

# **Putting U.S. Space Policy in Context**

How Have Policymakers Drawn on Existing Rhetorical  
Commonplaces to Legitimate U.S. Space Policy?

Capstone Project for Honors in International Studies  
May, 2009

Fletcher Fernau  
Advisor: Dr. Peter Howard

*“Earth is the cradle of humanity, but one cannot live in a cradle forever.”*  
-Konstantin Tsiolkovsky

It has been just over fifty years since humanity first extended its reach into outer space. The United States has been a leader in space exploration, particularly in being the first and only country to successfully send astronauts to the moon. Some of the most famous speeches in American public rhetoric are those that relate to space. Yet outer space competes with dozens of other priorities in the federal budget, and its hold on the American public's support often seems tenuous. Why have the United States' activities in outer space turned out as they have? This project focuses on how American policymakers have drawn on existing rhetorical commonplaces, especially "the frontier," to legitimate U.S. outer space policy to audiences foreign and domestic.

My analysis suggests that in the case of the effort to legitimate the space policy agendas of U.S. policymakers (specifically President John F. Kennedy) the rhetorical commonplaces deployed act as state-building mechanisms. Put another way, state-building is an outcome of the space policy legitimation process that is not always entirely explicit in the public rhetoric. As such, the rhetorical commonplace of the frontier functions as a permissive mechanism for state-building.

The rhetorical capital of the frontier can be used to harness public support for otherwise prohibitively costly government programs. Historically, the perceived need for territorial expansion, sometimes expressed through the rhetoric of manifest destiny, served to legitimate government sponsored projects to build state capacities. Examples include the purchase of large swathes of western land to be turned over to settlers, railroad land grants and subsidies, the Panama Canal, and the maintenance of a frontier military presence. In the same way, deploying the frontier in public rhetoric has been used to legitimate costly space exploration programs which in turn have led to the

expansion of state capacities. To a greater or lesser degree, government investment in space programs fueled scientific and technological innovation, spurred a generation of American students to study science, expanded the state's military capabilities, and drove globalization. These effects, particularly because so many were largely unforeseen, might not have sufficed to generate public support for the policies that led to them. The rhetorical power of the frontier acted (at least under Kennedy) as a mythic cover for state-building through the space program just as it had for America's western expansion.

### Methodology

This analysis is an effort toward “relational social constructivism” of the sort put forward by P. T. Jackson.<sup>1</sup> My work has been inspired in particular by his work with legitimation struggles and rhetorical commonplaces. Relational constructivism is a useful theoretical lens for helping to understand American space policy, the national identity issues surrounding it, and why the American experience with space has turned out as it has. This account is premised on the notion that U.S. space policy is *contingent*. It was not inevitable that the policies and goals of the U.S. space program were conceived, communicated, and defended in the way they were. The history of the space program is contingent on a confluence of historical and social factors that could have happened differently.

For Jackson, rhetorical commonplaces are tools available for actors to use to legitimate their policies. A central claim of his work is that “legitimation is constrained by the available configuration of publicly shared ‘rhetorical commonplaces’—those vague notions that command more or less general assent in the abstract but that stand in

---

<sup>1</sup> endnote 15 in Jackson, 2006

need of detailed specification before they can be determinately linked to specific courses of action.”<sup>2</sup> Rhetorical commonplaces are deployed by political actors to legitimate their policy preferences and rule out alternative courses of action. Legitimation is significant because it is the key mechanism producing outcomes from a relational constructivist perspective.<sup>3</sup>

To explain how and why the rhetorical commonplaces deployed in the space policy legitimation struggle were used, they must be put in historical context. However, Jackson advises that, “conventional historical narrative will not suffice,” because:

. . . scholarly researchers only know that some resource or practice was important in retrospect, which is to say after it has been deployed in a concrete context or legitimation struggle and has thereby taken on a locally specific meaning with practical implications for the issues at hand. Therefore, one has to begin at the point at which a legitimation struggle concretely takes place, then move "backward" in time to sketch out the specific historical context, and finally come back "forward" in time to the resolution of the concrete legitimation struggle itself.<sup>4</sup>

He suggests that analyzing a legitimation struggle in this way requires three analytical tasks. First it is necessary to, as Jackson terms it, “delineate the cultural resources.” What rhetorical commonplaces are shared among actors?<sup>5</sup> Second, one should examine the specific histories of the rhetorical commonplaces that are used. How did they come to exist? Third, one should trace the deployment of commonplaces under

---

<sup>2</sup> Jackson, 2006 p. 266

<sup>3</sup> Jackson in Sterling-Folker, 2006 p. 140

<sup>4</sup> Jackson, 2006 p. 271

<sup>5</sup> The method Jackson suggests for this task is “textual ethnography.” This involves a careful reading of statements from the actors under investigation, both U.S. policymakers and the audiences they addressed.

investigation. How did actors use them to achieve (or attempt to achieve) specific outcomes?<sup>6</sup>

It is not possible within the limitations of this capstone project to complete a comprehensive textual ethnography of public rhetoric on space policy. This analysis is confined to the initial period of space policy legitimation in the United States, from the launch of Sputnik in 1957 through the administration of President Kennedy. It was during this period that the American space program was initially crafted, and while it has evolved over time the institutions and infrastructure in place today are largely a product of Eisenhower and Kennedy's policies.

This analysis focuses on three key public addresses in which rhetorical commonplaces were deployed in order to legitimate space policy. The first is Dwight D. Eisenhower's "Special Message to the Congress Relative to Space Science and Exploration" of April 2, 1958. It lays out the administration's science-centric approach and calls for the creation of a civilian agency that would become NASA. This speech is characteristic of how the Eisenhower administration would discuss space and represents Eisenhower's response to Sputnik. The other two speeches most closely analyzed are both from President Kennedy. The first is his acceptance speech for the Democratic nomination in 1960, where he laid out his "New Frontier" rhetorical commonplace. The second is his speech at Rice University in 1962, where he famously declared that the U.S. chose to go to the moon because it would be hard; a challenge to the national character.

Together these three speeches illustrate how the first two presidents to preside over U.S. outer space policy chose to deploy rhetorical commonplaces in support of their policy agendas.

---

<sup>6</sup> Jackson, 2006 p. 272

### Early U.S. Space Policy

Before 1957 there was no formal United States outer space policy. The National Advisory Committee for Aeronautics, a civilian agency, had dangled its feet in the water of rocketry but was mainly concerned with airplane technology. American scientists, along with Werner von Braun and other German scientists relocated to the U.S. following World War II, were concentrating on rockets for nuclear deterrence, but not for space exploration. The United States was involved with launching a weather satellite as part of the International Geophysical Year, but this was seen as part of a general commitment to science and world community.<sup>7</sup>

On October 4<sup>th</sup>, 1957, the Soviet Union launched Sputnik 1 into orbit. Sputnik, although unexpectedly heavy, was actually not more advanced than the weather satellite the U.S. was planning to launch. It was little more than a battery and a radio transmitter. Nevertheless, the Soviets had launched a satellite into space before the Americans, and any American with a shortwave radio could tune in and hear Sputnik's transmissions as it passed over the country. This was only the beginning of a series of Soviet "space firsts" that caused consternation among the American public and policymakers alike. Not only did the launch of Sputnik undermine confidence in American technological supremacy, its announced weight and the pinpoint accuracy needed to put it in orbit had profound security implications for ballistic missile development. Initially the Eisenhower administration was slow to recognize the psychological effect of Sputnik on the American public and downplayed the Soviet accomplishment. Powerful members of the U.S. Congress, in particular Lyndon Johnson, did not share the President's lack of

---

<sup>7</sup> Krug, 1991 p. 23

concern, however. A second bombshell came on November 3<sup>rd</sup> when Sputnik 2 launched, weighing 1,120 pounds and carrying a dog.<sup>8</sup> Within a year, Congress passed the National Aeronautics and Space Act. It created a new civilian agency, the National Aeronautics and Space Administration (NASA), and kick-started America's entrance into what became the Space Race.

President Eisenhower's rhetoric is not sweepingly sensational. In a special message to Congress on April 2, 1958, he refers to a Science Advisory Committee statement that lists four factors that give "urgency and inevitability to advancement in space technology."<sup>9</sup> These factors were the human urge to explore, the need to take advantage of the military potential of space, national prestige, and opportunities for scientific observation and experimentation. He then lists the benefits of the proposed space program:

Such a program and the organization which I recommend should contribute to (1) the expansion of human knowledge of outer space and the use of space technology for scientific inquiry, (2) the improvement of the usefulness and efficiency of aircraft, (3) the development of vehicles capable of carrying instruments, equipment and living organisms into space, (4) the preservation of the role of the United States as a leader in aeronautical and space science and technology, (5) the making available of discoveries of military value to agencies directly concerned with national security, (6) the promotion of cooperation with other nations in space science and technology, and (7) assuring the most effective utilization of the scientific and engineering resources of the United States and the avoidance of duplication of facilities and equipment.<sup>10</sup>

Eisenhower includes the standard nod to the military potential of space, but the main rhetorical commonplace he uses is "science" (and technology). Space is going to

---

<sup>8</sup> *Legislative Origins of the National Aeronautics and Space Act of 1958*, 1992 p. 50

<sup>9</sup> Eisenhower, "Special Message to the Congress Relative to Space Science and Exploration."

<sup>10</sup> Eisenhower, "Special Message to the Congress Relative to Space Science and Exploration."

give us better versions of what we have now: airplanes, engineering, and science. Science is the rhetorical commonplace Eisenhower uses to legitimate his preference for a civilian space agency. A civilian agency is preferable, he argues, because:

. . . space exploration holds promise of adding importantly to our knowledge of the earth, the solar system, and the universe, and because it is of great importance to have the fullest cooperation of the scientific community at home and abroad in moving forward in the fields of space science and technology. Moreover, a civilian setting for the administration of space function will emphasize the concern of our Nation that outer space be devoted to peaceful and scientific purposes.”<sup>11</sup>

Eisenhower usually discusses space in the context of scientific advancement. A May 14, 1958 statement reiterates support for a civilian agency for scientific reasons. “Science” as a rhetorical commonplace was suited to Eisenhower’s style. His policy was for a measured, rationally planned and, importantly, civilian space program to go forward on the United States terms. Science, as popularly understood, was conceptually linked to such a policy direction. Science was rational, which served both to legitimate the administration’s space policy (“If the scientists say X is necessary we should do it”) as well as to deflect the competitive “space race” mentality that Eisenhower wanted to avoid. Science was supposed to be apolitical, something which divorced it from the rhetoric of the Cold War. Science was a primarily civilian profession, which again helped to avoid militarism and the Cold War.

The concept of a “Space Race” is itself a rhetorical commonplace, and one that Eisenhower was reluctant to use. The word “race” never appears in the April 2<sup>nd</sup> statement, while “plan” does three times. Eisenhower does not frame space as a race between the U.S. and U.S.S.R. Rather, he asserts, the U.S. has a plan and is carrying it

---

<sup>11</sup> Eisenhower, “Special Message to the Congress Relative to Space Science and Exploration.”

out. Political communications scholar Linda T. Krug notes: “The images Eisenhower used in establishing his program of space exploration are not especially startling or overly imaginative, nor do they invoke past and potential greatness. The images of the *plan* were extremely conscientious and consistent, and yet they failed.”<sup>12</sup> Despite founding NASA, Eisenhower was labeled a “do-nothing” president. Influential journalist and political commentator Walter Lippmann called Eisenhower “a tired old man who had lost touch with the springs of national vitality” in an essay, and Krug points to other examples of criticism along these lines.<sup>13</sup> Here is where Eisenhower’s use of science as a rhetorical commonplace failed him.

As discussed above, stressing scientific advancement in his rhetoric did help Eisenhower to achieve his policy agenda, perhaps most notably by leading to the creation of a civilian space agency.<sup>14</sup> Ultimately, however, it was a decision that would have negative implications for the way Eisenhower’s policies were perceived. Krug notes that Eisenhower’s “scientific plan” approach, “failed to create a role for the ‘ordinary citizen.’”<sup>15</sup> The plan, especially when compared with the tangible achievements of the Soviet Union being trumpeted in the global media, failed to stir the national imagination. A look at the language Eisenhower used to describe his space program compared with Kennedy’s suggests why his “plan” never caught on. The most commonly used words include “committee” and “agency” while Kennedy’s speeches repeatedly use words like “new” and “future.” These were terms designed to stir the imagination.<sup>16</sup> From a practical

---

<sup>12</sup> Krug, 1991 p. 29

<sup>13</sup> Krug, 1991 p. 25

<sup>14</sup> DOD space funding would not outpace NASA’s budget until the 1980s.

<sup>15</sup> Krug, 1991 p. 29

<sup>16</sup> See appendix 1

standpoint Eisenhower's plan might have been the most logical space program, but confronted with political realities it was not sustainable.

A study paper by then Vice President Richard Nixon in September of 1960 illustrates the reason the science rhetorical commonplace did not catch on with the American people in Nixon's own effort to defend it. "Americans as a people," wrote Nixon, "have been brought up from the earliest days of our history with the challenge of an unconquered wilderness and an apparently limitless frontier. It was the 'doers' rather than the 'thinkers' who were in greatest demand."<sup>17</sup> Nixon was correct in his analysis of the national character, but his response was flawed. He went on to argue that Americans must evolve their views, recognize the importance of science and better understand and support it. America opted instead to find a new "doer" to lead them.

John F. Kennedy's presidency occurred at a unique historical moment. As a Democrat, Kennedy was the heir to a political ideology created by Franklin Roosevelt and then echoed by Harry Truman. Roosevelt called for a "New Deal" as he took the presidency and ended years of Republican incumbency. The New Deal led the way out of the Depression and through World War II, and was echoed in Truman's call for a "Fair Deal." Following Truman, however, had come eight years under Eisenhower as well as general prosperity. The New Deal had gained widespread acceptance, and the crisis it had been created to address had passed.

Yet Kennedy and his advisors perceived a new set of problems looming in the future. Sputnik was a symptom of what was thought to be a growing communist threat. Under Eisenhower, Kennedy and his team believed, the ship of state had drifted. Unless

---

<sup>17</sup> Nixon, "The Scientific Revolution: Study Paper"

the power gained by previous Democratic administrations was used to its full potential to reinvigorate the United States economically and politically, it would continue to drift, eventually becoming unable to sustain its role as a superpower.

From the moment he accepted the nomination for president, Kennedy (aided by his speechwriting staff) made it clear in his rhetoric that his candidacy stood as a stark alternative to the “do nothing” complacency of the Eisenhower era. Eisenhower was then the oldest-ever elected president, and the Democratic nominee aimed to be the youngest. In Kennedy’s speech accepting the nomination, he put himself in a catchy and timely frame: the “New Frontier.” The famous “new frontier” speech deliberately echoed the rhetoric of past Democratic presidents; it cited Wilson’s New Freedom and Roosevelt’s New Deal. At the same time, it was not complacent about the future. Those programs were “measures for their generations” but now a new generation was taking the stage.

If Eisenhower was to be labeled a do-nothing president, the public needed to be reminded of why action was needed. “The old ways will not do,” Kennedy said, and labeled the Republicans the party of the status quo. He evoked the problems that faced the United States at home and abroad. Confronting the nation were economic woes, anxiety about rapid technological change and, overshadowing everything, the lurking threat of nuclear annihilation. The New Frontier of the 1960s was to be a set of challenges that Americans would face, whether they wanted to or not.

The choice of the frontier as a symbol was not inevitable. A number of options were available for defining a rhetorical frame for Kennedy. Some were even used to a lesser extent in his speeches. Certainly there was the option of explicitly framing everything in the language of the Cold War and the Communist Threat. This strategy

presented a number of problems, however. Challenging Eisenhower on military credentials would have been difficult, given his popularity and extensive World War II record, as well as Kennedy's own relative youth and inexperience. For all that the Kennedy campaign would harp on the idea of a missile gap, the Cold War menace as a rhetorical commonplace did not provide the same universally acceptable and unifying rhetorical force as the frontier.

Space policy, at least, could also have been framed as a purely scientific endeavor, thus avoiding the dangers or controversy of militarization while still emphasizing American preeminence. However, this was essentially what Eisenhower had done, and Kennedy's rhetoric would have to be differentiated against the Eisenhower/Nixon program. Furthermore, the series of stinging Soviet "firsts" in space undermined the assumption of American technical and scientific supremacy.

Frontier was a carefully chosen rhetorical and conceptual framework. It allowed Kennedy to make an analogy to the country's history even as he discredited "the old ways." Two-thirds of the way through the "New Frontier" speech, Kennedy makes a connection to the United States' past experience:

For I stand here tonight facing west on what was once the last frontier. From the lands that stretch three thousand miles behind us, the pioneers gave up their safety, their comfort and sometimes their lives to build our new West. They were not the captives of their own doubts, nor the prisoners of their own price tags. They were determined to make the new world strong and free—an example to the world, to overcome its hazards and its hardships, to conquer the enemies that threatened from within and without.

Today some would say that those struggles are all over—that all the horizons have been explored—that all the battles have been won—that there is no longer an American frontier.

But I trust that no one in this vast assemblage will agree with those sentiments. For the problems are not all solved and the battles are not all won—and we stand today on the edge of a New Frontier—the frontier of the 1960's—a frontier of unknown opportunities and perils—a frontier of unfulfilled hopes and threats.<sup>18</sup>

Exploring uncharted space was explicitly part of the definition of Kennedy's New Frontier, giving it a spatial dimension. The speech was not a space policy speech, it was about the nomination and the campaign, but it set the tone for much of Kennedy's later public rhetoric. The evocation of the frontier would occur again and again as Kennedy spoke about space.

Historian Richard Slotkin describes the reasoning behind the choice of the frontier as a symbol for the Kennedy campaign:

For Kennedy and his advisors, the choice of the Frontier as a symbol was not simply a device for trade-marking the candidate. It was an authentic metaphor, descriptive of the way in which they hoped to use political power and the kinds of struggle in which they wished to engage. The "Frontier" was for them a complexly resonant symbol, a vivid and memorable set of hero-tales—each a model of successful and morally justifying action on the state of historical conflict.<sup>19</sup>

The goal of Kennedy's rhetoric was to persuade the nation as a whole to buy into the heroic narrative of the frontier. Kennedy said he stood on "what was once the last frontier." The past tense is significant for, he asserted, a new frontier challenged the United States. Kennedy presented his rhetorical new frontier as a challenge to national greatness. The nominee and future president was calling on Americans to be pioneers who would take on the challenge presented by the new frontier with energy and courage. Slotkin concerns his work with the link between the mythology of the frontier and

---

<sup>18</sup> Kennedy, "Address of Senator John F. Kennedy Accepting the Democratic Party Nomination for the Presidency of the United States"

<sup>19</sup> Slotkin, *Gunfighter Nation* p. 3

violence in American culture, but this study concerns itself with the link between the frontier and legitimating the expense and effort required by the national space program.

The rhetorical commonplace that won the 1960 presidential election was Kennedy's new frontier, not Eisenhower and Nixon's scientific plan. Its victory would have lasting consequences for how the space program would evolve, what it would have to do, and what it could not do.

Having described how Kennedy settled on the frontier as a rhetorical commonplace to draw upon in articulating his policies, specifically his space program, the next step is to understand how and why the frontier came to have the rhetorical power it possessed.

### History

The concept of the frontier threads its way throughout the history of the United States. It is deeply connected with the utopian impulse in American culture. That impulse runs deep, as Launius and McCurdy note, "the concept of America as a Utopia in the making has permeated the national ideology since before the birth of the republic."<sup>20</sup> The United State sees itself as a nation of progress; a nation characterized by optimism. This progressive spirit may spring in large part from the European Enlightenment, but unlike in hidebound Europe the New World offered a clean slate. It offered the frontier.<sup>21</sup>

---

<sup>20</sup> Launius and McCurdy, 2008 p. 32

<sup>21</sup> In reality the Americas were not as clean a slate as the frontier myth would have us believe. The unhappy fate of the indigenous peoples of the "New" World is not focused on in this project, but is extensively examined in the work of Richard Slotkin as well as Todorov's *The Conquest of America*, to name just two excellent examples. See also Robert Frost's poem *America is Hard to See*.

In 1893 Frederick Jackson Turner delivered a paper titled “The Significance of the Frontier in American History” to the American Historical Association at the Columbian Exposition in Chicago. He made a sweeping claim: “Up to our own day American history has been in a large degree the history of the colonization of the Great West. The existence of an area of free land, its continuous recession, and the advance of American settlement westward, explain American development.”<sup>22</sup> The “Turner Thesis” would come to be central to the study of American history for decades.

Turner attributed a number of America’s national character traits to the existence of the open frontier. Successive waves of immigration that spread across the frontier created a “composite nationality” for the United States. Likewise, the frontier and the national resources it offered made the U.S. less economically dependent on England. Growth on the frontier also, according to Turner, stimulated demand for diversification in agriculture and industry. Even more audaciously, Turner asserted that “The legislation which most developed the powers of the national government, and played the largest part in its activity, was conditioned on the frontier. . . The pioneer needed the goods of the coast, and so the grand series of internal improvement and railroad legislation began, with potent nationalizing effects. Over internal improvements occurred great debates, in which grave constitutional questions were discussed.”<sup>23</sup> Finally, asserts Turner, “the frontier is productive of individualism,” and “frontier individualism has from the beginning promoted democracy.”<sup>24</sup> American democracy, according to Turner, owes its vitality to the frontier.

---

<sup>22</sup> Turner, F. J. “The Significance of the Frontier in American History” included in Taylor, George Rogers. *The Turner Thesis; Concerning the Role of the Frontier in American History*. p. 14

<sup>23</sup> Turner in Taylor, 1972

<sup>24</sup> Turner in Taylor, 1972

Turner gave the frontier credit for what he saw as America's exceptional character traits:

The result is that to the frontier the American intellect owes its striking characteristics. That coarseness and strength combined with acuteness and inquisitiveness; that practical, inventive turn of mind, quick to find expedients; that masterful grasp of material things, lacking in the artistic but powerful to effect great ends; that restless, nervous energy; that dominant individualism, working for good and for evil, and withal that buoyancy and exuberance which comes with freedom—these are traits of the frontier, or traits called out elsewhere because of the existence of the frontier. Since the days when the fleet of Columbus sailed into the waters of the New World, America has been another name for opportunity, and the people of the United States have taken their tone from the incessant expansion which has not only been open but has even been forced upon them.<sup>25</sup>

Turner's frontier thesis can be viewed in part as a continuation of the Jeffersonian tradition of a republic made up of individual landholders. Expansion across the frontier enabled this model to survive even as more settled areas of the country grew increasingly urban and industrial.

However, Turner's essay was bookended by the observation that, according to the 1890 census, the frontier was no more. This adds a note of nostalgia and concern for the future into the frontier myth. The frontier becomes viewed as both essential to the American character and simultaneously no longer available.

The Turner Thesis, like the similarly famous work of Charles Beard, is not without its detractors, and within the formal study of history many of Turner's assumptions have been rejected or at least deemphasized. Turner's ideas were enthusiastically adopted by the supporters of American imperialism and manifest destiny

---

<sup>25</sup> Turner in Taylor, 1972

in the late nineteenth and early twentieth centuries and have, along with such ideas, since been criticized for ethnocentric nationalism. Historian Louis M. Hacker took Turner to task for ignoring class distinction and the role of the frontier in developing American capitalism. Benjamin Wright believed Turner was mistaken in his sweeping claim that the frontier fostered democracy. He wrote:

“Democracy did not come out of the American forest unless it was first carried there. On some frontiers, democracy was not strengthened, rather the reverse. Free land gave the opportunity to establish slavery in Louisiana, oligarchy in the Mormon state, the hacienda system in Mexican California, while it was furnishing the opportunity for a ‘fit’ people in the Middle West to establish the particular degree and kind of democracy that they favored.”<sup>26</sup>

Yale historian George Pierson faulted Turner for inconsistency: “The nationalism of the frontier does violence to sectional tendencies, innovations are derived from repetition, the improvement of civilization is achieved via the abandonment of civilization, and materialism gives birth to idealism. . .”<sup>27</sup>

Columbia historian C. J. H. Hayes criticized Turner for historical myopia. In “The American Frontier—Frontier of What?” he faults Turner for isolationist thinking, arguing that the U.S. began as a frontier of Europe and continued to remain part of the West throughout its history. Hayes wrote, “we have cultivated a lusty nationalism, the more intense because the more artificial.”<sup>28</sup> He observed that the reason the United States was free to expand was because its politicians were aware of and in touch with Europe. For Hayes the continuity in American history is greater than the change, and culture was transmitted to the western frontier, not from it. Howard Lamar of Yale argues that the

---

<sup>26</sup> Taylor, 1972 p. 68

<sup>27</sup> Taylor, 1972 p. 96

<sup>28</sup> Taylor, 1972 p. 99

discontinuity in the frontier thesis between a mythical rural past and an industrialized urban present diminishes the value of Turner's thesis.<sup>29</sup>

Yet Turner has his defenders as well. Historian Ray Allen Billington defended Turner's ideas in numerous books on the frontier and found Turner's critics too obsessed with attacking his style rather than the substance of the Frontier Thesis.<sup>30</sup>

### The Value of the Frontier Thesis as Myth

Even if Turner's history may be faulted, the true significance of his work is in its value as a myth. The importance of a rhetorical commonplace is its place in the collective imagination of the group being addressed, not its historical accuracy. What matters is not how the frontier actually was, but how the story of the frontier is remembered. A. Craven, a Turner defender, perceived that, "Turner's strength, as well as his weakness. . . can be understood, in part at least, only by the fact that his work was an expression of the American mind and spirit at 'the turn of the century.'"<sup>31</sup> It is an expression of the mind and spirit that persists. Even as they criticize its utopian tendencies, Launius and McCurdy acknowledge that:

"Despite frequent criticism, the Frontier Thesis and its utopian companion possess a lasting appeal, in no small measure because they tell Americans how perfect they have become and how this might have occurred. Frontier and utopias are two of the oldest and most characteristic American ideologies. Among the public as a whole, largely unschooled in the details of academic history, the Frontier Thesis in particular remains a powerful idea with easy applicability to space exploration."<sup>32</sup>

---

<sup>29</sup> Launius and McCurdy, 2008 p. 58

<sup>30</sup> Taylor, 1972 p. ?

<sup>31</sup> Taylor, 1972 p. 128

<sup>32</sup> Launius and McCurdy, 2008 p. 59

As Launius and McCurdy note, tapping into the frontier analogy gives space exploration advocates access to a “vein of rich ideological power, easily understandable to people caught up in the American experience.”<sup>33</sup> The use of the frontier as a rhetorical commonplace is a means of associating and explaining a new phenomenon (space exploration) with preexisting concepts of American identity in the public consciousness. Again, Launius and McCurdy put it well: “The frontier ideal has always carried with it the ideals of optimism, democracy, productivity, heroism, honor, duty, and a host of other positive traits.”

Some make a negative analogy between the space program and the American West. Launius and McCurdy cite Mazlish’s work comparing the railroad to the space program in terms of government waste and corruption.<sup>34</sup> The argument, for example, that the railroad was supported by government largesse past its usefulness has some validity. However, such arguments leave out the wider picture. Government support of the railroads and other western projects, larded with graft though they may have been, were an integral part of developing those states, and by extension the country as a whole.

This is the role of the frontier as a rhetorical commonplace, distinct from the frontier as history. The myth of the frontier appeals to the popular imagination and acts as a tool to build the state. The captains of industry and the government urged crowded easterners and newly arrived immigrants to “Go West!” The frontier myth suggested that the pioneer would gain opportunity: land, work, or abstract personal fulfillment. Their backers gained customers, new markets, and new institutional capabilities. The West was presented as a land of opportunity in order to incentivize people to settle there, and that

---

<sup>33</sup> Launius and McCurdy, 2008 p. 55

<sup>34</sup> Launius and McCurdy, 2008 p. 58

settlement was made possible by and in turn legitimized the large government-supported state-building projects that connected the west to the rest of the country and supported its infrastructure. Such projects included land grants and subsidies for railroads. The government also bought land to give to settlers. It maintained a military presence across the West, and in fact fought a war with Mexico from 1846–48 to expand the western border and firmly establish U.S. control of Texas and California. It subsidized mail service via the Pony Express and the railroads. Mail service presupposes settlers who need mail delivered and, lured by the promise of the frontier, they came.

The closing of the frontier in the continental U.S. in early 20<sup>th</sup> century destroyed, in part, the actualization of the myth, but its legacy is the developed west as a source of growth and innovation. The formerly frontier state of California has an economy today roughly equal to that of France.<sup>35</sup> The deployment of the frontier rhetorical commonplace with its associations of opportunity and a clean start helped to build the state, even if the myth was unsupported by historical reality.

### Kennedy and the Frontier

Why did President Kennedy choose to use the frontier as a rhetorical commonplace in the communication of his space policy?<sup>36</sup> The best way to begin to answer this question is to consider his options. The effort in space could have been characterized, as it was under Eisenhower, as furthering science. But Kennedy, as

---

<sup>35</sup> Alaska is an interesting case. From one perspective it is an example of the result of resource exploitation of the frontier without the use of the frontier myth to support large-scale settlement, with the result being persistent underdevelopment and a continual siphon of government funds. On the other hand, Alaska has been a source of tremendous wealth and was settled in the face of great natural adversity, spurred on in part by the frontier myth.

<sup>36</sup> It should be noted that “Kennedy” is frequently used here as a synecdochical stand-in for the President and his advisors and staff. Obviously Kennedy did not shape his administration’s space policy in a vacuum.

discussed earlier, had campaigned on change and a rejection of Eisenhower's perceived passivity in the face of new challenges. Science was, put bluntly, boring.

"Science" as a rhetorical commonplace is also difficult for Americans to relate to. Certainly science was a good thing, something the U.S. should lead in, but it was also the domain of specialists, like Von Braun and the German scientists brought over from Europe. There is little room in such a conceptual framework for the average citizen, besides an exhortation to do well in school. A space program ambitious enough to catch up with and best the Soviets would require tremendous investment, as Kennedy doubtless knew, and such spending required public support science alone could not generate. While assertions of the scientific benefits of space exploration are never absent from Kennedy's rhetoric on the issue, it is clear that the advancement of science alone did not provide the necessary rhetorical ammunition.

A second possible rhetorical commonplace available as a tool for Kennedy was the threat posed by communism. If anything could open the public purse it would be national defense. Kennedy had campaigned on the threat posed by supposed Soviet nuclear missile superiority. How better to frame outer space than as an urgent national security issue? Eisenhower had used such a strategy to fund the interstate highway system, justifying what would eventually become essential arteries for commerce with the logic of military logistics.

Certainly this rhetorical thread is visible in Kennedy's speeches. Kennedy adopted the language of the space *race* far more readily than did Eisenhower. However, anti-communism alone has weaknesses as a rhetorical commonplace. Such a formulation would limit Kennedy's ability to speak on space on the international stage. Kennedy gave

a number of speeches that included space at the United Nations, always stressing the importance of keeping space demilitarized and of international cooperation not only within the West but with the USSR as well.<sup>37</sup>

If anti-communism was the defining rhetorical commonplace, it would be difficult for Kennedy to address both a domestic audience and an international one without appearing hypocritical. During Kennedy's presidency the U.N. acted as an international forum for discussing space exploration.<sup>38</sup> Kennedy's desire to engage with the U.N. on the issue of space can be seen in his speeches at the organization and in the work that went into them. Kennedy twice mentions space, both times in the context of demilitarization and international cooperation, in addresses to the General Assembly in 1961 and 1963. Kennedy also stressed the importance of ensuring the peaceful use of space in a message to the American Association for the United Nations.<sup>39</sup>

An August 27, 1962 memo from McGeorge Bundy addressed to the secretaries of state and defense, as well as a slew of space related cabinet agencies, advised that "The President desires that the space program of the United States be forcefully explained and defended at the forthcoming sessions of the UN Outer Space Committee and the General Assembly."<sup>40</sup> One of the desired goals of such a defense would be to "demonstrate the precautionary character of the U.S. military program in space."<sup>41</sup>

---

<sup>37</sup> Kennedy, "Address in New York City Before the General Assembly of the United Nations." 1961 and "Address Before the 18th General Assembly of the United Nations." 1963

<sup>38</sup> The Outer Space Treaty was not established until 1967 (UNGAR 2222) but the UN Committee on the Peaceful Uses of Outer Space was already functional during Kennedy's administration and is mentioned in his speeches on the subject.

<sup>39</sup> Kennedy, "Address in New York City Before the General Assembly of the United Nations." 1961 and "Address Before the 18th General Assembly of the United Nations." 1963

<sup>40</sup> Aug 27 memo,

<sup>41</sup> Aug 27 memo,

Only by moderating his anti-communist rhetoric could Kennedy have meaningfully engaged in this process, but if domestic support for the space program was conditioned on it being perceived as a crash program to beat communism such moderation at the U.N. could have hurt the administration at home. Further, by moderating his anti-communist rhetoric and encouraging international engagement, Kennedy could help sway foreign scientists to America's cause. Historian John Krige relates the story of internationally recognized space scientist Roger Bonnet, who grew up a French communist but ended up working with the United States because its program was more open and cooperative.<sup>42</sup>

Were space exploration defined solely as a Cold War struggle, it would also lose its broader appeal to American identity and history. The Cold War, although it had continued for over a decade, was a relatively new phenomenon and existed largely as an intangible battle of ideologies. The frontier, in contrast, drew on a publically accessible narrative deeply embedded in the American consciousness. As a rhetorical commonplace, it allowed Kennedy to point back to history as an example of what he intended his policies to achieve. Kennedy could believably claim to be building the capacities and strength of the country to a domestic audience, in the same manner that past expansions across the frontier had. At the same time, he could push for cooperation and demilitarization at the U.N., because the frontier commonplace did not lock him into militaristic rhetoric. In fact, neither Kennedy nor Eisenhower would reply on the threat of communism as their main argument in space policy. Not until the 1980s and the Reagan era would security rise to prominence over science and the frontier.

---

<sup>42</sup> Dick and Launius, 2007 p. 211

It also should not be forgotten that in the early 1960s it was still unclear whether the United States would be able to catch up with and best the Soviets in space. With the frontier, Kennedy was able to defuse concern about the Soviet space prowess, again by pointing to history. Look at California, look at Texas, he could argue; as a people Americans have already conquered one frontier and become far stronger for having done so; who can doubt that the United States can succeed when it puts its mind to something?

In an oral history Kennedy speechwriter and confidant Theodore Sorensen commented on Kennedy's repeated suggestion, at the UN and elsewhere, that the U.S. and the USSR cooperate in space. He asserted:

I think the President had three objectives in space. One was to ensure its demilitarization. The second was to prevent the field from being occupied by the Russians to the exclusion of the United States. And the third was to make certain that American scientific prestige and American scientific effort were at the top. Those three goals would have been assured in a space effort which culminated in our beating the Russians to the moon. All three of them would have been endangered had the Russians continued to outpace us in their space effort. . . . But I believe all three of those goals would also have been assured by a joint Soviet-American venture to the moon.<sup>43</sup>

These are pragmatic goals, but there is no single policy prescription to achieve them. Drawing on the frontier allowed Kennedy to keep his options open and to sail a middle tack between uncompromising anti-communism and pure science, while at the same time using the country's history to reassure, inspire, and legitimate his policies to the public. It allowed him to vow to go to the moon secure in the knowledge that the American people had already achieved historically comparable audacious goals, and simultaneously without making his vow seem like a threat internationally. This is the advantage of the frontier as a rhetorical commonplace.

---

<sup>43</sup> Sorensen oral history interview,

### The Rice University Speech

How exactly Kennedy was able to deploy the frontier to legitimate his space policy can best be demonstrated through taking a detailed look at what is perhaps his most memorable speech, and certainly the biggest speech he ever gave on outer space: the address at Rice University in September of 1962.

In reviewing speechwriter Theodore Sorensen's records, it is interesting to see how Kennedy reached out to his cabinet to shape his address. The speech uses the device of compressing human history into a fifty year time span. This particular suggestion came from the Secretary of Agriculture.<sup>44</sup> Another memo, this one from the State Department, gives a list of benefits of the space program that might be included in the speech, ranging from national prestige to the ability to weld aluminum.<sup>45</sup> From a methodological standpoint, examining Sorensen's notes on the speech is valuable because it gives insight into how the rhetoric Kennedy would use evolved and which phrases were included or discarded in the effort to communicate and legitimate policy.

Kennedy opened the speech with pleasantries and began with some anecdotes about science and progress, including the time-compression example. Having given some historical context, Kennedy continued:

. . . Surely the opening vistas of space promise high costs and hardships, as well as high reward.

So it is not surprising that some would have us stay where we are a little longer to rest, to wait. But this city of Houston, this State of Texas, this country of the United States was not built by

---

<sup>44</sup> Memorandum for Mr. Sorensen, Subject: Excerpt from draft of Freeman Speech, From: Dept. of Agriculture. September 10, 1962.

<sup>45</sup> Memorandum for Mr. Sorensen, Subject: Material Requested by Mr. Sorensen for Use in Preparation of the text of the President's Speech to be Given at Rice Institute in Houston, From: Mr. McGeorge Bundy. September 10, 1962.

those who waited and rested and wished to look behind them. This country was conquered by those who moved forward--and so will space. . .<sup>46</sup>

This is an explicit link to the frontier in American history and rhetorically links “the opening vistas of space” with the opening of the frontier, painting the exploration of space as almost a historical necessity. The next line is a reference to puritan leader William Bradford, again explicitly linking the challenges posed by space flight to America’s past, in this case back to 1630.

Next Kennedy asserts that America must be first in space, a global leader. Again, he links this to America’s historical experience, “Those who came before us made certain that this country rode the first waves of the industrial revolutions, the first waves of modern invention, and the first wave of nuclear power, and this generation does not intend to founder in the backwash of the coming age of space.” Kennedy continues:

In short, our leadership in science and in industry, our hopes for peace and security, our obligations to ourselves as well as others, all require us to make this effort, to solve these mysteries, to solve them for the good of all men, and to become the world's leading space-faring nation.

Here science and Cold War security are deployed as rhetorical commonplaces, but in tandem with “the good of all men” and “our obligation to ourselves.” Kennedy is not simply making a pragmatic case for space as a strategic or scientific good, and he is not using militaristic language even as he alludes to security; rather he suggests that America’s identity as a nation is at stake. The next passage continues in the same vein and ends with another explicit allusion to the language of frontier expansion: “I do say that space can be explored and mastered without feeding the fires of war, without

---

<sup>46</sup> Kennedy, “Address at Rice University in Houston on the Nation's Space Effort” September 12, 1962.

repeating the mistakes that man has made in extending his writ around this globe of ours.”

As Kennedy nears the climax of the speech he continues to draw on frontier language. He describes space as a clean slate, just as the western frontier was (in its myth at least):

There is no strife, no prejudice, no national conflict in outer space as yet. Its hazards are hostile to us all. Its conquest deserves the best of all mankind, and its opportunity for peaceful cooperation may never come again. But why, some say, the moon? Why choose this as our goal? And they may well ask why climb the highest mountain. Why, 35 years ago, fly the Atlantic? Why does Rice play Texas?

We choose to go to the moon. We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win, and the others, too.

This dramatic passage is a perfect illustration of how successful the frontier is for Kennedy. It serves as the pattern to legitimate his ambitious proposal to go to the moon. Why should the public support space exploration? Not merely out of an arcane desire for knowledge; certainly not out of fear. Rather, because it is there, and because the American national character compels it be reached. A late draft of the speech makes the point using a simpler formulation than was used in the final text; adding after the now-famous “because it is hard” line the sentence, “It will bring out the best in us.”<sup>47</sup>

The same draft of the speech illustrates the reasoning behind the departure from the slower systematic pace of the Eisenhower administration: “A nation determined to

---

<sup>47</sup> “Draft for Houston” September 12, 1962.

prove the superiority of a free society does not settle for second best. It does not put off the challenges of this decade to the next decade – or to the decade after that.”<sup>48</sup>

In the speech as delivered Kennedy continues with a recital of what his administration has accomplished and is preparing to accomplish in space exploration. The Cold War rivalry theme appears briefly in an assertion that American satellites have supplied more knowledge to the world than the Soviet efforts, as well as a dig at the secrecy that cloaks the Soviet space program. Then the President again uses the historical example of the frontier as a legitimizing tool for his own plans, juxtaposing Houston’s historic position on the frontier with its new role as a center of space research and technology:

And finally, the space effort itself, while still in its infancy, has already created a great number of new companies, and tens of thousands of new jobs. Space and related industries are generating new demands in investment and skilled personnel, and this city and this State, and this region, will share greatly in this growth. What was once the furthest outpost on the old frontier of the West will be the furthest outpost on the new frontier of science and space.

Finally, Kennedy ends the speech on a high note, explicitly echoing the message of his “because it is hard” line:

Many years ago the great British explorer George Mallory, who was to die on Mount Everest, was asked why did he want to climb it. He said, "Because it is there."  
Well, space is there, and we're going to climb it, and the moon and the planets are there, and new hopes for knowledge and peace are there. And, therefore, as we set sail we ask God's blessing on the most hazardous and dangerous and greatest adventure on which man has ever embarked.

The Speech at Rice University is a clear illustration of how using the frontier as a rhetorical commonplace allows Kennedy to communicate his policy vision to the

---

<sup>48</sup> “Draft for Houston” September 12, 1962.

American public in a way that makes it understood as part of the trajectory of American history and identity. At the same time it does not force him into militaristic belligerence when communicating with the rest of the world. The frontier is generally acceptable as a positive concept in American public consciousness. Of all the rhetorical commonplaces available to Kennedy, by linking his policies to the frontier Kennedy is able to both specify the relevance of the historical frontier myth to his own rhetorical conception of America's mission in the world (the "New Frontier") and legitimate his policies to audiences foreign and domestic.

As a result of this rhetorical effort Kennedy was able to mobilize public support for his policy agenda and obtain the funding he desired.<sup>49</sup> In order to follow the pattern set by the mythological frontier, outer space needed to eventually produce an expansion of state capacities. Whether or not this occurred is a cloudier issue, and an area where the realities of space as a hostile environment begin to infringe on the frontier myth.

One obvious expansion of state capacities is the advent of satellite capabilities. David Whalen identifies reconnaissance, navigation, weather, and communications as space applications operationalized by the United States.<sup>50</sup> He writes: "Applications satellites are not as glamorous as Moon landings . . . but they have made a huge difference in the world we live in: financially, culturally, and in the areas of safety and security. They have created the global village." His analysis suggests that these capabilities may have been developed by the Defense Department on its own, but it was

---

<sup>49</sup> There is debate regarding whether or not Kennedy's policy was a positive step for NASA and space exploration in general. (See Launius, *Kennedy's Space Policy Reconsidered: A Post-Cold War Perspective*). Regardless, the issue discussed here is the *result* of Kennedy's choice of deploying a Turnerian concept of the frontier to legitimate his policy, not the long-term wisdom of that decision.

<sup>50</sup> Dick and Launius, 2007. p. 311

the existence of NASA that facilitated their availability for public use, particularly communications satellites.<sup>51</sup>

What, however, of the manned spaceflight supported by Kennedy? Some have argued, like Alex Roland did in 1989, that “over the past quarter century, two-thirds of our space dollars have been invested in manned spaceflight, with little to show for the investment save circus.”<sup>52</sup> Philip Scranton, a historian from Rutgers University, concludes otherwise:

Beneath the satellites, probes, and human spaceflights, for a generation or more extensive innovations in process, materials, and instrumentation have flowed outward from NASA projects and resonated through the industrial economy. Their scope can be more readily realized than their scale can be measured, but their significance is evident.<sup>53</sup>

James Vedda has found that space exploration has had a significant role in the emergence of globalization:

Present-day globalization is reaping the benefits of space applications created and disseminated in a Cold War in an environment that kept major threats at bay and allowed global markets to flourish. Government space efforts aimed at national security, national prestige, and technology development have led us to a point where civil and commercial space applications are fundamental—though often transparent—in a globalizing world.<sup>54</sup>

Food standards developed by NASA even shaped U.S. food safety standards. According to Jennifer Ross-Nazzari the American food industry relies on risk prevention systems developed by NASA originally for the Gemini and Apollo programs.<sup>55</sup> Somewhat intangible but certainly important is the inspirational role played by

---

<sup>51</sup> Dick and Launius, 2007. p. 312

<sup>52</sup> Dick and Launius, 2007. p. 121

<sup>53</sup> Dick and Launius, 2007. p. 139

<sup>54</sup> Dick and Launius, 2007. p. 199

<sup>55</sup> Dick and Launius, 2007. p. 219

Kennedy's rhetoric and policies. A generation of students went into math and science inspired by dreams of spaceflight. It was a generation that included some of the future leaders of the information revolution that would bring technological breakthroughs and billions of dollars in economic growth.<sup>56</sup>

### The Decline of the Frontier as Rhetorical Commonplace

Space development has incontrovertibly had a tremendous effect on the capabilities of the American state. Yet space exploration has so far failed to deliver fully on the promises of the frontier commonplace myth. Launius and McCurdy suggest: "Invoking the ideas of Frederick Jackson Turner has become increasingly counterproductive for anyone attempting to carry on a discourse in a postmodern, multicultural society."<sup>57</sup> Linda Billings echoes this thinking:

The rhetoric of space advocacy has sustained an ideology of American exceptionalism and reinforced longstanding beliefs in progress, growth, and capitalist democracy. This rhetoric conveys an ideology of spaceflight that can be described, at its worst, as a sort of space fundamentalism. . . . Although the social, political, economic, and cultural context for space exploration has changed radically since the 1960s, the rhetoric of space advocacy has not.<sup>58</sup>

This type of postmodern criticism of the ideals embodied in the frontier myth has power, but it does not invalidate the importance of the frontier as a rhetorical commonplace, particularly as it was used by Kennedy. The frontier commonplace has not lost all its currency with the American public. Arguably it was when the reality of the

---

<sup>56</sup> An informal measure of the influence space exploration had on these men and women is the number of wealthy Silicon Valley types who have contributed significant sums of money to private space related projects. Entrepreneur Elon Musk's SpaceX and Microsoft co-founder Paul Allen's Spaceship One are just two examples.

<sup>57</sup> Launius and McCurdy, 2008. p. 58

<sup>58</sup> Dick and Launius, 2007. p. 48

space program diverged too far from the frontier commonplace narrative that policymakers' ability to gain substantial funding and support for the space program failed. The Challenger disaster may be considered one symbolic point where space exploration no longer believably fit the frontier myth for the majority of the American public. Before the Challenger disaster, space flight was becoming routine in the public imagination, and even as that put pressure on NASA's budget, plans were underway for a second space shuttle landing and launch facility at Vandenberg Air Force Base.

Challenger is in some ways analogous to the Hindenburg disaster, in that afterwards the Shuttle lost its luster as a transportation system. Challenger shattered the idealistic idea that space development was on a track to allow ordinary people the opportunity to travel in space.

The post-Challenger re-evaluation of the shuttle's role and of the American space program generally also led to the supposed state-building benefits of space travel being questioned. Doubt as to whether the money invested in manned spaceflight was leading to meaningful returns for the state undermined the utility of the frontier rhetorical commonplace. Perhaps space was not California at all but rather a fool's errand, financial folly. A consequence of Kennedy's grand frontier rhetoric was that the space program became viable not because of the inherent value of the scientific advances it brought but because of what it did for the country. If space was not believably a source of opportunity in the same way the frontier was imagined to be, why support a space program? After the Challenger tragedy, perhaps even after the last Apollo mission, the frontier rhetorical commonplace suffered from two problems. Its value as a tool for legitimation to the public was undermined by a yawning gap between myth and perceived reality, and

simultaneously the existence of the state building that it was being used to legitimate came into doubt.

An essential element of the frontier as a rhetorical commonplace is the concept of “taming” the frontier. It is not enough to simply explore; settlement must follow. Here the gap between the frontier narrative and space became a problem. After Apollo 17 in 1972 no further moon missions followed. Proposed space stations, a possible stepping stone to colonization, were downsized or eliminated. The next step in the frontier narrative did not occur, and so the rhetorical power of the frontier was not maintained.

Part of the explanation for why U.S. policymakers failed to maintain the frontier commonplace is that it is also possible that by the 1970s there was less of a need to expand state capacities in the way there had been in the late 1950s. The U.S. had outpaced the Soviet Union in space and could rest on its laurels after Apollo.

Today it seems space programs in the United States can only be funded when costs can be ameliorated by international partners (as in the case of the ISS) or behind the veil of military necessity or national security (through the DOD or NSA / NRO). President Ronald Regan chose to legitimate his policies primarily using the rhetorical commonplaces of Cold War security needs and national defense. Since the Reagan administration’s position towards the U.N. was skeptical and disengaged, Regan did not have to worry about the effect such rhetoric would have there. His ability to rhetorically sway the American public is best illustrated by the support generated for the Strategic Defense Initiative; the “Star Wars” missile defense program, despite the technological unfeasibility of the project.

President George H.W. Bush proposed an ambitious space program but was unable to convince a skeptical Congress and public to fund it. Following the end of the Cold War, President Clinton spoke of space using the rhetoric of international cooperation. President George W. Bush proposed a Mars exploration mission similar in scope to his father's, but it was overwhelmed by other issues and left as a mostly unfunded mandate.

One exception to this record of space policy being sidelined is the case of the Hubble Space Telescope. Launched in 1990, the telescope initially was a source of embarrassment for NASA due to a mistake with the telescope's mirror. NASA was able to correct the mistake with a servicing mission, and since then the telescope has been a scientific and public relation boon, delivering thousands of detailed images of the far reaches of space, some of which have become iconic. Repeatedly in danger of being cut from NASA budget, public support for the telescope has led to NASA continuing to service it. As Andrew Fraknoi observes, "Hubble images adorn musical CD covers, advertising, popular books and magazine, and even toys. One benefit of all this is that people seem to have an almost proprietary interest in the solar system these days."<sup>59</sup> Hubble does not only provide scientific benefits, it allows public engagement. In many ways Hubble images serve the same role as the panoramic murals of western scenery that used to adorn eastern train stations, commissioned by railroads to entice settlers westward. Hubble demonstrates that when the identity myth inherent in the frontier can successfully be integrated with tangible results, the frontier as a legitimating rhetorical commonplace still has force. The telescope shows that the power of space as a frontier in

---

<sup>59</sup> Dick and Launius, 2007. p. 413

the public consciousness still remains, even if the means to get there are as yet out of reach.

This situation underlines the relevance of constructivism as a useful lens for understanding space policy debates. It is clear that conflict over space policy today is a rhetorical battle, not a question of technological capability. Postmodern skepticism of American exceptionalism coupled with the failure of successive American leaders to convincingly maintain the space-as-frontier compound commonplace, even if they occasionally tried to use its language, explains the stagnation of further ambitious space policy initiatives and reveals the historical contingency of space policy discourse.





Appendix 2

## A Selection of Quotes Related to Space and the Frontier

These quotations are included here to demonstrate the widespread use of the frontier commonplace in discussing space.

"I grew up with the notion that the frontier had shaped our characters and that there was no frontier any more.... What we had to have were frontiers in literature, scientific research, human welfare. That was a beautiful figure of speech. I used it for years, but the first time somebody really talked to me about space colonization and what it might be like to really put a colony out there that could do as it liked, I discovered that a little real new space in which you could put a new society was much more exciting than pushing back those figurative new frontiers.... Space means greater well-being for our children and adventure, an outlet for all the things we thought there wasn't any outlet for, and a belief that the frontier isn't closed, that there are endless possibilities and we don't need to be discouraged by the population explosion, and we don't need to feel that life is going to get duller and duller so it isn't worth living."

—Anthropologist Margaret Mead, "Does it Matter What Women Think About Space," *Space Digest*, 1960

"Men go into space .. to see whether it is the kind of place where other men, and their families and their children, can eventually follow them. A disturbingly high proportion of the intelligent young are discontented because they find the life before them intolerably confining. The moon offers a new frontier. It is as simple and splendid as that."

—Editorial on the moon landing, *The Economist*, 1969

The world is being Americanized and technologized to its limits, and that makes it dull for some people. Reaching the Moon restores the frontier and gives us the lands beyond.

—Isaac Asimov, regarding Apollo.

Space, the final frontier. These are the voyages of the Starship Enterprise. Its five-year mission: to explore strange new worlds, to seek out new life and new civilizations, to boldly go where no man has gone before.

—Captain James T. Kirk, start of every episode of the original TV series 'Star Trek. The last line came from 'introduction to Outer Space,' a White House document written by Dwight D. Eisenhower's newly created Presidential Science Advisory Committee in 1958, "the compelling urge of man to explore and to discover, the thrust of curiosity that leads men to try to go where no one has gone before."

For when I look at the moon I do not see a hostile, empty world. I see the radiant body where man has taken his first steps into a frontier that will never end.

—David R. Scott, Commander Apollo 15, 'National Geographic,' Volume 144, No 3, September 1973.

More important than the material issue . . . the opening of a new, high frontier will challenge the best that is in us . . . the new lands waiting to be built in space will give us new freedom to search for better governments, social systems, and ways of life . . .

—Gerard K. O'Neill, 'The High frontier,' 1976.

"As long as there is the safety valve of unexplored frontiers, the aggressive and exploitive urges of human beings can be channeled into long-term possibilities and benefits. But as those frontiers close down, and people begin to turn in upon themselves, that jeopardizes the democratic fabric itself. I don't happen to think the frontier is closed. It's just opening up in space... The human race is going out and throughout, wherever space will permit us to go. It's only a question of when, and who, and what kind of leadership will take us there. And I, for one, don't think we ought to be looking just down here below."

—Governor Jerry Brown, remarks at a symposium, 1977

"We should be most careful about retreating from the specific challenge of our age. We should be reluctant to turn our back upon the frontier of this epoch... We cannot be indifferent to space, because the grand slow

march of our intelligence has brought us, in our generation, to a point from which we can explore and understand and utilize it. To turn back now would be to deny our history, our capabilities."

—James Michener, testimony before a U.S. Senate subcommittee, 1979

"There are three reasons why, quite apart from scientific considerations, mankind needs to travel in space. The first reason is garbage disposal; we need to transfer industrial processes into space so that the earth may remain a green and pleasant place for our grandchildren to live in. The second reason is to escape material impoverishment: the resources of this planet are finite, and we shall not forego forever the abundance of solar energy and minerals and living space that are spread out all around us. The third reason is our spiritual need for an open frontier."

—Freeman Dyson, *Disturbing the Universe*, 1979

. . . space is for everybody. It's not just for a few people in science or math, or for a select group of astronauts. That's our new frontier out there, and it's everybody's business to know about space.

—Christa McAuliffe, 6 December, 1985.

"If Earth is considered a closed system, there will be less for all forever. The frontier is closed, the wilderness is gone, nature is being destroyed by human consumers, while billions are starving. The future indeed looks grim, and there are, ultimately, no really long-range, positive solutions, nor motivation for making the sacrifices and doing the hard work needed now, unless we understand that we are evolving from an Earth-only toward an Earth-space or universal species."

—Barbara Marx Hubbard, *Distant Star*, 1997 (*Electronic Magazine of the First Millennial Foundation*)

"We must open the frontier to expand this grand experiment called freedom, because without an arena to feed and nurture the ideals of liberty, individual choice and the right to do and be whatever you want they may well perish from the Earth. We must open the frontier because without an edge to our packed culture of individuals, nurturing and then bringing in new ideas and giving release to bad ones, the center comes apart. We must open the frontier to find and create new wealth for humanity, because everyone in the world deserves the chance to have the same fine house, fine cars, and good life you can potentially have, and this planet alone simply cannot provide support that, unless you give up yours (and someone, sometime will try and make you do so). We open the frontier to help save the planet we love from the ravages caused by our ever growing numbers and our hunger for new forms of energy, materials and products. Finally, and most importantly, we must open the frontier as humans to survive as a species and to protect our precious biosphere from destruction by the forces of the universe or ourselves by making it redundant."

—Rick Tumlinson, *Testimony to a Senate Committee*, 2003

During the next 50 years, in countless cycles, in countless entrepreneurial companies, this "let's just go and do it" mentality will help us finally get off the planet and irreversibly open the space frontier. The capital and tools are finally being placed into the hands of those willing to risk, willing to fail, willing to follow the dreams.

—Dr. Peter H. Diamandis, chairman of the X-Prize Foundation, 'The Next 50 Years In Space,' 'Aviation Week' online 14 March 2007.

## **Bibliography**

### **Books**

- Dick, Steven J., and Roger D. Launius. *Critical Issues in the History of Spaceflight*. Washington, DC: National Aeronautics and Space Administration, Office of External Relations, History Division, 2006.
- \_\_\_\_\_. *Societal Impact of Spaceflight*. Washington, DC: National Aeronautics and Space Administration, Office of External Relations, History Division, 2007.
- FitzGerald, Frances. *Way out There in the Blue : Reagan, Star Wars, and the End of the Cold War*. New York: Simon & Schuster, 2000.
- Jackson, Patrick Thaddeus. "Making Sense of Making Sense: Configurational Analysis and the Double Hermeneutic." in Yanow, Dvora, and Peregrine Schwartz-Shea. *Interpretation and Method : Empirical Research Methods and the Interpretive Turn*. Armonk, N.Y.: M.E. Sharpe, 2006.
- Krug, Linda T. *Presidential Perspectives on Space Exploration : Guiding Metaphors from Eisenhower to Bush* Praeger Series in Political Communication. New York: Praeger, 1991.
- Launius, Roger D., and Howard E. McCurdy. *Spaceflight and the Myth of Presidential Leadership*. Urbana: University of Illinois Press, 1997.
- \_\_\_\_\_. *Robots in Space : Technology, Evolution, and Interplanetary Travel* New Series in Nasa History. Baltimore: Johns Hopkins University Press, 2008.
- Michaud, Michael A. G. *Reaching for the High Frontier : The American Pro-Space Movement, 1972-84*. New York: Praeger, 1986.
- NASA. *Legislative Origins of the National Aeronautics and Space Act of 1958 - Proceedings of an Oral History Workshop*. Conducted April 3, 1992. Moderated by John M. Logsdon.
- Slotkin, Richard. *The Fatal Environment : The Myth of the Frontier in the Age of Industrialization, 1800-1890*. 1st ed. New York: Atheneum, 1985.
- \_\_\_\_\_. *Gunfighter Nation : The Myth of the Frontier in Twentieth-Century America*. New York: Atheneum, 1992.
- Stephanson, Anders. *Manifest Destiny : American Expansionism and the Empire of Right*. 1st pbk. ed. A Critical Issue. New York: Hill and Wang, 1996.

Sterling-Folker, Jennifer Anne. *Making Sense of International Relations Theory*. Boulder, Colo.: Lynne Rienner Publishers, 2006.

Taylor, George Rogers. *The Turner Thesis; Concerning the Role of the Frontier in American History*. 3d ed. Problems in American Civilization. Lexington, Mass.,: Heath, 1972.

Turner, Frederick Jackson. *Frontier and Section; Selected Essays*. Englewood Cliffs, N.J.,: Prentice-Hall, 1961.

Weldes, Jutta. *To Seek out New Worlds : Science Fiction and World Politics*. 1st Palgrave Macmillan ed. New York: Palgrave Macmillan, 2003.

#### Archival Records – Kennedy Library (Primary Sources)

The author visited the Kennedy Library in Boston, MA and reviewed a number of documents that do not easily fit into the format of the attached bibliography. Included here is a partial list of the materials consulted, most of which can be found in the Kennedy Library's records in Theodore Sorensen's personal files (in particular series 5 box 38 and series 8 box 69) and Presidential Office Files box 30.

A selection of the documents consulted is listed here in chronological order:

Memorandum from Hugh Sidney to Pierre Salinger "Questions for the President on Space" dated April 14, 1961.

Memorandum for the President from Jerome B. Weisner dated April 14, 1961. The document from Weisner, Kennedy's science advisor, is a response to a memo from Hugh Sidney of TIME inc. critical of the space program.

Memorandum to: Secretary of State; Secretary of Defense; Director of Central Intelligence; Administrator, NASA; Director, ACDA; Chairman, AEC; Director, OST. August 27, 1962. The memo expresses the President's wish to have the space program defended at the UN.

Memorandum for Mr. Sorensen, Subject: President's Speech on Space, From: Tom Sorensen. September 8, 1962

"Possible Material for Houston Speech" September 9, 1962.

Memorandum for Mr. Sorensen, Subject: International Space Efforts, From: Executive Office of the President, Bureau of the Budget. September 10, 1962.

Memorandum for Mr. Sorensen, Subject: Material Requested by Mr. Sorensen for Use in Preparation of the text of the President's Speech to be Given at Rice Institute in Houston, From: Mr. McGeorge Bundy. September 10, 1962.

Memorandum for Mr. Sorensen, Subject: Excerpt from draft of Freeman Speech, From: Dept. of Agriculture. September 10, 1962.

"Draft for Houston" September 12, 1962

"First Oral History Interview with Theodore C. Sorensen" March 26, 1964 by Carl Kaysen for the John F Kennedy Library.

Interview with Dr. Wernher Von Braun" March 31, 1964

### Presidential Records

Retrieved from The American Presidency Project:  
<http://www.presidency.ucsb.edu/index.php>

Eisenhower, Dwight D. Speech: "Special Message to the Congress Relative to Space Science and Exploration." April 2, 1958.

\_\_\_\_\_. "Statement by the President in Support of the Administration Bill Relative to Space Science and Exploration." May 14, 1958.

\_\_\_\_\_. "Address in Houston Before the Faculty and Students of Rice University." October 24, 1960.

Kennedy, John F. "Address of Senator John F. Kennedy Accepting the Democratic Party Nomination for the Presidency of the United States - Memorial Coliseum, Los Angeles" July 15, 1960.

\_\_\_\_\_. "Special Message to the Congress on Urgent National Needs" May 25, 1961.

\_\_\_\_\_. "Address in New York City Before the General Assembly of the United Nations." September 25, 1961.

\_\_\_\_\_. "Message to the American Association for the United Nations." March 12, 1962.

\_\_\_\_\_. "Address at Rice University in Houston on the Nation's Space Effort" September 12, 1962.

\_\_\_\_\_. Address Before the 18th General Assembly of the United Nations. September 20, 1963.

\_\_\_\_\_. Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center. November 21, 1963.

Nixon, Richard M. "The Scientific Revolution: Study Paper" September 8, 1960.  
Obtained via The American Presidency Project.  
<http://www.presidency.ucsb.edu/index.php>