our destiny. Their beliefs are really pagan philosophy.[5]

Biblical creationists hold a different set of beliefs. They agree with an origin in time, but by fiat creation from the hand of the Creator, but many also have argued for, or agreed with, an expanding universe.[6] Some unwise biblical apologists[7] have even used the big bang origin as an apologetic defense of the Genesis 1 description, which includes an origin in time.[8,9]

Biblical fate of the universe

There is one question, though, that remains unanswered in the biblical creationist literature. What is the expected fate of the physical universe? Is it eternal or temporary? What can we expect and what does God say in the Bible about the temporal existence of stars, and hence galaxies, in the future?

The big bang theory is based on an expanding universe, but I have examined the evidence for and against expansion and found it equivocal.[10] As a biblical creationist I

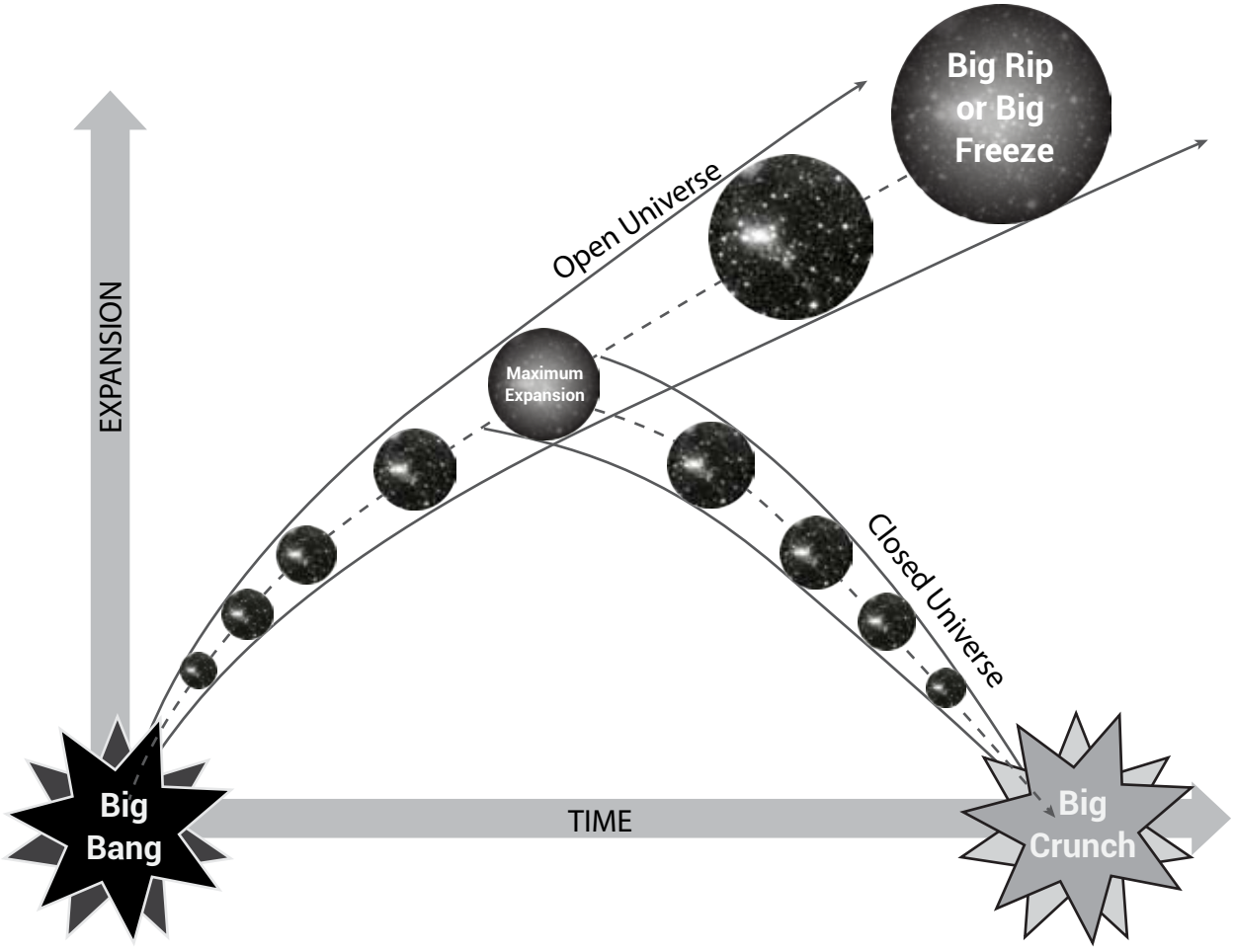

Figure 1. The theorised expansion of a closed universe from a 'big bang' to a 'big rip' (or 'big freeze') and a contraction to a 'big crunch'

believe one should use the Bible as the foundation of any cosmology.[11] So does the Bible really describe

1. an expanding universe, and/or
2. a temporary universe?

I have dealt with the first point before.[12] There I found that the oft-quoted scriptures, which include Hebrew words, הטָנָ (natah), meaning *to stretch or spread out*, עקַר (raqa), meaning *spread out by pounding, like thin metal sheet* and חתָמ (mathach), meaning *spread out, as a tent to dwell in*, cannot be used for cosmological expansion. None of those words ever have the meaning of cosmological expansion like in the rubber-sheet analogy of modern big bang cosmology. I believe that eisegesis is used to get these words to say what the authors want.[13]

And it would seem also that an expanding universe, hence ultimately one that dissipates, is not consistent with an eternal universe. Therefore, the universe is either expanding and temporary or it is static and eternal. This is the necessary choice we have to make in our considerations here.

So what of the second point? *Is the universe eternal or temporary?* Will it die out, be destroyed, or remain forever?

We know from science (the Second Law of Thermodynamics) and from the Scriptures (Hebrews 1:10–12, quoting Psalms 102:25–27) that inexorable decay in all physical systems is unavoidable. So, how can the universe be anything but temporary? Surely, science tells us that it will ultimately decay, and hence it cannot be eternal. On the other hand if the universe is eternal, what must the Creator do to maintain it?

In the 24th chapter of Matthew's gospel we read:

"Heaven and earth shall pass away, but My words shall not pass away" (Matthew 24:35).

Yet also we read in the Psalms it is written:

"Praise you Him, sun and moon; praise Him, all you stars of light! 4 Praise Him, you heavens of heavens, and you waters that be above the heavens! 5 Let them praise the name of the Lord, for *He commanded and they were created.* 6 *He has also established them for*

ever and ever; He has made a decree which shall not pass [emphasis added]" (Psalms 148:3–6).

The latter is a clear reference to a created yet an eternally existing universe. That is, a universe that was created in the finite past yet exists eternally, never to vanish or be eviscerated. The sun, moon, and stars are specifically mentioned; that they will exist "for ever and ever". It is by decree of the Creator and that decree will never be cancelled.

Then, when speaking of God's promise to the offspring of David, that is, Christ and His longevity and His rule on His throne, King David was inspired to write:

"It shall be established for ever as the moon, and as a faithful witness in heaven" (Psalms 89:37).

The promise of God here is established forever, in the same way that the moon is established forever.

These verses from the Psalms are not prophetic, nor are they intended as allegory, or just poetry but are stating facts regarding God's creation. That is, that the sun, the moon, and the stars in the cosmos are to be there forever. The Hebrew word used in both Psalms 89:37 and 148:6 is עוֹלָם (`owlam), which generally has the meaning of 'time out of mind (past or future)', but practically means 'eternity' and is frequently translated as 'always'.

Therefore, how do we interpret Matthew 24:35 "Heaven and earth shall pass away, but My words shall not pass away"? I say this is actually a verse supporting the fact that the cosmic heavens, earth, moon, and sun will be preserved forever. The text is saying that God's words will be preserved longer than the heavens and the earth.[14] My claim here may seem to be the opposite of what Matthew 24:35 seems to be saying from the English translation, but we can get clarity and a correct understanding of the intent of Jesus' statement from the equivalent verse in the gospel according to Luke. Jesus said:

"And it is easier for heaven and earth to pass [away], than one tittle [tiny stroke of a letter] of the law [the Word] to fail" (Luke 16:17).

Jesus is not actually saying heaven and earth will pass away, but that it would be easier for them to do so than it would be for God's words to fail. Since the Word of God will never fail, it will be preserved forever. Contrasted to that are the heaven and the earth, which are more likely to pass away, yet will be preserved for a very long time. And that length of time is an eternity, which we know from Psalms 148:6 and Psalms 89:37. These Psalms are not written as prophecy nor in any way are they allegorical or symbolic, but are clear statements of fact. There are yet other verses, in particular Isaiah 65:17 and Revelation 21:1, which on the surface seem to be stating that the heaven and the earth (the universe) will be destroyed if God is going to make 'a new heaven and a new earth'. Yet I would argue that those verses are prophetic and therefore are subject to the details of your eschatology, as to what they actually mean. I have formed my own views about that and believe that based on the evidence of the scriptures the 'new heaven and new earth' are, in terms of the physical environment, no more than a renovation or refurbishment of the current earth and its atmospheric heavens.[15,16]

Once we accept the fact of the eternal preservation of the heavens, by God's sustaining power, which was observed in action in the burning bush albeit for a short period of time (Exodus 3:3), 2 Peter 3:10 also becomes clear. The 'elements' there are not subatomic particles but the fundamental principles upon which the earth has been governed to this point in time. At the day of the Lord, when Christ returns (here's where eschatology comes in), God destroys the 'old order', bringing in His rule not only in heaven but on earth. The passage "the earth also and its works will not be found" makes no sense interpreted literally. The 'earth' symbolizes earthlings (inhabitants of the earth), not the planet itself. This is evident because the 'earth' has 'works' and only people can have works. It is true that the works include mankind's creations, and I believe that that is one reason God will refurbish the earth. But when God judges those works by fire at the great white throne judgment (Revelation 20:11) it is people He will judge, and those people not found in the book of life—i.e. not saved—will be cast into the lake of fire (Revelation 20:13–15).

So my argument here is that based on Psalms 148:6 and 89:37, God will preserve the starry heavens forever, i.e. for an eternity. This is a promise of God's intention.

Therefore it follows that even though the heavens are perishable God will preserve them forever. God must sustain them in the same way He sustains the creation now, but with an increase in His sustaining power. He showed us some of His sustaining power in *the burning bush* when He spoke to Moses from it (Exodus 3:3). The bush burned but did not burn up. Initially the bush must have started to burn, releasing carbon dioxide, water, and heat, and as such entropy must have increased in the system. But then it must have reached a steady state, else it would have died away. Or it could have been that God actually reversed the net entropy in the system bringing it to a state where it was burning strongest and maintained that level of burning but with no further increase in entropy. So the change of total entropy of the system (of the bush, air, and products of combustion) may have looked similar to the broken curve in figure 2. Instead of it continually increasing , when God intervened, for a period it reduced then eventually became constant, and remained so for as long as God needed to speak from the burning bush to Moses. In a similar fashion, yet in a way that is not so obvious, the Creator will sustain this universe forever. Figure 2 describes a finite universe undergoing normal increase in entropy (decay) until, by

the action of the Creator at some point in time, entropy is reversed and it eventually comes into a steady state (with zero further increase), providing the necessary conditions for an eternal universe.

God currently sustains the creation by sustaining the laws of physics, which keep things doing what they are doing. Those laws do not change or evolve.[17] Atoms are maintained; they do not evolve. Energy levels are unchanging and nuclear forces preserved at the current values. All the forces of nature are maintained in such a way that the universe, and our local universe in particular, is maintained for life to exist. Those laws are unchanging in time,[18] as reflected in the idea that Isaac Newton understood, that God actively superintends the universe. He understood that the laws of nature are the result of Divine creation and hence that they are unchanging in time. He wrote:[19]

> "And from true lordship it follows that the true God is living, intelligent, and powerful; from the other perfections, that he is supreme, or supremely perfect. He is eternal and infinite, omnipotent and omniscient; that is, he endures from eternity to eternity; and he is present from infinity to infinity; he rules all things, and he knows all things that happen or can happen."

Regardless of one's particular eschatological belief concerning where the planet undergoes major changes with the coming *Day of the Lord*, it would seem from the Scriptures that the starry heavens are to be preserved forever and as such the universe is eternal. Only the eternal God, the Creator of all, can preserve that which has a natural tendency to decay. But He has told us in His Word that He will keep the sun, moon, and stars forever and ever.

This view may be surprising to some. We have been taught that everything decays. However, the Bible describes aspects that can only be understood in terms of the *reversal* of decay. Examples are the burning bush (Exodus 3:3), the clothes and sandals of the children of Israel that did not wear out during the forty years they were in the wilderness (Deuteronomy 8:4, 29:5), Naaman healed of leprosy, his flesh restored to normal (2 Kings 5:14), Lazarus raised from the dead after being dead four days (John 11:38–44), Christ's Resurrection from the dead (Mark 16), and several other resurrections. All of these examples involve a reversal of entropy (decay processes). They are exceptional, granted, but they demonstrate the power of the Creator when He either adjusts rates of physical processes or reverses them entirely.

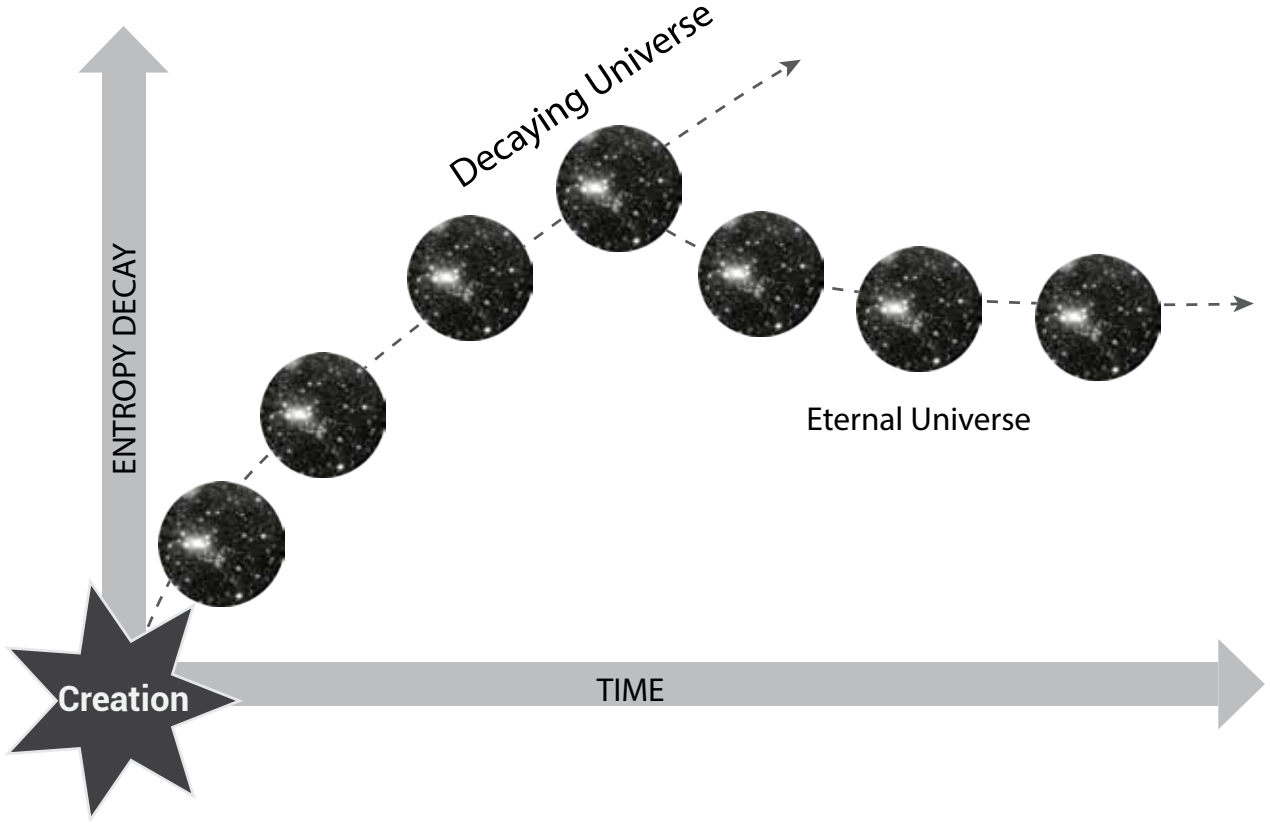

Figure 2. A finite static (non-expanding) universe undergoing normal decay until the hand of the Creator reverses entropy and establishes the conditions for an eternal universe. The stars and galaxies are preserved forever. Note: the vertical axis in this case is not expansion but entropy.

The universe we observe

The universe we observe is subject to this inexorable decay. But the usual assumption is that the physics of the universe locally is the same physics that operates everywhere else in the universe. The *cosmological principle* is normally defined as that no matter where an observer might be in the universe he would observe the same as we observe locally. Another aspect of that same *cosmological principle* is that the laws of physics are the same everywhere in the universe. This is an assumption nevertheless.

And as a result when the speeds of rotation of spiral galaxies are assumed to be subject to the same Newtonian Law of Gravitation, spherical halo dark matter is required to explain what would otherwise be anomalous behaviour. Similarly, when the masses of spherical galaxies and clusters of galaxies are calculated from their X-ray emissions, invisible dark matter is again invoked to explain otherwise anomalous behaviour.[20] But these calculations are based on the over-riding assumption that what we know as standard physics applies over the length scales and timescales of the galaxies and the clusters of galaxies. In addition, the same assumption is made concerning the scale size of the universe and the 13.8-billion-year timescale of its assumed history since the alleged big bang.[21]

But what if those assumptions are not correct? If they are not, it does not necessarily mean that the laws themselves are different but that the usual secular assumptions on the boundary conditions (i.e. the origin and age of the universe and its constituents) may be wrong. What if the universe (that we can see) has only been in existence for the past 6,000 years, as the book of Genesis indicates? What if the requirement to invoke dark energy and dark matter results from a lack of knowledge of the correct physics on galactic, supergalactic and universal scales? In such a case it does not mean, necessarily, that the physics is different in different parts of the universe, but only that it is different on larger and larger scale sizes, which is something we cannot locally test for—we are too small. What if the *cosmological principle* is actually wrong and the assumption that it is valid has led to this state of affairs. Our region of space may be unique and special and that may change how we model the observations as compared with assuming there are no special places.

Only recently has the scientific community been able to make precise and accurate measurements on astrophysical processes. Thus we have very little real time information on those processes in the universe over timescales more than about 50 years. Hence we are limited in our knowledge of very long-term changes. As a result we can only draw assumptions, like the belief that the Second Law of Thermodynamics applies universally and will apply over all time. Another major assumption is that that which is observed at any particular redshift represents real history for the whole universe when it was at that same cosmic time, as calculated from the assumed model, even though we can only observe one thin slice at any particular redshift.

So what if none of these assumptions are correct? What if the universe we observe on vary large scales, in general, is not subject to the inexorable decay? Or it could be that at some future time, not yet observable, that decay will be reversed.

The application, then, of the wrong assumptions has led in fact to the ludicrous state[22] of cosmology today, with its insistence on dark matter, dark energy, dark radiation, even dark 'photons', for which there is not one shred of experimental local laboratory evidence.

I could suggest an alternative—that direct causation by the Creator has been ignored because He does not fit the standard worldview called *materialism*. The Creator is not discoverable, yet neither is He excludible with current methodological science, so, by definition, He falls outside of 'science' and thus His creative power is not considered. What, after all, should a freshly created universe look like? What should the hallmarks of fiat creation be?

The universe was created, that we know for sure (Genesis 1:1), so why look solely for a naturalistic description of that which is truly supernatural? God may already have applied some additional sustaining power to the universe, which needs to be taken into account. Ignoring that fact could well be the reason that the stars in the arms of spiral galaxies do not follow the expected standard laws. Thus on the larger-length scales it could be interpreted as new physics but actually it is not new but has been in place all along. We have just not recognised it.

This sustaining power of God might be construed as a 5th force in the universe, one that is creative, conservative, maintaining the high speeds of the spiral arm stars without the need for halo dark matter. And thus dark matter and other fudge factors would no longer be needed to describe the motions in the universe. To suggest so would probably be laughed at or scorned by secular science. But in such a case, it may be incorrectly interpreted as new physics. With such a conservative power capable of reversing entropy (over very long timescales) it is possible that the universe is here forever.

One of the reasons this type of creative force is not detected may be that the Creator is, by definition, excluded and thus no theory can allow for such influences. Also, the timescales for any entropy-reversing processes are much greater than human life times and as such we have no available data; or the processes, like dark energy, cannot be detected on any local scale. Not yet anyway, when the effect is too weak. Understanding this goes to understanding the

true cosmogony of the universe, how and when God created all the stars and galaxies.

Such an entropy-reversing force need not be acting continuously, but is only needed when it suits God's purposes, as was the case in the burning bush, raising people from the dead, etc. The very existence of the universe begs a creator so why not a creator who preserves His creation, even if some parts of it have to undergo renovation sometimes. This, I believe, is indicated in the language of God's renewal of the earth, not its total destruction and recreation, when He said He will make a new heaven and new earth.[15]

Conclusion

The world looks forward to a dismal fate as the universe eventually dies in a 'big rip', 'big freeze' or a 'big crunch'. Without trust in the Creator and His Word the world has no hope. Their only comfort is that the ultimate death of this universe is expected to be so far off in the distant future it can be ignored. But the Bible describes catastrophic world-changing events not so far off, only a matter of thousands of years, not billions or trillions. God has told us this in His Word. And though there are several different interpretations among Christians, the general consensus among those who take God's words as they were intended to be understood is that it is only a matter of a thousand years or more before major changes are expected on Earth and even in the universe.

Only about 6,000 years ago this world—the whole universe—was created. But soon after it was damaged by sin. However, we look forward to the restoration of the fallen world in the *new heaven and new earth* as promised in the Revelation (Revelation chapters 21 and 22), wherein there is only perfection. The concept of an eternal universe then fits this concept, as those who are saved live forever with the King of kings and Lord of lords when He rules the universe from His throne.

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