

# THE IMPORTANCE OF SPACE: A STUDY

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## Abstract

*Scientists use crewed and robotic spacecraft to investigate the furthest reaches of the cosmos, increasing our understanding of the universe and benefiting mankind as a result. Here, one can find a full list of all crewed spaceflights, including details on each mission's success and indeed the crew members involved. In the night sky, individuals are often awestruck by the variety of things that may be seen in the sky at night. This hasn't altered at all. People, animals, and even robots were able to be sent into space as missile technology evolved over the 20th century, along with other technological advances. Before modern technology made space flight a reality, many individuals, notably pilots, biologists, authors, and painters, were captivated by the prospect. . There has been a loss of the ozone layer and climate change as well as deforestation and deserts. There are several examples of how remote sensing data is being used to improve our understanding of natural processes including water cycles and air quality. Two aspects of how these surveying and monitoring methods may give critical information on the status of ecosystems while providing objective support for good environmental action, such as conservation, are given.*

**Keywords:** Space exploration, Investigation, Humans, Ancient times, Space Exploration

## Introduction

Everyone was fascinated by the idea of spending a long amount of time in space. It was too costly for most of the late late 20th century and then into the early 21st century to launch humans as well as electronics into space. Many various sorts of individuals are interested in science travel, which has required a wide range of accommodation to accommodate their requirements. Indicators of national strength, public safety, and military might, as well as considerable benefits for the general public, have indeed been provided by space missions. In areas where the private industry may profit from satellite launches, including the use of satellites as communications relays, even when the government does not fund them, satellite communications activity has increased. Early 20th-century entrepreneurs anticipated a wide range of potential business enterprises in space, including personal space travel.

## History of space Exploration

Since the dawn of time, people all over the world have been observing and interpreting celestial events for religious as well as practical purposes alike. In other cases, people dream about travelling to other worlds in order to learn more about their civilizations. As an instance, in the seventeenth century, the French comic Cyrano de Bergerac published two comedic histories of world states, one in 1656 and the other in 1657, both under the title of History of the Comedic History of the World States and Empires of a Sun (1662; together in English as A Voyage to the Moon: With Some Account of the Solar World, 1754).

Over two centuries after their first publication, the writings of French author Jules Verne and English novelist and scientist H.G. Wells contain realistic depictions of outer space as well as space flight. These fantastical images of space travel must be made a reality by developing realistic methods of resisting the gravitational effects of the Earth's atmosphere. Space programmes had evolved by the turn of the century to the point that it was plausible to consider and utilise them to accelerate things such that they could enter elliptical orbits and even escape the Earth's gravitational effect and sail away from the Earth without fear of destruction.

### **The Important and Benefits of Space Exploration**

In their seek to learn what those little glowing dots may be and what the story behind them could be, mankind have been looking up at the sky for thousands of years. When hundreds of stars can be seen with the naked eye at night, most of us are awed and can't seem to stop looking at them for reasons that aren't quite clear. There is something that piques our fascination, and our curiosity causes us to question what that something is. Over the course of the previous few thousand years, this has had a profound impact on the human species. Our inspiration, thawhichgan with cave paintings and progressed via Greek mythology and philosophers to the current day, when we mostly adopt a scientific method, is unquestionably beneficial to many cultures. Today, we can proudly proclaim that we have accomplished some key successes in space exploration, such as landing on the moon and sending rovers to Mars, but we are most likely just at the beginning of something far larger in the future. However, to achieve this goal, a substantial amount of money is required.

It is essential that a long-term, environmentally friendly source of energy be developed in today's society . As a society, we are plagued by poverty, population increase, global warming, emerging nations and other issues. After seeing all of this, many begin to doubt the significance of space travel, and the amount of money that is being spent on it. Many people believe that this money would be better invested in other regions that are in urgent a need for repair. Is this money, on the other side, genuinely wasted? To what extent does human space exploration benefitted the human race? It seems to me that seeking out new experiences is a vital aspect of our existence and character. The answers to these issues are extremely essential in the twenty-first century, and they will most likely become even more significant as our understanding of the world grows. The basic notion of space exploration must be understood before everything.

"Space exploration is now focused on the discovery and investigation of celestial structures in outer space, which is being accomplished through the use of constantly growing and increasing space technology." (Exploration of the Universe) The term "space" is often used to refer to one single thing, yet it truly refers to a far larger area than we humans can comprehend. Another popular misconception is that all that can be found in space is cold, dry boulders travelling in all directions at random intervals. It should be noted that this list consists just of notions that we are currently aware of. When we think of space exploration, we typically think of NASA, which stands for National Aeronautics and Space Administration, and was established in 1958 as a division of the Government Of the united states to promote space exploration. It will be based on NASA, which is the world's premier space research organization; also, the United States will be the major focus of the

investigation. The so-called space race between the Soviet Union and the United States, which lasted from 1955 to 1972, was the apex of space research. A race was on between the United States and the Soviet Union to determine who could be the first to send a man to the moon. The result was an extremely large budget for NASA, which set the conditions for the fast growth of space technology throughout the late 1960s and early 1970s. When we look back, we can plainly see the influence of the money that was spent on it, as well as how much we were able to achieve as a result of it. At the time, all rocket launches were shown live on television, which greatly influenced their general opinion of them.

Each and every individual was enthralled with the idea of space, and they were all familiar with the names of NASA's astronauts. During in the Apollo 11 mission, public attention dropped once the primary goal was achieved and Neil Armstrong becomes first person to walk on the moon. In other words, NASA and other space programs were not closed down, but their budgets had been cut and their focus on satellite launch missions had already been diminished. Diverse research initiatives were in progress, such as improving human understanding of climate and weather change, as well as geology, aerodynamics, and thermodynamics. Irrespective of how you look at it, that was a major setback. It was anticipated that the landing of the Mars mission would be the next big thing to capture the public's interest.



NASA recently announced a slew of ambitious plans for the near future.

"Within the next few years, it is believed that the space programme will expand our knowledge of solar energy generation, robots, and other topics," according to Why Is Space Exploration Important? However, President Barack Obama reduced NASA's budget by 59 million dollars in 2013, making it impossible for them to meet all of their goals.

The cuts elicited a variety of responses. As of the most plausible explanation, the budget reductions were made in reaction to public protests about the expensive costs of space exploration. Many people today were opposed to space exploration for a variety of reasons.

The most major argument is simply that it is too costly to do so. Many people believe that the money should be spent on strengthening the health-care system or on decreasing unemployment rates by

creating jobs instead of on construction.

Another argument is that, since there are millions of starving people on the earth, spending the money on space is a sin and that money should instead be spent on them. However, many of the people who have spoken out in favour of space travel have said that mankind should instead concentrate on fixing its own issues at this time. And first foremost, prioritise Earth-related challenges before committing resources to space research. Others claim that exploring other planets is irrational considering the fact that we haven't even completed our own exploration of our own planet yet. Some individuals are also opposed to it for religious reasons, or simply because they feel that mankind is supposed to remain on this planet for the foreseeable future. Those are the most often heard counter-arguments, which may be discovered by asking about or searching online.

After putting into account the aforementioned points, some of us may question whether or not money should really be spent on it, because while we may see logic in a few of them, once we dig deeper into the actual input and output of the project, we would then quickly discover that they are not quite correct. If you really want evidence for this, think about how much money it truly costs, followed by what that money is used for. As we can see, NASA spent about \$17 billion of the United States' total annual budget in 2013, accounting for nearly a quarter of the total. Comparing this sum to the \$756 billion military budget (which is 44 times the NASA budget), we may reassess what constitutes a burden on the taxpayer.

Think about where the human race would be now if it spent all of its military budget on space research (or any other comparable subject), then think about how much good these two persons contributed to the world. Taking aim at space exploration and claiming that there are people starving in Africa looks to be a matter of simply, but this is not the case when it comes to launching space shuttles or feeding the globe.

If NASA were to shut down tomorrow, do you think the world would be a better place? Do you think that money would be put to good use? Sent to a developing country like Somalia for subsidies, for example, would assist only a limited number of people in the near run. In the meanwhile, as we shall discover in the following inquiry, investing in this has several long-term advantages for the whole society on a variety of levels. (Just to clarify, I support assisting those in need but do not believe funding from the space research budget should be used for this purpose.)

Taking NASA's budget instead of military spending would allow them to save much more money. A 3.0 percent reduction in military spending would save them even more money.

Also widely misunderstood, but incredibly important, is what all of this money is used for. The answer

to this question is: Not all of NASA's funding is spent on the Space Station, and it does not vanish from the economy as a result of this decision. NASA personnel are dedicated scientists who work as a team. However, they must also pay their bills, which is why the vast majority of the agency's budget is given to staff wages. NASA has "nearly 18,000 civil service personnel, as well as more than 40,000 contractors and grantees," according to the agency.

(Source: NASA Workforce.)

Therefore, it does really create a large amount of jobs. The money is distributed to other firms that collaborate with NASA and create employment in other organisations as well. In addition, when these individuals spend their income on any items, the cash returns to the economy. In addition, it is worth noting that space programmes and expeditions are increasingly culminating in international collaborations. NASA collaborates with the European Space Agency (ESA) on a variety of projects, while Russia contributes technology to China's space exploration efforts. When nations work together, aiding one another in addressing difficulties via collaboration, it helps not just the countries involved, but the whole world as a whole. As we can see, engineering in space technology benefits all other industries. However, the advancements, technological breakthroughs, and benefits listed above do not cover all of the reasons why space exploration is critical. These are merely byproducts of the process, not its primary motivation.

There are numerous other reasons that could be mentioned here, but one of them is definitely considering a few of the most relevant, rational, and logical paths for humanity's future. As well-known astrophysicist Stephen Hawking explains, "our population and use of the finite resources of planet Earth are growing exponentially, as is our technical ability to change the environment for good or ill." Our genetic code, on the other hand, still contains selfish and aggressive instincts that provided a survival advantage in the past. Avoiding disaster in the next hundred years will be difficult enough, let alone the next thousand or million. Our only chance of long-term survival is to spread out into space, rather than remain dormant on Earth."



As a result, it has the potential to generate a large number of employment. In addition to NASA, the money is allocated to certain other companies that interact with NASA and help to generate jobs in other companies. Also important is the fact that when these individuals spend their earnings on any goods, the money is returned to the market. As an additional point of interest, it is worth emphasising that space programmes or expeditions are increasingly resulting in multinational cooperation. Russia leader to China's space research endeavours, while NASA partners with the Space Agency (ESA) on a number of projects, including the Space Station.

Working together, assisting one another in tackling issues via cooperation, not only helps the countries concerned, but also benefits the whole globe. As we can see, innovation in the field of space technology is beneficial to all other businesses as well as the space industry. Space exploration is vital for a number of reasons, and the developments, technical breakthroughs, and benefits described above are just a few of the many reasons why.

However, they are merely consequences of the process and are not the primary motivation for it. One of the most relevant, reasonable, and logical pathways for humanity's future is to examine a few of the most relevant, scientific, and logical paths for humanity's future, which is one of the several other reasons that may be given here. According to Stephen Hawking, a very well scientist, "our population and consumption of the limited resources of planet Earth are expanding rapidly, as is our technological potential to affect the environment for good or ill." However, our genetic code still includes selfish and aggressive tendencies that offered a survival benefit in the past, and these instincts are still there now. It will be tough enough to avoid calamity in the next 100 years, much alone in the following thousand or million. "Rather of remaining dormant on Planet, our only hope for given the ability is to extend out into space," says the author.

**Important milestones in the history of space exploration**

The following table contains a list of major moments in the history of space exploration.

Significant milestones in space exploration			
Date accomplished	Event	Details	Country or agency
Oct. 4, 1957	1st artificial Earth satellite	Sputnik 1	U.S.S.R.
Nov. 3, 1957	1st animal launched into space	dog Laika aboard Sputnik 2	U.S.S.R.
Sept. 14, 1959	1st spacecraft to hard-land on another celestial object (the Moon)	Luna 2	U.S.S.R.
Oct. 7, 1959	1st pictures of the far side of the Moon	Luna 3	U.S.S.R.
April 1, 1960	1st applications satellite launched	TIROS 1 (weather observation)	U.S.
Aug. 11, 1960	1st recovery of a payload from Earth orbit	Discoverer 13 (part of Corona reconnaissance satellite program)	U.S.
April 12, 1961	1st human to orbit Earth	Yury Gagarin on Vostok 1	U.S.S.R.
Dec. 14, 1962	1st data returned from another planet (Venus)	Mariner 2	U.S.
June 16, 1963	1st woman in space	Valentina Tereshkova on Vostok 6	U.S.S.R.

Significant milestones in space exploration			
Date accomplished	Event	Details	Country or agency
July 26, 1963	1st satellite to operate in geostationary orbit	Syncom (telecommunications satellite)	U.S.
March 18, 1965	1st space walk	Aleksey Leonov on Voskhod 2	U.S.S.R.
July 14, 1965	1st spacecraft pictures of Mars	Mariner 4	U.S.
Feb. 3, 1966	1st spacecraft to soft-land on the Moon	Luna 9	U.S.S.R.
April 24, 1967	1st death during a space mission	Vladimir Komarov on Soyuz 1	U.S.S.R.
Dec. 24, 1968	1st humans to orbit the Moon	Frank Borman, James Lovell, and William Anders on Apollo 8	U.S.
July 20, 1969	1st human to walk on the Moon	Neil Armstrong on Apollo 11	U.S.
Sept. 24, 1970	1st return of lunar samples by an unmanned spacecraft	Luna 16	U.S.S.R.
Dec. 15, 1970	1st soft landing on another planet (Venus)	Venera 7	U.S.S.R.
April 19, 1971	1st space station launched	Salyut 1	U.S.S.R.
Nov. 13, 1971	1st spacecraft to orbit another planet (Mars)	Mariner 9	U.S.
Dec. 2, 1971	1st spacecraft to soft-land on Mars	Mars 3	U.S.S.R.
Dec. 3, 1973	1st spacecraft to fly by Jupiter	Pioneer 10	U.S.
July 17, 1975	1st international docking in space	Apollo and Soyuz spacecraft during Apollo-Soyuz Test Project	U.S., U.S.S.R.
July 20, 1976	1st pictures transmitted from the surface of Mars	Viking 1	U.S.
Sept. 1, 1979	1st spacecraft to fly by Saturn	Pioneer 11	U.S.
April 12–14, 1981	1st reusable spacecraft launched and returned from space	space shuttle Columbia	U.S.
Jan. 24, 1986	1st spacecraft to fly by Uranus	Voyager 2	U.S.
March 13, 1986	1st spacecraft to make a close flyby of a comet nucleus	Giotto at Halley's Comet	European Space Agency
Aug. 24, 1989	1st spacecraft to fly by Neptune	Voyager 2	U.S.
April 25, 1990	1st large optical space telescope launched	Hubble Space Telescope	U.S., European Space Agency
Dec. 7, 1995	1st spacecraft to orbit Jupiter	Galileo	U.S.
Nov. 2, 2000	1st resident crew to occupy the International Space Station	William Shepherd, Yury Gidzenko, and Sergey Krikalyov	U.S., Russia
Feb. 14, 2000;	1st spacecraft to orbit (2000) and	NEAR at the asteroid Eros	U.S.

Significant milestones in space exploration			
Date accomplished	Event	Details	Country or agency
Feb. 12, 2001	land on (2001) an asteroid		
June 21, 2004	1st privately funded manned spacecraft to achieve suborbital flight above 100 km (62 miles)	Mike Melvill on SpaceShip One	Mojave Aerospace Ventures (commercial joint venture)
July 1, 2004	1st spacecraft to orbit Saturn	Cassini-Huygens	U.S., European Space Agency, Italy
Jan. 14, 2005	1st spacecraft to land on the moon of a planet other than Earth (Saturn's moon Titan)	Huygens probe of the Cassini-Huygens spacecraft	U.S., European Space Agency, Italy
June 13, 2010	1st spacecraft to return to Earth with samples from an asteroid	Hayabusa	Japan
March 17, 2011	1st spacecraft to orbit Mercury	Messenger	U.S.
August 6, 2014	1st spacecraft to orbit a comet	Rosetta	European Space Agency
November 12, 2014	1st spacecraft to land on a comet	Philae	European Space Agency
March 6, 2015	1st spacecraft to orbit a dwarf planet (Ceres)	Dawn	U.S.
July 14, 2015	1st spacecraft to fly by Pluto	New Horizons	U.S.
December 21, 2015	1st rocket stage to return to its launch site	Falcon 9	U.S.
January 1, 2019	farthest object (2014 MU69) explored by a spacecraft	New Horizons	U.S.
January 3, 2019	1st landing on the Moon's far side	Chang'e 4	China

**Conclusion**

Marxism, feminists, postmodernism, postcolonialism, urban philosophy, as well as critical geography were all used to explore space in the social sciences. These ideas describe how the legacy of colonialism, transatlantic slave, and globalisation has shaped our understanding and knowledge of space and location. It has received considerable attention since since the publication of Henri Lefebvre's *The Creation of Interior* in the 1980s. His research focuses upon several and intertwined social forces that shape physical location. David Harvey introduces the concept of "time-space compression" in his books *The Status of Postmodernity*. This is the consequence of technological progress and capitalism on our perception of time, space, and distance. Changes in capital consumption and production influence and are affected by transportation & technological advances. These improvements result in cross-time & cross-space interactions, new marketplaces, and groupings of rich elites in metropolitan centres, all of which destroy distances as well as change our experience of linearity as well as distance.

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