Do We Need More Space? Essay, Research Paper

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The National Aeronautics and Space Administration, or NASA for short, plays a necessary and vital role in human life. It provides economic stability for the country, the common-day luxuries we have all come to expect, medical discoveries and advances, an insurance policy for the planet, and fulfills mankind’s eternal desire for exploration. Though there are many critics of the federally-funded space program, it indeed plays a central role in both the history and the future of the country.

The space program is a major component in our country’s economic stability. The industry generates more than $40 billion in annual exports, and almost $30 billion in positive balance of trade each year. (FAQs 1) The space program also supports nearly one million jobs. (FAQs 1) Yet, NASA’s funding represents only about one penny out of every dollar in the US federal budget. This is down from a peak of about four cents during the height of the Apollo program in the late 1960’s. (FAQs 1) The dissolution of NASA, along with destroying these one million jobs, would cost the country approximately $70 billion in revenue each year. New industries have been built on the technology that made space exploration possible, including personal computers, advanced medical equipment, and high-tech communications. NASA’s research and development generates jobs, demand for goods and services, and new opportunities for further research and development. The space program had and continues to be a strong influence on the economics and prosperity of the country. The applications of the space program have a profound effect on human life as we know it. In just a few short years, our lives have been significantly changed by space technology. The space program is responsible for the orbiting spacecraft that transmit information such as phone calls and television signals around the globe with speed and precision. Other satellites monitor the weather, and the world wide condition of the atmosphere. This provides advance warnings of major, possibly catastrophic, weather phenomena. Along with data on current weather patterns, satellites can forecast problems with the atmosphere that may create problems in the future. Present day satellite-based navigation systems aboard planes and boats enable people to determine their exact location and heading accurately. This improves safety and makes travel more efficient. In more ways than one, the space program has an immediate effect on many aspects of our life.

Research by the space program into the medical sciences affects all people. NASA is currently running experiments aimed at improving our quality of life and life expectancy. For instance, the Visual Sciences Department is working on a premise that the weightlessness of space would have a positive effect on the retinas of the human eye, causing less blindness and poor eyesight in humans by negating the pull of gravity. (Vision 1) The Department of Immunology has a theory that the human immune system is strongly influenced by environmental factors such as pollution, and space living would increase the strength and immunity of humans. (Immune 1) Perhaps the largest area of study at this time is from the bone and calcium studies, relating bone loss to gravity, and noting how bones respond to weightlessness. (Calcium 1) These projects, along with countless others currently being studied, will have a lasting effect on humankind. A different, yet valid argument was made by Ms. Sylvia Engdahl, Professor in Space Studies at Princeton. Her view on the importance of space flight centers around the need for “insurance” for mankind. There are still very real possibilities that the earth could be destroyed by nuclear war, terrorist attacks, or even an asteroid. “We all hope and believe that our homes won’t burn down, and yet we buy fire insurance. Does not our species as a whole need an insurance policy?” (Engdahl, 1) This is an interesting theory and a valid point, but we obviously have a ways to go before space is ready for a mass exodus from the planet earth.

Historically, Americans have always been explorers. Going back to our Native Americans crossing the land bridge of present day Alaska, the Viking exploration of the east coast, Columbus, and fellow explorers looking for a passage to the Far East, Lewis & Clark and their adventures in the west. And we need not stop there, for today we are exploring the ocean floor, the North Pole, and the vastness of Antarctica. It is only natural that our ancestors passed along to us the need to explore the unknown. Today’s astronauts are the explorers of the future. They allow us, through them, to feel the excitement, and the wonder of exploring new worlds.

It is well argued, that the space program has not been terribly successful in the last few years. Back to back failures of the Mars Climate Orbiter last September, and the Mars Polar Lander last December, left the space agency vulnerable to attacks by critics. But the fact still remains; we are making progress. As one unnamed reader of Newsweek magazine said, “Christopher Columbus had a hard time raising funds from the King of Spain, too. But who, today, would argue that his effort was not worthwhile?” (Newsweek 1) The space program does cost taxpayer money. But the program has many more positive effects on the country to stop federal funding. It provides economic stability, necessary communications, medical advances, insurance and fulfills the need for advancement and exploration.

1. “Mars: To Go or Not to Go” Newsweek 10 Jan. 2000. 2 Feb. 2000.

2. Petit, Charles W. “The risky mission to Mars” U.S. News and World Report 13 Dec. 1999.

14 Feb 2000.

3. “Frequently Asked Questions: Why NASA?” NASA Online 26 Feb. 2000

4. Engdahl, Sylvia. “My Views on the Importance of Space” 14 Feb. 2000

5. Visual Sciences Department website. 26 Feb. 2000

6. Department of Immunology website. 26 Feb. 2000

7. Calcium and Bone Department website. 26 Feb. 2000