

Why God wants a never-ending story

Why should the universe end? Better yet why would God want the universe to end? Taking as a given that humanity is God's children then we might ask how many children does God plan to create to populate his universe?

I do not believe there is a good argument to explain why God would want only 2 trillion humans created but not 2 trillion and one. Given that God is an infinitely large impossible being why would the number of its kids be finite? Infinite seems like the more appropriate amount given people are created in the image of God.

If the number of children i.e. the number of humans that will ever exist is a finite number than this would lead to the conclusion that, at some point there would be a final generation of humanity where no person after that generation will have any more kids. I do not believe this "final generation" makes spiritual sense because having kids is a profound and powerful way to spiritually develop people. A key part of the God's plan, I believe, and this is a common belief that extends to religions outside of western ones, is for people to come to this reality to spiritually develop, mature, and grow. For a person to be their best selves means they are supposed grow spiritually and in the Christian context become closer to God. I believe for the vast majority of people the responsibility of having kids enables profound spiritual growth that would not happen otherwise as well as teach people how God's perspective might be to us given that he is our parent. Therefore, if a final generation were to exist, by definition, they would not have kids and thus this generation would lose a fundamental avenue of spiritual growth. Therefore, this final generation would be doomed to an arrested spiritual development. This arrested spiritual development would be counter to the basic notion God sends us here to spiritual grow.

While one can point to many examples of people being born who do experience arrested spiritual development, I do not believe these examples would prove the idea that God is content with all of humanity experiencing spiritual retardation. It is one thing where for God to allow some people to spiritual drift and not grow. To extend that idea that God has let some people drift to mean he will let all people drift I believe violates the notion that God loves his children and that Christ's sacrifice on the cross to atone for all of humanity's sins worked.

Since the arguments for a final generation of humanity as well as there being only a finite number of souls born into the universe are weak at best, I believe the logical alternative is that God plans to have an unlimited number of kids.

Given this idea being true it means that the universe cannot exist in states which would lead a restriction on the number of humans that can be born.

This restriction become interesting physically when looking at the entire shape of the universe. The shape of the universe, based on Einstein's General Relativity (GR) can have three distinct geometries. These geometries are determined by the strength of gravity based on the mass density of galaxies and the expansion of the universe called Hubble's Constant. Mass density simple refers to how much energy per unit of volume where.

Hubble's Constant means in all of its connotations and meanings is a bit tricky to understand and is still a massive topic of debate today. Hubble's Constant empirically refers to the observation that galaxies that are farther away from us we then move faster. To give a simple example, this means that a galaxy 10 light years away moves at about (I am making this exact numbers up just to make the greater point) 10 m/s away from us. A galaxy that is 20 light years away will then be moving 20 m/s away from us. These geometries are a saddle, a sphere, and a flat plane/cube.

Now Hubble's Constant is considered to be the manifestation of the cosmological constant predicted in Einstein when he first published GR in 1915. The cosmological constant was important in Einstein's mind as to prevent what I will call Einstein's Nightmare- gravity completely dominating the universe. To make a static universe that is not collapsing towards Einstein Nightmare he created the cosmological constant to balance out the pulling in effect of gravity. In the sense that gravity always pulls things together the cosmological constant is what then pulls things apart. The energy creates the effect of the cosmological constant is called Dark Energy. This form of energy is "Dark" for two reasons. One, astronomers do not know how Dark Energy and what itself would look like from astronomical observations. Two, there is not no known "candidate particle" from fundamental particle physics which could create the physical effects expected from Dark Energy. Put more succinctly, Dark Energy is "Dark" because it is a complete mystery to physicists as what it could be.

Dark Energy is the theoretical reason the universe to not slowly but steadily evolving into Einstein's Nightmare. Therefore, we can indirectly observe the impact of Dark Energy but observing how strong gravity is influencing the universe on its largest scales. Gravity's impact on these large scales will lead to three types of geometries. If gravity dominates over Dark Energy, then this will

lead to the geometry of Einstein's Nightmare, a closed sphere. This eventually cosmological fate is often referred to as the big crunch. If Dark Energy dominates over gravity, then the universe will enter what is known as an open saddle geometry where everything expands away to infinity. Given that Dark Energy's basic definition is as an anti-gravity repulsive force then in the universe where Dark Energy dominates then even the nuclear forces holding atoms together will, eventually, become overwhelmed, and scatter apart. This fate is often referred to as the big rip where Dark Energy rips everything apart.

The third state is one where gravity and Dark Energy perfectly balance each other to prevent the geometry of either the closed sphere or open saddle to form. Instead, the universe is perfectly flat in all directions. The critical density one finds when reading about Dark Energy refers state where the Dark Energy and gravity balance each other out. Therefore a critical density of 1 refers to the flat state of the universe, a value greater than 1 a closed sphere universe, and a value lower than 1 a saddle open universe. The important point about the critical density is that this is the reference value when people talk about the energy composition of the universe. When astronomers look into the cosmos and they use the physics they know to estimate how much of a contribute typically matter (often referred to baryonic matter but baryon is its own physical reference which goes beyond this piece) has to the critical density is only about 4%. Dark Matter supplies about 26% and then Dark Energy supplies the rest at about 70%.

The important point about God wanting more kids and the shape of the universe is that only in the configuration where the universe is flat can God truly have an unlimited number of kids. Therefore, one can, and I believe should, reject the notion that the other possible geometries could have been for the simple reason the God loves his children and wants more.