

Kingdom Report

Week 14 July 2018

Elon Musk, SpaceX and the Future Puritan Space Trek

Elon Musk the Tesla and SpaceX entrepreneur recently announced the coming of their new Falcon BFR Heavy Lift rocket. Space experts said with this cost and weight lift capability they can put 2,5 million people in orbiting space colonies by 2040...in 22 years. Here is why I think the first long term space colony settlers will be “Puritan” evangelicals...like the Mayflower Puritans who settled America in 1620.

Why a blog on space colonization?

I have made the following arguments in my Kingdom Vision blogs:

- The Kingdom timeline is far longer than the usual 7000 years we are used to. And even if you still maintain that Kingdom rule is a 1000 year Millennium then we are going to need a lot more room than this earth can provide for 1000 years of exponential growth.
- The prime directive of Genesis 1:26-28 directs us to subdue the earth and be productive and multiply.
- Our Genesis Dominion Mandate extends not only to this earth but to all the works of God’s creation in this universe.
- An important aspect of subduing the earth is to control the resources and energy of the earth for the productive purposes of the Dominion Mandate. That means technology is God’s gift to us “the power to create wealth in order to establish his covenant”. (Deut. 8)
- God uses whomever He wills and gifts all manner of people with abilities to move His Kingdom agenda forward. That includes kings and politicians and scientists and entrepreneurs.

Christians involved with space colonization? Really?

Well it reminds me of those daring Pilgrims that set out 400 years ago to establish a “city on a hill” in the New World to claim new lands and people for the Kingdom of God and to show the world how God’s people live.

It was dangerous, In the first year of the 120 colonists who came over more than half died.

It was uncomfortable. They left friends and family and the comforts of village life in Europe and civilization and braved the misery of months at sea in a small boat to start a new way of living according to their Biblical principles.

<p><u>Plymouth Colony</u> A colony formed by the Pilgrims when they arrived at Plymouth Rock in 1620</p>	
<p><u>Pilgrims</u> The people who came over to the New World from England seeking religious freedom</p>	
<p><u>Mayflower</u> The ship that transported the first English Separatists (Pilgrims) from England to the New World</p>	
<p><u>Samoset</u> The first Native American to make contact with the Pilgrims of Plymouth Colony</p>	

Well we do not need to travel 3 months in a crowded sail boat to get to our new colony in low earth orbit. But it is hazardous and it will take brave souls with vision....

Here is the technology available to us in the years ahead to help us establish a new Kingdom colony in space.

From the technical descriptions I got from enthusiasts who see the possibility of building enough low earth colonies in space for 2,5 million people. Which as they say was the population of America in 1776 when they declared independence from Great Britain. Here is how they plan or hope to do it.



The SpaceX BFR Heavy Lift Rocket.

The SpaceX BFR will be 100% reusable and will be like a 747 with 150 tons of payload. SpaceX Falcon 9 launches are already about 7 times lower cost than United Launch or other space competitors.

Big Falcon Rocket is targeting costs of \$10 million per launch for per kilogram costs of \$66 per kilogram. 400X less than Saturn V and Space shuttle and 100X less than current competitors.

Rapid relaunch three times a week means twenty BFR could launch 3000 times per year. Each time lifting about ten times the payload. 100X the mass into space.

1000 SpaceX BFR launches would cost \$10 billion versus \$40 billion for a few dozen space shuttle launches of the International space station.

We will be getting 1000 times the capability in space.

Profits can be made initially through worldwide satellite high speed internet

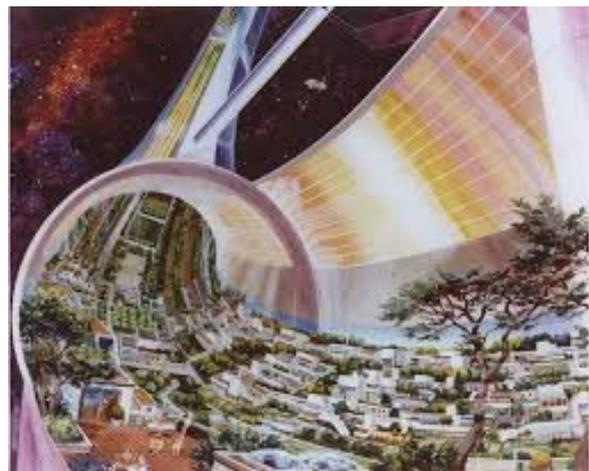
The FCC just approved SpaceX launch of thousands of internet satellite in a network to be operating by 2023. They will be in low earth orbit for fast response and high bandwidth.

They will reach every square inch of the planet. 5 billion subscribers at \$40 per month average would be \$2 trillion per year in revenue.

Fifty SpaceX BFR make stations to hold 2.5 million people by the 2040s

- * 30,000 launches at \$10 million a piece is \$300 billion which is 1.5 times the cost of 135 Space Shuttle launches
- * Over \$200 billion was spent on the International Space Station which only has from about 3-8 people
- * Once SpaceX BFR is proven safe and reliable it could transport 200-400 people at \$25K to \$50K per ticket
- * A \$20 billion per year colonization and industrialization program.

About 3000 Falcon BFR launches to build an 18,000 person space station in ELEM with no gravity or radiation issues.
Easily fit over 200 such stations around the equator. 5 rings 250 miles up to 370 miles every 30miles. 600 miles apart.
If each BFR flew four times per week then 50 Falcon BFR could transport the materials to build those settlements.
Starting in 2023 with the first BFR and building about 10 Falcon BFR per year then full orbital production rate could be achieved by 2028. Around 2040, all the settlements in ELEM could be completed.
2.5 million people living in the United States' original 13 States in 1776.
We could make large space stations like what was in the movie 2001, A Space Odyssey. Stanford space torus. Donut shaped stations 890 meters across with 18200 people in them.



Here is my takeaway from these new technology capabilities....

First, don't discount any of this as fantasy talk. If you are as old as I am then you remember where we were as a church and as a world 40 years ago. No personal computers, internet, iPhones, Artificial Intelligence microwaves, self-driving cars, Youtubes, Wikipedia, Print-On-Demand, 3D printing, and I can go on and on.

The technology that became available in the last 40 years has totally changed not only the world but how we do evangelism, spreading the gospel, ministry, and vision. This space access technology developed by private enterprise is now available and will only increase in effectiveness and lowering of costs.

The people involved in this new technology is not just Elon Musk and Space X. The richest person in the world is Jeff Bezos of Amazon and his space company Blue Origin will be funded by Bezos to a tune of \$1 billion a year for the rest of his life. And others....

Key Technologies for Space Colonization

There has been such enormous advances in so many key technologies that it is now very feasible to create space based colonies and a space faring civilization.

New materials technology for instance in sponge-magnesium is stronger and lighter than titanium making it ideal for space lift. Artificial intelligence and robotics will make assembling space modules in space easier than astronauts working in space. In fact rapid development of computing power made the precise guidance needed for re-useable space rockets that can deliver a load into space and then return automatically without human pilots. New enzymes and catalysts make it possible to engineer new biotech through gene splicing that can create drugs or chemicals of choice in fermentation processes. Or even assemble nano-scale molecules atom by atom in high precision 3D printing. 3D printing using new materials can make any spare parts needed one at a time. New techniques in biological 3D printing make it possible to print human body parts like bones, ears, veins etc.

The high-tech entrepreneurs have revolutionized the space industry. The Space Shuttle was supposed to be NASA's idea for low cost reusable space entry vehicles. Instead it became a decades long multibillion (tens of billions) financial boondoggle. Elon Musk built a better cheaper and quicker re-useable space delivery system that can send more into space at 100's times cheaper costs. Private entrepreneurs will always outdo government...

But what about the Church and Space Colonization?

Here is what I believe is going to happen. God has always had a remnant that He calls out from the world system to pioneer a new vision. He took out the Israelites out of Babylon. Hundreds of thousands went into captivity....42,360 came out to rebuild a new Israel and a new Jerusalem and Temple. Jesus ministered for 3,5 years and called out a new people out of Israel...120 responded on the day of Pentecost. The Reformation preaching of Luther and Calvin resulted in many hundreds of thousands coming out of Catholic bondage. But a hundred years after the start of the Reformation (1517) a new group arose called Puritans. They rejected the worldly ways that the Protestant Reformation had fallen into...captured by the state in England and Germany and other places. They wanted to live in communities that reflected the laws of God and a Godly way of life.

The Puritans left England in 1620 to start a new civilization in a new world. They were joined in the years from 1620 to 1690 by tens of thousands of Amish, Mennonites and other dissenters of the worldly Protestant nations. They endured the hardships and established the colonies in America that made it possible for everyone else to stream into America.

The first colony in America in 1607 was Jamestown, founded as a commercial enterprise by the London Company to exploit gold and riches out of America. It failed. It was saved eventually by tobacco. The Puritans succeeded because they did not come to find gold...they came to create new communities.

The first ventures into space will be commercial ventures, space tourism etc, But the first real colonies of space settlers will be once again God's people who will brave the new frontiers to really build a New Jerusalem in the new heavens and the new earth of space colonies....a hundred years from now space and the solar system resources will belong to the Kingdom of God and the Lord's space pioneers....to power endless growth of the Kingdom.