

A Very Brief Summary of Private Spaceflight & Tourism

Vocabulary Terms

Idioms & Phrasal Verbs

1. WHAT IS THE SPACE RACE?

- Hi, I'm Marcus B, and I'm not an astronaut – but if you are watching this in the 21st Century, you probably already know that we've made good progress in the age of space exploration over the past sixty-five years - from landing on the Moon, to landers and rovers on Mars, to deep space telescopes.
- But we've recently entered an interesting new age - specifically, the Private Space Race.
- And if you'll permit me - I'd like to tell you a little bit about how space privatization has literally taken off

[THE PURPOSE AND HISTORY OF SPACE EXPLORATION OF SPACE EXPLORATION 0:52]

Question: *Okay, so what's the purpose and history of Space Exploration?*

Answer:

- Well, according to Jesse Rogers, an Astrophysicist at York University, "Pushing ourselves to the edge of scientific exploration and discoveries and technology can ultimately help us do better on Earth."
- On a deeper level, space exploration is part of our species' deeply rooted nature to explore, understand and better use our surroundings.
- Now to explore the universe, we first need Rocketry - a Building Block in Humanity's reach beyond Earth to the Stars.
 - Historically speaking, the incentives for rocketry started out as military purposes but later developed into more scientific endeavors, after WW2 (World War 2).
 - Then, during the Cold War, the Space Age began with the Soviet Union launching Sputnik in 1957, and the first person, Yuri Gagarin, in 1961.
 - So later that year, competing with the Soviets, America's NASA began their own space programs, eventually leading to the Apollo 11 Moon Landing in 1969.
 - And by the year 2000, American, Russian, Canadian, European and Japanese space agencies had begun to collaborate on building the International Space Station (ISS).

[Scene 3 ~ 2:20]

Q: Right. Okay... thanks for the history lesson - so how did we get private spaceflight and who are these companies?

- Well, before **deregulation** in the 1990s, only publicly-funded government agencies could fly missions into space. But recently with their own finances and resources, a number of private companies have begun to launch private and public spacecraft into orbit.
- And who are these private companies? Well, allow me to introduce you to some very rich men and their flying machines! Elon Musk's SpaceX, Richard Branson's Virgin Galactic and Jeff Bezos' Blue Origin.

[Scene 4 ~ 3:03]

Q: Right, so they're making spaceflight more accessible but what are these companies doing up there and why?

- Okay, so similar to banking, railroads, airlines and computer software, there's real **lucrative** potential for a diverse economy to develop in space.
- There are many reasons why these companies would want to fund and develop projects up in orbit - from scientific and medical research, to asteroid mining, to space transportation links, to orbital hotels.
- Now, let's have a look at what some of these private companies are doing up in orbit: Leading this intriguing new race is PayPal CEO and Tesla co-founder Elon Musk's SpaceX
 - Known for its **reusable**, reliable and cheaper rockets *and* spacecraft, SpaceX has been contracted by NASA to send cargo and crew to the International Space Station.
 - SpaceX has also sent up hundreds of *Starlink* satellites in order to connect remote parts of the Earth to internet connectivity.
 - The company is also developing *Starship*, a fully reusable space launch system designed to take people to Mars with the hopeful goal of starting a **multiplanetary** civilization to ensure humanity's guaranteed survival.
- Next up, British Billionaire & *Virgin* founder Richard Branson: his company Virgin Galactic launches a rocket-powered spacecraft from a mothership that sends high paying customers to the edge of space.

- And finally, we have Amazon CEO & billionaire investor Jeff Bezos' *Blue Origin* – his company uses a similar spacecraft system to SpaceX, and is planning on building an orbital hotel by 2030.
 - Both these two companies allow for high-paying customers to fly to the edge of space and experience ten minutes of **weightlessness**. Kinda like William Shatner did: *Star Trek's original Captain Kirk*.
- As you can see - there are many reasons for private individuals or organizations to fund and develop these projects in space.

[Scene 5 ~ 5:24)

Q: Right, but about all the pro's and con's with these projects?

- So there are a number of mixed opinions & feelings about private spaceflight - most of which I happen to agree with.
- The **Pros** are that:
 - #1 Private space companies can do things cheaper and quicker than governments can sometimes – Freeing up funding for missions to the moon or Mars.
 - #2 is that with greater competition in space, there will be more technological developments for all back on Earth.
 - And #3, private space companies can help monitor things back here on Earth, like climate change or agricultural growth - which can help us to better adapt for the future.
 - So, who knows how long before we'll go back to the moon or have rotating stations in orbit like in the movie *2001 A Space Odyssey*?
- But then there are some **Cons**:
 - First off, some see private spaceflight as a reflection of the significant income **inequality** back here on Earth, since for now only the very wealthy and the elite can afford to fly into space.
 - Secondly, scientists say that with more **lift-offs** that burn more fuel, more carbon gets released into the atmosphere. That's not good when we are trying to combat climate change.

- Lastly and most dangerously all that **debris** up in orbit could collide with public spacecraft or satellites and cause significant damage back here on Earth.

[Scene 6 ~ 6:48]

- This leads us to ask some big questions like:
 - *Why are we funding this when there are more important things on earth that need to be solved?*
 - *Who's going to benefit from these companies' actions?*
 - *And how do we regulate and hold these companies **accountable**?"*
 - Here's another fun fact: The 2015 Space Act allows companies off Earth to legally claim anything they own, so *could or should SpaceX own a portion of the Moon or Mars?*
- That being said, *it's important to remember that anything we **start out** doing is bound to be imperfect in the beginning.*

[Scene 7 ~ 7:26]

Q: Wow... so in summary, where does this leave us back on Earth?

- Okay so it's predicted that private spaceflight will become more **commonplace** and accessible with various companies that have scientific, medical or communication purposes.
- And while it's less likely that more people will freely fly into space, although tourism will increase, it's more probable that individuals will be able to invest in private companies that have **payloads** in **low-earth orbit (LEO)**.
- So, in summary, while it's important that the government **keep an eye on** what these companies are doing up there, this shouldn't stop them from continuing with developments and achievements that might well benefit humanity in the near future.
- Remember - the Cold War Space Race might be over, but the Private Space Race has just begun. And don't forget to look up because ya never know what you might see up there one day!

Total Runtime: ~ 8 ½ min

Resources:

- [Billionaire Space Race - Global News](#)
- [Heliosphere \(Youtube\) - How Private Companies will Revolutionize Spaceflight](#)
- [Private Spaceflight Explained - Vox](#)
- [How Bad is Space Tourism? And Other Questions - Vox](#)
- [ABC News - Backlash against Bezos Spaceflight sparks Equity Debate](#)
- [Billionaires in Space - The Pros and Cons of Space Tourism](#)
- [TheHill - Will We Allow the Privatization of Space to Eclipse NASA?](#)
- [Wikipedia - SpaceX Starship](#)