

Summery of Thesis Research

*This cause of exploration and discovery is not an option we choose. It is a desire written in the human heart.*ⁱ
- George W. Bush

*The real reason we went to space was to make ourselves feel good about being Americans – national identity – and that's enough.*ⁱⁱ
- Popular Science

*Either spaceflight will be proven a successful revolution that opened the heavens to human use and habitation, or it will be proven an unsuccessful revolution that demonstrated in its failure the limits of technological advance ... If spaceflight does fail, its abandonment will represent a technological counterrevolution of great consequence, symbolizing the end of progress as it is understood today.*ⁱⁱⁱ
- William Bainbridge

MY INTEREST IN SPACE

My interest in working with the topic of the American space program began this summer with a few specific NASA events and presidential decisions. In July 2011, the Space Shuttle made its final flight to the International Space Station (ISS) under orders to terminate the program by President Obama.^{iv} The President also cancelled NASA's Constellation heavy lift rocket program, which was being designed to replace the shuttle. NASA has since started from scratch on a new rocket design, but they are not expecting to even begin making test flights until 2017.^v Without the shuttle, America has to rely on Russia to send astronauts to the ISS. Unfortunately, the last Russian Soyuz Rocket crashed shortly after launch on 24 August 2011, so they have put a hold on all manned flights until 12 November 2011 or until they can determine and fix whatever caused the crash.^{vi} Currently, there are only 3 astronauts on the ISS, and they are scheduled to return to Earth mid November. While they have the means to get back, if the Soyuz isn't fixed it could be the first time in history that the ISS goes unmanned. Thankfully, the Soyuz issue has been resolved, and there is a new NASA crew set to launch on 13 November 2011 while the current crew is cleared to return to Earth on 21 November 2011.^{vii} I am concerned that America, once a leader in space exploration, no longer has the will to pursue it.

A longer standing interest I have had with astronomy is the possibility of cosmology answering the question "why is there something instead of nothing." If we can determine the origins of how and why the big bang occurred we are also likely to solve the agnostic's issue.

AMERICA'S INTEREST IN SPACE

In the beginning of the spaceflight research just before World War II the "movement was carried on by an extremely small dedicated network of men and was sometimes led by single individuals. Unlike some political revolutionary movements, it did not draw on general support from the population at large."^{viii} Regarding sending people into space, "undoubtedly'

and 'entirely possible' were phrases that reflected NASA's wishful thinking but not the present mood of most Americans."^{xix} The disinterest in spaceflight even had an interesting relationship with art at this early stage. From the results of a widespread magazine poll "'developing rockets that land an American astronaut on the moon,' came in next to last, just ahead of 'financial support for artists and art activities.'"^x Even artist Pablo Picasso is quoted as saying, "[spaceflight] means nothing to me."^{xi} Furthermore, after Kennedy's announcement of the new national goal to go to the moon, "Americans in the 1960's were ambivalent about the moon shot."^{xii}

The Moon shot announcement did two things for American interest, however. First, it established a clear and concise goal for the space program, set a reasonable deadline for the project, and gave it the funding necessary to achieve said goal. Second, the US got embroiled in a space race competition with the USSR, which was able to send the first satellite and first cosmonaut into space well ahead of the Americans. These two things helped boost interest and support for spaceflight, as "when, as in the space program, the United States is made to look second-best, there is an outpouring of public opinion in this country demanding that we regain first place."^{xiii} Unfortunately for the space program, this increased zeal sped up space exploration to the point that in 8 years the moon mission was a success, and interest started to wane. "A curious thing has happened over the years. From the announcement in 1961 by President Kennedy that sending men to the Moon and bringing them back was a national goal to the first Moon landing in 1969, there was a building excitement, a growing national spirit and commitment. Since that day the national mood has gone the other way. Today national space policy is adrift. NASA has approved and funded space programs, but has developed little in the way of a cohesive national goal."^{xiv} An opinion poll conducted a few months after the Apollo 11 mission backs this up by showing "that 50 percent of Americans thought the country should 'do less' in space; only 20 percent thought the country should 'do more.'"^{xv} With the Moon shot goal achieved, national interest in space quickly fell.

Interest continued to decline through the 1970s and 1980s until the conclusion of the Cold War, when it took another significant hit. "There was a growing sense that the United States had trounced the Soviet Union in the space race and that further exertions would have to serve more pedestrian motives."^{xvi} "The Space Age – conceived in the challenging words of President John Kennedy, fueled by the fears of Cold War-era Soviet dominance, and proudly embraced in the hearts and minds of the American public – is fast becoming history."^{xvii} Without a clear goal NASA struggled to come up with a new project to pursue, in the end settling on a series of space stations. Unfortunately this goal was far less significant than the Moon shot, so much so that *Popular Science* questioned, "why should we all of a sudden in the 1990s decide that the major goal of NASA ought to be a goal that President Kennedy rejected in 1961 as not sufficiently bold for the decade of the 1960s?"^{xviii} President Nixon tried to revitalize the space program by introducing and supporting the new space shuttle. While initially designed to be a small recoverable vehicle to get people in and out of space, exclusivity and military contracts pushed the payload size of the shuttle larger and larger, greatly increasing the per launch costs. Even then "there has been a failure to identify any

goal for Americans in space. Nixon gave us the shuttle, which was a means to go somewhere, but with nowhere to go. Reagan gave us the space station, which is a place to go with the shuttle, but there's nothing much to do there."^{xi} In the end, "the space program of the mid-1990s and beyond could not operate on the basis of an obsolete world order of fear, violence, and competition with an enemy who was no longer there. The key words for the future were cooperation and international partnerships."^x In this way, a potential new less space-oriented goal for the program is to maintain the peace between collaborative nations that at one point in time were enemies.

Finally, we must look at motives for spaceflight in the first place, and the chief among them is exploration, be it "for its own sake versus exploration for a specific purpose, acquisitive or creative."^{xi} And the exploration continues, though mostly through robots and probes. President Bush was the first to publicly proclaim a manned mission to Mars, but failed to produce the funding for such a vast mission. Without government support, private companies, like SpaceX, have begun to devise their own means of human space travel and potential tourism, though none are quite there yet. The advent of space tourism may be just the thing to revitalize interest in space exploration. Guy Debord defines tourism as "human circulation considered as consumption, a by-product of the circulation of commodities, is fundamentally nothing more than the leisure of going to see what has become banal. The economic organization of visits to different places is already in itself the guarantee of their *equivalence*. The same modernization that removed time from the voyage also removed from it the reality of space."^{xii} While space tourism may lead to the banality of space travel, so long as the society of the spectacle persists it would also fuel interest in space as everyone signs up for their own trip to ensure their conformity and equivalence of experience to everyone else. I don't see the possibility of cultural contamination in a place that has no people as an issue, so space tourism can only be a good thing provided the economy can support it. In fact, while the rest of the country may not be interested, it is this possibility of all of us having our own space travels and explorations that keep me interested.

From this, sometimes contradictory research, I am inclined to think that there was never much interest in space exploration outside of the rocket science and science fiction communities. While I believe that an individual can change the world (spaceflight as we know it was almost completely developed by Wernher Von Braun) I do not think that spaceflight can be altered by one person any longer. The institutions in place have grown too large and too bureaucratic and the expenses involved too great. My two thesis proposals intend to express my interest in space exploration, question why Americans overall are not interested in space, and show a bit of the futility in trying to join those two sentiments.

ⁱ Popular Science. Are We Really Going to the Moon Again? March, 2004.

ⁱⁱ Popular Science. Space After the Race. August, 1993.

ⁱⁱⁱ Hansen, James. Spaceflight Revolution. National Aeronautics and Space Administration: Washington, D.C., 1995.

iv Questions Hang Over NASA's Post-Shuttle Future, by NELL GREENFIELDBOYCE, NPR, 20 July 2011, <http://www.npr.org/2011/07/20/138507386/what-s-next-for-nasa-as-space-shuttles-retire>

v Russia Delays Manned Space Launch Til Nov. 12, by THE ASSOCIATED PRESS, NPR, 13 September 2011, <http://www.npr.org/templates/story/story.php?storyId=140433805>

vi NASA: International Space Station May Have To Go Unmanned, NPR, 29 August 2011, <http://www.npr.org/blogs/thetwo-way/2011/08/29/140036900/nasa-international-space-station-may-be-left-unstaffed>

vii New Crew Members Set for Launch to Station. NASA. 4 November 2011. http://www.nasa.gov/mission_pages/station/living/index.html

viii Bainbridge, William. *The Spaceflight / Revolution*. John Wiley & Sons: New York, 1976. P. 4.

ix Hansen, James. *Spaceflight Revolution*. National Aeronautics and Space Administration: Washington, D.C., 1995.

x Bainbridge, William. *The Spaceflight / Revolution*. John Wiley & Sons: New York, 1976. P.6.

xi Hansen, James. *Spaceflight Revolution*. National Aeronautics and Space Administration: Washington, D.C., 1995.

xii Hansen, James. *Spaceflight Revolution*. National Aeronautics and Space Administration: Washington, D.C., 1995.

xiii Bainbridge, William. *The Spaceflight / Revolution*. John Wiley & Sons: New York, 1976. P. 77.

xiv Popular Science. *20 Years After Apollo*. July 1989. P. 4.

xv Hansen, James. *Spaceflight Revolution*. National Aeronautics and Space Administration: Washington, D.C., 1995.

xvi Bainbridge, William. *The Spaceflight / Revolution*. John Wiley & Sons: New York, 1976. P. 83.

xvii Popular Science. *Space After the Race*. August, 1993.

xviii Popular Science. *20 Years After Apollo*. July 1989.

xix *Ibid.*

xx Hansen, James. *Spaceflight Revolution*. National Aeronautics and Space Administration: Washington, D.C., 1995.

xxi Popular Science. *Are We Really Going to the Moon Again?* March, 2004.

xxii Debord, Guy. *Society of Spectacle*. Black & Red: Detroit, 1967. P. 168.