

“The Most Hazardous and Dangerous and Greatest Adventure on Which Man Has
Ever Embarked”:

The Frontier in Presidential Pro-Space Discourse, 1957-1963

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ABSTRACT

Since the inception of the US Space Program, space exploration has been linked in public discourse to the cluster of ideas and images constituting “the frontier.” In the seven years between 1957 and 1963, Presidents Eisenhower and Kennedy moved the nation from Sputnik-stunned to burgeoning space pioneers, linking the language of scientific and technological advancement to American exceptionalism and the romance and adventure of the frontier. Thus, the nation’s conception of the space program, as a significant feature in the US-Soviet agon, was initially encouraged by early Presidential space discourse. The image endured well beyond the early years of the space program, to the turn of the century and the completion of the nation’s shuttle program.

I argue that the ideas and images that constitute the frontier proved to be such a potent symbolic framework in American society that it functioned as a terministic screen for presidential pro-space discourse from the Eisenhower administration on. As the space age dawned, Dwight D. Eisenhower co-opted the dominant metaphor to justify his pragmatic and measured response to the Soviet Union’s dramatic space achievements. One term later, John F. Kennedy’s symbolic trajectory evolved pro-space discourse, building from an early continuation of Eisenhower’s pragmatism to a transcendent justification for his vision of the nation’s accelerated space efforts couched in a soaring mythic language, strains of which are still evident today. This nearly ubiquitous and certainly enduring nature of the space-frontier association in

both popular and technical discourse signals its potential importance to rhetorical scholars and historians alike.

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Trappist monk, poet, and social activist Thomas Merton has asked “what can we gain by sailing to the moon if we are not able to cross the abyss that separates us from ourselves? This is the most important of all voyages of discover.” However, I believe the following analysis will demonstrate that the Presidential discourse surrounding the US space program told us as much about ourselves as a nation as it did about the far reaches of the universe. What is certain is that this endeavor has been an important voyage of personal discovery for me, and one that could not have been realized without many fellow travelers.

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CHAPTER ONE

Introduction

Since the inception of the US Space Program, well before Captain James T. Kirk of the Starship Enterprise uttered the famous opening line, “Space, the final frontier,” space exploration has been linked in public discourse to the cluster of ideas and images constituting “the frontier.” The nearly ubiquitous and certainly enduring nature of this association in both popular and technical discourse¹ signals its potential importance to rhetorical scholars. How could Presidents, agency heads, and policy makers from the Eisenhower to Obama administrations, representing socio-political contexts from the Cold War to the New Millennium, call upon a common conceptual storehouse to achieve such varied purposes as selling a complex and risky new national endeavor, inspiring generation after generation of school children, comforting a shocked and grieving nation, and urging monumental programmatic overhaul?

The answer seemingly lies in the power of “the frontier” as a durable, flexible symbol system in the American imagination. Since the earliest days of the Puritan settlement of North America, frontier ideas and imagery, “taken from America’s sacred history” (Dorsey 1995, 9), have shaped America’s self concept and, by extension, its rhetoric (Bercovitch 1978; Rushing 1986a; Dorsey 1995; Dorsey 1996;

¹ In his 1962 State of the Union address, President John F. Kennedy explicitly identified space as the next American frontier, arguing “our objective in making this effort [a manned lunar landing], which we hope will place one of our citizens on the moon, is to develop in a new frontier of science, commerce, and cooperation, the position of the United States and the Free World” (Kennedy, Annual Message to the Congress on the State of the Union, January 11, 1962). Concurrently, NASA officials were using similar terminology in internal discussions. See Joseph F. Shea’s May 6, 1963 “Manned Space Flight Program,” remarks delivered to the third national conference on the peaceful use of space.

Spanos 2007). Yet the symbol and its status require both a clear definition and further explanation before a thorough and accurate analysis of its rhetorical potential is possible. We know that the frontier is an important element in American rhetoric, yet how it functions is not as well understood. As a rhetorically potent constellation of related ideas and images, “the frontier” is readily deployed in public discourse designed to challenge, inspire, comfort, and reinforce; however little consensus exists as to what exactly constitutes “the frontier.”² At its most basic, the frontier represents a simple border between two entities (Bercovitch 1978, 163), while more complex interpretations of the concept layer on a range of notions such as savage wilderness (Turner 1920), refuge (McMullen 1996), seemingly infinite voids that constrict and vanish as they are explored (Rushing 1986a, 226), and picturesque spaces of unlimited beauty tempered by unfathomed danger (Calder 1974; Rushing 1986a; Dorsey 1995, 5). Similarly, the frontier’s scene remains a constantly shifting property, representing such diverse physical locations as the early North American wilderness to the later American West; from dry land to open sea to, eventually, the sky and finally outer space, while also playing host to a full cast of colorful heroes and villains.

In addition to definitional issues, historians and rhetorical scholars alike disagree as to the nature and function of the frontier in space discourse. Some classify the frontier as a metaphor (Krug 1991; Stuckey 2006) while others maintain that it holds mythic status (Rushing 1986b; Byrnes 1994; McCurdy 1997). When

² Hofstadter (1969) identifies the lack of a precise definition of the frontier in scholarly works dating back to Fredrick Jackson Turner’s watershed work *The Frontier in American History* (pp. 84, 126).

used simply as a stylistic flourish, perhaps the definitional differences and metaphorical versus mythic status of space as a “final frontier” are inconsequential. Hortatorily, “the frontier,” albeit vague, may conjure appropriately serviceable images within the public mind’s eye of romance and adventure, good and evil. However, when called upon strategically to do the heavy lifting required to rally skeptical taxpayers behind multi-billion dollar technological gambles and whole scale overhauls of the national education system, or to begin the process of healing necessitated by a generation of schoolchildren witnessing a catastrophic loss of life play out in a brilliant fireball on national television, such “minor” details as concrete definitions and questions of metaphor or myth take on elevated importance. While both metaphor and mythic imagery can be called into service to rally, comfort, and inspire, I argue that the hard work required of the complex of images and ideas constituting the frontier in pro-space advocacy often necessitates its consideration as a primarily mythical as opposed to metaphorical device.

Therefore, in this dissertation I seek to contribute to the ongoing scholarly conversation about the frontier in US space discourse by exploring the ways in which various deployments functioned strategically for the rhetors who used them. Rather than assuming that “the frontier” is a clear conceptual entity, in this project I will ask how and to what ends the Eisenhower and Kennedy administrations used the various symbolic elements of the frontier constellation to support and promote their programmatic visions at the inception of the US space program. By taking a “both/and” approach to the question of whether the frontier is ultimately used as a

myth or a metaphor, I intend to shift focus away from the ongoing scholarly debate over the mythic or metaphorical nature of the frontier and highlight the Presidents' strategic choices as they marshaled a powerful collection of symbolic elements to articulate and then advocate for their visions of an emergent US space program in response to the ever-shifting context of Cold War America.

Space and the American Imagination

Presidential pro-space discourse utilizing frontier images and ideas did not materialize from thin air nor would the average citizen have considered it in any way novel. Prior to the October 1957 launch of the Russian "weather satellite" Sputnik 1, much of what Americans knew, or thought they knew, about outer space had been gleaned primarily from popular culture which provided a rich public lexicon redolent with frontier symbolism. As early as the mid-1800's, serialized tales of space fantasy were being published in the nation's periodicals while the first amusement rides featuring spaceflight themes emerged at the turn of the century (McCurdy 1997, 30; Burrows 1998). In the "golden age of science fiction" (Bulkeley 1990, 45) between the first and second world wars, Flash Gordon and Buck Rogers exemplified the archetypal American hero in much the same way as Roy Rogers and the Lone Ranger did for the generations before. Interest in outer space was further heightened between 1947 and the mid-1950s as the result of a rash of UFO reports prompting official investigations (Bulkeley 1990, 45). The resultant adventure entertainment focus meant that an accurate public understanding of the means, mechanisms, and potential

applications of space exploration was weak at best and outlandishly fantasized at worst. Bulkeley (1990) suggests that although the American public was more “space-minded” than its leaders in the 1940s, popular literature and an ever-expanding and overlapping vocabulary of space related terms created a terministic screen within the national imagination that resulted in a near total focus on humans’ presence in space, ignoring the critical, albeit far less thrilling intermediate steps in technology miniaturization and successful unmanned orbit necessary for a fully realized manned space exploration program (45).

A 1949 Gallup poll captured the national attitude towards space exploration quite clearly. When asked what technological advances Americans might expect to see by the year 2000, eighty-eight percent predicted that a cure for cancer would be found, while sixty three percent believed that trains and airplanes, the primary public transportation of the day, would run on atomic power. However, a mere fifteen percent of respondents believed that “men in rockets will be able to reach the moon” by the dawn of the new millennium (McCurdy 1997, 29).

Those with a more factually serious approach to the potential of space exploration, such as the members of the American Interplanetary Society, later the American Rocket Society, labored to bring their message of its feasibility to the public beginning in the 1930s (McCurdy 1997; Burrows 1998). Leaders at the Hayden Planetarium within New York City’s American Museum of Natural History sponsored a series of promotional symposia on space travel in 1951 featuring academic and corporate representatives. As a spin-off of the first event, *Collier’s*

magazine printed an eight-part series on space exploration over a two-year period, authored by many of the leading minds in the field which eventually led to a national speaking tour by German expat and rocketry expert Wernher von Braun (Bulkeley 1990, 56). Even the Imagineeres at the Walt Disney Corporation got in on the act, producing a series of scientifically-based television specials, also featuring von Braun, albeit conveniently tied into the 1955 opening of Walt Disney World's Tomorrowland (Bulkeley 1990, 128; McCurdy 1997, 42; Burrows 1998, 144).

However, the lack of public savvy regarding the trajectory of the US space effort did not signal an equal lack of scientific advancement in the field, despite citizens' skepticism that the government would ever support spaceflight as a serious national endeavor (McCurdy 1997, 35). The history of America's aeronautic research traced its roots back to the 1915 establishment of the National Advisory Committee for Aeronautics (NACA) (Byrnes 1994, 26; Burrows 1998, 218) and the aforementioned rocket societies of the 1930s (McCurdy 1997, 20). Additionally for several decades, dating back to the world wars, the various branches of the armed services maintained individual, if not complementary, missile and manned flight programs (Byrnes 1994, 26; Neufeld 2005). Based on the realization that a marriage of atomic bomb and long-range missile technologies offered the best chance at national defense in the post-war 1940s (Bulkeley 1990, 16), the US Defense Department actively "pursued research in rocketry and upper atmospheric sciences as a means of assuring American leadership in science and technology and for the purposes of national security" (Launius 2010, 255). The resulting multitude of

legitimate governmental institutions alternately representing US aeronautical interests and competing fiercely against rival programs for space, funding, and raw materials, undoubtedly obscured, or at least complicated, a definitive path towards American space exploration that could be delivered clearly and convincingly to the space curious public.

State of Scholarship

Previous scholarship on institutional space talk³ has addressed such diverse topics as US missile defense programs (Goodnight 1986; Rushing 1986b; Fitzgerald 2000), technological and ecological education (Krug 1991), and NASA's organizational communication (Gouran, Hirokawa, and Martz 1986; Rowland 1986), in addition to issues directly related to manned space flight (Mister 1986; Depoe 1991; Jordan 2003; Stuckey 2006). In order to pare down the topic to a manageable size, I focus on space exploration and manned space flight as articulated by the nation's President. The romance of space flight has captured the American imagination in ways that missile defense and science education do not (Krug 1991; Byrnes 1994; McCurdy 1997), rendering them sites ripe for potential need of presidential interpretation and/or response.

³ Frontier images and symbolism feature prominently in popular culture's handling of outer space and as a result have received significant scholarly attention (see for example the works of Janice Hocker Rushing, including "E.T. as Rhetorical Transcendence" (1985) *Quarterly Journal of Speech*, "Mythic Evolution of 'The New Frontier' in Mass Mediated Rhetoric" (1986) *Critical Studies in Mass Communication*, and "Evolution of 'The New Frontier' in *Alien* and *Aliens*: Patriarchal Co-optation of the Feminine Archetype (1989) *Quarterly Journal of Speech*). However, this project seeks to explore how Presidential deployment of the frontier myth shapes public understanding of both the space program and of the frontier as an American phenomenon.

As a body of discourse, US Presidential space rhetoric has received a great deal of scholarly attention, both as a primary focus of presidential rhetorical leadership and as one more of the many and varied topics upon which presidents in the modern era must speak (McDougall 1965; Goodnight 1986; Gouran, Hirokawa, and Martz 1986; Mister 1986; Rowland 1986; Rushing 1986b; Depoe 1991; Krug 1991; Byrnes 1994; Launius and McCurdy 1997; McCurdy 1997; Fitzgerald 2000; Jordan 2003; Stuckey 2006; Raphael 2007). From missile defense strategy to technology education policy, launch pad encomia to astronaut eulogies, American presidents from Eisenhower to Obama have been called upon at both deliberative and epideictic occasions to speak upon matters related to outer space, providing a rich archive of primary documents further extended by a litany of letters, White House directives, and Presidential citations. However, Krug (1991) notes that little is actually known about “the relationship between the president, the direction of the space program, and our conceptualizations of who we are as a people and a nation” (xviii). Such an oversight, she adds “is costly, not only for the message it sends about the full range of presidential powers, but for what it implies about the importance of space exploration and science and technology in general” (xviii).

Objects of Study

In an attempt to rectify this oversight, the texts considered in this project will be drawn from the public papers of the Eisenhower and Kennedy administrations. Certainly a longitudinal look at frontier symbolism in US Presidential space discourse

from the inception of the nation's unified space program to the present would yield a more nuanced understanding of the institution's use of the constellation of ideas and images and as such is an admirable long-term goal. However, such a study promises a career-worth of scholarship, the launch pad of which will be constructed here.

Therefore, for the purpose of the project at hand, 1957 and the American reaction to Russia's lowly weather satellite prove important. I argue that the October 1957 launch of Sputnik I constitutes the first significant national "crisis" in America's fledgling space program and as such, created an exigency demanding that the president, in this case Eisenhower, exhibit rhetorical leadership by responding to the public distress with both discourse and policy. It appears that in addition to a diplomatic, scientific, and technological "space race" between the United States and the Soviet Union, Sputnik launched a six-decades-long discursive relationship between the White House's Executive Office and the national vision of the "Final Frontier" which deserves additional scholarly attention.

Despite limiting the scope of inquiry to the earliest days of a unified national space effort, the wealth of both primary and secondary Presidential documents that might be considered requires further definition of "US Presidential space discourse," which clarifies issues of speaker and message channel. In terms of an appropriately narrow definition, little discussion exists within the published studies to guide the project at hand. Scholars speak blithely of a seemingly monolithic genre of "US Presidential space discourse," alternately referred to as the "rhetoric of space exploration" (Krug 1991), "the American space program" (Depoe 1991), "national

space policy” (McCurdy 1997), and “presidential space policy” (Stuckey 2006), yet containing, and referencing, the same expanse of discursive acts as mentioned in the opening paragraph of this chapter.

Clearly, no tacitly accepted definition exists, even in practice. Therefore, the challenge of defining “US Presidential space discourse” has been considered via two questions designed to clarify the identity of the rhetor and the available channels to convey the messages encompassed by the concept: Who counts as “the president”? and What counts as “discourse”? within this wider body of rhetorical artifacts.

Identifying a Rhetor: Who is the President of the United States?

The President of the United States is both an individual and an institution, although it has been long recognized within the discipline that the creation of presidential rhetoric is typically a group project (Tulis 1987; Campbell and Jamieson 1990; Krug 1991; Stuckey 2006). Where ghostwriters were once the dirty little secret of the Executive Office, the presidential speechwriting team is now an accepted, if not celebrated, extension of the White House image management machine. Further, the members of the White House communications office are crafting messages, not necessarily for an individual, idiosyncratic, and autonomous speaker, but rather for an individual with a unique speaking style who happens to be occupying and thus representing a richly historic and symbolic station within the national government. Stuckey (2006) argues that by nature of the institution “no president is simply an individual, and this would still be true even if they wrote all their own speeches. The

chief executive represents an institution, and focusing on any one president as if that person were merely an individual who happened to temporarily occupy the office leads to an impoverished understanding of both the president and the presidency” (106).

Therefore, in considering the rhetor in relation to Presidential space discourse, one must ask whether the project will examine only that discourse uttered by Dwight D. Eisenhower and John F. Kennedy or whether it is appropriate for the project to include documents, such as Presidential Directives and Citations, and presidential correspondence issued by the Executive Office and whether or not to consider the discourse generated by presidential surrogates. As the project at hand does not intend to make claims about either DDE or JFK’s personal (i.e. privately held) positions on space exploration or the US Space Program, a wider consideration of the rhetor, as a public representative of a symbolic office, is appropriate. For the purposes of this study, the president will include the title-holding individual and his textual presence.

Defining the Channels: What Counts as Discourse?

For any rhetorical analysis, the deliberative and epideictic addresses seem to be the most obvious choices. As strategically composed episodes of public communication, they are the clearest instances of the President of the United States acting in his official capacity. However, to confine analysis to these speeches seems overly exclusionary and as such, threatens to dilute our understanding of the way presidential administrations utilize available message channels. Three additional

categories of presidential space talk require consideration: Presidential campaign rhetoric; miscellaneous (such as letters of commendation and remarks at ceremonies conferring space honors) and “novelty” communication (such as presidential phone calls to astronauts on orbit and casual correspondence); and the rather unique category of undelivered or contingency addresses. It is important to note, for the sake of clarity, that this category of discourse does not include the myriad drafts of addresses common to all presidential communication. Rather, this family of rhetoric is defined as finished, yet unnecessary, speeches created so that the president’s remarks will be fitting for the actual course of events or finished, yet discarded, addresses which became inappropriate or untimely due to the (often tragic) turn of circumstances.

For the purpose of the project at hand, all three categories, in addition to formal deliberative and epideictic speeches will be considered. Campaign rhetoric represents the moment that an individual “enters the conversation” about national space policy in a potentially executive capacity and, as such, represents an important aspect of “US Presidential space discourse.” Miscellaneous and novelty communication typically occur at or in place of ceremonial events and serve epideictic ends, making them similar to formal speechmaking in content and purpose, although perhaps shorter in length with less fully developed arguments. Finally, the undelivered and contingency addresses, although never utilized, belong conceptually to the same category as the formal and strategically composed deliberative and epideictic addresses and offer to tell us as much about “US Presidential space

discourse” as their publicly deployed counterparts. When considered in tandem, the delivered and undelivered versions of the speeches may provide a unique window into an administration’s conceptions of the definition, mission, and values embodied by the US space program and the impact of individual events upon those conceptions.

In short, the wealth of primary source documents available to support research in the area poses both an opportunity and a challenge to the rhetorical scholar. As a result, I will limit examination to four categories of presidential space talk occurring between the years of 1957 and 1963: campaign rhetoric, miscellaneous and novelty communications, undelivered and contingency addresses, and prepared speeches and remarks, including press conferences. These categories represent both ceremonial and deliberative action and offer several potential bases for comparisons.

Précis of Chapters

Chapter 2 reviews the scholarship of metaphor and myth in public address. After exploring the potential of both metaphorical and mythical points of view, I argue that formal/functional mythic explanation of US Space Discourse is often required given the simultaneous needs for advocacy, inspiration, justification, instruction, and even consolation. Given the challenging nature of pro-space advocacy and its need to continuously reconcile vision with cold hard fact (McCurdy 1997), the frontier myth, as a foundational element of the American identity since the Puritans (Bercovitch 1978; Spanos 2007), seems particularly well suited to and perhaps more successful at the task.

Beginning with his response to the exigency created following Russia's launch of Sputnik I, chapter 3 explicates Eisenhower's metaphorical deployment of frontier images and ideas to justify his conservative and pragmatic vision for the nation's unified space program. Although he discounted the launch's impact on national standing and security and attempted to avoid a "space race" with the Soviets, his remarks firmly established space as the next arena for US-Russian interaction and formed a nearly inseparable bond between technological advancement and international supremacy in the American mind for decades to come. However, his use of a conservative metaphoric form of the frontier may have lacked the rhetorical power necessary to survive repeated attacks by the Kennedy campaign in 1960, who implemented a more mythically based portrayal of the program.

Chapter 4 explores Kennedy's application of his administration's New Frontier theme to the national space effort from the 1960 campaign through the end of his Presidency. While Eisenhower clearly identified space as an important cold war arena with democratic values, education, and research as the weapons of choice in the US-Soviet agon, John F. Kennedy tempered the now familiar goal of national security with one of national inspiration, building a mythically-tinged vision of US space activities as the modern realization of the frontier spirit. For the Kennedy administration, space represented both the battlefield and the pinnacle of American imagination.

Finally, chapter 5 begins with a summary of the differences between Eisenhower's metaphorical approach and Kennedy's mythic use through a head-to-

head examination of space themed addresses delivered at Rice University in Houston, Texas in the fall of 1960 and 1962 respectively. The comparison highlights both the similarity in theme as well as the vast contrast in approach between their remarks. The chapter ends with a discussion of potential places for extension while also identifying the strengths and limitations of the work at hand.

Conclusion

In sum, this project contributes to our understanding of both presidential discourse and modern utilization of frontier images and ideas. First, it begins to fill the void, mentioned above, in our understanding of Presidential space discourse. That presidential speech serves a variety of leadership and identity functions is well documented (Tulis 1987; Campbell and Jamieson 1990; Krug 1991; Stuckey 2006). The situation is similar for myth, as it too serves a variety of political, social, and personal functions for its adherents. Therefore, this examination of specifically presidential use of the frontier in space advocacy offers to tell us more about the rhetorical presidency and its leveraging of frontier symbolism while also contributing to our understanding of pro-space discourse at a time when the future of the US space program is in flux.

CHAPTER TWO

“The human space program has existed in the collective unconscious of humanity since the dawn of awareness”

- Frank White

Since well before the initiation of the US space program in 1958, citizens have looked to the stars as a romanticized source of both inspiration and challenge. In American popular culture and political imagination alike, the “final frontier” has represented a Cold War battleground, an untapped field of natural resources, a high tech scientific laboratory, a thrilling adventure land, and more recently, an arena for the advancement of international cooperation. President Eisenhower captured the entirety of this romantic national spirit in his June 30, 1957 remarks on the opening of the International Geophysical year. Many considered his remarks the official opening of the nation’s new frontier when he said, “The scientists tell us they cannot possibly anticipate all of the valuable scientific knowledge that will result from their efforts [to launch an earth-orbiting satellite within the year]. They believe many of the facts thus acquired will give us new understanding and new power over the forces of nature. As I see it, however, the most important result of the International Geophysical Year is the demonstration of the abilities of peoples of all nations to work together harmoniously for the common good” (Eisenhower, Remarks in Connection with the International Geophysical Year, 1957, June 30, 1957).

That American political and opinion leaders alike have turned repeatedly to the power of frontier symbolism to express their thoughts about and aspirations for

the nation's space program deserves further critical attention.⁴ What is it about the frontier motif that makes it such a powerful and enduring means of advocating, motivating, and reassuring? Every national triumph and tragedy in space since the 1950s had been portrayed, at least in part, in frontier-themed language. From the earliest inception of space as the next frontier to the contemporary challenge of maintaining a manned outpost, Americans understood, and continue to understand, the national space policy as the next instantiation of its historic frontier. Further, for an often complex and technical scientific and geopolitical concept such as space exploration to resonate so strongly with a diverse population speaks to the potency of the symbolic constellation. That the frontier images and ideas are more than simple linguistic flourish is undoubtedly clear, as they would have likely gone by the wayside as another tired trope long ago. Therefore, it is the position of this project that the frontier's remarkable staying power in US space discourse must be attributed to the symbol system's metaphorical and/or mythical qualities.

⁴ As recently as April 2010, President Barak Obama utilized frontier imagery in his "Remarks on Space Exploration in the 21st Century" to NASA employees at the Kennedy Space Center. In the address, Obama featured many of the familiar frontier themes evidenced in Presidential space rhetoric up to that point, including the historic importance of the "space race" from both a technological and geopolitical standpoint, the inherent risks and rewards of space exploration, space's continuing promise as a venue for international cooperation, and its capacity to inspire future generations. Further, the President acknowledged the integral nature of space exploration to the American self-concept, stating "for me, the space program has always captured an essential part of what it means to be an American – reaching new heights, stretching beyond what previously did not seem to be possible. And so, as President, I believe that space exploration is not a luxury, it's not an afterthought in America's quest for a brighter future – it is an essential part of that quest" (Obama, Remarks by the President on Space Exploration in the 21st Century, April 15, 2010).

Frontier as Metaphor and Myth in US Space Discourse

In *Presidential Perspectives on Space Exploration*, Linda Krug (1991) argues that the constellation of frontier images serves as a metaphor within space discourse, positing that the complex's influence may be explained by metaphor's ability to unite "two disparate experiences (such as pioneers of the West and space exploration) and, in the process, creating a third, unified perspective (space pioneers)" and in doing so "open up new ways of thinking about situations and events" (xviii). Mary Stuckey (2006) concurs in her work on Reagan's Challenger Eulogy, noting that the frontier theme "worked well for Reagan in that context [the Challenger speech] not only because of his personal identification with the frontier metaphor but also because that figure of speech resonated strongly on the topic of space" (35).

The rhetorical power of metaphor is clear. Far from the conception of metaphor as mere ornamentation, the contemporary treatment of metaphor considers the device to be both a persuasively potent rhetorical force with the ability to appeal to basic and commonly-held motives (Osborn 1967) as well as "the linguistic origin of our most compelling arguments" (Ivie 1982, 240). Used argumentatively, a metaphor has the ability to direct an audience's energy toward a speaker's recommendations (Osborn 1967). However, even when used primarily as ornamentation, the metaphor has a capacity to function enthymematically, "as a demonstration in itself" (Osborn 1967, 315), further enhancing its persuasive appeal by fostering a sense of both logical participation and emotional identification within the audience.

The metaphor's argumentative and aesthetic strength is bolstered by its capacity to retain flexibility over time. Speaking directly to the American use of the Western frontier motif, Osborn (1977) argues that while many of a culture's most powerful and enduring metaphors are timeless, their meanings are not indelible, but rather retain a malleability which allows them to respond to "dramatic changes in human circumstance" (347). During the industrial revolution and beyond, he notes, the Western frontier supplanted the sea in the American imagination, constituting "both dream, for the vicarious projection into another life, and a real option should an actual life situation go beyond endurance" (365). Well in advance of the space program, Suzanne Langer (1942) even suggested that air travel may provide the next complex of metaphorical images for adventure and escape, arguing "in some future generation, an aeroplane may be a more powerful symbol than a ship; its poetic possibilities are perhaps even more obvious" (242). When viewed from the following perspective, it is easy to see how technical experts and public figures alike are drawn to a powerful combination of aerospace and frontier imagery when crafting pro-space advocacy messages directed toward the American imagination.

While the resonance and flexibility of metaphor may begin to explain over a half century of reliance upon the matrix of images and ideas constituting "the frontier" in US pro-space discourse, a topic as complex and challenging as space may also require a more powerful rhetorical tool. In *Space and the American Imagination*, Howard McCurdy (1997) argues that space exploration has proven to be one of the most entertaining yet challenging visions of the twentieth century. Outer space's

ability to fascinate, he asserts, comes from its appeal to human aspirations, its roots in centuries-old cultural traditions, and its power to unite a recreation of the past with a vision of the future, all decidedly mythical attributes as the next section will suggest. However, with its attractiveness comes vulnerability. Clearly, the sort of governmental and scientific action required to bring space exploration to fruition lacks the romantic and entertainment appeal of the popular images and imagination of human space travel. Thus, in a realm “where cultural traditions are strong, the role of imagination is pronounced, and the cosmos full of surprises” (2), to be viable, public policy advocacy often requires that leaders reconcile popular vision with technical and political reality. And such reconciliation, to be sure, often requires more than a metaphor.

Similarly, in his work on NASA’s image making, Mark Byrnes (1994) argues that the space agency harnessed the wide range of romantic potential inherent in the frontier myth by focusing on three distinct, and I argue, mythically-tinged themes. The first promoted the idea that “NASA helps fulfill the ingrained human urge, particularly strong in Americans, to explore the unknown and expand the frontier” (48). The second theme projected a heroic image of “the space program’s most visible participants, the astronauts” (48). And the third “stressed the emotional rewards that emanate from space exploration” (48). Here, a metaphorical explanation alone falls short of fully accounting for the device’s ability to harness the power of human impulse, make heroes of mere mortals, and capture the collective heart of a nation. Such functions are more commonly associated with myth.

While metaphor may contain sufficient power to perform a variety of advocacy, didactic, and ceremonial functions (Jamieson 1980; Ivie 1987; Sontag 1989), bridging the yawning gap between the romanticized collective imagination and the complex and sometimes deadly realities of space exploration often requires more. The simultaneous labors of persuasion and inspiration, instruction and consolation demanded by the various uses of the constellation of frontier images and ideas frequently call for a mythic explanation. To offer a more comprehensive explanation of the role of the frontier in US space discourse, the next section reviews the role of myth in society from a primarily functionalist perspective, before summarizing the scholarly conversation about the enduring rhetorical role of the frontier in American culture.

Myth and the Frontier in American Culture

The important roles myth plays within society are well documented. Anthropological, historical, psychological, literary, and rhetorical approaches concur that myth serves important identity, organizational, religious, pedagogical, political, and personal functions for individuals within all levels of social collectives. Scholars as varied as Joseph Campbell (1972; Moyers 1981), Carl Kerényi (1949), Bronislaw Malinowski (1954), and Northrup Frye (1967) agree that myths are not simply invented, entertaining and/or didactic stories or fairy tales and instead occupy central places within collective societal consciousness (Moyers 1981, 1). From this perspective, myths are “reality lived” (Malinowski 1954, 100) or passionately

believed and sacredly kept “master stories” (Hart 1990) that are also vitally important elements in day-to-day life (Kluckhohn 1942). As such, myths fill a people’s need to explain their society’s past, contextualize its present, and project its future direction for those who believe. By promoting a set of accepted values, myths serve to guide and justify society members’ behaviors (Malinowski 1954; Rowland and Frank 2002).

While the sacred nature of a society’s myths would suggest that their influence is largely religious in character, this is not necessarily the case. Although they do play an important role in connecting a people to their origin (Eliade 1963) and often become canonized into formal religious traditions (Campbell 1972), Malinowski (1954) also indicates that myths provide the grounding for human institutions (116). Rowland and Frank (2002) point specifically to the way in which the frontier myth has “served this function for decades in American society” (27). Further, myth has the capacity to suggest policy directions prior to providing justification for policy decisions. Burke (1947) asserts the possibility of treating “the mythic as the non-political ground of the political, not antithetical to it, but as the ‘pre-political’ source out of which it is to be derived,” adding that although a mythic vision transcends the political, it has “political attitudes interwoven with it” (201). By reconnecting a society to its first principles and reminding its members of their values and interests, myth strongly suggests appropriate concerns as well as the potential solutions to those problems, paving the way for policy.

Additionally, myth may serve as a bridge between the two primary ways in which a society comes to terms with its experiences - its origin stories and scientific or technical reason - a particularly important function when considering the role of myth in space discourse (Byrnes 1994; McCurdy 1997). Kerenyi (1949) laments that modern society has “lost our immediate feeling for the great realities of the spirit – and to this world all true mythology belongs – lost it precisely because of our all-too-willing, helpful, and efficient science” (1), going a step further to assert that the meanings of myths cannot be fully translated into the technical or scientific language of facts (4). However Campbell (Moyers 1981) suggests that the two ways of knowing unite within the cosmological function of myth, where the shape of the universe is shown “in such a way that the mystery comes through” (6). He argues that through the cosmological function of myth, science is properly conceived as “the energy for the whole cosmos” and as such, “another kind of mythology” that “breaks that older mythological idea of a spiritual realm and an earthly realm that is not of it” (10), bringing the scientific explanations of life’s experiences together with their earlier mythical accounts in a satisfying way. Campbell goes on to note that the sense of “awe and wonder” that inspired human development and pushed early explorers to new lands has, in fact, taken modern civilization to the moon, “sending those space ships out there” (11).

Perhaps nowhere else have the themes of origins, values, institutions, policies, science, and religion come together as they have in the complex of images and ideas constituting “the frontier.” Despite its announced “closure” in 1890, the frontier

continues a vibrant existence in American hearts, minds, rhetoric, and popular culture (Carpenter 1977; McCurdy 1997). And as a potent subgenre of societal story, the frontier myth has received a great deal of critical attention (Carpenter 1977; Slotkin 1985; Dorsey 1996; McMullen 1996). This is perhaps attributable to the integral role the frontier plays in America's national identity. Since the Pilgrims' landing, the frontier wilderness has played a part in shaping Americans' self concept, providing a "moving stage for the quintessentially American drama of destined progress, of process as order and control" (Bercovitch 1978, 164). As both an ideological rationale for action and a safety valve for restless nationalistic urges, Spanos (2007) characterizes the frontier's place in American discourse as "rejuvenating" (40). Rushing (1986a) concurs, adding, "from birth to maturity, America has drawn upon the frontier for its mythic identity," suggesting that "the American imagination remains fascinated by new and unknown *places*" (265). Dorsey (1995) moves a step further, arguing that "one of the longest-lived sacred histories of American culture is the Frontier Myth," and adding that it is "perhaps the most characteristic expression of American culture" (4). Although the Old West of cowboys and homesteads, with its romantic promises of whiskey, women, and gold is a long closed and largely fictionalized chapter of the nation's history, McMullen (1996) suggests that we persist in our attempts to resurrect this sacred space by seeking new horizons "precisely because [the myth's] origins are located in the past" (31).

Because the frontier represents such a powerful and enduring national symbol, it is also important to recognize its rhetorical value in public discourse. Dorsey

(1995) notes that myths are routinely used by presidents to “shape the audience’s identity and to prescribe its social behaviors” (1). Speaking particularly to presidential use of the frontier myth, he points to its ability to simultaneously “inspire audiences and to energize policies” (2). Theodore Roosevelt relied upon the romance and purity of the frontier to build an argument in support of his conservation programs (Dorsey 1995) while John F. Kennedy used a variant of the frontier myth to advocate for the formation of the Peace Corps (Dorsey 1996). Similarly, presidential candidate Ronald Reagan employed the frontier myth during his 1980 campaign to simultaneously advance his conservative agenda and broaden his public appeal (Moore 1991).

Although the frontier injects a great deal of power into public discourse, its use is not without hazard. Rushing (1986a) points to its “inherently paradoxical” nature, noting that the “frontier is a place that at first seems infinite and unknown, but eventually becomes confining and familiar. Like desire, it vanishes in its fulfillment” (266). Consequently, America seems to be perpetually searching for the next great national conquest (Rushing 1986a; Dorsey 1995; Dorsey 1996; McMullen 1996).

For over sixty years, the nation has been encouraged, both through popular culture and political discourse, to cast its collective gaze skyward in search of the next American frontier. While the connection between the frontier and outer space is widely recognized among both historians and rhetorical scholars, from the most conservative to the most expansive (Osborn 1977; Rushing 1986a; Byrnes 1994; McMullen 1996; McCurdy 1997), the various functions that it performs remain far

less developed. As Krug (1991) notes, this is particularly true in the area of Presidential space discourse (xviii).

Given the power of myth in general and the frontier myth in particular to undergird social institutions, define identity, and bridge the gap between science and imagination, an explanation of the enduring presence of the frontier in Presidential space discourse is clearly important. To accomplish this aim, I suggest a formal/functional theoretical and methodological approach for exploring the role of frontier images and ideas in US space advocacy discourse in general and Presidential space discourse in particular.

Exploring Frontier Mythology in US Space Discourse

Focusing on the use of the complex of frontier images and ideas in US space discourse brings with it a constellation of theoretical and methodological implications that require further consideration. Fortunately, myth's sacredness and centrality within a culture make it a popular target of critical attention in rhetorical studies and related disciplines, providing a variety of potential perspectives. However, popularity is a double-edged sword and these approaches must be carefully considered because, as Rowland (1990a) notes, an overly broad or insufficiently grounded approach tends to "produce criticism that fundamentally mis-analyzes a given work or obscures simpler explanations for it" (101). Hastiness in pronouncing the "mythic" nature of a societal story due to either overexcitement on the part of a critic to discover a new myth or for the sake of imaginative interpretation threatens to both disrespect the

power of legitimately mythic societal forms and denigrate the larger project of mythic criticism.

Given my claim that the frontier motif, as myth rather than metaphor, has and continues to perform a variety of important functions in pro-space advocacy, a formal/functional approach to mythic criticism seems the most promising path to a satisfying explication. By focusing on the substantive characteristics making up the myth as well as the formal duties it performs, while also evaluating its success “based upon its capacity to answer the problems it addresses” (Rowland 1990b, 157) and ultimately grounding those conclusions in concrete audience data, the perspective offers attractive critical flexibility for examining the myth over an extended period of time in which programs, rhetors, audiences, and socio-political contexts changed. Where one may have information about the myth’s formal attributes, its function may require further examination. Conversely, where its function may be easily ascertained, its operative characteristics may be less clear. Both views, accompanied by an understanding of the problems it is used to address and culture’s reaction to the myth in response to those problems hold great potential for a longitudinal study of pro-space discourse that is keenly sensitive to changes in its form, uses, and outcomes while also assessing its success based on its ability to solve the problems presenting space exploration to the American public in the face of such changes presents.

In addition to critical flexibility, Rowland (1990b) argues that such an approach provides the critical vocabulary necessary for distinguishing myth from other rhetorical forms, the crux of the foregoing argument, while also aiding the critic

in the selection of fitting theoretical and methodological tools (152). Again, the time span under consideration here demands that the methodological resources, especially, accommodate changes in rhetors, audiences, programmatic goals and public standing, governmental policy, and socio-political contexts at home and abroad. Therefore, a thorough and grounded, formal/functional analysis of a society's myth has two requirements. First, the critic must make use of an appropriately narrow definition that justifies the myth's characteristics with recourse to the work that each element performs. Second, to avoid reduction to relativism, the critic must anchor any claims to the results of the myth's strategic usage in such "neutral" forms of confirmation as audience reaction data and subsequent "chaining out" of the myth in others' rhetoric.

Several complementary formal/functional perspectives exist for explaining the societal work of myth and three seem particularly applicable to the project at hand. Speaking to a modernized myth, Burke (1947) suggests that an ideal sacred story "must give us that new vision, and not merely in its purity, as with the Christian vision of peace on earth, but in its ideological implications as well" (203). He outlines the twelve qualities necessary for such a story to fulfill its visionary function, demanding that the myth transcend nationalism, establish and support a "piety of loyalty to a particular location" (204), connect the modern world to the universal past, consider the modern world within the context of that past, concern itself with the "momentous conflicts" of the modern age (205), celebrate the achievements of individual heroes, collectives, and institutions, "give expression of love and adventure" (205), speak to vital human interest, connect its heroes and their

achievements to those interests, and “think of human motives in the most incisive and comprehensive terms” (205). By defining a society as perpetually suspended between its immediate location and the larger world as well as between its past, its present, and the divine, while also providing a blueprint for and definition of ideal human action within that context, Burke’s ideal modern myth achieves its functional charge of providing a people with both vision and ideology.

Campbell (Moyers 1981) extends the Burkean outline for the modern myth by adding an overtly instructional component, noting that they are “infinite in their revelation” and, therefore, primarily designed for instruction (6). Myth, for Campbell, serves four, progressively more pragmatic, functions. The first, mystical function connects a society to its divine origins, inspiring a sense of “awe before this mystery” (6). The second, cosmological function provides individuals with a sense of structure within the universe while managing to preserve its awe-inspiring foundation. The third, sociological function supports and validates the social order, sanctioning the institutions and practices necessary for everyday human activity. And the fourth, pedagogical function provides the wellspring of knowledge necessary for individuals to solve problems, develop into functional members of society, and ultimately navigate day-to-day existence. Again, by connecting a people to their origins and indicating how those origins organize and underlie both social institutions and day-to-day activities, the myth “instructs” believers on the appropriate ways to be healthy, productive, and contributing members of society.

While both Burke's and Campbell's explanations hint at the minimal required formal characteristics of myth, Rowland (1990a) provides the most concrete guidance for a critic seeking a list of attributes to consider. While some may believe that such criteria unduly limit the range of stories that might be labeled and thus examined as myth (Solomon 1990; Rushing 1990), their presence seemingly addresses Osborn's (1990) concern about critical distance. As a sacred story, myth holds great sway over those within the culture and it is quite reasonable to ask whether a critic has the ability to separate him- or herself from the gravitational belief field of a living societal myth in order to render a thorough and potentially subversive reading (122). The criteria threshold Rowland (1990) provides, along with an insistence upon audience reaction data, goes a long way in assuring as objective a reading as possible by a symbol using and misusing animal (Burke 1976) dealing in symbolic forms.

It is also important to note that the list should not be considered a shibboleth. Rowland (1990b) concedes that while the synergistic nature of the elements contributes the greatest problem-solving power and resonance to myths, all five components need not be present in a fully realized form in order for a story to be labeled mythic (155). This flexibility seems particularly important to the project at hand, as it is quite possible, given the long-term association between the frontier and space exploration, that the myth operates at a more subtle or enthymematic level. However, if this is the case, then as Rowland (1990b) notes, textual evidence, audience reaction data or the existence of rituals should bear out the conclusion (157).

Given the necessity of myth to “transcend ordinary life and provide meaningful grounding for that which cannot be supported rationally” (103), Rowland (1990a) argues that its structural components must contain sufficient power individually while also working synergistically with the other necessary elements to provide its adherents with “‘true’ answers for crucial social and personal problems” (103). As such, his five-part “recipe” requires, first, that myths are stories, believed to be true by those within the culture, as the narrative form permits its lessons to transcend the bounds of discursive logic and the believability criterion assures that those lessons will be taken seriously by its adherents. Second, the story’s primary characters must possess powers on a grand or heroic scale in order to serve as societal models and solve societal problems.⁵ Third, the tale must occur outside of “normal historical time” or within a period of great symbolic import in order to transport the audience outside of chronological time to solve the problems created in and by such time. Fourth, the story must occur in an equally mythical location, either outside of the “normal” physical world or in a real place of great symbolic import. Much like the time requirement, the spatial criterion assists in problem solving by adding “force and credibility to the mythic story” (Rowland 1990a, 104). Finally, the myth must incorporate archetypal symbols whose presence figures into the story in such a way that they contribute to the lesson or solution advanced within the tale.

⁵ Rowland maintains that all main characters within myths need not be on the side of good, noting “the villains in a myth generally will possess great power, precisely because a great hero requires a great adversary” (Rowland 1990b, 155).

By telling a story in resonant terms of powerful places and times populated with equally powerful figures, a myth transports believers outside of the restrictive confines of reality to gain the necessary perspective while also providing the necessary models for appropriate thought and action to solve society's most vexing problems. As such, myths hold the potential to inspire, to explain, to organize, to justify, to teach, and to console. And this power has been harnessed routinely by public figures seeking to sell policies, rally the population, support programs, and answer difficult questions. In the final section of this essay, I will sketch an outline of a critical project designed to explore just such uses of the frontier myth in US space advocacy discourse.

The Final Frontier in Space Discourse During the Eisenhower and Kennedy Administrations

In sum, I will utilize a formal/functional approach because it endeavors to discover the role of the frontier, as a foundational American story, in Presidential space discourse. The narrow delineation of both structural components and functional properties, critical flexibility and distance, precise terminology, and demand for data to warrant conclusions promises to yield a grounded interpretation of the frontier's function in pro-space advocacy. This combination of precision and flexibility are especially attractive given the range of purposes, audiences, and media that make up US space rhetoric.

I will examine specifically presidential use of frontier images and ideas in pro-space discourse during the Eisenhower and Kennedy administrations, with an eye to the forms that the frontier takes to perform the various functions demanded of it. I ask two main questions. First, how do Eisenhower and Kennedy marshal frontier images and ideas to sell their visions of the space program to the American people, to contextualize and justify its continuance during times of difficulty, and to advocate for changes to the program and its funding? Second, how do the Eisenhower and Kennedy administrations adapt frontier images and ideas to reflect the changing socio-political contexts in which the space program operated both at home and abroad?

Conclusion

While many consider the use of the frontier within pro-space advocacy to be metaphorical (Krug 1991; Stuckey 2006), further consideration of the demands placed upon it suggests that such an understanding may fall short of fully explaining its function and staying power. Metaphor is certainly a strong rhetorical force capable of injecting both argumentative and aesthetic octane into persuasive appeals. However, in light of the myriad functions required of the matrix of images and ideas constituting the frontier, by technical experts and public figures alike, any thoroughly satisfying account of its recurrent nature requires consideration of a more powerful rhetorical device as well.

Simultaneous needs for advocacy, inspiration, justification, instruction, and even consolation often cry out for mythic explanation. Constituting an all-encompassing expression of a society's first principles in narrative form (Burke 1947), a single myth, when artfully used, possesses the ability to encourage acceptance of complex ideas, provide reasons for policies and institutions, bridge the gap between romantic imagination and political reality, reconcile the scientific and the spiritual, move a people to action, and even assuage guilt and grief. Given the challenging nature of pro-space advocacy and its need to continuously reconcile vision with cold hard fact (McCurdy 1997), the frontier myth, as a foundational element of the American identity since the Puritans (Bercovitch 1978; Spanos 2007), seems particularly well suited to the task.

Critical fascination with myth across several disciplines has led to a myriad of potential approaches and explanations; however, a formal/functional perspective is most fitting to this project. Not only does it highlight the necessary formal characteristics of the frontier myth utilized by pro-space advocates and connect those attributes to the important work that they do, but it also evaluates the myth upon its own terms and demands sufficient grounding in the form of audience reaction data to avoid relativism in its conclusions. Such an approach provides the critic with necessary critical distance, theoretical and methodological flexibility, and the conceptual and terminological consistency required to examine the role of the frontier myth in pro-space advocacy over an extended period of time in which rhetors, audiences, programs, and contexts change. Thus, my work, assessing the use of the

frontier myth in presidential pro-space discourse during the Eisenhower and Kennedy administrations, will use the formal/functional approach to illuminate a series of interesting texts while also filling a void in our understanding of a sub-set of presidential rhetoric and enhancing our appreciation of a foundational symbol of American identity, (physical) space and the (final) frontier.

CHAPTER THREE

“What the world needs today even more than a giant leap into space is a giant step towards peace.”

-Dwight D. Eisenhower, 1957

While a national presence in outer space was largely a non-issue when Dwight D. Eisenhower entered office in 1952, eight years later the US space program, or perceived lack thereof, was the centerpiece of a presidential campaign that saw the defeat of former Vice President Richard Nixon. During his 1960 election run, Senator John F. Kennedy placed the blame for America’s lack of space firsts squarely on the shoulders of the administration, using the issue as a symbolic representation of what Democrats saw as a generalized failure of leadership (McDougall 1985, 302; Byrnes 1994, 37-38; Launius and McCurdy 1997, 51; Burrows 1998, 320). The 1950s and 60s were clearly the birth of the American space age, bringing aerospace technology in line with the robust body of science fiction and popular culture devoted to space travel and exploration (McCurdy 1997, 30). The Eisenhower era saw several significant milestones including: an international scientific year devoted to space and geophysical activities, the launch of three Sputniks, a small fleet of weather and communication satellites and several US and Russian space probes,⁶ and the organization of the National Aeronautics and Space Administration to coordinate the

⁶ Several of the US and Russian flights included living creatures, including American “astrochimps” Able, Baker, Ham, and Enos and Russian “cosmodogs” Laika, Belka and Strelka. All seven animals were recovered alive, albeit visibly upset with their human handlers, after successful flights (Krug 1991, 98, 100-101; Burrows 1998, 318).

nation's civilian space activities (Krug 1991, 97-100). Like it or not, Eisenhower's political legacy was intimately tied to the burgeoning US space effort.

Galactic Cooperation? Sputnik and The International Geophysical Year 1957-1958

Prior to the Russians' first satellite launch, one event in the 1950s appeared to hold the most promise for advancing space exploration, as well as public understanding of space technology, on a worldwide scale. The International Geophysical Year (IGY), sponsored by the International Council of Scientific Unions at the suggestion of a group of US scientists, was slated as an eighteen-month program, running from July 1, 1957 to December 31, 1958, promoting truly cooperative scientific development and international intellectual exchange in the geophysical sciences (Bulkeley 1990, 17; Boyle 2008, 374; Launius 2010, 255). In 1954, the IGY committee adopted the development and deployment of artificial Earth satellites as one of the many possible objectives of the worldwide exchange (Bulkeley 1990, 17; Launius 2010, 255). By 1955, US scientists, in cooperation with military officials, identified the Navy's Viking and Army's Redstone missile programs as potential sites for further satellite technology development. And upon settling on the non-ballistic Viking rocket as its basis, the US delegation persuaded President Eisenhower to sign off on an orbital satellite project as part of the American contribution (Burrows 1998, 170; Launius 2010, 256). However, all the years of careful strategic planning and widespread publicity for the Vanguard project and other IGY-related activities still failed to make a considerable impact on the general

public by the fall of 1957, despite the United States' immanent, albeit poorly funded, launch plans (Burrows 1998, 172; Boyle 2008, 374; Launius 2010, 255-256, 258).⁷

The same cannot be said for the events of October 4, 1957. During an evening reception for members of the IGY committee at the Soviets' Washington embassy marking the conclusion of yet another planning session, Lloyd Berkner, one of the American delegates to the Scientific Council, learned of Sputnik I from the *New York Times'* chief science writer (Burrows 1998, 184; Boyle 2008, 374; Launius 2010, 257). Although the immediate members of the scientific team publicly extended hearty congratulations to their Russian counterparts, privately they were stunned (Boyle 2008, 374; Launius 2010 257). As latecomers to the IGY cadre, the Soviets were on record as planning to attempt a satellite launch in 1958, only suggesting at the present gathering that their timeline may be accelerated (Burrows 1988, 177-178; Launius 2010, 257). Still, those involved in the American effort believed that the Soviet technology lagged considerably behind that of the United States and that the present hints were little more than blustering rhetoric (Bulkeley 1990, 125, 170; Launius 2010, 257).

With the Cold War as a backdrop, news of the successful launch hit the front page of American newspapers the following morning and domestic reaction was swift (Burrows 1988, 186; Bulkeley 1991, 23-24; Byrnes 1994, 26; Launius and McCurdy

⁷ Space historians cite a combination of two factors for the sparse federal funding allotted for the orbital project. Military leaders failed to recognize the potential strategic importance of the (presumed) purely scientific satellite, a likely consequence of the deliberate effort to house Vanguard within a purely civilian organization as a way to avoid international criticism (Boyle 2008, 374) while the White House vastly underestimated the scientific advances underway in the Soviet Union (Bulkeley 1990, 17; Boyle 2008, 374).

1997, 25; Neufeld 2005, 740; Boyle 2008, 374; Launius 2010, 256). Space historians write of the immediate post-Sputnik period as one of angst and alarm, equating the event to “Pearl Harbor” (Bulkeley 1990, 195; Launius and McCurdy 1997, 26; Boyle 2008, 375; Launius 2010, 256) in its parallel ability to call national security, intelligence, prestige, and leadership into question. Politicians responded with expected patriotic fervor, undoubtedly colored by party affiliation. Washington Senator Henry Jackson pronounced the launch “a devastating blow to the prestige of the United States as the leader of the free world” (Launius and McCurdy 1997, 26) while Lyndon Johnson, then Democratic Majority Leader and chair of the Senate space committee, declared that “it was not our technology that has failed, [but] our leadership” (Krug 1991, 36). New Hampshire Republican Styles Bridges issued a statement to *The New York Times* calling for “an immediate revision of national psychology and diplomatic approach,” adding “[t]he time has clearly come to be less concerned with the depth of the pile on the new broadloom rug or the height of the tail-fin on a new car and be more prepared to shed blood, sweat, and tears if this country and the free world are to survive” (Burrows 1998, 191; Boyle 2008, 375). Michigan Senator Charles Potter concurred in an October 21, 1957 letter to the President (see WHCF/OF 133-Q), suggesting that the Soviet launching of the Sputnik satellite had such a profound effect on national policies and institutions that it “required a revamping of national perspectives” which included the creation of a federal agency to oversee the “swiftly-changing technological world” in which

“miracles follow miracles” (The Papers of Dwight David Eisenhower, 1996, doc 396).

Aside from the political response, many other sectors leveraged reaction to the launch to further their individual agendas. Higher education leadership seized the opportunity to call for increased funding. At the closing session of the annual American Council on Education conference outgoing council chairman, University of Kansas chancellor Franklin D. Murphy, declared: “the Soviet man-made satellite typifies the new age in which we live. In the face of this extraordinary reality, how can responsible persons still ask whether we can afford to spend more money for education?” (Fine 1975, 3). World’s Fair organizers in Seattle, struggling at the time to overcome negative perceptions of the city as a site for the next exposition, joined forces with the scientific community to promote their proposed Century 21 Exhibition as both an opportunity “to awaken the U.S. public to the significance of the general scientific effort and the importance of supporting it” and a chance to present a more intellectually rigorous image of the country than the upcoming 1958 Brussels exhibit that featured “hamburgers and wide-screen movies” (McCurdy 1997, 93). Even popular culture became involved. Vodka-based Sputnik cocktails appeared on bar menus, cartoonists cashed in, and toy manufacturers scrambled to seize the nation’s fascination with child-sized replicas of the Russian satellite and a variety of space-themed merchandise (Burrows 1998; Boyle 2008, 374).

Eisenhower and the Space Race

Historians and Presidential scholars alike point to the Sputnik response as one of the defining points of Eisenhower's presidency (Bulkeley 1990; Krug 1991; Launius and McCurdy 1997; Burrows 1998; Neufeld 2005; Boyle 2008; Launius 2009). However, six decades removed from the events of October 1957, the Administration's legacy vis-à-vis the early days of the space program remains somewhat muddled. When the nation turned anxious eyes toward the White House for cues to interpret the startling developments, many were surprised by the President's nonchalance (Krug 1991, 25; Launius and McCurdy 1997, 27; Burrows 1998).

During his October 9, 1957 press conference, Eisenhower declared that the Russians' "one small ball in the air" was not a threat to US national security and "does not raise my apprehensions, not one iota" while adding that the nation's "well-designed and properly scheduled" plan to launch a satellite as part of the nation's contribution to the ongoing IGY would proceed as scheduled (Eisenhower, News Conference October 9, 1957, 730). He would reiterate his stay-the-course philosophy a day later, during a meeting with the National Security Council, telling those in attendance that the Administration's message would be one of continued support for the measured and well-reasoned satellite program developed for the IGY activities (Eisenhower, 339th NSC Meeting October 10, 1957, 6). Even in light of growing public and political pressure to accelerate a US launch in response to a perceived Soviet power play, the show would go on . . . as scheduled.

To Eisenhower's credit, survey data collected by social anthropologist Margaret Mead in the days following the Sputnik launch, later confirmed by larger impact studies conducted by the national government, indicated that many Americans interpreted the development as a promising sign of technological advancement (Launius 2010, 258). Additional polling revealed that forty one percent of Americans believed that man would reach the moon within ten to twenty five years, up from fifteen percent less than a decade earlier (McCurdy 1997, 47). And if a nation were to vote with its checkbook, the President could point to some public support in the form of the additional one billion dollars allocated to science and technology education, research, and development in the form of the National Defense Education Act, especially among those in Congress who had previously voted against national support for education (Clowse 1981, 140-143). However, the positive response was lukewarm at best. In the months that followed the initial Sputnik launch, several Congressional subcommittees held hearings featuring a varied cast of US aeronautics experts, scientists, educators, and industrialists designed to ascertain when, where, and why the nation fell behind their Soviet counterparts in the burgeoning space race (Clowse 1981, 59-61; Bulkeley 1990, 188-189). Embarrassing questions were asked and answers demanded.

As alarming as the Administration's lack of urgency was to many Americans, the calm public façade was not the indication that Eisenhower either underestimated the Soviets or intended to do nothing that many assumed (Bulkeley 1990, 160; Launius and McCurdy 1997, 27; Burrows 1998, 203; Boyle 2008, 375). Although Eisenhower

was admittedly caught off guard by the intensity of the public reaction to the Soviet launch (Clowse 1981, 10-11; Launius and McCurdy 1997, 26) and the White House's message appeared to convey what one critic called "a curiously uncertain, even fumbling apologia" (Burrows 1998, 203), behind the scenes the response was neither uninformed nor haphazard. The strategic nature of the administration's response was simply lost in translation as Eisenhower failed to fully appreciate the power of the Presidency in both agenda setting and rhetorical leadership (Krug 1991; Launius 2009, 259) in the wake of a national show of psychological vulnerability (Clowse 1981, 55; Burrows 1998, 200). While he attempted to reassure the nation and generate support for his conservative and pragmatic program by embellishing his pro-space advocacy with terms that his audience might associate with the frontier, the following analysis will reveal that his use of frontier language remained largely metaphorical rather than mythic when viewed from a formal/functional perspective and as such, missed the mark.

The powerfully enduring nature of the frontier in American culture (Bercovitch 1978; Rushing 1986a; Moore 1991; Dorsey 1995, 1996; McMullen 1996; Spanos 2007) suggests that the nation had and would continue to accept the American frontier myth as a true story, satisfying the criterion of a story believed to be true by members of the culture. Additionally, the Cold War was most certainly a time of great symbolic import, satisfying the criterion of events occurring outside of normal historical time or in a time period of great symbolic importance. Yet to achieve truly mythic status from that point of view, the President's justification would have also

needed to tell the story of his space program in archetypal terms conveying a national endeavor undertaken outside of the normal physical world by a cast of heroes and villains who embodied the essence of good and evil. Further, the program would have needed to claim to put humanity in touch with its origins or solve its most vexing problems. Rather, Eisenhower chose to portray the effort as a rational and calculated scientific experiment conducted by a talented, cooperative, and conservative group of intellectuals from many nations who were following a pre-planned course of action to achieve predetermined outcomes. While the goal reflected a desire to manage, if not eventually conquer, a new environment in order to satisfy curiosity and improve the human condition, he did not offer his vision for the national space program as an institution whose activities would answer questions of who Americans were as a people, provide a sense of transcendence, or end the Cold War, arguably one of the most pressing problems of the era. While all five components need not exist to label an account as mythic, all formal/functional perspectives note that a key element of myth is its ability to speak to the highest of human motives and connect to divine origins in an effort to solve societal problems or achieve transcendence. As the following analysis will show, Eisenhower's pro-space discourse, while featuring variants of frontier themes, did not utilize them in this way.

This failure of his largely pragmatic rationale to fully convince national audiences that his measured program actually did provide the answers to their primary concerns of safety, prestige, and self-concept, or to inspire national confidence in the plan plagued the President throughout the remainder of his second

term and provided a foothold for the Democrats in the next election, as is evidenced by the continued Congressional questioning of his program and of John F. Kennedy's use of space as a major campaign issue. Although Kennedy's presidential bid did not hinge on his proposed space policy, space historians attribute the Democrat's victory in part to voter frustration with the Eisenhower Administration's conservative attitude towards outer space and Kennedy's ability to present a more appealing alternative (Krug 1991, 30; Byrnes 1994, 37; Launius and McCurdy 1997, 51; Burrows 1998, 319).

Clearly, the successful launch of the small Soviet satellite and the American public's deep concern about its collective safety, self-concept, and international image had created a compelling rhetorical exigency. In reassuring the public that his vision of the US space program was not simply adequate, but rather a truly fitting national endeavor, the President's challenge was twofold. First, in order to stay within his New Look defense policy, a fiscally austere defense posture that sought to create sufficient military preparedness for deterrence-sake without engaging in an all out Cold War arms race, he had to contextualize his vision of US space efforts in a way that resonated with the American self-image and allayed national fears yet did not encourage a similar race mentality in outer space. Second, he needed to advocate for increased spending in the "slow" areas such as basic research, education, and technology required to support a truly scientific space effort at a time when most Americans were concerned about quick fixes designed for safety and prestige and a national show of force.

Four factors stood to influence Eisenhower's possible responses. First, the President believed strongly in the pre-existing plan for national space efforts which separated the new scientific exploratory efforts from the robust military rocketry program. Even prior to his election, Eisenhower had received regular briefings on the status of the nation's missile programs and their strategic, geopolitical importance (Bulkeley 1990, 125; Launius 2009, 259) and, once in office, showed an increasing concern with the Soviets' aeronautic efforts (Bulkeley 1990, 150; Launius and McCurdy 1997, 24). This was clearly not a leader who was either uninterested or under-informed. On its face, the Eisenhower space program was designed and presented for purely scientific advancement, eschewing militaristic or propagandist agendas. The President's unwillingness to develop a crash program in the wake of Sputnik seems to support this conclusion (Byrnes 1994, 37; Launius and McCurdy 1997, 22) as does his careful avoidance of competitive rhetoric in relation to the satellite plan (Krug 1991, 26). However in practice, only the IGY satellite's immediate efforts were decidedly separate from the Administration's top-priority missile defense program (Bulkeley 1990, 181; Launius and McCurdy 1997, 23; Burrows 1998, 217).⁸ President Eisenhower fully intended for the US to "field the first intercontinental ballistic missiles (ICBM) and reconnaissance satellites by the time he left office" (Launius 2009, 261), and had laid the fiscal and administrative foundation to achieve just such technological superiority. However, he was not

⁸ Many argue that the United States could have beaten the Soviet satellite launch had the Eisenhower Administration not diverted funding from the Vanguard program to accelerate missile defense development (Launius and McCurdy 1997; 23)

equally bullish on manned spaceflight.⁹ When counseled that a moon shot could rival Columbus' discovery of the New World in historical importance, the President replied, "I'm not about to hock my jewels" to finance a risky mission in the same way that Queen Isabella had (Hirsch and Trento 1973, 37; Logsdon 2010, 28).

Second, confidential intelligence information, the existence of which the administration could not reveal, indicated that the robust Soviet program was not as advanced as presumed.¹⁰ In his work *This New Ocean* (1998) space historian William Burrows attributes part of the administration's seemingly feeble response to "the classic conundrum of the national security process in a democratic society" (199). Eisenhower, it seemed, suffered from a painful catch-22. On one hand, much of the intelligence the President and his top advisors possessed about both the United States' and the Soviets' aeronautic exploration and defense capabilities was so deeply classified as to be compartmentalized, a classification level above "top secret." Where sharing this information, even within the various scientific and governmental groups

⁹ This can likely be attributed to Eisenhower's belief that robotic and photographic means rendered manned space exploration largely unnecessary (McDougall 1985, 228; Launius and McCurdy 1997, 40; McCurdy 1997, 83).

¹⁰ The Soviets, as would later be discovered, were largely bluffing. And much of what was considered by Western nations to be a robust combined missile and rocketry program accomplished little more than the Sputnik launches to serve as a "symbolic counterthreat to the United States" (McDougall 1985, 250-251). Khrushchev later revealed the Soviets' reasoning for not entering into any cooperative ventures in his memoir, stating that "the US might have been willing to cooperate with us, but we weren't willing to cooperate with them. Why? Because while we might have been ahead of the Americans in space exploration, we were still behind them in nuclear weaponry . . . Our missiles were still imperfect in performance and insignificant in number. Taken by themselves, they didn't represent much of a threat to the United States. Essentially we had only one good missile at the time: it was the Semyorka, developed by the late Korolyov. Had we decided to cooperate with the Americans in space research, we would have to reveal to them the design of the booster for the Semyorka . . . In addition to being able to copy our rocket, they would have learned about its limitations; and from a military standpoint, it did have serious limitations. In short, by showing the Americans our Semyorka, we would have been both giving away our strength and revealing our weakness" (McDougall 1985, 255).

partnering in the American space program, would have undoubtedly assuaged national fear and stemmed the growing sense of inadequacy, tipping the national hand in such a critical Cold War period seemed equally unwise. But both intelligence gathering and R&D efforts could be severely compromised in the attempt at openness. On the other hand, there were those within government and the press who felt that the nation's limited openness about its scientific space efforts on the IGY stage were tantamount to sharing our national technology secrets and, as such, contributed to the Soviets' rapid advancements. Ultimately, Eisenhower's lead science advisor, James Killian would conclude in his memoir that "ignorance – the result of excessive secrecy – undoubtedly contributed to the American people's frantic reactions" (Burrows 1998, 199).¹¹

Third, Eisenhower wished above all else to avoid a race with the Soviet Union. Early in his administration the President charted a course, guided by his economically conservative New Look national defense strategy, which paradoxically privileged nuclear defense capabilities and simultaneously reigned in overheated defense spending and government growth while also publicly deemphasizing the agonistic "race" mentality in decision-making that was so characteristic of US-Soviet relations during the Cold War (Bulkeley 1990; Krug 1991; Launius and McCurdy 1997). The PR contingency document circulated the prior summer by a top secret IGY project working group made this posture, as it related to the space program,

¹¹ National security again tied Republicans' hands during the 1960 Presidential campaign, as Eisenhower was "reportedly furious" that Nixon was unable to counter with factual evidence known to the administration while Kennedy continued to push the missile gap issue (Logsdon 2010, 13).

clear, stating that the United States would “disclaim any intention of engaging in a race with the Soviets” and accept Soviet accomplishments “in the cooperative spirit of the International Geophysical Year” (Bulkeley 1990, 160-161). A Cold War fueled race would undoubtedly prove costly in both dollars and lives while also increasing the potential for escalated shows of force by both nations. And such a gamble, especially in light of the Soviets’ nuclear capabilities, seemed reckless.

Finally, a non-response given the public expectation for Presidential action at a time of national concern was equally unacceptable. For the first time in over a generation, America’s exceptionalism was being openly challenged. The nation that had raised the “Greatest Generation” which won a two-theater world war and rebuilt Europe through the Marshall Plan was suddenly “behind” the Soviets in technical achievement, watching with alarm as the Soviet threat rolled across Europe and Southeast Asia, and struggling with financial and racial troubles at home. The historical phenomenon most often described as the rhetorical presidency (Fisher 1980; Kernell 1986; Tulis 1987) has conditioned the American public to not simply expect, but also accept Presidential talk as an alternative to action and prevailing conditions cried out for a display of leadership. Campbell and Jamieson (1990) note that “all presidents have the opportunity to persuade us to conceive of ourselves in ways compatible with their views of government and the world. At the same time, presidents invite us to see them, the presidency, the country, and the country’s role in specific ways” (18). So, while as the leader of the free world Eisenhower was certainly free to ignore public outcry in the days and weeks following Sputnik and

allow the existing space programs to proceed as planned, such a response would have signaled an absolute miscalculation as to the rhetorical importance of the office and further inflamed national sentiment. On one hand, the American people expected the President to respond but in doing so, he also possessed an opportunity to advance his own vision of the nation's space program in a way that was made consistent with deeply held national beliefs, values, and self-conceptions.

Opening the Next American Frontier: A Rhetorical Exigency

As is evident, Eisenhower's charge was not to persuade a reluctant public of the need to engage in space exploration. Much to the contrary, in fact, as Americans from all walks of life were clamoring for a US space presence, even more so following the Soviet launch of Sputnik I in the fall of 1957 (Launius and McCurdy 1997, 36; McCurdy 1997, 62-63; Burrows 1998, 189). Given his desire to downplay competition and portray US space activities as a serious scientific endeavor, coupled with the pervasive public outcry for a strong national response to Sputnik, couching his pro-space rhetoric in the language of the frontier may, on face, have appeared a risky rhetorical choice. As an enduring national symbol, the frontier embodies rugged individualism, strength, force, competition, and risk, concepts seemingly antithetical to Eisenhower's vision of a cooperative and measured intellectual endeavor (Turner 1976, 37; Kauffman 1994, 5). However, from the start, the administration's space rhetoric featured language that equated outer space with unexplored virgin land, portrayed US space activities as rigorous attempts to master

that unfamiliar environment, and featured such familiar frontier themes as adventure, risk, and challenge, new fields of opportunity, good versus evil, and individualism versus collectivism yet did not rise to the level of myth when considered vis-à-vis the five criteria of the formal/functional perspective discussed above.

Still, that use provided the President with an opportunity to set the terms for discussion, labeling his conservative policies and program with a public-satisfying language that conveyed a sense of action, exploration, and adventure consistent with a longstanding national self-concept and address the pervasive anxiety over safety and image without playing into the rampant Cold War competition gripping the nation. Such a strategy is consistent with metaphor's ability to unite two seemingly distinct elements in a way that encourages a new perspective of both (Krug 1991), in this case a pragmatic program of scientific study with a rugged frontier adventurism that incorporates aspects of cooperation and mutual benefit, and direct audience focus towards the rhetor's recommendations (Osborn 1967). When considered in these metaphorical terms, the public could support Eisenhower's moderate space program "as if" it represented a modern instantiation of the frontier settlement activities that shaped the national character and still feel secure that the response fell in line with the basic and commonly held notions of what it meant to be a rugged American Cold Warrior without needing an outcome that featured a no-holds-barred US-Soviet competition aimed at obliteration of the other in the pursuit of world domination.

For example, in his June 30, 1957 address marking the start of the United Nations' International Geophysical Year, Eisenhower effectively "opened" space as

the next American frontier, declaring that “July first marks the beginning of one of the great scientific adventures of our time,” and concluding with “[W]e wish the scientists of all nations Godspeed and good luck as the International Geophysical Year begins” (Eisenhower, Remarks in Connection with the International Geophysical Year, 1957, June 30, 1957). Consistent with his desire to portray the activities as scientific, the President highlighted the immeasurable knowledge value of the impending earth-orbit satellite launch, adding also that “the most important result of the International Geophysical Year is the demonstration of the ability of peoples of all nations to work together harmoniously for the common good” (Eisenhower, Remarks in Connection with the International Geophysical Year, 1957, June 30, 1957). In addition to highlighting the great adventure aspect of the frontier, the President featured the talented individuals who would master that uncharted territory. However, for Eisenhower space exploration served as the new embodiment of teamwork, where a dedicated group of scientists marshaled their collective talents to return a scientific bounty for the benefit of humankind as opposed to the rugged individual hero that braves the traditional frontier. By extension, a concerted group effort promised to help humankind master nature as opposed to fellow humans. Speaking of the meteorological and geophysical observations collected as a result of the ongoing work, Eisenhower marveled at the possibility of a “new understanding and new power over the forces of Nature” (Eisenhower, Remarks in Connection with the International Geophysical Year, 1957, June 30, 1957). Where a mythic depiction of the mission would likely have depicted a rugged solo hero as a superhuman

battling alone in the unyielding universe to secure the priceless bounty against all odds, Eisenhower's metaphorical usage portrayed only a dialed-down adventure. The talented scientists combined their diverse resources in a carefully calculated, pre-planned series of expeditions over the following year designed to gain beneficial knowledge that could later be used to enhance the human condition.

He repeats many of the same variations on the traditional frontier theme five months later in his November 7, 1957 Radio and Television Address to the American People on Science in National Security. Speaking directly to the growing public concern about national safety following Sputnik, the President again stressed the benefits of science as a cooperative and non-military endeavor, urging Americans to throw their collective support behind his conservative initiative. For Eisenhower, there was far "more to science than its function in strengthening our defense, and much more to our defense than the part played by science" (Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7, 1957). Rather, he considered "[t]he peaceful contributions of science-to healing, to enriching life, to freeing the spirit-these are the most important products of the conquest of nature's secrets" (Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7, 1957). Here again Eisenhower picked up the conquest aspect of the frontier, echoing his previous address in stressing the mastery of nature as opposed to domination of an other. Where a mythic depiction would have spoken to primary societal concerns, in this case national safety and standing, the President's metaphorical frontier adventure

highlighted the exact opposite, the alternative, peaceful, and humanitarian uses of this scientific mastery of nature.

However, these benefits would not come without effort, specifically Soviet cooperation and individual sacrifices by the citizenry (Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7 1957). Ultimately, the President asserted: “What the world needs today even more than a giant leap into outer space, is a giant step toward peace” (Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7 1957). This sentiment was contrasted with an earlier warning against the urge to “mount our charger and try to ride off in all directions at once” (Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7 1957). Once again teamwork and sacrifice, directed towards taming nature rather than fellow beings, promised to benefit humankind and ensure peaceful coexistence. In fact, Eisenhower suggests the possibility that the untamed wilderness, a critical frontier element, was unnecessary to the storyline if peace could be obtained by other means. And as always, moderation and goodwill trumped the restless militancy characteristic of the mythic frontier story. Again, Eisenhower’s metaphorical portrayal of the frontier themes seemed to simply invite a comparison between the controlled scientific endeavors and the nation’s frontier history rather than present a truly mythic quest for solutions to the problems plaguing Cold War society. The account encourages a view of the program “as if” its

pragmatic and systematic experimentation were like a heroic journey, stopping short of depicting the actors, activities, and spoils in a formally mythic way.

So why does Eisenhower utilize frontier language to advocate for conservative positions and peaceful values so very different from the rugged frontier, which focuses on individualism, self versus other, and risk? I suggest that the answer resides in a combination of factors including: the dominance of the frontier in American culture, the obvious parallels between space and the frontier as emergent vistas, and the rhetorical flexibility that the frontier images and ideas provided in light of his situational constraints. In other words, the characteristics of the emerging US space program and the rhetorical environment of mid 1950s America coupled with the strength of the frontier as a dominant social symbol virtually required that the President couch his pro-space discourse in frontier terminology to be accepted by the shaken public (McDougall 1985, 125-128). Anchoring his vision for the program within an enduring societal story that so readily informed our conception of what it meant to be an American offered Eisenhower an opportunity to redefine what the public initially perceived to be an inadequate response as one that fit comfortably within national expectations.

First, outer space and the frontier shared several obvious physical and psychological characteristics that the President could draw upon. Both were vast uncharted expanses replete with danger yet ripe with potential. Such an environment required bravery, a singleness of purpose, purity of motive, and a willingness to accept uncertainty. The Cold War provided an ideal backdrop for frontier imagery.

The two “sides” were clearly drawn between distinct cultures, Soviet and American, occupying well-demarcated territories and possessing antithetical systems of culture and governance that could be handily defined as “good” and “evil.” Further, recent Cold War developments including: Soviet development of ICBM’s, the ongoing tensions in Vietnam, Hungary, and Berlin, and several failed attempts to establish diplomatic relations and enforce international agreements heightened the “us versus them” mentality among the nation’s leaders and the general population. Such clear cut and easy-to-articulate definitions played conveniently into the frontier white hat/black hat agon, setting the scene for a potential “showdown at the OK Corral.”

Additionally, that even Eisenhower’s pragmatic justification of a measured, research-focused program, designed to downplay the competitiveness of a potential space race, co-opted frontier themes speaks to the dominance of the symbol in American life. Clearly the frontier was not the only rhetorical resource available to the Commander in Chief, as a significant body of space fantasy popular literature existed in the United States dating back to the 1830s (McCurdy 1997, 30) and other national scientific endeavors have been captured rhetorically with a variety of non-frontier themes including spatial, temporal, and economic (Miller, 1994, 85). Yet, as space historian Howard McCurdy notes, “popular conceptions of exploration, however, fulfill important human needs. Old myths die hard” (McCurdy 1997, 27). Apparently this remained true for Eisenhower and his administration as well. And the emerging US space program provided just the right raw material for a good story.

As the following analysis will demonstrate, Eisenhower fit his pro-space rhetoric into a prevailing national frontier terministic screen yet redefined several elements in such a way so that space was not viewed as the OK Corral, but rather as an untamed yet known wilderness, removing the storyline from the archetypal and extra-physical environment necessary to satisfy a truly mythic depiction of the events. Key to his desire to deescalate tensions between the US and Soviet Union and avoid a costly and dangerous space race, the President conveyed outer space activities so that the nation was no longer engaging in a mythic storyline featuring white-hatted Americans versus the black-hatted Soviets in an epic struggle for world domination or human transcendence. Rather, the strategy reframed the pertinent challenge “as if” space exploration were a modern parallel to a modified frontier adventure, defined as humankind’s collective and methodical foray into the unyielding physical and psychological environment in an attempt to meet predetermined scientific outcomes and improve the human condition. As such, the new instantiation of the frontier adventure privileged cooperative and conservative values such as progress, restraint, commitment, and patience as opposed to the traditional frontier attributes of individualism, competition, force, and self-aggrandizement.

Further, victory was defined not as beating the Soviets in “space firsts,” but rather in securing a bounty of knowledge from the carefully orchestrated space efforts that could be disseminated to and used by individuals the world over to make everyday life easier, more enjoyable, and more predictable. As indicated in his remarks opening the International Geophysical Year and several subsequent

addresses, Eisenhower clearly intended that any scientific advancement made under the auspices of the space program would be shared with the world (Eisenhower, Remarks in Connection with the International Geophysical Year, 1957, June 30, 1957; Eisenhower, Radio and Television Address to the American People on Science in National Security, November 7 1957; Eisenhower, Our Future Security, November 13, 1957; McDougall 1985, 158-159). And for a nation “now afflicted with self-doubt, humiliation, and mild hysteria [which] was trying desperately to shake its malaise and even the score” (Burrows 1998, 203), a revived expedition into the great beyond seemed a fitting plot progression in the ongoing national narrative.

Eisenhower Speaks

As the formal opening of IGY activities and the launch of Sputnik marked the nation’s entry into serious civilian space exploration, 1957 can be considered the start of Eisenhower’s organized pro-space discourse efforts.¹² The President spoke only seven times on space-related issues and themes, with his November 13th radio and TV address to the American people on “Our Future Security” constituting his most robust articulation of the frontier themes that year. As a collection, the rhetoric stressed four primary points: the peaceful and scientific use of outer space, the disavowal of a “race” mentality, a need for new emphasis on science and scientific education, and an eventual acknowledgement of the potential psychological and political advantage of

¹² A review of the *Public Papers of the President: Dwight D. Eisenhower*, 1952 through 1956 yielded only one additional mention of space activities. In his Annual Budget Message to Congress, delivered on January 16, 1956, the President mentioned the potential for satellite technology development.

being first into space, a concession to the Soviet's achievement with Sputnik.

Frontier themes and imagery appeared overtly in four instances, the June 30th address opening the International Geophysical Year, an October 30th press conference, the November 7th address on Science in National Security, and the November 13th radio and TV address from Oklahoma City, Oklahoma.

In his November 13th address, the President reiterated his characterization of science as the great liberator of the age, declaring: "We live in one of the great ages in the story of mankind. For millions of people science has removed the burden of backbreaking toil. For other millions the hope of a good life is being translated into definite promise," adding also that, with privilege comes duty, noting: "In this wonderful age, we Americans have a special responsibility. We were given a fresh continent and an opportunity to work out a modern dream of how men should work together, live together, and govern themselves" (Eisenhower, *Our Future Security*, November 13, 1957). While highlighting the cooperative nature of the proposed endeavor, he also made an effort to assure his audience that cooperation did not imply fully abandoning the individualism which is such a part of the American identity, stating: "Drawing on all the cultures of the past, and on the rapid growth of science, we worked out a way in which every person can be his own competitive self, and at the same time be a dedicated member of a harmonious community" (Eisenhower, *Our Future Security*, November 13, 1957). Such a distinction was important, as it represented a key difference between the Soviet and American systems. While reiterating frontier themes of adventure, uncharted territory, bounty, and a qualified

redefinition of a cooperative individualism, Eisenhower's use of those themes remained metaphorical in that he again resisted the opportunity to elevate the comparison to a sacred, mythic level. The President stopped short of defining the people, places, and times involved as extra-ordinary or of proclaiming the benefits to solve the truly vexing problems of mankind. Rather, the program, as a modern instantiation of the founders' frontier settlement provided regular American citizens with an opportunity to "work out" a plan to follow as they strove to improve their lot.

Eisenhower used the distinction between America's cooperative autonomy and the Soviet's forced collectivism to assure the nation that while the Soviets may have gained a temporary advantage in space technology, those accomplishments came at a high price, particularly one that "postpones again and again the promise to each man that he will be allowed to be himself, and to enjoy, according to his own desires, the fruits of his own labor" (Eisenhower, *Our Future Security*, November 13, 1957). This contrast formed the basis for his argument against a crash space program which would have likely risen to more mythical grounds as it would have signaled an agonistic and heroic attempt to salvage the nation's image and assure its security. Unlike the Soviet Union, which deferred the dreams and needs of its citizens in order to forward a show of international force at all costs, the United States would carefully consider its options and move forward in a measured and thoughtful way that leveraged the strength of its people and maintained fiscal integrity over time rather than taking advantage of those resources for short term gain. Once again the

methodical, albeit strenuous exploratory foray stopped short of a truly mythic adventure undertaken by heroic superhumans.

Noting that he would be taking a closer look at national infrastructure in the coming days and making specific recommendations, the President used the opportunity to push specifically for strengthening science and math education, enhancing ongoing research efforts, and increasing military spending in the name of national security, counseling that “[t]he biggest part of the task is in the hands of you, as citizens” (Eisenhower, *Our Future Security*, November 13, 1957). While Russian scientific advances, evidenced by the Sputnik launch, aroused American curiosity and concern, Eisenhower declared, “of course, free men are meeting and will meet this challenge,” again evoking the chosen nature of his audience and their duty to do their part for the new national endeavor. Continuing the theme, he asserted: “it has always been my faith that eventual triumph of decency and freedom and right in this world is inevitable. But, as a wise American once observed, it takes a lot of hard work and sacrifice by a lot of people to bring about the inevitable” (Eisenhower, *Our Future Security*, November 13, 1957). Although the speech constitutes one of the earliest comprehensive examples of Eisenhower’s frontier metaphor in his pro-space discourse, he clearly sets the stage for his subsequent remarks, characterizing science as the vast new territory ripe for a collective effort, undertaken by an elite, yet obligated group of modern day pioneers charged with improving the lot of humanity worldwide. The adventure would be challenging and the citizens were up to the challenge, but success was assured if only the group dedicated itself to its purpose,

adhered to its values, and persevered. Yet, the President's use of the frontier themes remained purely metaphorical, again a diluted "as if" comparison that failed to depict the archetypal characters, places, and times demanded of myth to truly suggest solutions to the American identity crisis created by Sputnik.

The President spoke far more frequently on space-related issues and activities in 1958, delivering 22 messages throughout the year to a variety of audiences. Once again, he characterized space as an open field of exploration replete with promise and risk that embodied a great adventure. Highlighting humans' desire to explore, he also stressed that nations with the capability to enter space held a responsibility to promote its peaceful use and spread its benefit to humankind, maintaining a separation between scientific and exploratory functions from defense programs. An increased emphasis on science education and basic research permeated his pro-space discourse throughout the year as he urged several national decision-making bodies to throw their support behind efforts to create the pool of talent and knowledge necessary to support a long term US effort in space. In a change from the prior year's discourse, the President did acknowledge both setbacks in the nation's progress towards a presence in space as well as the deep psychological impact Sputnik had on the American people, calling it a "tough year" (Eisenhower, Press Conference, January 15, 1958).¹³ In several of his remarks throughout the year, he also linked scientific activities and national security concerns under a wider umbrella of the "challenges of the space age," all the while being careful to differentiate the exploratory programs

¹³ Eisenhower would later express his concern and puzzlement over the "psychologically vulnerable" nature of the American people in the wake of Sputnik (McDougall 1985, 148; Burrows 1998, 200).

from those aimed at defense. While the President clearly favored a cooperative approach to the national space efforts and continued to advocate for international agreements on peaceful use, he made fully clear that he did not intend to compromise national safety in the process, all while carefully avoiding the charged language characteristic of a mythic portrayal of the frontier.

Expressions of his reframed frontier metaphor appear most explicitly in six speeches, starting with his Annual Budget Message to Congress in January, where he expounded on the opportunities and dangers that the “new vistas” opened by science and technology provided and declared the year’s budget a response “to the promises and dangers of the dawning age of space conquest” by a people with “a tradition of uniting in action when their freedoms and welfare are threatened” (Eisenhower, Annual Budget Message to Congress, January 13 1958), and ending in late October with a Chicago Republican National Committee Panel Discussion. The March 26 statement accompanying his Science Advisory Committee’s “Introduction to Outer Space,” an explanatory document designed to flesh out his proposed policy for the “non-technical reader,” reinforced “the opportunity to share through [sic] understanding in the adventures which lie ahead,” while reiterating his view “that we and other nations have a great responsibility to promote the peaceful use of space and to utilize the new knowledge obtainable from space science and technology for the benefit of all mankind (Eisenhower, Statement by the President on Releasing the Science Advisory Committee’s ‘Introduction to Outer Space,’ March 26, 1958). While the “adventures” in the new territory and bounty of new knowledge might

evoke a frontier feeling, the peaceful, planned, pragmatic, and polite tenor of the activities and benefits fell short of evoking the heroic actors, extra-ordinary scenes, and archetypal symbolism requisite of myth.

However, the most extended use of the frontier metaphor occurred in his April 2, 1958 Special Message to the Congress Relative to Space Science and Exploration, when Eisenhower again evoked the sense of adventure inherent in frontier exploration at the outset, declaring that his decision to support moderate acceleration of the nation's program comes out of a naturally "compelling urge of man to explore the unknown" (Eisenhower, Special Message to Congress Relative to Space Science and Exploration, April 2, 1958). He justified his decision by noting that early legislation "will help assure that the United States takes full advantage of the knowledge of its scientists, the skill of its engineers and technicians, and the resourcefulness of its industry in meeting the challenges of the space age" (Eisenhower, Special Message to Congress Relative to Space Science and Exploration, April 2, 1958), once again highlighting the importance of responsible and measured action harnessing the nation's superior resources in a group effort. And as a result of the nation's continued urge to explore, if fully and reasonably supported, the reward would return "the expansion of human knowledge of outer space and the use of space technology for scientific inquiry," as well as "the promotion of cooperation with other nations in space science and technology," while also "assuring the most effective utilization of the scientific and engineering resources of the United States and the avoidance of duplication of facilities and equipment" (Eisenhower, Special Message to Congress

Relative to Space Science and Exploration, April 2, 1958). While speaking to a universal primal urge for exploration and adventure in this instance, the account remained metaphorical as the President's characters again fell short of possessing grand or heroic powers. Similarly, the depiction lacked archetypal symbolism and the bounty failed to provide the advanced lessons or solutions necessary to address the present crisis of safety and image felt by the American people.

Eisenhower's rationalization for a civilian space program aptly illustrated his conservative approach as he stated:

I have reached this conclusion 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. (Eisenhower, Special Message to Congress Relative to Space Science and Exploration, April 2, 1958)

In introducing the National Aeronautics and Space Administration to the American people, the President combined several frontier themes, including the challenging appeal of the vast new expanse, the cooperative spirit of exploration, and the humanitarian benefit of the bounty yet did so without arousing the restless competitiveness that might be evoked by a mythic form of the story should the same themes be presented with rousing archetypal symbolism.

1959 saw a small decline in presidential pro-space discourse, as Eisenhower spoke 15 times on the subject with only three comprehensive and extended articulations of his frontier metaphor. Throughout the collection of space rhetoric, he

stressed three primary points during the year. First, he took frequent opportunity to celebrate the nation's progress in space, which included the bolstering of civilian space efforts through the formation of NASA, the successful launch of five satellites since the inception of the American program, and the launch and capture of a large quantity of data from the aptly-named Pioneer IV space probe. Second, he stressed the need for continued bureaucratic and public support of research, educational, and explorative efforts in order to continue the successes seen in the IGY activities and subsequent endeavors. Third and perhaps most often, he reiterated that the US had been and would continue to follow a measured and sensible space program rather than enter a race, often coupling that with a celebration of the teamwork and group effort involved. The most powerful expression of this final point came in the statement of transmission accompanying NASA's first annual report of activities, where he declared that after a year following a moderate philosophy the "report makes clear that the Nation has the knowledge, the skill and the will to move ahead swiftly and surely in these rapidly developing areas of technology," calling the achievements of the year "a record of solid achievement in a most intricate and exacting enterprise" (Eisenhower, Message to the Congress Transmitting the First Annual Report Under the National Aeronautics and Space Act, February 2, 1959).

A telling use of his frontier metaphor came early in the year in a statement following the Soviet launch of a space probe. Although neither the longest nor the most detailed expression, the statement both acknowledged and embodied his interpretation of the metaphor, as he remarked: "[t]he successful launching, as

announced by the Soviets, of a vehicle designed to pass near the moon, represents a great stride forward in man's advance into the infinite reaches of outer space. To the scientists and engineers assigned to this undertaking, a full measure of credit is due and we congratulate them on this achievement” (Eisenhower, Statement by the President on the Launching of a Space Probe by the U.S.S.R., January 3, 1959). Eisenhower’s congratulatory approach enacted his cooperative philosophy, emphasizing the cumulative benefit of the Soviet achievement, while the content highlighted space’s physical parallel with the frontier as well as the non-military character of those involved, and the teamwork required to be successful. While “infinite reaches” begins to approximate the sort of extra-ordinary scene necessary for a mythic adventure, the scientists and engineers as highly trained technical experts again fell short of superhuman characters and the launch. And although the successful launch extended existing knowledge, the benefit hardly managed to solve the great problems of humanity. Here, the epideictic occasion may offer a hint as to why the President utilized a slightly elevated language while still tempering his remarks.

He repeated those sentiments days later in his State of the Union. In addition to cautioning the people that “[t]here can be no such thing as Fortress America,” and complementing the Soviets on their “brilliant” achievements in space, the President urged continued support for his conservative space program that both “gathered information of scientific importance never before available” and “foreshadows new developments in world-wide communications” (Eisenhower, Annual Message to the Congress on the State of the Union, January 9, 1959). Once again, Eisenhower used

the ceremonial opportunity to advocate for his measured scientific program that emphasized international cooperation and benefit to humankind, and to repeat the theme of scientific advance for worldwide benefit. In this instance, however, the President eschewed a metaphorical frontier comparison for a more pragmatic line of argument despite the presence of the familiar themes. His strategic use of a more pragmatic rationale is noteworthy, as praising Soviet accomplishments in the lofty mythic or even stirring metaphorical terms common in a State of the Union address would have been damaging to American morale given the existing Cold War anxieties and may have sent an overly rousing message to the Soviets.

There was another uptick in presidential pro-space discourse in 1960 and 1961 as Eisenhower spoke 22 times on space issues with nine containing extended adaptations of his frontier metaphor.¹⁴ The President's discourse focused around four topics, three familiar and one relatively new. Echoing his rhetoric of previous years, he again stressed the importance of cooperation in the space program, characterizing the collaboration of scientists and technicians from various institutions and organizations, of diverse governmental organizations, and of public and private sector interests as vital to continued progress. Previous success in outer space endeavors resulted from the synergistic relationship between imaginative scientists, selfless organizations, and progressive and responsive industry under the strong leadership of

¹⁴ As the President remained in office only briefly into the 1961 calendar year, primarily conducting administrative wrap up rather than articulating new policy, I have chosen to include three space-related addresses in 1961 with his 1960 discourse, considering the grouping to constitute only one annual administrative cycle. However, the 1960 Presidential campaign discourse combined with Kennedy's 26 pro-space messages during his first year in office on top of Eisenhower's space rhetoric exposed the American public to a particularly robust body of presidential pro-space rhetoric during the period.

the National Aeronautic and Space Administration and future success was predicated on a continuation of that ethic. In short, to achieve the virtue of progress, the nation must remain selfless and cooperative.

Also in line with his prior rhetoric, Eisenhower took pains to differentiate the nation's military from its civilian space efforts, often using purpose as the deciding factor, and to stress that activities in one were not attached to the activities or funding of the other. In order to maintain the distinction in practice as well as words, the President transferred a division of the Army's Ballistic Missile program which had developed much of the lift technology necessary for satellite transport to NASA at the end of 1959 and recommended that Congress amend the National Aeronautics and Space Act in the winter of 1960 in order to maintain the strict separation of defense and exploratory activities. Related to the military/civilian distinction, he stressed the differences between "spectacles"--space stunts such as Sputnik and the placement of a Soviet standard on the lunar surface, designed to immediately shock and impress audiences--and steady and deliberate plans for programmatic space exploration in line with the US endeavors. The former served as little more than a thin, yet expensive, veneer for a defense-focused rocketry program at the expense of the needs of civilians while the latter constituted a legitimate and calculated public investment in technology and knowledge that would ultimately benefit humankind (Eisenhower, Annual Budget Message to Congress, January 18, 1960).

The President utilized an additional theme more liberally in his 1960/61 discourse as well, speaking frequently on the "conquest" of space for the benefit of

humankind. Perhaps encouraged by the nation's recent achievements in space, including several weather and communication satellites and successful manned and unmanned flights, as well as his waning time in office, Eisenhower declared that the United States led the Soviets in space exploration, as opposed to stunts (Eisenhower, Address at the Republican National Convention in Chicago, July 26, 1960; Eisenhower, Remarks Upon the Inspection of the Capsule Retrieved From the Satellite Discoverer XIII, August 15, 1960; Eisenhower, Statement on US Achievements in Space, August 17, 1960; Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960; Eisenhower, Annual Message to the Congress on the State of the Union, January 12, 1961). As a fitting bookend to his promises of 1957, the President was able to announce at least an initial realization of his pragmatic vision as his second term came to a close, symbolically rewarding the nation for its patience with his conservative and research-focused space program. The moderate and disciplined program, driven by altruistic motives, and leveraging the combined strength of America's greatest scientific, technological, and industrial minds had managed to top the Soviets in its own time, all the while maintaining its fiscal integrity and refraining from placing an unwarranted burden on the citizenry. Further, the nation's success was virtually guaranteed under the present system, as the cumulative benefits of the scientific discoveries would only continue to accrue and strong programmatic and fiscal management promised that the space activities could continue for years to come.

Early in the year, the President was able to report that “[m]uch information of far-reaching significance was acquired on the frontiers of science and technology; substantial gains were made, ranging from advances in aircraft and space vehicle design to greatly improved understanding of the environment in which our planet exists and by which its natural forces and life are conditioned, thanks to the work of “the tremendous efforts of the American scientists, engineers, and technicians who, in the short space of the past five years, have performed miraculously in developing United States rocket technology” (Eisenhower, Message to the Congress Transmitting Second Annual Report on U.S. Aeronautical and Space Activities, February 24, 1960). In following his conservative program focused on cooperation and scientific as opposed to military superiority, he believed that NASA had made great strides toward achieving “the paramount goal, the conquest of space for the benefit of all mankind” (Eisenhower, Message to the Congress Transmitting Second Annual Report on U.S. Aeronautical and Space Activities, February 24, 1960). The emergence of the more assertive, almost archetypal, tone of miraculous accomplishments and conquest of space, accompanying the familiar themes of cooperation and scientific benefit is interesting to note at this point in his administration. I suggest that the shift may be explained by a confluence of two factors. First, the conservative program had delivered upon its promises, assuring a competitive American presence in space. Second, the President was nearing the end of his second term in office and would soon hand the program and the nations’ concerns off to his successor.

He made similar statements, also more competitive and militaristic in tone, in an August 17 address on US Achievements in Space, its tenor again explained by the ceremonial occasion. Here, Eisenhower declared that “[t]he events of the past weeks have demonstrated beyond all doubt the vigor, capabilities and leadership of the United States in the conquest of the frontiers of science and technology and, in particular, in the exploration and utilization of space” (Eisenhower, Statement of the President on U.S. Achievements in Space, August 17, 1960). Again, he highlighted his measured approach by noting: “[a]ll these are the results of a well planned and determined attack on this new field-an attack that promises very real and useful results for all mankind” and justified his conservative vision with the observation that, “[w]hile no one of them has been undertaken solely in an effort to achieve a ‘spectacular first’ in the eyes of the world, each has resulted in just such a ‘spectacular first’ in support of the desires of mankind for greater knowledge and understanding. The United States leads the world in the activities in the space field that promise real benefits to mankind” (Eisenhower, Statement of the President on U.S. Achievements in Space, August 17, 1960). Once again, the President capitalized on the notion of space as a new national frontier ripe for exploration while also coupling the image with his vision for a measured approach. In this instance, he was able to offer results which seemed to support his consistent argument that a crash program was unnecessary to produce noteworthy firsts. Eisenhower’s more assertive tone and overtly frontier themes of conquest, attack, and spectacle are noteworthy yet again and can likely be explained by several situational factors. In addition to the

concrete results and waning term cited above, the ceremonial occasion certainly demanded a loftier turn of phrase. Also, Massachusetts Senator John F. Kennedy had kicked off his presidential campaign a month earlier with a shot at the administration's space effort. In his acceptance address, Kennedy asked whether "on this frontier at a turning-point in history," the nation had the nerve and will to "race for a mastery of the sky and the rain, the oceans and the tides, the far side of space and the inside of men's minds" (Kennedy, Address of Senator John F. Kennedy Accepting the Democratic Party Nomination for the Presidency of the United States, July 15, 1960). The President's choice of language could reflect a desire to respond authoritatively to the Senator's overt challenge while continuing to justify his conservative program.

Eisenhower's pragmatic and metaphor-based justification of his space program saw full realization in his September 8, 1960 Remarks at the Dedication of the Marshall Space Flight Center. With the 1960 presidential campaign now in full swing, the President spoke at the dedication of the new facility, named in honor of General George C. Marshall who he believed to embody the qualities of the "nation's highest ideals," including selflessness, prudence, humility, bravery, and intelligence and "in whose name we carry forward this activity" (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960). For Eisenhower, the General, and by extension the rest of the staff working to carry on his legacy at the Huntsville facility clearly represented the sort of benevolent, cooperative motive privileged by his interpretation of the frontier

metaphor. He similarly captured the vast and appealing nature of the frontier in his opening when he declared: “[t]o move conceptually, in one generation, from the hundreds of yards that once bounded my tactical world to the unending millions of miles that beckon these men forward, is a startling transformation” (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960). And he incorporated his last frontier theme, the value of the accrued bounty, shortly after by saying “these and other space ventures have opened new vistas of thought, of understanding, and of opportunity” (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960).

Not unlike his November 13, 1957 remarks in Oklahoma City, the President used the opportunity to draw an explicit comparison between the United States and the Soviet Union, attributing the nation’s quickly realized and ongoing success in outer space to its superior values. Here he argued that the “truth” not to be overlooked among the remarkable feats was that:

All that we have already accomplished, and all in the future that we shall achieve, is the outgrowth not of a soulless, barren technology, nor of a grasping state imperialism. Rather, it is the product of unrestrained human talent and energy restlessly probing for the betterment of humanity. We are propelled in these efforts by ingenuity and industry, by courage to overcome disappointment and failure, by free-ranging imagination, by insistence upon excellence-with none of this imposed by fiat, none of it ordered by a domineering bureaucracy. (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960)

For Eisenhower, the recent successes in outer space research were the proof “once again that hard work, toughness of spirit, and self-reliant enterprise are not mere

catchwords of an era dead and gone” (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960). Rather, the US Space Program, pragmatic, cooperative, scientific, and benevolent in character embodied a modern “fulfillment of America's dream” (Eisenhower, Remarks at the Dedication of the George C. Marshall Space Flight Center, Huntsville, Alabama, September 8, 1960). While the language still stopped short of a truly mythic portrayal of the program, replete with archetypal characters and places, the address did feature a more competitive spirit. Once again the occasion, a ceremonial event taking place against the backdrop of a successful space program during an election year, may explain Eisenhower’s choice of loftier images and ideas.

Conclusion

Whether American esprit de corps had reached a historic low in October of 1957 or not is debatable. However, what is clear is that the successful launch of two Soviet satellites with the Cold War as a backdrop necessitated a strong national response in both words and action. Dedicated to both reducing what he saw as runaway spending by previous administrations while also minimizing the growing sense of US-Soviet competition in several international arenas, President Dwight D. Eisenhower articulated his vision for a measured and purposeful program of civilian space exploration via a redefined frontier metaphor. While other rhetorical options existed, the power and durability of frontier images and ideas within the national psyche, combined with the many similar characteristics between space and the

frontier, the growing Cold War agon, and the prevailing challenge to a long-held idea of American exceptionalism allowed the President to easily co-opt the reaffirming language of the frontier to justify a pragmatic and cooperative response.

The foregoing analysis of Eisenhower's pro-space discourse between 1957 and 1961 reveals two primary adaptations of traditional frontier themes within his rhetoric. First, the President defined scientific space exploration as the great adventure of the era, declaring it no less than one of the "great ages in the story of mankind" (Eisenhower, *Our Future Security*, November 13, 1957). By definition, scientific endeavors privilege calculated and cooperative efforts, precise and measured responses, and objective detachment--just the type of cool-headed behavior that he believed would benefit the nation in a volatile time. Second, in privileging the program's knowledge value over its potential defense capabilities, he sought to highlight the program's potential for US-Soviet cooperation and its inherent humanitarian benefit while also quelling a national push towards entering what he saw to be a costly and destructive "space race." By valuing engagement over conflict, Eisenhower could portray all scientific achievements in outer space as positive, whether US or Soviet, further enhancing the cooperative spirit he chose to encourage and downplaying the need to develop a crash program to keep up with Soviet advances. This stark differentiation between scientific and militaristic uses of and activities in space was key to the President's rhetorical strategy, a tactic made clear as early as October 1957 and embodied philosophically in the creation of NASA a year later. At no point in the Eisenhower presidency, did the United States abandon

its missile defense program (McDougall 1985, 128-129). Defense-related activities simply took place separate from the civilian space exploration efforts in stark contrast to the Soviet's combined defense/exploratory program.¹⁵

The President's reliance on a cooperative and conservative variant of the frontier story to justify a measured and scientific program, and its at least partial acceptance by the American public, suggests two lessons. First, it attests to the dominance of that constellation of images and ideas as a societal story. Despite a rich storehouse of available rhetorical options supplied by, among other things, a robust body of space fantasy and science fiction, Eisenhower chose to redefine the frontier in order to justify his pragmatic approach to national space activities in the face of a complex and urgent rhetorical situation. Second, it hints at an important separation between mythic and metaphoric portrayals of powerful societal stories. Given the amount of heavy lifting that Eisenhower's redefinition required to move public opinion from its state of near panic to one of confident acceptance, perhaps his pragmatic and metaphoric approach was too conservative, not allowing the account to effectively compete against the gravity of the situation. The ability of myth to bring origins, values, institutions, policies, science, and religion together into a coherent whole that engages the heart and mind simultaneously may have made it a wiser strategic choice. However, the use of frontier symbolism by one administration, early

¹⁵ Space historians note that the separation of civilian and defense projects in the United States Space Program was far less clear in practice, a fact that was not publicly recognized by the White House until mid-way into the Kennedy Administration (Kennedy, Press Conference, August 22, 1962). Contrary to the Eisenhower Administration's declaratory policy, space flight was clearly a bi-product of missile defense work and much of the satellite technology developed through the nation's IGY project, and later NASA, enhanced intelligence gathering efforts from the get go (McDougall 1985, 134; Bulkeley 1990, 157-158, 176; Burrows 1998, 216-217).

in the space program is not indicative of the story's corner on the rhetorical market. The important question remains, would the frontier framework hold as the program, and the nation, matured?

CHAPTER FOUR

“This nation has tossed its cap over the wall of space, and we have no choice but to follow it.”

- John F. Kennedy, 1963

Although Kennedy’s presidential bid did not hinge on his proposed space policy, space historians attribute the Democrat’s victory in part to voter frustration with the Eisenhower Administration’s conservative attitude towards outer space (Krug 1991, 30; Byrnes 1994, 37; Launius and McCurdy 1997, 51; Burrows 1998, 319; Sorensen 2008, 334). Where for Eisenhower Sputnik became synonymous with unwarranted panic and angst (Eisenhower, Press Conference, April 16 1958), for Kennedy the Soviets’ ongoing accomplishments in space represented nothing less than the ultimate national setback (Kennedy, Question and Answer Period Following Speech of Senator John F. Kennedy, Coliseum, Raleigh, N.C., September 17, 1960, September 17, 1960; Kennedy, Remarks of Senator John F. Kennedy, Municipal Auditorium, Canton, Ohio, September 27, 1960, September 27, 1960; Kennedy, Democratic Party of California Dinner, November 18, 1961). Candidate Kennedy used Eisenhower’s slow and steady space policy as illustrative of the administration’s, and by extension candidate Richard Nixon’s, lack of competitive vision and complete inability to maintain national prestige during the Cold War (Byrnes 1994, 37-38; Launius and McCurdy 1997, 51).

While the Kennedy campaign was quick to use America’s weak record in space against the Republicans, they offered little in the way of concrete initiatives of

their own; however, space activities did dovetail seamlessly with his broader national vision (Kennedy, Address Accepting the Democratic Party Nomination for the Presidency of the United States, July 15, 1960; Kennedy, Remarks of Senator John F. Kennedy, Do Drop Inn, Muskegon, Mich., September 5, 1960, September 5, 1960; Kennedy, Excerpts From an Address Delivered by Senator John F. Kennedy in at Pocatello, Idaho, September 6, 1960, September 6, 1960; Kennedy, Speech of Senator John F. Kennedy, Civic Auditorium, Portland, Oreg., September 7 1960, September 7, 1960; Kennedy, Remarks of Senator John F. Kennedy, Roosevelt Field, Norristown, Pa, October 29, 1960, October 29, 1960; Kennedy, Speech of Senator John F. Kennedy, Valley Forge Country Club, Valley Forge, Pa, October 29, 1960, October 29, 1960; Kennedy, Speech of Senator John F. Kennedy, Chicago Auditorium, Chicago, Ill., November 4, 1960, November 4, 1960; Kauffman 1994, 5). Even the Democratic Party Platform remained vague, declaring only that the Republicans had “remained incredibly blind to the prospects of space exploration” while Democrats vowed to “press forward . . . in full realization of the importance of space accomplishments to our national security and international prestige” (Kennedy, Democratic Party Platform of 1960, July 11, 1960). With the exception of advocating for an international agreement on accepted military uses of space, the Democrats primarily urged the nation to “face the facts and pay the cost” (Kennedy, Speech of Senator John F. Kennedy, VFW Convention, Detroit, Mich., Friday, August 26, 1960, August 26, 1960), to ask “how any citizen can vote for a political party and leadership which permits us to be second in space” (Kennedy, Remarks of Senator John F.

Kennedy, Lawrence Stadium, Wichita, Kans., October 22, 1960, October 22, 1960), and ultimately to decide whether the nation would continue to be second in space and graduate half as many scientists and engineers as the Soviets or “also do other things” (Kennedy, Speech of Senator John F. Kennedy, Scranton, Pa, October 28, 1960, October 28, 1960). Those other things constituted “new problems” that would require “new people, new solutions, new ideas, and requiring above all a sense of dedication to the cause of freedom” (Kennedy, Remarks of Senator John F. Kennedy, Roosevelt Field, Norristown, Pa, October 29, 1960, October 29, 1960).

Much like his predecessor, Kennedy lacked an intrinsic interest in and knowledge of outer space (Logsdon 2010, 1). Rather, as space historians note, the Democrat saw the issue as one more vista ripe for campaign sloganeering (McDougall 1985, 317; Krug 1991, 30; Burrows 1998, 320; Logsdon 2010, 8). That Kennedy’s space rhetoric did not evolve during the transition period or his early days in office and that significant policy or personnel changes were not made, suggest that the new president was initially more concerned with outer space for its rhetorical significance than with the realities of the nation’s languishing space program (Krug 1991, 30; Burrows 1998, 320-321; Logsdon 2010, 13, 35). To wit, Hugh Dryden, deputy director of NASA during the Eisenhower administration, was not asked by the incoming administration to remain on board until the eleventh hour, making the space agency’s formal directorship the senior most unfilled position in the administration at the start of Kennedy’s presidency (Logsdon 2010, 35, 39). James Webb was not sworn in as department head until early February 1961 amidst continuing questions

about the agency's direction and competence (McDougall 1985, 310-312; Kauffman 1994, 12; Burrows 1998, 320; Logsdon 2010, 39-43). Further, space historians point to Kennedy's request for Vice President Lyndon Johnson to assume leadership of the dwindling Space Council, a role traditionally held by the President, as additional proof of the low priority he placed on space issues (McDougall 1985, 319; Burrows 1998, 321; Logsdon 2010, 28-31). Presidential disinterest in space policy did not last long into the administration, however, as Kennedy "learned on the job" (Sorensen 2008, 334) for a period before ultimately declaring the moon shot "among the most important decisions that will be made during my incumbency in the Office of the Presidency" (Kennedy, Address at Rice University, Houston, TX, September 12, 1962).

Where Eisenhower's pro-space rhetoric co-opted frontier themes in line with the dominant social narrative as both a pragmatic response to a series of challenging events and a justification for the administration's measured and minimally competitive approach, Kennedy's utilization of frontier images and ideas followed a functional progression from a pragmatic to a mythic use by the end of his term. A review of Kennedy's pro-space discourse will illustrate that the rhetoric shifted over the course of his administration from pragmatic to mythic in response to situational, audience, and personal factors. International events, including continued Soviet space firsts, the Bay of Pigs debacle, and the Cuban Missile Crisis, accompanied by an increased call among members of the public for a more aggressive US space presence, and the President's rhetorical style contributed to his increased reliance on a

soaring tone that incorporated strong archetypal imagery and mythic themes outside the bounds of normal space, time, and history. The progressive change in tone and themes builds from the occasional flash in his ceremonial rhetoric on the campaign trail to consistent use across all genres of space talk by the spring of 1961, following the Bay of Pigs. While his September 1962 Address at Rice University provides an extended view of his mythic approach and rich language in the course of a single speech, assassination cut the full realization of the mythic trajectory short in the fall of 1963. However, his speeches during the fateful Texas trip along with the undelivered remarks prepared for an Austin reception on the evening of November 22 suggest that Kennedy was committed to a mythic depiction of the nation's space program during his reelection campaign. In the following section, I will review Kennedy's early, pragmatic pro-space discourse with an eye to instances where the mythic shift begins to surface before suggesting three reasons to explain why the shift occurred.

Kennedy Speaks

During the 1960 presidential campaign, a relatively short affair by modern standards, Senator John F. Kennedy spoke 42 times on space-themed topics. Hints of his soaring mythic framing appear occasionally, predominantly in language choice, but the candidate utilized a pragmatic framing, similar to that of Eisenhower, while on the campaign trail. His remarks during most appearances focused on the administration's record, presenting facts and outcomes as a way to highlight the gap

between rhetoric and record. By focusing on Eisenhower's record with factual evidence, stressing predominantly material over emotional or spiritual dividends, and focusing on the here and now, the storyline Kennedy chose was more strongly pragmatic in character than his future discourse would be. Eisenhower and his conservative program were falling short in the effort to promote a strong national image at home or abroad, and the facts proved it. America was losing the battle against the environment, not to mention the Soviets, and struggling to return with the promised bounty. Teamwork was failing for a lack of qualified members and singleness of purpose. The solution was not to return to a mythic past for power from a collective national pool of values, symbols, or creation stories, nor was it to rely on a sort of resurrected mythic hero. Rather, America needed the tools, the training, and the leadership to go forth and do the job right or else safety and a way of life were at stake.

A familiar refrain throughout that fall reminded voters from California to Connecticut that the first satellite to orbit the earth was called Sputnik, not Vanguard; the first vehicle to the moon was Lunik; and the first space passengers were named Strelka and Belka, not Rover, Fido, or even Checkers (Kennedy, Speech of Senator John F. Kennedy, VFW Convention, Detroit, Mich., Friday, August 26, 1960, Kennedy, Remarks of Senator John F. Kennedy, Do Drop Inn, Muskegon, Mich., September 5, 1960, September 5, 1960; Kennedy, Speech of Senator John F. Kennedy, Civic Auditorium, Portland, Oreg., September 7 1960, September 7, 1960; Kennedy, Remarks of Senator John F. Kennedy, Reyburn Plaza, Philadelphia, Pa,

October 31, 1960, October 31, 1960). Further, Kennedy never hesitated to revisit Nixon's then infamous kitchen retort to Khrushchev's space boast that the Soviets "may be ahead of us in rocket thrusts but we're ahead of you in color television" ("Face-to-Face Nixon-Kennedy" Joint Radio/TV Broadcast, October 21, 1960, 269; Kennedy, Remarks of Senator John F. Kennedy, Lord & Taylor Shopping Center, Philadelphia, Pa, October 29, 1960, October 29, 1960).

For the Kennedy camp, capitalizing on the perceived space gap provided a potent symbol of perilous decline in several important national indicators that the Truman and Eisenhower administration had permitted (McDougall 1985, 302; Byrnes 1994, 37-38; Launius and McCurdy 1997, 51; Burrows 1998, 320). The argument proved multi-layered. On the surface, the Russians beat the Americans to the new frontier, a damaging development in and of itself. However in doing so, the formerly "backward" nation had managed to marshal its economic, industrial, educational, scientific, and military means of production in a startlingly short period of time and throw both its achievement, and its cheerful little weather satellite, into the face of the greatest nation on the planet, which couldn't seem to accomplish a similar task with many of those same mechanisms already in place (Kennedy, Question and Answer Period Following the Speech of Senator John F. Kennedy, Coliseum, Raleigh, N.C., September 17, 1960, September 17, 1960; Kennedy, Speech of Senator John F. Kennedy, Salt Lake City, Utah, Mormon Tabernacle, Friday, September 23, 1960, September 23, 1960). Getting beat by a worthy foe was one thing, but to be shown up by a second-rate society was something totally, and disconcertingly, different

Kennedy argued, and certainly not an acceptable outcome for a chosen people. He reminded the nation of this in his Address to the Greater Houston Ministerial Association, a speech most often considered in the context of the Senator's Catholicism. However, JFK felt that there were more important issues to address when he told the audience "[w]hile the so-called religious issue is necessarily and properly the chief topic here tonight, I want to emphasize from the outset that we have far more critical issues to face in the 1960 election; . . .an America too late to the moon and outer space" (Kennedy, Speech of Senator John F. Kennedy, Greater Houston Ministerial Association, Rice Hotel, Houston, Tex., Monday Evening, September 12, 1960, September 12, 1960). Just shy of two weeks later, at an event in Salt Lake City, Utah, the Senator declared that "the products of [the Soviet Union's] once-backward education system have surpassed our vaunted science and engineering in launching rockets to the moon and outer space," adding that "[i]n almost every area of competition – military, diplomatic, economic, scientific, and educational – the Communists are now capable of competing with the United States on nearly equal terms" (Kennedy, Speech of Senator John F. Kennedy, Salt Lake City, Utah, Mormon Tabernacle, Friday, September 23, 1960, September 23, 1960). Days later in Canton, Ohio he told those assembled that he did not think "Khrushchev has had it so good as he has had it lately, calling the Soviet's presence in outer space "the most serious defeat the United States has suffered in many, many years" (Kennedy, Remarks of Senator John F. Kennedy, Municipal Auditorium, Canton, Ohio, September 27, 1960, September 27, 1960).

Additionally, where GDP, quarterly output, thrust capacity, and inventory of fissionable materials proved complex and nuanced measures of Cold War success to articulate on the campaign trail, the presence of a Russian satellite in orbit gave the Democratic party, the American people, and the international community an understandable and easily presentable gauge of what seemed to be a severe imbalance of international potential (Kennedy, Remarks of Senator John F. Kennedy, Municipal Auditorium, Canton, Ohio, September 27, 1960, September 27, 1960; Kennedy, Remarks of Senator John F. Kennedy, Lord & Taylor Shopping Center, Philadelphia, Pa, October 29, 1960, October 29, 1960). In Canton, Ohio, the Senator reminded his audience that the “people around the world equate the mission to the moon, the mission to outer space, with productive and scientific superiority. Therefore, in spite of all our accomplishments, because we failed to recognize the impact that being first in outer space would have, the impression began to move around the world that the Soviet Union was on the march, that it had definite goals, that it knew how to accomplish them, and that we were standing still” (Kennedy, Remarks of Senator John F. Kennedy, Municipal Auditorium, Canton, Ohio, September 27, 1960, September 27, 1960). The same was true of America’s ability to “turn out one half as many scientists and engineers” (Kennedy, Remarks of Senator John F. Kennedy, Granite City, Ill., Auto Rally, October 3, 1960, October 3, 1960; Kennedy, Remarks of Senator John F. Kennedy, Muncie, Ind., October 5, 1960, October 5, 1960; Kennedy, Remarks of Senator John F. Kennedy, Street Rally, Elgin, Ill., October 25, 1960, October 25, 1960; Kennedy, Speech of Senator John F. Kennedy, Scranton, Pa,

October 28, 1960, October 28, 1960) as the Soviets. And such imbalances, he stated, posed a grave threat to national security as well as international standing (Byrnes 1994, 38).

Kennedy leveraged the space gap to illustrate a host of shortcomings in Republican leadership and policy and foster a renewed sense of urgency in the American people (Launius and McCurdy 1997, 51; Logsdon 2010, 8). The world was changing rapidly, Kennedy argued, and the Republicans were content to languish in a polite and comfortable post-war stupor, perhaps in front of their color televisions, while time passed them by. In typical campaign logic, Kennedy crafted a message in which Sputnik illustrated the effects of gross overcrowding and underfunding in the nation's education system, again stressing the material over emotional dividends of the space program and, as such operating from a far more pragmatic than mythic framework. Rather than using archetypal terminology to highlight a sense of national calling or define space as the next arena for conquest, the Senator spoke concretely in policy terms, specifically of the Defense Education Act. In an appearance in Raleigh, North Carolina JFK criticized the Eisenhower administration for not using the program's scholarships and loans "nearly as generally as I think they could be used to help bright young boys and girls go to college" (Kennedy, Question and Answer Period Following Speech of Senator John F. Kennedy, Coliseum, Raleigh, N.C., September 17, 1960, September 17, 1960), and close the gap opened by the graduation of twice as many Soviet as US scientists. More time, attention, and funds were required to build the schools, stock the classrooms and labs, fund opportunities

for the less fortunate and for graduate level training, and pay the teachers' salaries to bring domestic math and science education up to a space-ready standard.

Further, the argument pressed, as world economies shifted increasingly to techno-industrial bases, the US lacked the sort of scientific and technological means, and perhaps even competitive zeal, to keep up in an ever-changing, atomic, global market. In Billings, Montana, Kennedy unveiled a nine-point plan which called for the nation to develop a space program that leveraged “the same scientific talents and energies which we have applied to the development of our national defense” (Kennedy, Speech of Senator John F. Kennedy, Shrine Auditorium, Billings, Mont., September 22, 1960, September 22, 1960). For JFK, when America lagged behind in production of scientists, engineers, and high-tech widgets, it suffered militarily and diplomatically (Kennedy, Speech of Senator John F. Kennedy, VFW Convention, Detroit, Mich., Friday, August 26, 1960, August 26, 1960; Kennedy, Remarks of Senator John F. Kennedy, Municipal Auditorium, Canton, Ohio, September 27, 1960, September 27, 1960).

Internationally, Cold War alliances were up for grabs and superiority in space represented one important and impressive measure of national vigor, militarily, economically, and technologically (McDougall 1985, 317; Burrows 1998, 320). The Kennedy campaign cited Sputnik among the litany of recent Republican diplomatic debacles that also included Suez, Cuba, the Congo, and the collapse of the recent US-Soviet summit in Geneva (Kennedy, Speech of Senator John F. Kennedy, VFW Convention, Detroit, Mich., Friday, August 26, 1960, August 26, 1960; Kennedy,

Remarks of Senator John F. Kennedy, Shaunee [sic] Mission East High School, Kansas City, Kans., October 22, 1960, October 22, 1960; Kennedy, Speech of Senator John F. Kennedy, Milwaukee, Wis., October 23, 1960, October 23, 1960; Kennedy, Remarks of Senator John F. Kennedy Albuquerque, N. Mex., November 3, 1960, November 3, 1960). To further their argument, the Democrats pointed to a July 1960 US Information Agency/Gallup Poll survey of ten international powers, in which most respondents believed that the Soviet Union led America in science and would trump the United States militarily by 1970 as a result of Soviet space superiority (Kennedy, Remarks of Senator John F. Kennedy, Belleville, Ill., October 3, 1960, October 3, 1960; Kennedy, Remarks of Senator John F. Kennedy, Government Square, Cincinnati, Ohio, October 6 1960, October 6, 1960; “Face-to-Face Nixon-Kennedy” Joint Radio/TV Broadcast, October 13, 1960; “Face-to-Face Nixon-Kennedy” Joint Radio/TV Broadcast, October 21, 1960; Kennedy, Remarks of Senator John F. Kennedy, Lord & Taylor Shopping Center, Philadelphia, Pa, October 29, 1960, October 29, 1960).

Such an international reputation, Kennedy argued, put not only the nation’s standing but also its safety at risk. At a point when communism was knocking on America’s back door, any sign of weakness threatened to shake international confidence, potentially leading developing Latin American and African nations to join forces with the Soviets. Kennedy reminded voters of this in a September appearance in Portland Oregon when he stated, “I do not believe that there is any American who can be satisfied with that strength and prestige as it is reflected in

events around us in the southern half of the globe. Americans wonder why it was that Africans who some years ago quoted Thomas Jefferson and Lincoln and Franklin and Roosevelt now quote Karl Marx in the Congo. They wonder why the nations of South America who once were engaged in a great enterprise called the good neighbor policy should now stone the Vice President of the United States. They wonder why America, which was once regarded in the 1930s with so much friendship on the island of Cuba should now be reviled and attacked by the erratic leader of that island only 90 miles from our shore,” adding also emerging countries “are no longer certain that America’s lead will continue in the future when they see the missile gap widen” (Kennedy, Speech of Senator John F. Kennedy, Civic Auditorium, Portland, Oreg., September 7, 1960, September 7, 1960). A month later, he asked an audience in Cincinnati to consider “[w]hy are we second in outer space and second in the minds of many of the people of Africa and beginning to be second in the minds of many of the people of Latin America?” adding that the previous administration “ignored Latin America” as well as that “there is not a present American statesman who is quoted by any African leader today. They [Africa and Latin America] stand on the razor edge of decision. They wonder whether the world and the future belongs to the Communists or belongs to us” (Kennedy, Remarks of Senator John F. Kennedy, Government Square, Cincinnati, Ohio, October 6 1960, October 6, 1960).

International standing aside, Kennedy argued that the country’s physical presence in space was critical to its long-term national and international security. As with any newly opened territory in international affairs, to the winner go the spoils

and America had clearly lost an opportunity to stake its intergalactic claim. During remarks in Shawnee Mission, Kansas, the Senator argued that in 1952, “there was no discussion, really, of outer space, and yet this administration [Eisenhower’s], when a similar opportunity was granted to it to make a significant breakthrough, to recognize the implications of the opportunity in the same way that Franklin Roosevelt had recognized it in 1941 [with the development of atomic energy], when this administration was informed of the significance of outer space, both militarily and scientifically, we did not respond” (Kennedy, Remarks of Senator John F. Kennedy, Shaunee [sic] Mission East High School, Kansas City, Kans., October 22, 1960, October 22, 1960). The following day, Kennedy told an audience in Milwaukee, Wisconsin that “[o]ne of the reasons why we have never been able to get an agreement on the disarmament of outer space is because we are second in outer space, and the Soviet Union will not give way [sic] their advantage” (Kennedy, Speech of Senator John F. Kennedy, Milwaukee, Wis., October 23, 1960, October 23, 1960). In laying the blame squarely at the Republicans’ feet, he declared that he and running mate Lyndon Baines Johnson were ready to “secure a new frontier” (Kennedy, Remarks of Senator John F. Kennedy, Do Drop Inn, Muskegon, Mich., September 5, 1960, September 5, 1960;) for the country, recognizing its importance to military defense and intelligence purposes in the years to come (Kennedy, Press Conference of Senator John F. Kennedy, Olympic Bowl, Olympic Hotel, Seattle, Wash., September 7, 1960, September 7, 1960) in stark contrast to the Eisenhower space policy of the past.

Kennedy's space rhetoric did not evolve during the transition period or his early days in office either. He retained a more pragmatic orientation throughout the winter of 1961, with frontier terminology appearing on occasion as it pertained to his New Frontier philosophy. Like in his nomination acceptance six months earlier, the President made cursory mention of space in his Inaugural Address, declaring: "Together, let us explore the stars" (Kennedy, Inaugural Address, January 20, 1961). Rhetorically, the new President did exploit the perceived missile gap to urge Congress for additional defense spending (Kennedy, Defense Message to Congress, March 28, 1961; McDougall 1985, 317).¹⁶ In reality, it would take five months for the President to turn his attention to outer space, but at that time, goaded by events in Cuba and Russia and facing ever increasing national angst, he made his definitive statement on United States space policy that set the course for the nation's space program for decades to come (Launius and McCurdy 1997, 228-229; Logsdon 2010, 3) and signaled a rhetorical shift from the pragmatic depiction favored by the Eisenhower administration to the stirring mythic depiction that would characterize his own approach.

In all, Kennedy spoke 25 times on space-related topics in 1961, eight of those featuring frontier themes, including his April 12 message to Nikita Khrushchev following the successful orbital flight of a Soviet cosmonaut, an interview with British TV on April 19, his April 21 press conference, the April 25 remarks

¹⁶ By the time he entered office, Kennedy was forced to admit that the "missile gap" he so heartily decried on the campaign trail was little more than a Soviet smoke screen. U-2 spy plane missions and later satellite photoreconnaissance indicated that much of the firepower assumed to make up the Soviet ICBM program were little more than launch vehicles for the satellite program (Launius and McCurdy 1997, 44, 52; Burrows 1998, 321; Logsdon 2010, 13).

accompanying his Amendment to the National Aeronautics and Space Act, as well as his remarks to the National Academy of Sciences the same day, the May 25 Special Address to Congress on Urgent National Needs, his telephone remarks on May 26 to the Conference on the Peaceful Use of Space, and the September 25 address to the UN General Assembly. The rhetoric focused on four points: attempted cooperation with all nations, including the Soviets, prevention of an arms race in space, a free and open space program, and a collective national commitment to space activities.

Prior to April, he reiterated many of Eisenhower's earlier thoughts. First, he highlighted the importance of cooperative space activities for worldwide humanitarian benefits (Kennedy, Press Conference, March 1, 1961; Kennedy, Statement by the President on the Orbiting of a Soviet Astronaut, April 12, 1961). In his statement congratulating the Soviet Union on sending a cosmonaut into orbit, he expressed his "sincere desire that in the continuing quest for knowledge of outer space, our nations can work together to obtain the greatest benefit to mankind" (Kennedy, Message to Chairman Khrushchev Concerning the Flight of the Soviet Astronaut, April 12, 1961). Second, he called for a conservative program that avoided waste and risk (Kennedy, Press Conference, February 8, 1961; Kennedy, Press Conference, April 12, 1961; Kennedy, Press Conference, April 21, 1961). For example, during his April 21 press conference, he stated that while it was important to find a project which "offers us hope of becoming pioneers" he did not "want to start spending the kind of money that I am talking about without making a determination based on careful scientific judgment as to whether a real success can be achieved,"

adding “it's a matter of great concern, but I think before we break through and begin a program which would not reach a completion, as you know, until the end of this decade—for example, trips to the moon, may be 10 years off, maybe a little less, but are quite far away and involve, as I say, enormous sums—I don't think we ought to rush into it and begin them until we really know where we are going to end up” (Kennedy, Press Conference, April 21, 1961). Third, he stressed the predominantly scientific benefit of space activities, including meteorology, space exploration, and weather control (Kennedy, Press Conference, March 1, 1961; Kennedy, Transcript of Remarks During an Interview for British Television, April 19, 1961), touting the importance of crossing the new “frontier” of science “as a means of a much better life for people. . .all around the world” (Kennedy, Transcript of Remarks During an Interview for British Television, April 19, 1961).

The President's remarks to the National Academy of Science exemplified the early strains of his new mythic orientation. With the nation “on the threshold of a good many frontiers,” he drew a line from Franklin and Jefferson as “leading political figures of their time, both scientists, social as well as natural” to the academy members, calling them all a “natural resource” to be relied upon during times of great decisions, noting their parallel sense of loyalty to both country and craft (Kennedy, Remarks Before the National Academy of Sciences, April 25, 1961). Together, he believed, the nation would move forward to “build a stronger society” reminiscent of the golden era of “our Founding Fathers [where] a most happy relationship, a most happy understanding of the ties which bind science and government together” solved

the “sophisticated problems” vexing humankind during a challenging time in the nation’s history (Kennedy, Remarks Before the National Academy of Sciences, April 25, 1961). While the address lacked the overtly mythic dichotomies, superlatives, and invocations of his later rhetoric, JFK was beginning to paint a new picture of the relationship between space exploration and the nation’s history. Although speaking to an audience of scientists, he did not stress the benefits of space activities on science, technology, or mankind nor did he urge the sort of cautious and measured program reminiscent of the scientific method. Rather, he positioned his listeners in a national lineage, as direct intellectual descendants of heroes past who too possessed the potent combination of intellect and integrity that would lift an America struggling with the challenges of the modern era back to its prior glory. In short, the collective quest towards national greatness continued, with their unique assistance.

The most assertive expression of his emerging mythically-based framework during the year appeared in the May 25, 1961 address that many consider his second State of the Union (Launius and McCurdy, 1997, 222). Here, Kennedy challenged the American people to accomplish the unthinkable, placing a man on the moon and returning him safely to earth by the end of the decade (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961; McDougall 1985, 322; Krug 1991, 30; Byrnes 1994, 39; Kauffman 1994, 13; Launius and McCurdy 1997, 61; Burrows 1998, 329-332) by positioning the newly accelerated space program at the leading edge of a historical timeline which highlighted the nation’s highest values and ideals. At an extraordinary time and in the face of extraordinary challenges, the

President felt compelled to break with Constitutional tradition and articulate the nation's new "role in history" (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961). Setting the historical scene, he noted that the nation has "always stood from our earliest beginnings, for the independence and equality of all nations," adding, "[t]his nation was born of revolution and raised in freedom" (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961) and would continue to do so in the future. The problem that faced the nation at the moment, however, "was a world-wide struggle in which we bear a heavy burden to preserve and promote the ideals that we share with all mankind" (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961) and the space program played a central role in the fight because of its symbolic importance to national stature.

The President reminded his audience that "the dramatic achievements in space which occurred in recent weeks should have made clear to us all, as did the Sputnik in 1957, the impact of this adventure on the minds of men everywhere" (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961). Foregoing the measured factual language of his prior rhetoric, JFK redefined space as a modern agon that captured humankind's wanderlust and provided the nation with a clearly marked path back to its former greatness. The nation had the necessary raw materials to make its space dream a reality, including the "resources and talents," as well as the bravery and integrity, which was evident by the willingness to risk catastrophic failure "in full view of the world" (Kennedy, Special Message to Congress on Urgent

National Need, May 25, 1961). All that was missing was the national commitment, which Congress and by extension the American people, would provide in the form of 531 million dollars in additional space spending for the following fiscal year (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961).

As “the most important decision we will make as a nation” (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961), the moon shot was a modern voyage into the new frontier that represented a quest, designed so that a nation of heroes could reclaim a historical birthright of greatness squandered by four years of mismanagement and weak vision. The President characterized the moment as the “time to take longer strides-time for a great new American enterprise-time for this nation to take a clearly leading role in space achievement, which in many ways may hold the key to our future on earth,” adding later that “[s]pace is open to us now; and our eagerness to share its meaning is not governed by the efforts of others” (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961). Rather, Americans “go into space because whatever mankind must undertake, free men must fully share” (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961). Kennedy closed by declaring confidently that he knew the nation was prepared for the struggles ahead, willing to make the necessary sacrifices, “united in its commitment to freedom and. . . ready to do its duty” (Kennedy, Special Message to Congress on Urgent National Need, May 25, 1961), as any heroes preparing for such a quest naturally would.

Later in the year, the President spoke in front of the United Nations' General Assembly to advocate for the extension of international law to outer space. Echoing earlier themes of peaceful cooperation, Kennedy expands his hopes for the new frontier of space to an international level, issuing a call to extend "the rule of law on earth. . . to man's new domain-outer space" (Kennedy, Address in New York City Before the General Assembly of the United Nations. September 25, 1961). For the President, "[t]he new horizons of outer space must not be driven by the old bitter concepts of imperialism and sovereign claims" but rather should be reserved "for peaceful use, prohibiting weapons of mass destruction in space or on celestial bodies, and opening the mysteries and benefits of space to every nation" (Kennedy, Address in New York City Before the General Assembly of the United Nations. September 25, 1961). Despite the raging Cold War, Kennedy still saw the challenges and wonders of space as capable of fostering international cooperation for the good of humankind.

Three reasons appear to have influenced the President's shift from pragmatic to mythic frameworks over the course of the year: domestic and international events during the spring of 1961, public response to the nation's progress in space, and Kennedy's rhetorical style. First, a marked shift in frequency, content, and tone of JFK's pro-space discourse occurs in late April 1961, immediately following the Bay of Pigs incident.¹⁷ Like his predecessor's, his early 1961 rhetoric urged careful consideration of space policy and programming and stressed opportunities for

¹⁷ President Eisenhower made note of the shift in a letter to a NASA astronaut, stating that "what I have criticized about the current space program is the concept under which it was drastically revised and expanded just after the Bay of Pigs fiasco" (Launius and McCurdy 1997, 40).

cooperative ventures with the Soviets and the scientific benefit of space exploration (Kennedy, Statement by the President on the Orbiting of a Soviet Astronaut, April 12, 1961; Kennedy, Transcript of Remarks During an Interview for British Television, April 19, 1961; Kennedy, Press Conference, April 21, 1961), while later remarks connected space exploration with the nation's storied past and hopes for the future (Kennedy, Remarks Before the National Academy of Sciences, April 25, 1961; Kennedy, Special Message to the Congress on Urgent National Needs, May 25, 1961; Kennedy, Remarks by Telephone to the Conference on Peaceful Uses of Space Meeting in Tulsa, May 26, 1961; Kennedy, Address in New York City Before the General Assembly of the United Nations, September 25, 1961; Kennedy, Address in Los Angeles at a Dinner of the Democratic Party of California, November 18, 1969). Compounding the sense of national urgency, Soviet Cosmonaut Yuri Gagarin became the first human to successfully orbit the earth on April 12, 1961 (Krug 1991, 100).

With few successes to bolster American spirits, Congress called for the crash-style space program befitting the tense Cold War atmosphere. Pennsylvania Republican James Fulton demanded to know how much money would be required to subsidize the program, adding that he was "tired of coming in second best all the time" (McDougall 1985, 317), while the *New York Times* military correspondent Hanson Baldwin blamed the administration for adhering to the same conservatively limiting philosophy that had embarrassed the nation once before and predicted "a bleak future of more Soviet triumphs" (Burrows 1998, 321; Logsdon 2010, 73) should nothing change. Fellow *Times* writer Harry Schwartz concurred, taking a

personal shot at the President who “had attempted to present himself as an image of a young, active, and vigorous leader of a strong and advancing nation,” noting that “none of these and other measures have had the effectiveness or the spectacular quality of Soviet efforts” (Logsdon 2010, 73). As if to twist the knife a bit more, Schwartz added: “[m]oreover, since he took office the President’s image has been beset by the difficulties he has had with Congress, by his failure to spell out the promised ‘sacrifices’ to be required of the American people, and by the continued recession” (Logsdon 2010, 73).

This sustained, yet tumultuous, public response to US space activities also appears to have played a role in the shift. While the country remained generally patient with Eisenhower’s conservative approach at the time, Kennedy’s more aggressively pro-space campaign rhetoric clearly struck a chord with voters. America was a country not accustomed to coming in second. But both pride and fear are powerful impeti for action and, as McCurdy (1997) points out, Cold War fear was a key factor that “motivated otherwise pragmatic individuals to implement elements of an extraordinary dream” (82). Where national embarrassment at a second place moon landing was bad enough, the thought of a Soviet missile base orbiting overhead was almost unbearable (McDougall 1985, 214; McCurdy 1997, 109; Sorensen 2008, 333). Kennedy sensed this early on, as evidenced by his decision to leverage the “space gap” in the 1960 campaign. While many slumping national indicators were available for his exploitation, he chose to zero in on US space activities or perhaps more

accurately the lack thereof, as a symbol of the administration's poor leadership (Depoe 1991, 220; Sorensen 2008, 333-334), and the nation responded.

Clearly public anxiety hit an all time high again with the events of April 1961, spawning a second round of Sputnik-esque lamentation. Without prior preparation by US officials, the nation was again stunned by the spectacular Soviet space first, leading the *Times*' Baldwin to declare that "only Presidential emphasis and direction will chart an American pathway to the stars" (Logsdon 2010, 73). Although the first American astronaut repeated the feat three weeks later, international opinion clearly swung towards the Soviets, further damaging the US image at home and abroad (McDougall 1985, 246). Congressional leaders demanded answers, with Representative Vincent Anfusio hinting that a comprehensive investigation was necessary to determine why the nation was not mobilized for what he perceived as a full scale war (Logsdon 2010, 47). Clearly, the nation needed a jolt of inspiration.

Kennedy and the New Frontier

While JFK's pro-space discourse developed along a symbolic trajectory from the early continuation of Eisenhower-era pragmatism during his 1960 campaign and continuing through early 1961, the shift to a transcendent, truly mythic, justification for the massively accelerated US space program was most apparent in the spring of 1961 following the Bay of Pigs. From April 1961 on, four developments satisfying several of the formal/functional criteria characteristic of myth signaled the President's shift to a mythic use of the frontier images and ideas: the contextualization of space

activities within the flow of national history, both past and future, a redefinition of humankind's relationship to the environment, a focus on the emotional as well as scientific/technological and policy dimensions of the space program, and the evocation of a transcendent tone within his pro-space discourse. In the following section I begin by explaining these four changes and then I will review the remainder of his pro-space discourse with an eye to the most powerful expressions of his use of mythic themes and language.

As I argued above, myths' important societal functions arise as a consequence of their unique ability to explain the past, contextualize the present, and project the future for their believers. They are able to accomplish this for a variety of reasons well covered by scholars across the academy. Broadly, myths promote accepted values which guide and justify behaviors (Malinowski 1954; Rowland and Frank 2002) as well as offer potential solutions to societal problems (Burke 1947). In doing so, they engage the mind and the emotions (Kelley-Romano 2006), uniting scientific explanations with mythical accounts of a people's origins (Moyers 1981; Byrnes 1994; McCurdy 1997). By bringing origins, values, institutions, policies, science, and religion together in a coherent story, a mythic approach to pro-space advocacy holds a particularly persuasive appeal to policy-makers, one apparently realized by Kennedy shortly after taking office.

The first significant difference between Kennedy's and Eisenhower's discourse arose when JFK began to situate the space program within a broader national history. When pressed about the possibility of a crash program in his April

21, 1961 press conference, the President replied that his administration was considering “whether there is any program now, regardless of its cost, which offers us hope of being pioneers in a project” (Kennedy, Press Conference, April 21, 1961). For a group of devout settlers turned progressive colonists turned rugged pioneers, the conquest of space served as the next step in a logical and emotional national progression. Space was literally in America’s DNA and the astronauts in particular were exceptional figures who traced their valiant attributes through a long lineage of national founders and heroes. Kennedy spoke to this lineage first in his campaign address at the Mormon Tabernacle, where he spoke of his New Frontier philosophy as a modern ecumenical parallel to Brigham Young’s crusade and where he, like Young, would command to his followers to “[g]o as Pioneers” (Kennedy, Speech of Senator John F. Kennedy, Salt Lake City, Utah, Mormon Tabernacle, Friday, September 23, 1960, September 23, 1960). The theme appeared again during the presentation of the NASA Distinguished Service Medal to Major Gordon Cooper, with JFK stating: “in this new, great, adventurous period the Americans are playing their great role, as they have in the past” (Kennedy, Remarks Upon Presenting the NASA Distinguished Service Medal to Astronaut L. Gordon Cooper, May 21, 1963). In his remarks upon awarding the medal to Colonel John Glenn, the President put the astronaut in the same category as both Charles Lindbergh and the Marines who planted the American flag upon Mount Suribachi (Kennedy, Remarks at the Presentation of NASA's Distinguished Service Medal to Dr. Robert R. Gilruth and Col. John H. Glenn, Jr., February 23, 1962). Several months later, at the dedication of the nation’s Aerospace

Medical Health Center, he again characterized the airmen of Brooks AFB and the personnel of the center as “an outstanding group of pioneers” (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). Not only was space exploration a worthwhile national endeavor for its scientific, political, and humanitarian benefits, but it was literally “the key to this country’s future” (Kennedy, Message to the Congress Transmitting Report "United States Aeronautics and Space Activities, 1961," January 31, 1962).¹⁸ He reiterated this theme again in his 1962 State of the Union address, declaring, “our objective in making this effort [a manned lunar landing], which we hope will place one of our citizens on the moon, is to develop in a new frontier of science, commerce, and cooperation, the position of the United States and the Free World” (Kennedy, Annual Message to the Congress on the State of the Union, January 11, 1962).

Such a shift also speaks to the formal/functional criteria of myth involving an elevated or extraordinary time and space in which the story takes place. JFK reminded the nation of just this fact the day after John Glenn’s historic orbital flight, noting at his press conference that “the impact of Colonel Glenn's magnificent achievement yesterday goes far beyond our own time” (Kennedy, Press Conference, February 21, 1962). While the Cold War served sufficiently as a time of great symbolic import, Kennedy contextualized the program as an important step in the ongoing national “quest” for international leadership (Kennedy, Message to Chairman

¹⁸ In his 2008 memoir, *Counselor: A Life on the Edge of History*, Ted Sorensen reminisced that “the very notion of a manned flight to the moon, as impossible as that seemed, was one that I knew would engage President Kennedy’s keen interest. It embodied everything that he had said for a year and longer about striving to get the country moving again, about joining the Russians in peaceful space exploration, about crossing “new frontiers” (335).

Khrushchev Concerning the Flight of the Soviet Astronaut, April 12, 1961; Kennedy, Special Message to the Congress on Urgent National Needs, May 25, 1961; Kennedy, Remarks by Telephone to the Conference on Peaceful Uses of Space Meeting in Tulsa, May 26, 1961; Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962; Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). This was most apparent in his address to Congress on Urgent National Needs, where he reminded the nation that "if we are to win the battle that is now going on around the world between freedom and tyranny, the dramatic achievements in space which occurred in recent weeks should have made clear to us all, as did the Sputnik in 1957, the impact of this adventure on the minds of men everywhere, who are attempting to make a determination of which road they should take" (Kennedy, Special Message to the Congress on Urgent National Needs, May 25, 1961). By declaring the space program as the aforementioned key to the future (Kennedy, Message to the Congress Transmitting Report "United States Aeronautics and Space Activities, 1961," January 31, 1962) at a time when the nation was poised on "the edge of a great new era" (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963) and presenting the scene as "the new frontier" (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963), the President was able to elevate his language to a more archetypal level characteristic of myth.

Kennedy's redefinition of the relationship between human and environment signaled a second shift in the overall pro-space rhetorical strategy which more closely satisfies the criterion of myth involving elevated or extraordinary characters who serve as societal models or solve societal problems. For example, when presenting NASA's Distinguished Service Medal to Colonel John Glenn and Project Mercury Director, Dr. Robert R. Gilruth following Glenn's 1962 orbital flight, Kennedy lauded both the astronaut and the scientist, stating: "[a]ll of us remember a few dates in this century, and those of us who were very young remember Colonel Lindbergh's flight, and Pearl Harbor, and the end of the war-and we remember the flight of Alan Shepard and Major Grissom, and we remember the flight of Colonel Glenn" while also calling Gilruth representative of "the kind of American genius for organization, particularly in the scientific field, upon which we put so much of our hopes" (Kennedy, Remarks at the Presentation of NASA's Distinguished Service Medal to Dr. Robert R. Gilruth and Col. John H. Glenn, Jr., February 23, 1962). By portraying Americans in general and the astronauts and other members of the space program on a grand scale, holding them up as heroic characters, he was able to craft an image of a group of exceptional individuals able to resolve the present concerns over the nation's safety and image and serve as role models for genuinely American behavior.

Further, where Eisenhower characterized the relationship between humans and space as one of struggle with an untamed wilderness for the benefit of humankind, JFK highlighted the sense of excitement and optimism evoked by exploration. To be clear he too advocated mastery of the "new ocean" (Kennedy,

Remarks Following the Orbital Flight of Col. John H. Glenn, Jr., February 20, 1962; Kennedy, Address at Miami Beach at a Fundraising Dinner in Honor of Senator Smathers, March 10, 1962; Kennedy, Remarks in Palm Beach Upon Opening by Remote Control the Seattle World's Fair. April 21, 1962; Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962), an archetypal image by itself characteristic of myth, but did so in a new spirit of confident adventure. Gone was the conservative sense of measured scientific experimentation. No longer was the nation undertaking a solely cooperative and altruistic venture out of a sense of duty to a wider humanity. Rather, Americans descended from a noble lineage of brave explorers and would continue their journey as part of a collective quest to fulfill their destiny. The President often characterized members of the US space program as modern day explorers, drawing parallels between their exploits and the accomplishments of the earliest American explorers. He reminded the nation of this lineage several times while honoring Major Gordon Cooper who accomplished the longest American orbit "on the anniversary of Charles Lindbergh's flight to Paris. Charles Lindbergh took approximately the same time to go about 1/150 of the distance of Major Cooper. Both flights were equally hazardous; both were equally daring" (Kennedy, Remarks Upon Presenting the NASA Distinguished Service Medal to Astronaut L. Gordon Cooper, May 21, 1963). Adventure was no less than a national birthright and as much a matter of heart as a matter of mind.

Further, Kennedy stressed the continued superiority of humans over technology. As a clearly technical endeavor, much had been made by the previous administration about the role of science and technology in space exploration. This President, however, privileged the human role in the process. In the context of Glenn's flight, JFK stressed that the Colonel's "performance was marked by his great professional knowledge, his skill as a test pilot, his unflinching courage, and his extraordinary ability to perform most difficult tasks under conditions of great physical stress and personal danger. His performance in fulfillment of this most dangerous assignment reflects the highest credit upon himself and the United States" (Kennedy, Remarks at the Presentation of NASA's Distinguished Service Medal to Dr. Robert R. Gilruth and Col. John H. Glenn, Jr., February 23, 1962). Kennedy reiterated this point just over a year later following Gordon Cooper's orbital flight, noting that one of the most important lessons of the mission was that "however extraordinary computers may be that we are still ahead of them and that man is still the most extraordinary computer of all" (Kennedy, Remarks Upon Presenting the NASA Distinguished Service Medal to Astronaut L. Gordon Cooper, May 21, 1963). While technology played an important part in US space activities, for the President, human beings remained central to the journey.

Coupled with an expanded human role in space exploration, Kennedy's rhetoric relied more heavily on the emotional dividends, as opposed to scientific and technological benefits, as he assumed a more mythic articulation of the frontier. A strong space program would certainly encourage advances in basic research and

development, education, meteorology, and medicine while also providing economic incentives, and Kennedy leveraged these benefits when strategically sound.

However, the President more commonly evoked the sense of wonder embodied in space exploration, characterizing the “enterprise” as a pioneering “quest” for knowledge that fulfilled a national and humanistic desire to explore (Kennedy, Message to Chairman Khrushchev Concerning the Flight of the Soviet Astronaut, April 12, 1961; Kennedy, Special Message to the Congress on Urgent National Needs, May 25, 1961; Kennedy, Remarks by Telephone to the Conference on Peaceful Uses of Space Meeting in Tulsa, May 26, 1961; Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962; Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). The frequent line of argument asserted that space exploration would continue, whether or not the US participated, but it was only in the American nature to finish what it had started. For example, when honoring Major Cooper, Kennedy recalled, “I know that a good many people say, ‘Why go to the moon,’ just as many people said to Lindbergh, ‘Why go to Paris.’ Lindbergh said, ‘It is not so much a matter of logic as it is a feeling’” (Kennedy, Remarks Upon Presenting the NASA Distinguished Service Medal to Astronaut L. Gordon Cooper, May 21, 1963). Once again, adventure was as much a matter of great heart as a matter of great minds.

Finally, JFK’s pro-space rhetoric undertook a decided shift in tone as it progressed from a pragmatic to a mythic orientation, moving closer to fulfilling the formal/functional criterion of using archetypal language and symbols necessary to

transcend ordinary reality and offer the insight required to solve societal problems. Eisenhower's precise and measured technical language and cool-headed assurances were replaced by a growing number of superlatives and dichotomies that framed the endeavor as part of the national charge. Space was extraordinary and vital and among the greatest undertakings on the national scene. Following John Glenn's February 20, 1962 orbital flight, the President reminded the country that space was the "new ocean," and that "the United States must sail on it and be in a position second to none" (Kennedy, Remarks Following the Orbital Flight of Col. John H. Glenn, Jr., February 20, 1962). As we began to see in his 1961 Address to Congress on Urgent National Needs, discussed above, the American program became a quest, undertaken by a people "born of revolution and raised in freedom," designed to transcend the present "battle that is now going on around the world between freedom and tyranny," capturing the mysteries of the universe as well as the nation's spirit of "eagerness to share its meaning" (Kennedy, Special Message to the Congress on Urgent National Needs, May 25, 1961; see also Kennedy, Message to Chairman Khrushchev Concerning the Flight of the Soviet Astronaut, April 12, 1961; Kennedy, Remarks by Telephone to the Conference on Peaceful Uses of Space Meeting in Tulsa, May 26, 1961; Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962; Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). "God's blessing" for the "most hazardous and dangerous and greatest adventure on which man has ever embarked" (Kennedy, Address at Rice University in Houston on the Nation's Space

Efforts, September 12, 1962) was invoked as the US pushed at the threshold of human knowledge and capability. Kennedy's epideictic remarks in particular featured such dualities as challenge and opportunity, hope and fear, feeling and logic, and the West versus the Communists. For example, in his dedication of the Aerospace Medical Health Center, he characterized the era as "filled with both crisis and opportunity, an era to be characterized by achievement and by challenge. It is an era which calls for action and for the best efforts of all those who would test the unknown and the uncertain in every phase of human endeavor. It is a time for pathfinders and pioneers" (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). Additionally as we have seen, the story was populated by a roster of noble heroes including Columbus, Lindberg, Jefferson, Lincoln, Franklin, Roosevelt and those who stood their ground at the Alamo, designed to inspire while also reminding audiences of their explorer/adventurer DNA.

Where Kennedy's sensitivity to both current events and public sentiment likely shaped his choice of rhetorical strategy, his stylistic preferences and oratorical acumen must also be considered influential when assessing his choice of a mythically based pro-space discourse. In an edited collection of Kennedy's oratory, Presidential speechwriter and personal confidante Theodore Sorensen noted that JFK "believed in the power and glory of words – both written and spoken – to win votes, to set goals, to change minds, to move nations. He consistently took care to choose the right words in the right order that would send the right message" (Sorensen, 1988, 1). This

rhetorical sensitivity is evident in his choice of “the New Frontier” as a “phrase that would reflect his emphasis on the tasks and challenges confronting the American people, combining the need to change with the country’s unfinished agenda, while invoking the courage and achievements of the past” (Sorensen 2008, 218). Rhetorical scholar David Zarefsky concurs, noting also that the platform “became a meaningful symbol when it received widespread use and when the related images of discovery, exploration, charting a course, and pursuing the unknown were given expression” (Zarefsky 1986, 17).

So while I reassert my earlier argument that the strength of the frontier in American society virtually compelled its use in Presidential pro-space discourse, and Kennedy undoubtedly took a cue from his predecessor’s rhetoric as seen in his early take on space related issues, his shift to a progressively mythic usage of frontier images and ideas was far from coincidental. JFK’s concern with rhetorical precision coupled with his natural oratorical prowess strongly suggest that he deliberately chose his soaring depiction of outer space as a modern instantiation of a mythic frontier that had inspired his own Presidential speech in much the same way that it stirred the American spirit from birth.

Sorensen (2008) further substantiated this choice in his memoir, noting that the President “immediately sensed that the possibility of putting a man on the moon could galvanize public support for the exploration of space as one of the great human adventures of the twentieth century” (336). Recognizing the strength of the bully pulpit in shaping US space policy, when Kennedy sensed skepticism, hostility,

“stunned doubt and disbelief” from his audience during his “Urgent National Needs” speech in April 1961, he strayed from his prepared text for the only time in Sorensen’s memory adding “a personal note of urgency on the importance and difficulty of this commitment and the need for support from all” (Sorensen 2008, 336). Clearly oratorical style was more than window dressing for JFK, as the following review of his remaining pro-space discourse will illustrate. His careful wordsmithing and strategic deviation from script when conditions demanded additional rhetorical power cannot be overlooked as influential on his choice of a mythical use of frontier images and ideas in pro-space discourse.

The national hero’s quest in space continued in 1962 where JFK spoke 35 times on space issues, likely influenced by several successful manned orbits during the twelve-month period. Nine occasions featured the frontier as central to both the spirit and content of the address, including: his January 31 message accompanying the 1961 report on US Space Activities, the February 7 letter transmitting his Communication Satellite bill, his remarks following John Glenn’s orbital flight on February 20 as well as his press conference the following day, and his remarks on February 23 bestowing NASA’s Distinguished Service Medals upon Glenn and Mission Director Gilruth, a March 10 address at a fundraiser in Miami Beach, his remarks opening the Seattle World’s Fair on April 21, his remarks upon presenting the Presidential Award for Distinguished Federal Civil Service to Robert Gilruth on August 7, and the September 12 Address at Rice University. The President stressed three themes during the year, all consistent with his prior rhetoric. First, and most

prevalent, was the role space played in the national future. The US space program held the key to the nation's future, as the world would judge American society in large part by how much its people were able to accomplish in space. Since no defeat in the 1950s was more profound than that suffered in space, the fact that the program was able to catch up from a slow start was an accomplishment in and of itself, but more was both necessary and expected (Kennedy, Remarks at the State Fairgrounds in Louisville, Louisville, IN, October 13, 1963). Second, he stressed continued interest in cooperative space ventures with the Soviets and other international powers under the auspices of UN regulations for peaceful use, going as far as outlining a series of projects in which immediate US-Soviet collaboration was both possible and welcomed (Kennedy, Message to Chairman Khrushchev Proposing Joint Action in the Exploration of Outer Space, March 18, 1962). Third, Kennedy highlighted the renewed strength of the US space program, noting a new spirit of determination, goaded by a desire to always do better and a realization that with opportunity comes responsibility to those who put their trust and aspirations in NASA's hands as well as all of humankind. In other words, he heralded a program that embodied the exact traits and values upon which the nation was founded.

Two additional features of the President's 1962 remarks are notable. First, the military/peaceful distinction maintained since the program's inception in 1957 began to break down in August of 1962, likely due to Khrushchev's continued rebuffing of offers for cooperative ventures and the successful Soviet launch of two cosmonauts

for simultaneous geosynchronous orbit within a 24-hour period.¹⁹ While outer space had always been a dangerous environment, when one's competitors refuse to share, shut down meaningful dialog, and display an aggressive show of force, the risk only heightens. Second, American astronauts appear in a more pronounced role in Presidential pro-space discourse. With successful orbital flights by John Glenn, Scott Carpenter, and Walter Schirra to laud, Kennedy highlighted the astronauts as American heroes who embodied national values of service, selflessness, bravery, and intelligence. JFK called Glenn and his fellow astronauts "the kind of American [sic] of whom we are most proud" (Kennedy, Remarks Following the Orbital Flight of Col. John H. Glenn, Jr., February 20, 1962), while counting Carpenter as among the best "of what we like to think our country stands for" (Kennedy, Remarks of Welcome to Astronaut and Mrs. Scott Carpenter, June 5, 1962). Portrayed as squeaky clean family men, with their wives and mothers at their sides, the modern day pioneers' accomplishments reflected the aspirations and obligations of a generation (Kennedy, Remarks Following the Orbital Flight of Col. John H. Glenn, Jr., February 20, 1962; Kennedy, Telephone Conversation with Colonel Glenn Aboard the U.S.S. *Noa*, February 20, 1962).

The most comprehensive articulation of the President's mythically-based frontier vision occurred in his September 12 address at Rice University in Houston, Texas, which many consider the most complete outline of the administration's space

¹⁹ Concern about simultaneous synchronous orbits stemmed from the significance that the maneuver had in the development of rendezvous technology. An ability to win a game of "space tag" signaled that a program could potentially intercept both scientific and military space vehicles outside of earth's atmosphere. This technology was the basis of the Reagan-era "Star Wars" program.

policy (Logsdon 2010, 150). As the third space-related speech of the day, the fifth of six given in a three-day period, the address outlines the program's philosophical underpinnings while also presenting a general plan of how the Apollo program was to proceed. As such, the speech is replete with the soaring mythical language one might expect from a lengthy justification for an ambitious, expensive, and extremely risky national endeavor during the height of the Cold War while also creating strategically important shifts in temporal and spatial relationships.

Setting his remarks "in an hour of change and challenge, in a decade of hope and fear, in an age of both knowledge and ignorance" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962), the President condensed 50,000 years of recorded history into a 50-year time span, using the alteration of time to demonstrate the importance of the space race not only in American history, but in the wider flow of human achievement. In a compressed timeline that featured Christianity celebrating its second birthday and penicillin discovered the week before, JFK reminded those present that "if America's new spacecraft succeeds in reaching Venus, we will have literally reached the stars before midnight tonight" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962). At a point when national patience was wearing thin with the massively expensive program while the Soviets continued to outpace American efforts, the change of temporal perspective lifted the space program out of the constraints of "normal" time and demonstrated that the progress was rapid in comparison to other major milestones in human history, despite popular opinion.

That breathtaking pace created challenges of its own, and Kennedy acknowledged that “the opening vistas of space promise high costs and hardships, as well as high reward” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). However, Americans were not the type to avoid peril, as the “country was conquered by those who moved forward-and so will space” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). The President proceeded to place the space program, yet again, within a heroic historical frame, reminding the audience of William Bradford’s courageous voyage as well as the settling of Texas and the innovative progress of the early industrial barons, entrepreneurs, and nuclear scientists, adding: “[i]f this capsule history of our progress teaches us anything, it is that man, in his quest for knowledge and progress, is determined and cannot be deterred” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). The efforts and successes of those who came before set the path that the country continued down to that day, a national quest of self exploration designed to test the mettle of the present generation just as the challenges he enumerated in the opening had challenged the previous generations.

In the present geopolitical climate, however, the journey was taking on a new significance. No longer was it simply an issue of self discovery or national restlessness, and the President would have been remiss not to acknowledge the situation given the savvy audience to which he spoke. In 1962, success or failure within the space program had international implications, which he noted by

reminding the audience that “exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in this race for space,” adding, “the eyes of the world now look into space, to the moon and to the planets beyond” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). However, by the same token, America would not be goaded into the endeavor simply by the taunts of self-important others looking for a new competitive arena. Rather, the nation of hearty explorers, akin to Newton, Bradford, and Mallory would take on the challenge of its own accord, guided by its innate curiosity and benevolent desire to secure outer space for peaceful purposes, as a test of its scientific and industrial capabilities as well as its fortitude. “We set sail on this new sea because there is new knowledge to be gained, and new rights to be won, and they must be won and used for the progress of all people,” JFK declared, adding: “[w]hether it will become a force for good or ill depends on man, and only if the United States occupies a position of pre-eminence can we help decide whether this new ocean will be a sea of peace or a new terrifying theater of war” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962).

The notion of space as the new sea represented an important shift in spatial relationship, similar to the shift in temporal relationship the President created in the opening. Aligning the void of outer space with the vastness of the sea provided the audience, again, with a sense of perspective. Just as trans-oceanic exploration had

been a risky but necessary part of nation building in the Colonial era, space exploration was a vital step in a new era of international relations. And, just as America's seafaring ancestors had been successful, so would the nation's space faring pioneers today. The new relationship simultaneously introduced familiarity and a sense of the routine into a rather complex and abstract concept while also suggesting a proper course of action and predicting a successful outcome. In short, it provided the answer to those who, as Kennedy noted would ask: "why, some say, the moon? Why choose this as our goal?" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962).

The answer came in a form that reinforced JFK's focus on the emotional dividends of space exploration, over the scientific or technological benefits touted by his predecessor. "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," he replied (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962). A nation born of free thinking and courageous men and women striving to make a better life for their heirs, progeny who themselves went on to accomplish great things in the face of steep odds would produce a generation charged with seizing the present opportunity to secure a better world for all of humankind, testing its own resources in the process. Quoting Mallory, Kennedy closed by declaring: "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” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). The quest, once again, was on.

The President’s interpretation of space exploration as the new national quest continued unabated into 1963, where he spoke 21 times on related issues. The mythically tinged frontier images and ideas appeared in thirteen of the addresses, including: the January 17 Budget Message, his January 29 Special Message to Congress on Education, the remarks following Gordon Cooper’s May 16 orbital flight, an address at the Redstone Arsenal on May 18, the May 21 conferral of the NASA Distinguished Service Medal to Major Cooper, a July 17 press conference, the September 20 UN General Assembly address, his remarks upon awarding the nation’s Collier trophy to American astronauts on October 10, an October 22 address at the Anniversary Convocation of the National Academy of Sciences, his October 31 press conference, the November 21 address at the Aerospace Medical Health Center, his remarks at a November 22 campaign rally in Fort Worth, as well as in undelivered remarks prepared for a fall gathering of the Texas Democratic Committee. During a year of appearances shortened by the tragic events of November 22, Kennedy characterized US space activities as a solely American charge. While it was conducted in part for national security, the program would continue regardless of what space activities the Soviets pursued, as a way to continue to challenge its

citizens at home and meet the international responsibilities brought about by the burdens of its privilege. The space age redefined national purpose (Kennedy, Special Message to Congress on Education, January 29, 1963), pushing human experience and providing a sense of victory for the human spirit (Kennedy, Radio and Television Remarks Following the Flight of Astronaut L. Gordon Cooper, May 16, 1963) while also providing a potential avenue for US-Soviet cooperation (Kennedy, Press Conference, July 17, 1963; Kennedy, Press Conference, October 9, 1963; Kennedy, Address at the Anniversary Convocation of the National Academy of Sciences, October 22, 1963), suggesting that to the end, he held out some hope that the two nations could collaborate productively in a neutral environment.

Two addresses most clearly illustrate his use of the mythic frontier framework, in particular his desire to situate the program within the broader scope of national history, to emphasize the emotional over material benefits of the endeavor, to redefine humankind's relationship with the environment, and to inject rhetorical octane into his remarks as a way to inspire a nation that continued to struggle with the sacrifices required by the enormous program. In his October 10 remarks presenting the Collier Trophy for outstanding achievement in aeronautics to the first seven American astronauts, he placed the cadre within a long lineage of national heroes while also suggesting future directions for the program when he stated that the occasion "honors an extraordinary page in American history, as well as in the history of flight. And I hope that this award, which in a sense closes out this particular phase of the space program, will be a stimulus to them and to other astronauts who will

carry our flag to the moon and perhaps even someday beyond” (Kennedy, Remarks Upon Presenting the Collier Trophy to the First U.S. Astronauts, October 10, 1963). The seven recipients had “become part of the American story in a very real way” and were “a most extraordinary influence on our lives” (Kennedy, Remarks Upon Presenting the Collier Trophy to the First U.S. Astronauts, October 10, 1963) through their accomplishments which provided the nation with not only tangible material benefits, but also a renewed sense of confidence, purpose, and inspiration for the adventures ahead.

While the Collier award focused more directly on the astronauts as modern pioneers, his remarks at the dedication of the Aerospace Medical Health Center provides a clear articulation of Kennedy’s vision for the space program within his New Frontier philosophy. Delivered on November 21, the address was part of a pre-campaign trip to Texas, aimed at priming the key state in preparation for the upcoming campaign. As in the 1960 campaign, space exploration embodied the New Frontier, a concept that spoke to “this Nation's place in history, to the fact that we do stand on the edge of a great new era, filled with both crisis and opportunity, an era to be characterized by achievement and by challenge. It is an era which calls for action and for the best efforts of all those who would test the unknown and the uncertain in every phase of human endeavor. It is a time for pathfinders and pioneers” (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963). Featuring his now characteristically soaring rhetoric, replete

with graphic dichotomies, the President again set the US space program within a wider national history, populated by a stock of heroic characters.

In addition to the tangible benefits in technology and medicine borne of space exploration, the program “stands on its own as a contribution to national strength” (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963), influencing humankind’s relationship with the environment and encouraging Americans to come together at a particularly perilous time in history. Although the quest posed a challenge, JFK reiterated his faith in the American people, noting that like their predecessors, they too had tossed their cap over the wall of space and would “climb this wall with safety and with speed-and we shall then explore the wonders on the other side” (Kennedy, Remarks in San Antonio at the Dedication of the Aerospace Medical Health Center, November 21, 1963), bringing both the material bounty and inspiration back to an awaiting generation.

Conclusion

Where Eisenhower’s metaphor-based approach allowed the President to unite the familiar with the new (Krug 1991) and, as a result, appeal to basic and commonly held motives (Osborn 1967) in his pro-space advocacy, the approach was fitting for the administration’s message of measured cooperation aimed at reducing the national urge to enter an all out space race with the Soviets. However, the outcome of the 1960 Presidential campaign hints that national patience with the conservative program was wearing thin, as candidate Kennedy’s pro-space message struck a chord with voters

nationwide (Krug 1991, 30; Byrnes 1994, 37; Launius and McCurdy 1997, 51; Burrows 1998, 319). McCurdy (1997) suggests one rhetorical reason for this resonance, noting that the challenge and awe of space stems from its appeal to human aspirations, its roots in ancient cultural traditions, and its power to unite the legacy of the past with the dreams of the future (2)--in short, its mythic appeal.

And as Kennedy discovered, pro-space advocacy that both recognizes and leverages that mythic draw held great potential for success. While thematically similar to Eisenhower in the exaltation of science as the great adventure of the era and the privileging of US-Soviet cooperation over competition, Kennedy's pro-space discourse differed markedly from his predecessor's in an important way. Where Eisenhower relied upon a conservative metaphorical framework to justify his pragmatic and cautious program, Kennedy's rhetoric evolved from pragmatic and Eisenhower-esque during the 1960 campaign and early in his administration to a mythic articulation of his progressive vision for an accelerated space program following the Bay of Pigs incident in April of 1961.

For JFK, scientific exploration began as a value-neutral tool enabling international cooperation, tangible technological benefits, and a better understanding between two cultures and political systems with radically opposing world views. However, following the mythic shift, space activities became the vehicle for discovering the mysteries of the cosmos and realizing human potential in a new and challenging era. Like the nation's founders, early explorers, and pioneers, the astronauts and by extension the American public embodied the sense of bravery and

integrity necessary to elevate the present generation to the same greatness as their heroic ancestors and to recapture a sense of achievement so desperately needed at a point of national doubt.

While the national mood faltered following the 1957 launch of two successive Sputnik satellites, it may have hit an all-time low in the spring of 1961 after an embarrassingly botched CIA-led invasion attempt in Cuba and the successful orbit of Soviet cosmonaut Yuri Gagarin, the first human in space. Kennedy, however, realized that his reactions to the events of April 1961 offered an opportunity to “identify himself with a new space program with wide public appeal” and garner political capital with a Congress weary of five years of apologetic rhetoric (Kauffman 1994, 3). The aggressive new space program, unveiled publicly in his May 25 address on Urgent National Needs, may have placated Congress but the general public remained wary. A Gallup Poll taken after the televised address found that 58 percent of those asked opposed the President’s decision to go to the moon by the end of the decade (Burrows 1998, 336). However, the tides of public opinion generally changed as the nation saw some success until the Apollo project “was widely viewed as triumph of effective government as well as a demonstration of technology” (McCurdy 1997, 84).

And public opinion swung again near the end of the Kennedy presidency, as the now enormous manned spaceflight program came under fire for its perceived excess and waste (Kauffman 1994, 53). A program that only two years earlier had been too small and too conservative was now seen by the public and their

representatives in Congress as nothing less than a “boondoggle” (Kauffman 1994, 53; Logsdon 2010, 199). Spurred by national disappointment at the program’s lack of demonstrable progress as well as growing fiscal pressures, Congress slashed \$612 million from NASA’s FY 1964 budget, endangering the already slowed Apollo project even more and prompting a Presidential response that included his ill-fated November visit to Texas (Logsdon 2010, 208, 216-218). Kennedy’s rhetorical charge began as a chance to demonstrate to a restless nation his understanding of the importance of outer space to domestic and international prestige but transformed within a year’s time into a need to reaffirm the country’s ability to compete meaningfully in outer space, only to shift again a year later to a demand to account for the massively accelerated program that had yet to successfully close the dreaded “space gap.” In short, he was compelled to create pro-space discourse that progressively assured, inspired, and finally placated a Cold War weary public all while maintaining a consistent message.

McCurdy (1997) notes that “new directions in policy often require major shifts in cultural beliefs. Such shifts do not happen often, but when they do, they can profoundly alter public policy” (235). One significant driver of these shifts can come in the form of rhetorical action and the functional progression from a pragmatic to a mythic usage of frontier images and ideas evidenced in John F. Kennedy’s pro-space discourse may have encouraged just such a change. Responding to the demands of both scene and purpose, Kennedy’s soaring justification for a massive acceleration of

the nation's space program appears to have resonated with a Cold War weary public while also leveraging the dynamic leader's powerful use of mythic symbols.

CONCLUSION

“ . . . the space program has always captured an essential part of what it means to be an American – reaching new heights, stretching beyond what previously did not seem to be possible.”

- Barak Obama, 2010

In the seven years between 1957 and 1963, Presidents Eisenhower and Kennedy moved the nation from Sputnik-stunned to burgeoning space pioneers, linking the language of scientific and technological advancement to American exceptionalism and the romance and adventure of the frontier. Clearly, space was the modern crucible for proving national character and, like their revolutionary and pioneer ancestors, Americans of the day would not shy from the challenge of or responsibility for greatness. Not unlike the gold rush that preceded it, the space race was on! Perhaps more importantly, the US *could* not shy away from the challenge, as doing so would signal a humiliating concession to its preeminent Cold War enemy in the areas of technology, education, and the economy. The nation’s conception of the space program as a significant feature in the US-Soviet agon, initially encouraged by this first stage of Presidential space discourse, would endure well beyond the early years of the space program, to the turn of the century.

This project has argued that the ideas and images that constitute the frontier proved to be such a potent symbolic framework in American society that it functioned as a terministic screen for presidential pro-space discourse from the Eisenhower administration on. As the space age dawned, Dwight D. Eisenhower co-opted the

metaphor to justify his pragmatic and measured response to the Soviet Union's dramatic space achievements. One term later, John F. Kennedy's symbolic trajectory evolved pro-space discourse, building from an early continuation of Eisenhower's pragmatism to a transcendent justification for his vision of the nation's accelerated space efforts couched in soaring mythic language, strains of which are still evident today.

Differentiating a metaphorical from a mythic deployment of the frontier may seem like little more than academic hair-splitting; however, that is not necessarily true when the decision is deliberate and strategic. In this case, the symbolic evolution occurred as an intentional instrument for persuasion in the face of increasing domestic and international pressure. It is one thing to ask an audience to think metaphorically, "as if" one thing is like another. At best, this is an attempt by a rhetor to frame the unfamiliar in familiar terms to reduce resistance or clarify complex information. It is something else to deliberately cloak controversial policy in the sacred vestments of a deeply-held societal myth that recalls the events, motives, and beings of the collective's primordial beginnings. Such a tactic speaks intimately to who we are as a people and a leader's vision for where we are going as a society. As such, a move of this sort simply calls out for a rhetorician's examination.

In the case of pro-space discourse circa 1961, President Kennedy realized that the scene – the US losing ground in several measures of Cold War strength at a time when there were many pressing domestic issues that could also draw national resources – in conjunction with the purpose – a need to garner public support for a

risky program with minimal tangible benefits or short term payoffs – demanded the rhetorical octane of myth as opposed to the comfortable associations of metaphor. Therefore, the shift from a metaphorical deployment of frontier images and ideas characteristic of both Eisenhower and early Kennedy pro-space discourse to a mythic framing following the Bay of Pigs debacle can be considered clearly strategic, while also demonstrating the flexibility of potent societal stories.

Eisenhower and Kennedy – Head to Head

While extended analyses of the Eisenhower and Kennedy administrations' approaches have been offered in the previous chapters, the difference between their metaphorical and mythic deployments of the frontier in presidential pro-space discourse might be further clarified by a head-to-head comparison of a single rhetorical event. Fortunately, historical circumstances colluded to provide just such an opportunity as both men spoke, late in their respective presidencies, at Rice University in Houston, Texas. While not intended to focus solely on national space efforts, Eisenhower's October 24, 1960 Address in Houston Before the Faculty and Students of Rice University stressed the importance of engaging with the international community as well as balancing federal and local interests, while Kennedy's September 12, 1962 Address at Rice University in Houston on the Nation's Space Efforts is often considered the administration's primary articulation of US space policy.

Examination of the addresses reveals five similarities in content, clearly tied to the Presidents' mutual use of a frontier framework. First, both men characterized the present time as one of great challenges facing the nation. Eisenhower captured this by opening with a question. "Now what can you expect to find in these years of challenge and decision which lie ahead? None of us needs to be reminded that, internationally, they will be years of unremitting struggle-for peace, for security, for freedom and for justice. With the best will in the world on the part of all sides, the peaceful resolution of basic world differences would be a most complex process," adding also that "We know that the Soviet Union is using its vast power not for world betterment, but as weapons of political and economic warfare and for human enslavement. For this basic problem of living on the same planet with the Communist bloc there is no ready-made solution" (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). Kennedy struck a similar chord, declaring, "We meet at a college noted for knowledge, in a city noted for progress, in a State noted for strength, and we stand in need of all three, for we meet in an hour of change and challenge, in a decade of hope and fear, in an age of both knowledge and ignorance. The greater our knowledge increases, the greater our ignorance unfolds" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962). As a dominant societal story, the frontier always presents some form of challenge, be it physical, spiritual, psychological, or to tangible resources. However, the story goes, present conditions demand that the risk be undertaken for the future benefit of the collective. For both Eisenhower and Kennedy

the Cold War provided a perfect backdrop, as the threat of Soviet aggression loomed large in the late 1950s and early 1960s with both nuclear-enhanced superpowers vying for the international affection of third world and emerging countries.

Second, both leaders assured their audiences that the United States would win the Cold War as long as it leveraged the capacity of the new generation. Eisenhower counseled:

a new generation is not compelled to accept its eventual responsibilities all at once. There is no clear dividing line, in point of time, between the duties and influence of any one generation and its successor. Invariably there is a gradual transition—a full changing of the guard takes years to complete. Now this is well, for the factor of experience inevitably plays an essential part in any important undertaking, but the transfer is, nevertheless, relentless and it is final. Sooner or later the day will come when the decisions which control the affairs of your community, your nation, your world, must be made by another generation—yours. The nation's future is what you make it. (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960)

And he closed the address with the same focus, noting “I can express to you an unshakable faith, derived and developed through years of living, in the character and capacity of young Americans, to meet life's problems as they exist or arise. On battlefields, in peaceful countrysides and in great cities, on busy campuses, I have seen America's youth developing and producing leaders that, in every quality and in every walk of life, measure up to the world's finest. These we need in ever-growing numbers, so that through them and throughout our nation, and finally throughout the world, all people everywhere will come to understand that the oldest aspiration of mankind

peace with justice-must be provided by their governments, or their governments will be repudiated” (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). Similarly, Kennedy expressed that “all great and honorable actions are accompanied with great difficulties, and both must be enterprised and overcome with answerable courage. If this capsule history of our progress teaches us anything, it is that man, in his quest for knowledge and progress, is determined and cannot be deterred. The exploration of space will go ahead, whether we join in it or not, and it is one of the great adventures of all time, and no nation which expects to be the leader of other nations can expect to stay behind in this race for space,” adding also that “this generation does not intend to founder in the backwash of the coming age of space. We mean to be a part of it-we mean to lead it” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). Intention to lead was the key to success as both Presidents urged Americans to put forth the necessary effort, often in the form of financial support for the space program itself or ancillary efforts in education, research, defense, or economic stimulus. In the wider national story, victory on the frontier was never fully assured, but hard work, purity of motive, and clarity of purpose armed the pioneers with the necessary tools to progress, providing rhetors with powerful symbols to urge continued effort and self-reflection.

The third, and related, similarity involved the way that both leaders used long term goals as a way to organize and mobilize the nation's efforts. Eisenhower noted that "[t]hrough patience we may relieve by negotiation some dangerous pressures, both local and national. Free nations, when they unite effectively, can defeat specific efforts at economic penetration and political subversion in newly developing areas. But our experience of the past warns us not to expect miracles of the future; the road to genuine peace will be long and hard and costly," adding also that "public programs-local or national-must be guided by long term and easily recognizable goals. Short-term expediency, resulting in rapid change in effort, is a most wasteful process. It makes practically impossible the sustaining of responsible government" (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). While Kennedy stated the charge equally clearly, he delivered one of the most memorable lines of the speech when he declared, "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" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962).

Where effort would ultimately yield victory, that work required an ability to delay gratification and stay the course, even under duress. Privileging long-term success over short-term returns allowed Eisenhower and Kennedy to urge patience in

the face of high set-up costs, discouraging delays, the inevitable setbacks and the delayed gratification that would threaten to derail such a massive and forward-thinking endeavor.²⁰ As such, patience and dedication became cardinal virtues for the new space pioneers along with bravery, clarity, purity, and industriousness so that continued support of the program, even when it struggled, was an outward sign of commitment.

Fourth, both men highlighted science and industry's roles in peace and security. For Eisenhower, this meant nation-building at home and abroad. He counseled that "[o]ur clear mission is to produce a better life in freedom for ourselves and help to do so for the world and, so doing, make the attainment of a just peace more probable. This will demand a massive, sustained, coordinated effort by all our people and by all peoples devoted to freedom" (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). He expanded the point by noting that he had "recently had the privilege of addressing the United Nations General Assembly, and of making certain proposals to that body on the peaceful uses of outer space, arms control, and assistance to the less developed nations, particularly the emerging States of Africa. These proposals are evidence of

²⁰ The nation would not have to wait long for a significant setback to its manned spaceflight program. On December 6, 1957 the world watched as Vanguard, America's first generation of heavy lift vehicles, exploded on the launch pad, its grapefruit-sized satellite detached, rolling pitifully free from the inferno and prompting *New York Journal American* reporter Dorothy Kilgallen to ask, "Why doesn't someone go out there and kill it?" (Burrows 1998, 205). Author Tom Wolfe captured the scene in *The Right Stuff*, writing, "the first stage, bloated with fuel, explodes and the rest of the rocket sinks into the sand beside the launch platform. It appears to sink very slowly, like a fat old man collapsing into a Barcalounger. The sight is absolutely ludicrous, if one is in the mood for a practical joke. Oh Khrushchev had fun with that, all right! This picture – the big buildup, the dramatic countdown, followed by the exploding cigar – was unforgettable. It became the image of the American space program. The press broke into a hideous cackle of national self-loathing, with the headline KAPUTNIK! Being the most inspired rendition of the mood" (Burrows 1998, 204-205).

America's deep and continuing interest in the United Nations and its work. They are also evidence of the depth and scope of the vast unresolved problems with which the human community must deal, and to whose solution we must make our contribution” (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). Similarly, Kennedy declared, “[y]et the vows of this Nation can only be fulfilled if we in this Nation are first, and, therefore, we intend to be first. 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” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). Differentiating scientific and military space programs was an expensive endeavor, as the nation already possessed vibrant rocketry programs within the Army and Air Force at the time of Sputnik. However, acceleration of the existing rocketry program, even if for purportedly peaceful purposes, would inflame Cold War tensions and escalate an already costly arms race. Therefore, a believable civilian program was required. And, because the frontier story requires heroes, a cadre of exceptionally talented scientists and industrialists with specialized skills and non-military values brought the heavy lifting required to build a civilian space program that could ensure national victory. These experts joined the patient and supportive American citizenry in the greatest adventure of the era.

Finally, both Eisenhower and Kennedy stressed the importance of the peaceful use of space. For Eisenhower, this meant ensuring that the United Nation's efforts to declare space a nonmilitarized zone received international support, captured in the quote above. Kennedy took much the same approach, providing an extended example:

For space science, like nuclear science and all technology, has no conscience of its own. Whether it will become a force for good or ill depends on man, and only if the United States occupies a position of pre-eminence can we help decide whether this new ocean will be a sea of peace or a new terrifying theater of war. I do not say that we should or will go unprotected against the hostile misuse of space any more than we go unprotected against the hostile use of land or sea, but I do say that space can be explored and mastered without feeding the fires of war, without repeating the mistakes that man has made in extending his writ around this globe of ours. 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. (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962)

By stressing the challenging nature of the environment, both leaders were able to portray a coherent and believable frontier story without having to introduce direct forceful engagement with the Soviets. The formidable and seemingly inhospitable void that was outer space proved a worthy enough foe that neither country needed to engage the other directly (i.e. militarily) in that arena. Rather, both countries could work towards bringing the bounty of space, defined as advances in knowledge and technology, to the citizens of the world whether separately or in cooperative ventures.

While both leaders chose similar ideas that stressed identical values, clearly indicating the strong influence of the frontier motif on the addresses, the presentation

of those ideas reflects the difference in Eisenhower's metaphoric versus Kennedy's mythic deployment of the thoughts. President Eisenhower summarized his measured and long-term approach succinctly, noting: "[s]teadiness, solvency, balance. These may seem prosaic and uninteresting to talk about in times when people are being promised, without cost, the good life for all. Yet these unglamorous realities are the bedrock upon which all our strength is based, and the necessary precondition for the great labors we must perform both at home and abroad in the interest of world peace and progress" (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). Hard work and conservatism reigned, as he counseled:

Nothing is more destructive of orderly progress than wild fluctuation between the extremes of panic and complacency. It is our aim to build steadily and soundly the economic and military strength we shall need--possibly over decades--to meet, every minute, every day, our responsibilities in the momentous decade ahead. And this is not done by hasty or ill-considered actions, crash programs, efforts that stop and go like traffic at a busy intersection. This is not only costly; it is flagrantly inefficient. It betrays a myopic vision, a weakness of will and a lack of inner conviction that our long-term goals are worthy and our methods correct. (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960)

He reiterated the need for self-control in closing by stating that "[t]his contribution will be measured by our capacity and our will, and its success will be assured not by a few great and valorous deeds, but rather by all of us doing a great many small tasks sensibly and well" (Eisenhower, Address in Houston Before the Faculty and Students of Rice University, October 24, 1960). The vocabulary was clearly one of disciplined restraint, which he juxtaposed against the rhetoric of the Kennedy campaign that by

implication featured a harmful, immature, and chaotic approach to national and international action.

By contrast, President Kennedy presented a far more transcendent vision of US space efforts two years later when he declared:

. . .even though I realize that this is in some measure an act of faith and vision, for we do not now know what benefits await us. But if I were to say, my fellow citizens, that we shall send to the moon, 240,000 miles away from the control station in Houston, a giant rocket more than 300 feet tall, the length of this football field, made of new metal alloys, some of which have not yet been invented, capable of standing heat and stresses several times more than have ever been experienced, fitted together with a precision better than the finest watch, carrying all the equipment needed for propulsion, guidance, control, communications, food and survival, on an untried mission, to an unknown celestial body, and then return it safely to earth, reentering the atmosphere at speeds of over 25,000 miles per hour, causing heat about half that of the temperature of the sun almost as hot as it is here today-and do all this, and do it right, and do it first before this decade is out, then we must be bold. (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962)

Like his predecessor, he was not advocating for a win-at-all-costs program, which he made clear when he stated, "I think we're going to do it, and I think that we must pay what needs to be paid. I don't think we ought to waste any money, but I think we ought to do the job. And this will be done in the decade of the sixties. It may be done while some of you are still here at school at this college and university. It will be done during the terms of office of some of the people who sit here on this platform. But it will be done. And it will be done before the end of this decade" (Kennedy, Address at Rice University in Houston on the Nation's Space Efforts, September 12, 1962). For Kennedy, exploration was a task to be embraced, one in which the national attitude declared that, "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” (Kennedy, Address at Rice University in Houston on the Nation’s Space Efforts, September 12, 1962). Gone was the sense of cautious self-restraint characteristic of the Eisenhower administration, replaced instead by a youthful confidence anchored in the belief that the mission was an extension of a divinely favored national quest.

Presidential Pro-Space Discourse to Come

While Kennedy’s assassination on November 22, 1963 cut development of the symbolic trajectory of his pro-space rhetoric tragically short, it is telling that Lyndon Baines Johnson assumed his predecessor’s mythic mantle, arguing that a continuation of the controversial Apollo program, with its goal of sending a man to the moon by the close of the decade, was both an important national endeavor and a fitting memorial to JFK. With his space-related political activities starting when he served as the chair of the Senate Space committee during the Eisenhower administration, LBJ was no stranger to the nation’s efforts and his rhetoric reflected the frontier framework in much the same way as his predecessor’s. However, perhaps influenced by the violent public assassination of President Kennedy and the bloody quagmire of conflict in Southeast Asia, Johnson’s pro-space discourse began to emphasize the peaceful prospects of the new frontier over its position as a centerpiece of the Cold

War agon. The country was poised to celebrate the productive boon of its accomplishments.

In his January 8, 1964 State of the Union address, the President declared that “our ultimate goal is a world without war, a world made safe for diversity, in which all men, goods, and ideas can freely move across every border and every boundary” (Johnson, Annual Message to Congress on the State of the Union, January 8 1964), with space featured among the ten ways in which he proposed reaching the goal. While reasserting the aim of US dominance in outer space, Johnson tempered the message by welcoming cooperation, stating “we must assure our pre-eminence in the peaceful exploration of outer space, focusing on an expedition to the moon in this decade – in cooperation with other powers if possible, alone if necessary” (Johnson, Annual Message to Congress on the State of the Union, January 8 1964). In welcoming the crew of Apollo 8 to the White House in his last month as President, Johnson summarized the effort by reminding the nation that “[i]f there is an ultimate truth to be learned from this historic flight, it may be this: There are few social or scientific or political problems which cannot be solved by men, if they truly want to solve them together” (McCurdy 1997, 99).

Similar strains appeared in Nixon’s pro-space discourse as he heralded the start of the Shuttle program. In his statement, the President urged the development of “an entirely new type of space transportation system designed to help transform the space frontier of the 1970s into familiar territory, easily accessible for human endeavor in the 1980s and 90s,” adding that such a system “will go a long way

toward delivering the rich benefits of practical space utilization and the valuable spinoffs from space efforts into the daily lives of Americans and all people” (Nixon, Announcement on the Space Shuttle, January 5, 1972). And Reagan struck a familiar chord while eulogizing the Challenger astronauts fourteen years later, memorializing the seven crew members as frontier heroes and reminding the American people that “we’ve grown used to wonders in this century . . . We’ve grown used to the idea of space and perhaps we forget that we’ve only just begun. We are still pioneers. They, the members of the Challenger crew, were pioneers” (Reagan, Address to the Nation on the Space Shuttle Challenger Tragedy, January 28, 1986). Whether in triumph or in tragedy, American presidents have relied upon the dominant frontier story to frame their pro-space discourse, creating an indelible link between the galaxy beyond and the nation’s origins that has endured through eleven administrations spanning over half a century.

Rhetorical Implications

This nearly ubiquitous nature of frontier imagery in Presidential pro-space discourse suggests four noteworthy insights about the rhetorical deployment of myths and metaphors. First, potent societal stories hold the potential to create their own gravity, pulling rhetors and audiences alike into their rarefied symbolic atmospheres. As meaningful frameworks for making sense of the world that are passed from generation to generation through a variety of channels, these stories set expectations, provide templates, and form terministic screens for members of a culture. Issues and

ideas that evoke elements of these powerful stories virtually cry out for expression within their frameworks as both rhetors and audiences are already comfortable with the associations they elicit. For a rhetor to violate these expectations can prove risky but might also create powerful new associations upon which to build. That neither Dwight D. Eisenhower nor John F. Kennedy utilized a dominant societal framework other than the frontier in their pro-space discourse is telling, as is the continued reliance of frontier images and ideas by Presidential administrations during the half century that followed.

Second, a rhetor must consider the influence of scene, purpose, audience, and style when choosing an appropriate deployment of a dominant societal story. Resonance is generally a factor of fit, and successful rhetors are those who craft messages appropriate to the situation, to their goals, to the audience's expectations, and to their rhetorical style. Simply relying on a potent story framework to provide the necessary terms and associations to compel an audience to action is insufficient. Rather, as is well demonstrated in the relative successes of Eisenhower's and Kennedy's strategies, a rhetor must make careful choices that leverage strengths, mitigate weaknesses, and above all, meet audience expectations. In consideration of scene, or the environment in which the symbols must operate, times of great importance, turmoil, or celebration often call for a more transcendent deployment than during periods of status quo as people are looking for authoritative interpretation of events and firm directives for appropriate responses. In consideration of purpose, or the work that the symbols are called to do, heavy lifting often requires a mythic

approach to put an audience in touch with the deeply held beliefs and values that motivate major change. Finally, the rhetor's style must also influence choice, as some speakers handle more aptly or gravitate naturally toward a transcendent approach while others favor a more pragmatic mode of expression.

Third, the strategic deployment of a dominant societal story creates a dynamic in which the issue or idea and the framework modify each other. In this case, the frontier as a terministic screen shapes our understanding and interpretation of the space program by creating a series of compelling associations. The vacuum of outer space becomes the unbroken, unyielding prairie, brave astronauts are rugged pioneers, distant planets take the place of scattered wilderness outposts, and enormous and technically complex rockets and shuttles take the place of trains of Conestoga wagons. Conversely, "space, the final frontier" has permanently altered our cultural understanding of the frontier motif as a dominant social story.²¹

Fourth, couching rhetoric within a dominant societal symbol system is a double-edged sword. In *Language as Symbolic Action* (1966), Burke reminds us that symbols use humans as much as humans use symbols. These compelling stories provide us with a fertile system of accepted pre-existing conceptual links which can form the basis for many enthymematic arguments. Also, familiar frames improve the chance of public understanding and acceptance of messages. Further, the pool of

²¹ Pop culture has perhaps most clearly co-opted space as an essential part of the frontier framework, as evidenced by the litany of television, motion picture, and anime space-westerns produced since the middle of the twentieth century, including: *Serenity*, *Firefly*, *Star Trek*, *Spaceballs*, the *Star Wars* trilogy, the *Adventures of the Galaxy Rangers*, *The Adventures of Buckaroo Banzi Across the 8th Dimension*, *Bravestarr*, *Cowboy Bebop*, *Trigun*, *Outland*, *Silverhawk*, *Space Rangers*, and *Cowboys and Aliens*.

ready-to-use concepts makes expressing new and/or complex ideas easier by virtue of their association with familiar concepts. However, once deployed, the dominant stories limit our rhetorical options, especially when using them to convey new ideas. Innovating and reframing becomes more difficult after comfortable conceptual associations are formed. Additionally, solutions and responses are often suggested, if not implicitly stated, within these powerful stories constraining options that rhetors might offer for action while also reducing or eliminating opportunities for discussion or innovation. Finally, patterns of symbolic relationships may calcify, making it difficult for a rhetor to move outside of the existing framework should change be necessary or desired.

Contributions

The rhetoric of both Dwight D. Eisenhower and John F. Kennedy are well-traveled territory for historians and rhetoricians alike. And the same can be said of both leaders' space discourse. This project contributes to the growing body of scholarship on Presidential space discourse, as well as the scholarship on Eisenhower and Kennedy. First, much has been made of the incongruence or contradictions in Eisenhower's Cold War rhetoric resulting from a tension between his ideology and his pragmatic approach to diplomacy (Tudda 2006, O'Gorman 2008). A similar conclusion may be drawn on the basis of the foregoing analysis as there is an inherent tension between frontier images and ideas and conservative cooperation. However, I believe that a more satisfying explanation may be that Eisenhower strategically used

the prevalent variant of American exceptionalism metaphorically in order to forward his more pragmatic program. Regardless of one's preferred interpretation, the foregoing analysis joins that conversation with yet another instance of Eisenhower's rhetorical practices, crafted to navigate the challenges of reconciling a particular view of what it means to be an American with the exigencies of the Cold War, across a variety of occasions.

Second, Murphy (2000) suggests that "that style matters as successors tug at the shrouds of predecessors" (596), particularly in instances where there is unfinished policy business. In the case of John F. Kennedy's vision for the US space program, this is especially true. Jordan (2003) notes: "[m]any of the enduring images that continue to shape our understanding of space bear close association with the transcendent romanticism out of which Kennedy crafted his address. Intentionally or not, policymakers and popular culture texts have called upon this rhetoric in the hope that it will enable them, like Kennedy, to evoke themes of noble exploration and wonderment and to make space exploration tangible to the public. In both fictional and actual contexts, the romantic, transcendent rhetoric that Kennedy successfully married to the lunar program continues to resonate throughout the public imagination" (225). This project contributes to the ongoing conversation about Kennedy's rhetorical legacy by highlighting one additional instance of where his New Frontier philosophy moved beyond campaign catchphrase to physical reality.

Limitations and Extensions

As the present analysis is intended to be part of a larger study tracing the use of frontier images and ideas in pro-space discourse from the inception of the US space program to the present day, it is important to consider both the limitations and extensions of the work at hand to enhance the overall project. Two primary categories of limitations exist, those related to the chosen discourse and those related to the chosen theoretical frame. In terms of the discourse, focusing solely on Presidential rhetoric as the primary public message source about US space efforts restricts the conclusions that can be drawn about the nation's conception of outer space activities. The American people are exposed to information about the program from a variety of authoritative sources, all of which advance their own agendas and shape their rhetoric to meet their own needs and perspectives. A more comprehensive view of image-making efforts surrounding the US space program would necessarily include examination of the messages produced and disseminated by the Presidential Space Council, Committee on Space Commercialization, and Space Interagency Policy Committees,²² the Congressional aerospace committees, NASA as well as other governmental and extra-governmental organizations, the astronauts themselves, and media and popular cultural outlets. Additionally, confining the examination to the civilian space program beginning with IGY activities in the 1950s and continuing through the present day omits many pockets of US space activity which also shape

²² The Committee on Space Commercialization and Space IPC were established by President Obama in June 2010 upon issuance of the National Space Policy Directive designed to provide comprehensive national guidance in all United States Space Activities.

the national conception of the space program, including the early national rocketry program and the contemporary defense-related aerospace activities. Further, President Obama's recent focus upon a commercial space presence provides a third form of space activity, outside of the ongoing scientific and military applications, which will receive public attention. And finally, examining pro-space discourse exclusively provides only a partial picture of the available messages generated about the US space program. A robust body of discourse opposing the US space program, some emanating from inside NASA and other governmental sources, also exists and looking at this rhetoric, specifically for the deployment of frontier images and ideas, would add strength to the claim of its potency within the realm of space talk.

In terms of theoretical frame, it is critical to consider the effect one's lens has upon one's conclusions. In this case, the frontier acts as strongly upon the critic as upon those who initially crafted the pro-space discourse in question. It is important to note that the frontier is a prevalent part of the national lexicon, but only a subset of a larger framework of American exceptionalism. Approaching pro-space discourse through the lens of frontier images and ideas makes the task of finding frontier references easy, as one is usually able to "find what one is looking for."

Additionally, the study at hand utilizes what many rhetorical scholars consider to be a very narrow and limited definition of myth (Solomon 1990; Osborn 1990; Rushing 1990). To be sure, more lenient frameworks for examination of significant societal stories exist which, if used, may reveal that pro-space discourse relies upon many other symbolic frameworks as well.

While addressing the limitations mentioned above may enhance the project, several additional paths for further exploration also exist. First, looking back to the earliest instantiations of the US rocketry program for the roots of the frontier framework as a dominant reference would provide further evidence of the strength of the symbol system. This would be particularly interesting as many of the early pioneers of the national space effort were German ex-patriots who defected to the United States after the war. Along similar lines, looking forward with an intensive examination of Presidential pro-space discourse from the Johnson through the Obama administrations would allow for a more comprehensive view of the way in which the frontier motif did or did not change through subsequent administrations. A significant body of work on Ronald Reagan's pro-space discourse already exists within the field, due in large part to his historic address in January 1986 (eulogy of the Challenger astronauts) as well as his Star Wars policy initiatives. However, the space talk of the Johnson, Nixon, Ford, Carter, George and George W. Bush, Clinton, and Obama administrations have not been extensively examined outside of article-length analyses of individual speeches.

Additionally, an examination of the National Aeronautics and Space Administration rhetoric would be instructive. While several published works focusing on image making within NASA exist, the emphasis is primarily upon rhetoric as a function of policy advancement. What has been largely overlooked is the influence of Fredrick Jackson Turner's Frontier Thesis on James Webb, agency director during the Kennedy and Johnson administrations. Space historians have

commented in passing that Webb's views on the burgeoning program were heavily informed by Turner's work but no subsequent examination of his rhetoric exists (Byrnes 1994, 50; Logsdon 2010). Finally, analysis of the frontier framework in space discourse would benefit from a comparison between official public rhetoric and the robust body of space-themed science fiction that has existed since the turn of the last century. Following the implication of the reciprocal relationship between the symbol system and its various redeployments, investigating how public pro-space discourse informs science fiction and vice-versa would prove valuable.

Conclusion

Outer space's instantiation as a modern symbol of the final frontier may well explain why over six decades of Presidential pro-space discourse consistently drew upon its constellation of images and ideas to challenge, inspire, comfort, and rebuke the American public. As recently as July 2011 with the nation's shuttle program drawing to a close, President Barak Obama characterized Atlantis' final mission in frontier terms as one that "ushers in an exciting new era to push the frontiers of space exploration and human spaceflight," noting that the program "has always embodied our sense of adventure and exploration and courage" (Obama, Call to Atlantis, July 17, 2011). This project sought to unearth the rhetorical roots of that characterization of space as the "final frontier" by looking to Dwight D. Eisenhower and John F. Kennedy's pro-space advocacy at the birth of the nation's space program. My analysis suggests that the conservative nature of the frontier ideas and images that

undergird the US space program have functioned as a terministic screen in Presidential space discourse, shaping the national conception of space exploration and, by extension, national space policy. Further, it provides some insight into why those who continue to adhere to the romanticized 20th-century conception of outer space push back against President Obama's recently instituted changes to an outdated and underperforming Shuttle project despite expert testimony disputing the program's viability, raising concerns reminiscent of Cold War era politics.

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