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THE SPUTNIK CRISIS AND AMERICA’S RESPONSE

by

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B.A. University of Central Florida, 1999

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ABSTRACT

On 4 October 1957, the Soviet Union launched Sputnik, the world’s first artificial satellite, and the Space Age had arrived. While not an American achievement, Sputnik stands as a significant juncture in United States history. This thesis explores the resulting American political crisis, its development in the final three months of 1957, and the impact Sputnik had on American life. The thesis also examines the social and political context of the Sputnik crisis and will challenge some long-standing analysis of how America's reaction to the Soviet satellite developed.

To accomplish this task, it was necessary to consult both primary and secondary sources. Important primary sources include government documents from both the Legislative and Executive Branches of the United States Government, attained from both printed volumes and online archives. The memoirs of key individuals also shed light on the mindset of prominent politicians and policymakers of the period. Newspapers and magazines from the era were examined to explore the media and public reaction to the Sputnik Crisis and related events. Secondary sources are used as both avenues of information and theory regarding the events, and also for the purposes of examining the consensus of others who have explored this topic.

The topics covered in the thesis include the flow of events before, during, and after the Sputnik Crisis of 1957; analysis of contextual issues such as missile and satellite development and American culture of the period; and analysis of how the Sputnik Crisis unfolded and how this impacted American culture and national policy.
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There are so many people to whom I owe thanks for their help and support as I worked on this project over a period of nearly two years. My family, of course, was chief among my supporters, and I owe them my gratitude for reinforcing my confidence and my desire to strive for excellence. This is especially true of my parents; my mother, Ann Scherman, my father, Hal Kennedy, my stepfather, Jon Scherman, and my stepmother, Rosalyn Kennedy. Without their love and interest in my work, none of this would have happened.

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INTRODUCTION

On 4 October 1957, the Soviet Union launched a 184-pound satellite into orbit around the Earth. The satellite was called “Sputnik” by the Soviets, which in Russian means “fellow traveler.” Circling the planet approximately 500 miles above the surface, it transmitted a steady beeping sound signaling to those people below the space age was born. Sputnik should rank among the greatest of the technological achievements of humanity as it proved for the first time that our species was not confined to this single sphere. Science fiction had become science fact, as the journeys to the stars featured in literature and films since the beginning of the twentieth century entered the realm of the possible for the first time. Sputnik was humanity’s initial step towards the exploration of the universe. Centuries from now, the launch of the Soviet Sputnik satellite will stand as one of the most significant events in the history of the humanity and as a tribute to human ingenuity.

Undoubtedly future reaction to the Soviet achievement will be in sharp contrast as to how most Americans in 1957, received the news that a communist nation was the first to launch a satellite. As author Walter Sullivan commented in Assault on the Unknown, “the feeling of wonder and excitement at man’s escape from the earth was largely lost in fear.”¹ In the shadow of the Cold War struggle between communism and the free world, many Americans viewed the launch of the Russian satellite as symbolic of American weakness and as a sign of Soviet superiority in technology. They were concerned that the nation was in danger of attack, and

wondered if their political and military leaders were prepared to meet the new Soviet challenge. Many questioned how the United States could have “allowed” their competitors to beat them to this great achievement, relying on their long held assumption that America was technologically superior to its Soviet adversary. The atmosphere of tension that followed would ultimately transform the launch of Sputnik into an impetus for change in mid-twentieth century America.

When deciding to write about this subject, I talked to members of my family who could recall Sputnik. Many remembered the event, and seemed to remember a great deal of concern and fear felt by people they knew. They also remember reading articles in the newspapers about it, and that much of what they read was worrisome. But to a person, they noted one item in particular. “Of course, I wasn’t among those who were afraid.” This inspired me to think about whether or not we truly understand the American reaction to Sputnik. One would think so, since there seems to be a lot of uniformity on the subject in the available scholarship. But assumption of understanding is a powerful thing, for good if it is well founded and for ill if it is not. Which was it in this case?

In order to fully understand this important moment in history, the Sputnik launch and the events that followed must be examined in the proper context. The progress of the American missile and satellite programs up to the time of the Sputnik I launch must be considered for two reasons in particular. First, such a study provides a general understanding of advancements in technology at the time and how this change was affecting the perception of military power by both the public and the military establishment. Second, the comparison of United States satellite and missile technology vis-à-vis the Soviet satellite program was an important point of discussion and source of concern on the part of many Americans after the Sputnik launch.
Besides placing the Sputnik launch into a technological context, the event must also be examined as a part of the overall mood in America during the fifties. Other scholars attempted to do this in the past. Stephen Ambrose, for example, referred to a time of peace and tranquility during the 1950’s that ended with the launch of Sputnik.\(^2\) An example where a contrary opinion can be found in an article by Robert MacDougall found in the *Journal of Popular Culture*, which described an American society plagued by fears of what he called “red, brown, and yellow perils.” MacDougall was referring to the theory of a pervasive paranoia about people and ideas that were different than what was common to the mainstream view of American cultural values that dominated society.\(^3\) These two examples represent two common, but fallacious, theories about American society of the period. The first theory presents the period as a time of relative calm and repose, and that Sputnik was the event that destroyed that tranquility. The other takes the opposite position, viewing American society of the 1950’s as a time of consistent American paranoia covered over by a thin veneer of false security. Sputnik, when included in this theory, was just another source of concern for an already paranoid nation. Both of these approaches place Sputnik in an inaccurate context, requiring a re-examination of the event in a 1950’s American societal context that better explains the reaction.

This suggests an American society that existed on two levels. On the level of the everyday life experience of Americans in the 1950’s, the time was indeed prosperous and tranquil (overall) for most in the nation. Citizens lived with a sense of security in America’s perceived technological superiority. Occasionally a crisis arose and brought with it a temporary


aura of fear, but when the crisis abated, life went back to a surface-level calm. But underneath this layer was a more subconscious one that only manifested itself openly in a sporadic fashion. The Sputnik crisis tapped into this fear and brought it to the everyday layer of the American consciousness in a more consistent manner than was seen before it.

But how did the American reaction unfold? Did hysteria follow immediately after the launch of Sputnik I, as so many sources on the event would lead us to believe? An examination of the public reaction, combined with analysis of it in the proper contextual framework, suggest that the public reaction may not have been immediately fearful. There is evidence to suggest that many Americans were concerned after their communist foes launched the first Sputnik, but not really afraid. Other than the shame of being beaten to the achievement, a large portion of the public felt that they would soon be back on top and that Russian satellite did not pose an immediate threat.

This “not too much to worry about” mentality did not last long into the following month. When the Soviets repeated their achievement with the launch of Sputnik II in early November 1957, a much larger and heavier satellite that included a canine passenger, Americans had more cause for concern. As that month drew to a close, further events would breed a more worried reaction. The existence of the Gaither Report became public knowledge and although its specific contents were classified, the general message of the report would become public. Information “leaks” from “inside sources” to the media revealed a dire state of affairs for America’s defenses. On 25 November, President Dwight D. Eisenhower, a bulwark of leadership that had almost always inspired public confidence, suffered a stroke, causing many to speculate whether the aging leader could still fulfill the weighty obligations of the presidency. Finally, as if to add
insult to injury, the first attempt by the United States to match the Soviets in the new space race resulted in spectacular failure. On 15 December 1957, American rocket technicians attempted to launch their nation’s first satellite. This small sphere, called Vanguard I, barely made it off of the launch pad before the rocket carrying crashed back to Earth in a massive ball of flame. Once Americans saw this highly publicized disaster, most of the “not too much to worry about” feelings that may have existed after the first Sputnik were replaced by genuine concern.

But this fearful public reaction that eventually developed was not fueled exclusively by the successful Sputniks and the Vanguard’s failure. The media and members of government also fanned the fires of discontent, in some cases deliberately. The newspapers and magazines presented a confusing array of opinions and statements in the implications of the communist satellites. The mixed messages in the media added to the uncertainty that developed in people’s minds. In some cases, the hysteria in the press sources may have been deliberate attempts by their proprietors to breed hysteria, with political and/or monetary motives in mind.

The motives for attacks on American security readiness were also varied among politicians. While some members of the Congress in both political parties were motivated by genuine concern for national security, clearly there was a desire on the part of many Democratic senators and congressmen (and some Republicans) to use to the Sputnik crisis for political gain. Up until Sputnik, Republican President Dwight D. Eisenhower was all but untouchable in the political arena, almost effortlessly winning re-election in the year prior to the Sputnik launch. With Sputnik, the Democrats finally found a weakness in Eisenhower’s record, and exploited this fissure to varying degrees.
Ultimately, the Sputniks would have long ranging effects on the development of many areas of American society in the decades to come. Sputnik motivated the United States to pursue a more aggressive space program, beginning with the creation of the National Aeronautics and Space Administration (NASA) in 1958. The government in general paid more attention to science as a part of national policy, with such changes as the creation of a permanent scientific advisory position for the President. Political interest in science also reached into the area of education, as the federal government sought more involvement in the schooling at all levels in America, eventually expanding this interest into all areas, not just science. The result was the National Defense Education Act (NDEA), passed in 1958, which represented a major shift in federal education policy and the long-held philosophy of extremely limited involvement by the national government. In the area of science itself, Sputnik helped to create an emphasis on fields related to space and aeronautics, as the next generation of American scientists came largely from these areas of study.

The effects from the Sputnik crisis on American politics would be both immediate and long term. President Eisenhower’s overwhelming popularity was greatly reduced by Sputnik, and the perceived failures of the Eisenhower Administration to match the gains made by the Soviet Union in the areas of satellites and technology greatly contributed to a Democratic sweep of Congressional seats and gubernatorial races in the 1958 elections. During the political controversy that followed, already powerful Senate Majority Leader Lyndon B. Johnson gained additional political clout and a moderately known Senator John F. Kennedy rose to prominence on the “missile gap” debate.
The Cold War reduced what should have been a universally heralded moment of human achievement to political volleyball. A full and proper understanding of this crisis of confidence in American society is essential because of the importance of the event itself and the sweeping changes it initiated. With this goal in mind, this work will take a systematic approach to the issue that includes information about the chain of events, a proper contextual framework for the subject, analysis of the reaction to the crisis from different perspectives, and an examination of the ramifications that came from it all.

The sources used to achieve this more complete understanding of the Sputnik Crisis are important to consider. Fortunately, the release of government documents from the Eisenhower Administration in recent decades provides a greater amount of data than was available to scholars in the past. Many of these documents are also readily available through published sources, and those that used to be only accessible at the Eisenhower Presidential Library in Abilene, Kansas, are also available through the Internet. The Congressional Record and other released legislative documents from the time can add the perspective of Republican and Democratic Congressmen and Senators who commented on the crisis. The memoirs of both administration and legislative officials also add personal insights and perspectives on what occurred.

One of the most valuable sources of information (or mis-information as the case may be) and commentary are the media sources available from the time. To get a complete perspective on how the press covered and editorialized Sputnik, I have consulted a range of local and national publications. Newspapers from the different corners of the country have been examined. Magazines ranging from news periodicals like *Time* and *Newsweek* to less serious but
still insightful publications like Reader’s Digest and Look also provide a useful array of comment on the course of events. Scientific and technical journals are essential reading for both their information on the engineering of the various satellites and missiles of the time and the view of the scientific community on the crisis. These media sources provide a source of information and comment on the events, but they also act as a medium to be questioned for its reliability as an indicator of the public mood. Most scholars have used media sources as their proof of widespread public panic in the initial period after Sputnik I was launched. Whether this is really a reliable source of data is a question that can be answered in part by looking at the press sources themselves.

But sources that can provide insight on the public’s reaction to the events of the Fall, 1957, must also be complimented by sources that provide insight into the cultural context for this reaction. America’s national mood in the 1950’s is best explored through two main sources of information. Films of the period, both those of from Hollywood and those produced by Civil Defense organizations, allow us to see what messages were being transmitted to the public. To help us understand these messages, a comparative study of other scholarship on the cultural Cold War is also necessary.

The scholarship of other authors on the subject, ranging in date of publication from 1957 to those from the current decade, also provides important insights in several different ways. First, they give an indication as to how the conventional ideas about the Sputnik crisis have developed over time. Some of these works taken in comparison also provide valuable information about contrary and complementary points of view on specific issues related to the
overall subject. Finally, works that specialize in specific issues can also provide cogent and important information analysis that adds to the understanding of the material.

As one NBC news commentator said after Sputnik I made its journey into orbit around the Earth, it was a moment that “separates the old from the new.” Sputnik represents one of the most defining events of the twentieth century, and a complete understanding of what heralded its appearance in Earth’s orbit is essential to understanding how many aspects of the world of today came to be.

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CHAPTER ONE:
MISSILES AND SATELLITES

The Cold War was over a decade old when Sputnik I was launched on 4 October 1957. The United States and Soviet Union had competed with each other in armament development designed to defend their populations against a perceived threat of attack by the other. The dawn of the nuclear age, and the acquisition of long-range delivery weapons by both nations, meant that any future war between the two superpowers could lead to a holocaust of destruction unlike any before seen in human history. Both countries believed that the stakes of defense were very high, and each looked to science to provide answers to the problems of national defense.

Ever since the Manhattan Project had developed America’s first atomic bombs in 1945, the United States government was cognizant of the potentials of science to enhance the nation’s military capability. Strangely, this awareness did not lead to an immediate emphasis on research and development of all long-range weapons systems after World War II. The use of missiles by Nazi Germany during the Second World War prompted the U.S. Army Air Force to conduct a study of the use of long-range missiles as early as 1945. However, that study concluded the United States could someday develop missiles with long-range capabilities, but the technology to do so would not be available until the distant future.¹

During the late 1940’s, the newly formed United States Air Force had a very small budget for research and development. The Air Force placed greater emphasis on the

maintenance and improvement of weapons systems and aircraft already in their arsenal. As
missile technology continued to advance, the Air Force’s structure for progressing along with it
proved to be slow to respond to change.\(^2\) Thus, as the 1950s dawned, the Air Force had yet to
fully incorporate long-range missile systems into their defense structure.

There were several reasons for the lack of research and development in the Air Force. The
clearest explanation of these reasons comes from Edmund Beard, who examines the subject
in his work, *Developing the ICBM*. Beard points out that pilots dominated the senior officer
corps of the United States Air Force in the 1940’s and early-1950’s. Manned aircraft and the
men who flew them won the Second World War, and these were the tools that the Air Force
relied upon for its offensive and defensive capabilities. The concept of missiles, unmanned
aircraft maintained and operated by technicians (not pilots), was alien to most of the officers in
the Air Force at that time. This was despite the fact that the Germans had used the V-2 rocket to
some effect during World War II, and many of the Air Force’s officers of that period saw service
in the war. When the Air Research and Development Command (ARDC) was created by the Air
Force in 1950, to supervise research into missile systems, it was given little authority and had
secondary standing within the Air Force’s authority structure. Besides the prejudices in Air
Force culture against missiles, Beard also considers budgetary concerns in the tightly funded
U.S. military of the late-1940’s. Missiles were largely an unknown quantity when it came to
cost, so the Air Force did not want to risk scarce funding on a new, largely untested idea.\(^3\)

\(^2\) Ibid., 108.
\(^3\) Ibid., 8-9.
A study conducted by a special committee of the Air Force’s Scientific Advisory Board in 1949, revealed many of the shortcomings in Air Force philosophy regarding missiles. Chaired by Dr. Louis N. Ridenour, the committee concluded that the Air Force was not giving priority to the funding of missile-related research and did not give equal status to technical personnel in comparison to those personnel involved in manning and maintaining aircraft. In August 1949, just two days after the committee released its report, the Soviet Union tested their first atomic bomb. Soviet acquisition of an atomic device gave greater emphasis to the committee’s findings, but increased funding for research and development into missiles was delayed further by the onset of the Korean War in the summer of 1950. Funding priority was directed towards the war effort until the conflict’s resolution in 1953.\textsuperscript{4}

But the Air Force was not the sole branch of the military that considered missiles as a possible component of their future defensive and offensive strategies. The United States Army took an interest in missiles as well, considering them a logical extension to their field artillery capabilities. Many officers of the Army, lacking the Air Force’s prejudices against unmanned aircraft to hinder their foresight, advocated more research and development for missiles. This interest by one of their service rivals assisted in greater Air Force examination of missile applications. The Department of the Air Force began to refer to missiles as “pilotless aircraft,” the terminology clearly placing the weapons within the Air Force’s arena.\textsuperscript{5}

Ultimately, three events in tandem brought missiles to the forefront of America’s Cold War military strategy. Dwight D. Eisenhower brought new leadership to the U.S. military’s

\textsuperscript{4} Ibid., 109-116.
command structure with his ascendance to the presidency in 1953. Many of the missile’s best advocates at the Department of Defense assumed greater roles in Eisenhower’s administration. The end of the Korean War in 1953, released funding for military projects that were put on the back burner by the conflict’s budgetary demands. Then, on 20 August 1953, the Soviet Union exploded its first hydrogen bomb, only a year after the United States’ first successful test of an H-bomb. It became apparent to more U.S. military planners that the Soviet Union appeared to be gaining a decisive edge in technology, and that America had to be able to compete in this area to maintain an effective deterrent.  

The United States military became aware of a new reality described by historian Walter J. Boyne in his work on the history of the Air Force entitled *Beyond the Wild Blue*. “The oceans were no longer relevant protection for our shores,” writes Boyne, “and the warning time for crises had dropped from the years provided in World Wars I and II to a matter of minutes.” This realization led to a new policy of military funding outlined by President Eisenhower and the National Security Council in 1953. The new strategy became known under the axiom the “New Look,” and placed a much greater emphasis in military funding on weapons that added to America’s nuclear deterrent capabilities. In the $30 billion military budget proposed for 1954, the Air Force received the largest share of all of the armed services ($12 billion). At the same time, the Eisenhower Administration decreased the Army’s and Navy’s budgets in an effort to cut military funding in areas unrelated to the nuclear deterrent, such as infantry forces.  

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7 Ibid., 97.  
8 Ibid., 96.
The Air Force finally had the funding available and a shift in the interest to develop offensive missiles, but it still needed a plan for their development and implementation. Secretary of Defense Charles Wilson and Secretary of the Air Force Harold Talbott called upon two men in particular to work on the development of such a plan: Special Assistant on Research and Development Trevor Gardner and Major General Bernard Schriever, the head of the Air Force’s Weapons Development Division. These two men developed the two elements necessary for America’s rapid development of a functional Intercontinental Ballistic Missile.

In 1954, Gardner organized a committee to study the feasibility of the proposed ICBM designs in terms of budget, capability, and the time necessary to construct and deploy each system. The committee chose the Consolidated Vultee Corporation’s Atlas missile design as America’s first ICBM, and planned for a crash program to develop the missile. The Atlas’ projected weight was approximately 220,000 pounds and would have a maximum range of 5000 nautical miles. Gardner predicted that if the Air Force gave the missile top priority in funding, the first Atlas missiles could be operational by the middle of 1958, and that the program would ultimately cost approximately $1.5 billion.

At the same time, General Schriever developed a plan that called for “parallel development” of the individual components of the Atlas by different contractors. If there was a problem with the development of one component of the missile, the contractor in charge of that component’s construction could focus its energies on overcoming the problem while the other

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9 Neufeld, 95-96.
10 Boyne, 112-113.
components were completed as scheduled by the other contractors.\textsuperscript{12} Schriever’s plan also called for the continued investigation into and development of other ICBM designs that would supplement or surpass the capabilities of the Atlas missile. This plan resulted in the deployment of three different ICBM designs--Atlas, Titan, and Minuteman--by 1963.\textsuperscript{13}

In order for Gardner’s and Schriever’s plans to work, the Air Force needed administrative support for their implementation. In 1955, they received such support when President Eisenhower officially made the development of the ICBM a top priority in the Defense Department’s budget.\textsuperscript{14} A few months later, the Air Force developed a plan that called for any future designs for ICBM systems and Intermediate Range Ballistic Missiles (IRBM)\textsuperscript{15} to receive “lump sum approval”, and for the Air Force to choose the agencies and contractors that would best be able to construct the various components of the missiles.\textsuperscript{16}

While the Air Force began its missile program, the Army continued to argue for its own independent missile force. The rivalry between the two services over the issue came to such a fever pitch at one point that Eisenhower considered taking the job of missile development away from the military all together, placing the responsibility in the hands of a new group of civilian and military personnel similar to the Manhattan Project.\textsuperscript{17} The Eisenhower Administration ultimately settled the issue by implementing a policy that restricted the Army to the development

\textsuperscript{12}Neufeld, 119.
\textsuperscript{13}Boyne, 117.
\textsuperscript{15}An IRBM is a missile with a shorter range than the ICBM. These missiles are designed to be deployed in areas of the world closer to their intended targets.
of missiles that had a range of 200 miles or less for battlefield use.\textsuperscript{18} Wernher von Braun, a scientist originally from Germany who was recruited by the United States after World War II, put together a team to develop the Redstone missile for the Army, which had a range of 200 miles and could deliver a nuclear payload. Working out of Huntsville, Alabama, von Braun’s team delivered the first operational Redstone missiles to the Army on 18 September 1957.\textsuperscript{19}

As the Army’s team worked on development of the Redstone, the Air Force proceeded with work on the Atlas ICBM, but the complexity of the system proved problematic. The first test launch of the Atlas missile on 15 June 1957, was a failure, and it would not be the last.\textsuperscript{20} While the Atlas traveled down its hard road to maturity, both the Air Force and the Army began working on designs for an IRBM. The Air Force Thor and the Army Jupiter missiles were developed at almost the same time, and both had a range of approximately 1500 miles. By 1957, the Eisenhower Administration considered dropping one of the two programs to save money, or combine the best capabilities of both systems into one missile for both services.\textsuperscript{21} Eisenhower and the Defense Department agreed to wait for one of the two missiles to be successfully tested, then consider combining the two programs.\textsuperscript{22} Ultimately, the Jupiter program was turned over to the Air Force when the Eisenhower Administration made its decision to limit the range of Army missiles, and elements of the Jupiter were used to improve the Thor IRBM design.\textsuperscript{23}

\textsuperscript{19} “Army Activates First Redstone Group,” \textit{Missiles and Rockets}, Vol. 2 (October, 1957), 49.
\textsuperscript{20} “Missile Firings Accelerated at Cape Canaveral,” \textit{Missiles and Rockets}, Vol. 2 (October, 1957), 47.
\textsuperscript{23} Beard, 231.
All of the before mentioned missile designs were powered by liquid-fueled boosters. The volatility of the fuel made it unsafe to keep the missiles fully fueled and ready for launch. Instead, they had to be fueled just before being launched, which meant a greater lag time for retaliation to a potential nuclear first strike by the Soviets. Even as the Atlas and Titan ICBMs were being developed, the Air Force worked on the design of its first solid-fueled ICBM called the Minuteman. The advantage of the solid-fueled missile over its liquid-fueled brethren was that it could be kept fully fueled for at least a year, and could therefore be ready to fire within minutes. The 57 foot long Minuteman was already in the planning and development stage by 1958, the first year the Atlas became operational.24

With all of these different missiles in development, the amount of testing being conducted increased by the end of 1957. The main U.S. missile testing facility at Cape Canaveral, Florida, saw at least one test launch almost every day by that time, with various missiles for the Air Force and Army inventories being tested. There were often more failures than successes, but those who were testing the missiles believed that “from failures are learned the lessons that produce successes.”25 With the spectacular failure of the Vanguard test in December 1957, this belief was not of great comfort to the American public who saw only a loss of ground to the Soviets.

Experiments being conducted into the nuclear warheads that the ICBMs and IRBMs would carry influenced the development of missile designs such as the Atlas. The Eisenhower Administration tasked the Atomic Energy Commission with the goal of producing nuclear

warheads that would be much smaller without losing their destructive power. This would reduce the size of the missiles necessary to deliver the warheads to their targets, and thus lower their cost and allow for the construction of more missiles. President Eisenhower considered smaller warheads a “pre-requisite” to the development of a cost-effective ICBM. By the end of 1954, the testing of the Atomic Energy Commission concluded that a one-megaton nuclear warhead could be developed that weighed 1500 pounds.

The emphasis Eisenhower placed on reducing the size of nuclear warheads for America’s missiles was part of his overall concern with streamlining the military budget. He was convinced that the U.S. military could be fully funded while still maintaining a solvent economy. To achieve this goal, President Eisenhower ordered cuts in all military programs that were not directly a part of the nuclear deterrent programs of the “New Look.” The Army’s infantry divisions and the Navy’s surface vessels were both reduced in numbers due to the tighter budget. Eisenhower’s cutbacks contributed to later criticism that he was cutting back the military too much and endangering America’s security, despite the fact that military spending accounted for 63 percent of the overall national budget for fiscal year 1958.

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28 Neufeld, 94-95.
31 Adams, 371-372.
The new emphasis placed on missiles in the U.S. Air Force command structure and in the Department of Defense began to change the culture of both organizations. The design, construction, deployment, maintenance, and operation of ICBMs and IRBMs, as well as the first Surface to Air Missiles (SAMs)\(^{32}\) also in development by the mid-1950’s, required personnel who were not trained as pilots, but as technicians. The “Missiliers,” as the missile technicians were called, were incorporated into the new face of the modern Air Force. In time, they would earn equal consideration with their pilot brethren for recruitment and promotion.\(^{33}\) These changes sparked an increasing amount of speculation about the future of manned flight within the Air Force. In an October, 1957, \textit{Look} magazine article entitled “The Coming Death of the Flying Air Force,” writer Fletcher Knebel commented that “the shadow of the guided missile is upon the land-and upon the silver wings of the Air Force.”\(^{34}\) Such comments reflected a growing belief among military experts and observers that piloted aircraft would eventually become obsolete, and that the ICBM, IRBM, and SAM were the weapons of the future.\(^{35}\)

But those who still believed in a more traditional Air Force that relied on manned bombers and fighter planes as a deterrent to aggression had a strong voice in General Curtis LeMay. As the officer in charge of the Air Force’s vaunted Strategic Air Command (SAC), LeMay supervised most of the nation’s bomber aircraft charged with retaliating against a Soviet nuclear strike. He considered missiles to be primarily “political and psychological weapons” that were still lacking in reliability and accuracy. LeMay expressed confidence in the ability of SAC’s bombers to deter aggression and deliver nuclear weapons to their targets in the Soviet

\(^{32}\) A SAM is a missile designed to down aircraft.

\(^{33}\) Boyne, 97-98.

\(^{34}\) Knebel, 29.

\(^{35}\) Ibid., 26-29.
Union if necessary.\textsuperscript{36} Despite the rise of the missile in the 1950’s, SAC bombers still constituted the bulk of the Air Force’s nuclear deterrence force well into the early-1960’s.

While the U.S. military began the design and development of its first missiles, the idea of launching a man-made satellite into orbit was being discussed by some in the Defense Department and other agencies. As with missiles, the idea of an orbiting satellite can be traced to the end of World War II. At that time, the national defense community rejected a proposal for the Army to develop and launch a satellite because it was believed at the time that such a satellite would have no military or strategic value. More proposals were presented to the U.S. government during the early-1950’s, including one by S. Fred Singer of the International Astronautical Federation, an organization of scientists interested in space related studies. In 1953, Singer presented a design for the MOUSE (Minimum Orbital Unmanned Satellite) as a device to collect scientific data about outer space.\textsuperscript{37}

Although the Defense Department rejected the MOUSE proposal, Singer’s idea inspired the development of the first officially proposed American satellite. Called Project Orbiter, the five pound satellite’s construction would have been supervised by Werner von Braun’s team at Huntsville, Alabama, using a modified version of their Redstone missile to put it into orbit. In 1955, Donald A. Quarles, the Assistant Secretary of Defense for Research and Development, recommended that the Orbiter project be part of a “triple approach” using three different programs in the three branches of the armed forces. Project Orbiter was to be developed by von Braun’s Army team, while the Naval Research laboratory worked on another satellite designed to

\textsuperscript{36} Neufeld, 121.  
be fired by the Navy’s Viking rocket. The Air Force would also work on a satellite launched with an Atlas missile booster in combination with an Aerobee-Hi rocket.\textsuperscript{38}

While the U.S. military discussed the idea of developing satellites, scientists from around the world prepared for another great scientific endeavor. On 5 April 1950, Dr. J.A. Van Allen and other prominent scientists gathered for a dinner party held to honor Sydney Chapman, a distinguished geophysicist visiting the U.S. from Britain. The scientists at the party developed an idea that evolved into the International Geophysical Year. The proposal called for scientists from many different fields and different countries to cooperate in a 16-month study of the structure of the Earth and the functioning of its natural systems.\textsuperscript{39} When the International Geophysical Year (IGY) began in 1957, it involved the participation of 64 countries, and would be the engine that would drive the U.S. government to pursue a greater interest into launching a satellite into orbit.

On 25 July 1955, the Eisenhower administration, in conjunction with the National Academy of Sciences and the National Science Foundation, announced that the United States would launch a man-made satellite with scientific instruments as part of America’s contribution to the IGY. This satellite was designed to assist IGY scientists studying the Earth’s outer atmosphere.\textsuperscript{40} The Eisenhower Administration was determined the proposed satellite remain a civilian endeavor, separate from any military projects. This would require the construction of a

\begin{footnotes}
\item[38] Ibid.
\item[40] Sullivan, \textit{Assault on the Unknown}, 80.
\end{footnotes}
completely new rocket and satellite system that did not use military missiles already in development.\textsuperscript{41}

President Eisenhower had two main reasons for this policy. The IGY required that any discoveries made or technologies used during the program’s studies be shared with the rest of the world. This included the satellite that the United States intended to contribute and the missile used to put it into orbit. If the U.S. used a military missile, that would mean sharing military technology with the other nations of the world. Eisenhower believed that this presented too great of a security risk. At the same time, the President also wanted to keep the military out of the program as much as possible to maintain the benign nature of the satellite program.\textsuperscript{42} He considered the satellite “a gift to the scientific community of the entire world,” and wanted that gift to come from a peaceful endeavor.\textsuperscript{43}

To meet these requirements, the Eisenhower Administration tasked Vanguard to be America’s IGY satellite. Vanguard’s rocket was approximately 72 inches in diameter, weighed around 22,000 pounds at the time of takeoff, and its boosters produced approximately 27,000 pounds of thrust. The satellite package that the rocket was designed to carry was 20 inches in diameter and most weighed approximately 21.5 pounds. This made the Vanguard much smaller than most of the long-range missiles in development for the military. Although Vanguard was mainly a civilian effort, the Naval Research Laboratory provided supervision and technical

\textsuperscript{41} Eisenhower, \textit{Waging Peace}, 209.
\textsuperscript{43} Eisenhower, \textit{Waging Peace}, 209.
support to the venture. The total cost of the Vanguard program as of April 1958, was $112.2 million, the price tag being picked up by both the military and civilian agencies.

The civilian scientists who worked on the Vanguard program requested more military assistance for their efforts. Vanguard was an advanced piece of technology, in many facets more complicated to develop and operate than the missiles the military was developing. For example, the Vanguard used both solid and liquid fueled stages to orbit its payload. The only other missile on the drawing board of U.S. planners that used solid propellant was the Minuteman, and its deployment was still several years away. Despite the technical difficulties, the Eisenhower Administration still wanted to keep the military’s involvement to a minimum. The fact that scientists believed they could have launched a satellite much faster with more military hardware and assistance would be an important source of criticism leveled at Eisenhower after the Soviet launch of the Sputnik satellites.

As the planning for the development of Vanguard got underway, the United States embarked on its open policy to share the satellite with the world. A full day was devoted to the discussion of America’s satellite program at an International Geophysical Year conference held in Barcelona, Spain, on 10 to 16 September, 1956. The American representatives shared information on the projected capabilities of the satellite to assist in the IGY experiments, and also requested the assistance of other nations in tracking the satellite after it was launched. At this meeting, the Soviet representatives announced that their nation also planned to launch a

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46 Raymond, “ ‘Moon Divorced From Arms Work.”
satellite as part of the Soviet Union’s IGY contribution. The Soviet and American representatives agreed to cooperate in the venture by using transmitters on both nations’ satellites that were compatible. The use of compatible transmitters would have allowed for easier tracking by the international network of stations being set up to monitor IGY satellites. Between September, 1956, and the Sputnik launch of October, 1957, the Soviets continued to pledge that they would share details about their satellite with the rest of the world before they launched it, and would provide sufficient warning so the tracking stations could be prepared to monitor their satellite.47

Shortly after the Barcelona conference, on 20 September, Wernher Von Braun’s Army team launched a Jupiter-C rocket to a height of 600 miles above the Earth, but failed to recover the nose cone it was carrying. The development of the Jupiter-C missile was a direct result of the original plan for the Army to develop and launch the Project Orbiter satellite. Although the Eisenhower Administration officially opted for Vanguard as America’s satellite because of its use of non-military technology, von Braun’s team continued to develop the Orbiter program concurrently.48

While it shared the “Jupiter” name, the Jupiter-C was a modified version of the Redstone missile originally chosen to launch the Orbiter satellite. This name ploy permitted the project to be worked on under the cover of the Jupiter IRBM program still in development at the time.49

The Jupiter-C was approximately 68.6 feet long, and 70 inches in diameter. It was not quite as

49 Ibid.
long as the Vanguard rocket, but it was wider and could carry a larger payload. The Jupiter-C was also a less complicated rocket system than the Vanguard, as it did not incorporate the mixture of solid and liquid fuel technology.\(^{50}\)

Von Braun’s team continued testing on the rocket throughout 1956 and 1957, until they were able to launch a Jupiter-C nose cone into low orbit and recover it on 8 August 1957. This nose cone became the first man-made object launched into space and recovered upon re-entry into Earth’s atmosphere.\(^{51}\) The testing by von Braun’s team eventually proved fortuitous for the United States as problems would soon develop in the Vanguard Program.

The International Geophysical Year began on 1 July 1957, just prior to the successful Jupiter-C test. President Eisenhower spoke about the IGY on television the night it began, calling it “one of the great scientific adventures of our time.” He expressed his hopes that the international effort would lead to more cooperation between the world’s scientists and promote greater understanding between nations.\(^{52}\) In Britain, the Duke of Edinburgh echoed Eisenhower’s enthusiasm in a special program on British television devoted to the IGY. The Duke called the IGY “a great experiment in world cooperation” during the one and a quarter hour program that cost the British Broadcasting Company $56,000 to produce.\(^{53}\) *The New York Times* ran several articles on the IGY the day it began, including one on the front page written by the paper’s science correspondent, Walter Sullivan.\(^{54}\) This was the first series of articles

\(^{50}\) “Review of First Eleven Months of IGY,” 132.
\(^{51}\) Divine, 10.
Sullivan wrote on the IGY, but most were relegated to the back pages of the issues they appeared in.

Although the New York Times gave the IGY prominent coverage on the first day, most of the national news magazines either did not cover it at all, or gave it only passing attention in buried articles. In Newsweek, a brief article appeared on page ninety-four of that week’s issue, noting that the United States the IGY started with a series of storms observed on the surface of the sun. The brief article that was published in the 8 July 1957, issue of Time presented the IGY as a subject mainly of interest to the world’s scientists. Except for these brief articles, both Newsweek and Time did not cover the IGY again until after the Sputnik I launch. Other magazines such as Look did not mention the IGY at all before October, 1957.

The lack of attention by the media was an indication of the apathy that most of the American public felt towards the International Geophysical Year. New York Times journalist Walter Sullivan commented on this apathy in the book he later wrote on the IGY entitled Assault on the Unknown. He noted, “the IGY had been something children heard about in the schoolroom, or the more scientifically inclined read about in selected newspapers or periodicals.” J. Tuzo Wilson, another author who wrote about the IGY, also commented on the public indifference towards the 16-month international study his work, I.G.Y: The Year of the New Moons. “Although it absorbed the imagination of the world’s scientists for eighteen months,” wrote Wilson, “to the general public the purpose of the International Geophysical Year was not nearly as clear as the delightful realization that scientists either could not count or did

57 Sullivan, Assault on the Unknown, 2.
not know how many months there are in a year.” It was not until the launch of Sputnik I that public attention shifted to the IGY, as it became a political propaganda pawn of the Cold War. Technical issues continued to plague the Vanguard Program throughout the first months of the IGY. There was dispute between the scientists who were working on Vanguard and President Eisenhower as to how much extra military aid was requested. The scientists later claimed that they repeatedly requested further military assistance when Vanguard continued to encounter difficulties, but that these requests were denied by the administration. President Eisenhower’s memoirs notes his administration offered the scientists the opportunity to switch from the Vanguard to the Jupiter-C missile as a launching platform for the satellite, but that the scientists “showed little interest” in the proposal. Eisenhower added that there were other difficulties besides those in the technical area, including budgetary concerns that had to be addressed with Congress. Either account suggests there was little sense of a race against time for Vanguard’s development, and none suspected the bombshell the Soviets had in store for them in the fall of 1957.

As scientists gathered for a National Academy of Science conference in Washington, D.C., on 30 September 1957, the Soviet Union laid the foundation for Sputnik’s launch. The American scientists working on Vanguard presented the bulk of the material at the conference, as they updated the rest of the world’s scientists on their progress. They even set up an elaborate

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58 Wilson, xi.
exhibit that included an animated exhibit featuring a model of the Vanguard satellite circling a large globe.  

At first, the Soviets only contributed previously released information about their satellite program. Soviet scientist Sergei M. Poloskov then claimed the Soviets were very close to launching a satellite, using the word “imminent” when describing the timetable for such a launch. Poloskov backed down from that statement when pressured for more information by scientists at the conference, but added that the Soviet satellite team intended to use a different frequency of transmitter on their satellite than that being used by the Americans. The U.S. representatives accused the Soviets of violating the agreement made at the conference at Barcelona to use compatible transmitters. Finally, at the closing dinner of the conference held at the Soviet Embassy in Washington on 4 October, the Soviet representatives announced the greatest new piece of information of all; they had just successfully launched the world’s first man-made satellite into orbit. 

Sputnik I was a spherical satellite 22 inches in diameter that weighed approximately 184 pounds. Although it did not carry much in the way of scientific instrumentation, it did have a transmitter that sent out a constant beeping signal that could be picked up on radios around the world. It was launched inside the protective nose cone of its carrier rocket, and all three survived the trip into orbit. Sputnik I circled the Earth at an altitude of around 600 miles above the

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60 Sullivan, Assault on the Unknown, 62-64.
61 Ibid., 67-68.
These measurements were superior in size and altitude to the Vanguard satellite that was yet to be launched by the United States.

Many of the American scientists who were in attendance at the dinner offered their congratulations to their Soviet counterparts on the accomplishment that Sputnik’s launch represented. Among those who offered their congratulations was Joseph Kaplan, head of the United States National Committee on the IGY, who said that Sputnik “was a remarkable accomplishment on their (the Soviets’) part. From the point of view of international cooperation, the important thing is that a satellite has been launched.” Fellow American IGY committee members Lloyd Berkner and P.H. Wyckoff echoed these sentiments, the latter claiming to be “elated” over the launch.63

However, not all of those who were there that night expressed elation over the Soviet launch of Sputnik I. Sydney Chapman, the British scientist in charge of the International Geophysical Year, expressed his displeasure over the way the Soviets launched their satellite. “They (the U.S. and U.S.S.R.) had worked,” he said, “in their different ways-on the one hand keeping the world informed of much of their plans, their progress and setbacks, on the other hand, in silence until and unless their declared aim had been achieved.”64 Chapman’s words foreshadowed the reaction of many in the United States. The Soviets had secretly worked on their missile and satellite programs, and achieved success. They surprised the world and beat the United States into space, and many Americans began to wonder how it happened.

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63 Ibid.
64 Sullivan, Assault on the Unknown, 69.
CHAPTER TWO:
THE “BEEPS” HEARD AROUND THE WORLD

On the evening of 4 October 1957, there were only two men on duty at the Smithsonian Astrophysical Observatory in Cambridge, Massachusetts. After all it was a typical weekend, and few could have anticipated that the world was about to be changed by the launching of a Soviet satellite. When the news reached the observatory, the two men there scrambled to recall the rest of the facility’s staff and alert the more than 2000 Moonwatch observers around the world originally assigned to observe the American satellite when it was launched. The surprised earthbound onlookers put into place the mechanisms to observe the new satellite circling the globe. Since the Soviets provided no information about Sputnik’s orbit, altitude, or speed, the American scientists had to find Sputnik for themselves and rely on their own observations to gather information about the satellite.\(^1\)

Just like their brethren at the Smithsonian Observatory, the Washington Naval Research Laboratory staff feverishly prepared their instruments to observe Sputnik. They worked through the night of 4 to 5 October, making necessary adjustments to equipment originally designed to monitor Vanguard.\(^3\) Circling the globe every one hour and 35 minutes, Sputnik was traveling on

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\(^1\) The Moonwatch observer program was made up of a group of technicians posted around the world who were tasked with monitoring the transmissions of the IGY satellites. Originally, they were meant to be used after the first Vanguard satellites was launched, but were pressed into service when the Soviets launched the Sputnik I and II satellites.


\(^3\) “Reds Fire ‘Moon’ Into Sky. Spins 560 Miles Up at 5 Miles a Second, 1 Hr., 35 Minutes Around Earth,” Chicago Daily Tribune, October 5, 1957. In future, this will be referenced in notes as “Reds Fire ‘Moon’…”
a north to south orbital path that brought it over the United States seven times every twenty-four hours. The Earth’s rotation caused Sputnik’s orbit to shift 1200 miles westward every time it completed an orbit, thus inhibiting Americans from physically spotting the satellite during its first two days in space. Americans could not see Sputnik over their nation for the first two days of the satellite’s orbital journey. To further complicate physical sighting during these initial days, lighting conditions permitted for Sputnik to be visible to ground observers only at dawn or dusk. The Soviets refrained from releasing photographs to the world press, adding to the secrecy that surrounded their achievement. Seeking a visual aid to explain the feat, several U.S. newspapers opted to print pictures of the Vanguard satellites as a stopgap measure until images of Sputnik were finally available for publication.

Sputnik’s initial calling to America came only from the satellite’s radio signal transmitted every point-three seconds. The signal was described as being “of the nature of a telegraph,” sending a steady beeping sound to radio receivers on the ground tuned into the correct frequency. A writer for Life magazine comically described Sputnik’s signal as sounding like “a cricket with a cold.” American and British observatories and listening posts picked up the signals coming from Sputnik for the first time on the night of 4 October. RCA recorded Sputnik’s radio pulse at 7PM EST that same night, and provided the recorded signal to NBC

4 “Track Red’s Space Moon ‘Round World. Pick Up Messages from Sphere,” Chicago Daily Tribune, October 6, 1957. In future, this will be referenced in notes as “Track Red’s Space Moon…”
6 Whipple and Hynek, 39-40.
8 “Reds Fire ‘Moon’…”
News. That evening, NBC became the first network in America to broadcast Sputnik’s signal to the public. The newscaster who made the report introduced the signal by saying the following: “Listen now for the sound which forever more separates the old from the new.”

With little information released by the Soviets, the Cold War mentality led American scientists to speculate the transmissions being sent by Sputnik might have actually been coded signals. Code specialists analyzed Sputnik’s steady beeping to decipher any kind of message it may be transmitting. At the same time, other American scientists debated about how long Sputnik might remain in orbit. The Soviets stated that the battery on the transmitter aboard Sputnik would only last two weeks, and hoped it would maintain its orbit for at least that length of time. The main stumbling block in the scientists’ calculations and theories about Sputnik’s life expectancy was a lack of knowledge about the density of the Earth’s atmosphere at the satellite’s orbital altitude.

Even as scientists searched the heavens for Sputnik, and tuned in their radios to listen for and record its signals, the world began to respond to the Soviet achievement. Arthur C. Clarke, who would later pen the novel *2001: A Space Odyssey*, called Sputnik “one of the greatest scientific advances in world history.” Many British scientists expressed frustration with the lack of information provided by the Soviets both before and after Sputnik’s launch. Writers for the Egyptian press expressed hopes that Sputnik would somehow promote greater neutrality among nations in space related issues. In France, the *Du Dimanche* journal issued in the week after Sputnik expressed hope that the United States would soon match the Soviet achievement. The

10 “Reds Fire ‘Moon’…”
12 “Track Red’s Space Moon…”
Chinese government and press were predictably pro-Soviet in their statements on Sputnik, and touted the Soviet satellite as proof of American weakness.\(^{13}\)

James T. Mangan, the leader and founder of the Nation of Celestial Space, based in Illinois, offered a more comical reaction. Mangan asserted that his group claimed outer space as their national territory back in 1948, and saw the Soviet launch of Sputnik as a violation of his nation’s territorial integrity. He also said that the Nation of Celestial Space did not plan on military action against the Soviets for this invasion of their territory because they believed in solving their problems peacefully.\(^{14}\)

While Magan’s claims may have brought a moment of amusement to Americans, few considered Sputnik a laughing matter. Shortly after the Sputnik launch, the discussion of the orb in many circles quickly began to reflect the political realities of the world in 1957. As a writer for *Time* magazine put it, “the impulse to applaud a mighty scientific achievement soon froze in the rigors of the Cold War.”\(^{15}\) An article in the Science section of *Newsweek* published on 14 October, claimed that the Soviet launch of Sputnik was a clear victory of Soviet science over American science. Sputnik proved that the Soviets were ahead of the United States in missile development, and blamed America’s second place status on a late start in funding the development of missiles.\(^{16}\) The editors of *Time* were no more positive in their reaction to Sputnik. Using weight and orbital altitude as measures, they wrote that the Soviet satellite “outclassed” America’s Vanguard satellite in almost every appreciable area, and chastised the

\(^{13}\) “Fears Satellite May Be Like a Spy in the Sky. Army Men Dispute Briton’s View,” *Chicago Daily Tribune*, October 7, 1957. In future, this will be referenced in notes as “Fears Satellite…”


\(^{15}\) “Red Moon Over the U.S.,” 19.

\(^{16}\) “Into Space: Man’s Awesome Adventure,” *Newsweek*, October 14, 1957, 37.
United States government and satellite technicians for not using large and more powerful military missile as the Soviets apparently had done.\footnote{\textquote{The Sputnik}, \textit{Time}, October 14, 1957, 46.} Harry Schwartz, a writer for \textit{The New York Times}, was less scathing in his appraisal of the situation. Although he agreed with other assessments that Sputnik demonstrated Soviet superiority in ICBM development, Schwartz called the launch a stunt motivated to generate propaganda about Soviet superiority in science and communism as a superior system to the west.\footnote{Harry Schwartz, \textquote{A Propaganda Triumph. A View That Soviet Will Stress Satellite to Buttress Claims of Military Power}, \textit{The New York Times}, October 6, 1957.} Clearly the American press was linking the \textquote{pure science} wonder of the Sputnik satellite to Soviet superiority in booster technology and by doing so noted that the Communists were ahead in the nuclear payload delivery race.

Of course, Soviet actions and statements made in the period after Sputnik’s launch certainly did not help alleviate any concerns expressed by American media commentators. Even before the Sputnik launch, the Soviets stated that the American bomber forces of the Strategic Air Command would be vulnerable to Soviet missile attacks within a short period of time.\footnote{Raymond L. Garthoff, \textquote{Russia…Leading the World in ICBM and Satellite Development?} \textit{Missiles and Rockets}, Vol. 2 (October, 1957), 72.} On the same day that the Soviets launched Sputnik, they also exploded a hydrogen bomb at one of their testing facilities. The bomb test was part of an ongoing series of experiments that had been going on for some time before Sputnik, but the timing of the test to coincide with Sputnik’s launch added to America’s trepidation about Soviet intentions.\footnote{Dickson, 109.} The TASS News Agency (the Soviet state sponsored news organization) released a statement after Sputnik, saying \textquote{the present generation will witness how the freed and conscious labor of the people of the new Socialist...}
society turns even the most daring of man’s dreams into reality.”

One Soviet scientist reportedly said that “Americans design better automobile tailfins but we design the best intercontinental ballistic missiles and earth satellites.”

A few days after Sputnik’s launch, the Soviets indicated that Sputnik was just the first step in a plan to develop and send more probes into space, including one to the moon within “a few years time.”

The Soviets knew that they scored a scientific, psychological, and political victory with Sputnik, and wasted no time in taking advantage of the achievement.

Although the Soviets touted their successful launch of Sputnik, there is also evidence that has come to light since the end of the Cold War that the Soviets had suffered a series of setbacks in the summer and fall of 1957. But these failed launches were cloaked under a strict “veil of secrecy,” as Asif Siddiqi called it in his book, *Sputnik and the Soviet Space Challenge*. Siddiqi goes on to point out the irony of the fact that the Soviets attached a great deal of publicity to its space program, but only to its successes, and most of the details about how the Soviets accomplished such feats as the launch of Sputnik were not revealed. Even the names of Soviet scientists working on space and missile related projects were covered up and false names used. “One could read countless books and articles on the (Soviet space) effort,” wrote Siddiqi, “and not learn anything new about the program.”

This policy of secrecy not only provided the Soviet government with the ability to cover up their failures, but also gave its leaders the freedom to make exaggerated statements about

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21 Schwartz.
Sputnik’s military implications. Soviet Premiere Nikita Khrushchev used his nation’s achievement to support the idea that the Soviet Union possessed a much greater missile capability than they actually had in 1957. As historian John Lewis Gaddis points out in *We Now Know*, the Soviets were only able to deploy a small number of IRBMs to Eastern Europe, and had no capability for launching ICBM’s with any precision. In fact, the Soviets only had four functional ICBMs, and would not build more until the early 1960s. By claiming that Sputnik was an indication of Soviet missile capabilities, Khrushchev was practicing what Gaddis calls a long standing Soviet policy of “building just enough of a capability to create the illusion that much more lay behind it.”

Khrushchev intended to deliberately bluff the free world and used Sputnik as his playing card.

Despite the Soviets’ Cold War secrecy over the details of their program and the boasting of Soviet leaders, American and Soviet scientists met as part of their mutual participation in the International Geophysical Year. A number of American scientists openly voiced their congratulations to their Soviet colleagues at these face-to-face gatherings. There were some attempts made by Soviet and American scientists to maintain positive relations with each other after Sputnik’s launch as well. A group of scientists from both nations met to share information about data being collected by Sputnik I and to discuss mechanisms for sharing data from future Soviet and American satellites. They even discussed the idea of observing each other’s rocket and satellite tests, and for including some American scientific equipment on a future Soviet satellite. The latter two ideas would never come to fruition. Cold War politics permeated these

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talks as upon their conclusion. Several American scientists boasted about the superiority of their scientific instruments over that of the Soviets. Ultimately, the spirit of competition between the two sides far outweighed any cooperative impulse on the part of a few members of the scientific community.

In this atmosphere of competition, and concern over the status of American technology, there was at least one person in America who expressed very few doubts about the nation’s ability to compete with its adversaries. As Paul Dickson wrote in his book *Sputnik: the Shock of the Century*, “the calm at the center of this whirlwind (the Sputnik crisis) was Dwight David Eisenhower.” As the center of the “whirlwind” of the Sputnik Crisis, it is important to understand what kind of President Dwight David Eisenhower was when the Soviets’ propelled the world into the space age. Eisenhower was ten days away from his sixty-seventh birthday when the Soviets launched Sputnik I. By that time, he had spent the grand majority of those sixty-seven years in public service, first in the United States Army then as a politician. He was from the small town of Abilene, Kansas, almost at the center of the continental United States. According to Stephen Ambrose, the President’s biographer, Eisenhower inherited from his midwestern heritage all American good looks, a big grin, and a strong sense of religious faith. But other parts of his personality included strong ambition and competitiveness, as well as a bad temper. Despite these latter characteristics, “he much preferred working on a team than acting on his own,” said Ambrose in a 1995, speech. For the team he chose to work with, Eisenhower

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27 Dickson, 111.
always sought the best and the brightest, especially in the areas of organization and management of resources. When it came to public relations, President Eisenhower had enjoyed almost unprecedented confidence from the public. “Those who knew him well,” wrote Ambrose, “and millions who did not, looked to him instinctively for guidance and leadership.” This was due mainly to his record of accomplishments during and after World War II, but credit also goes to his ability to project a sense of command over almost any situation. President Eisenhower relied upon his customary ability to inspire trust and his team of advisors to navigate through the waters of the Sputnik Crisis.

From the time Sputnik entered orbit, Eisenhower maintained a spirit of confidence in both public statements and private meetings with his advisors. He was vacationing at his private residence in Gettysburg, Pennsylvania, when Sputnik was launched, and was informed almost immediately after the Soviets made the announcement. Eisenhower did not rush to make a public response, and did not speak to the press about it for five days after the launch. Instead, he allowed his White House Press Secretary, James Hagerty, to speak on behalf of the administration in the initial response.

Hagerty faced the press on 5 October, and offered the Soviet’s congratulations on behalf of the President for their “great contribution to scientific knowledge.” The official position of the White House was that the President was not overly surprised by Sputnik’s launch, and that the timing and manner of the launch was clearly motivated in part by a desire for a propaganda victory. Hagerty pointed out the way the Soviets “bowed reporters” into the Soviet embassy in

Washington, D.C., on the evening of Sputnik’s launch; a place where reporters are normally not welcomed. When some of the reporters at the press conference asked about Sputnik’s implications to America’s defense, Hagerty did not respond with specifics, but instead offered a general statement of confidence in U.S. strength. On the same day as Hagerty’s press conference, John P. Hagen of the Vanguard program also stated that the official position of the members of the program, in concurrence with that of the Eisenhower Administration, was that Sputnik’s launch would not affect the timing of the U.S. satellite program. At the same time, Hagen did admit that the Soviets probably used something “close to an ICBM” to launch Sputnik and that America’s satellite program could be accelerated a little if needed.\footnote{Ibid.}

While Hagerty and Hagen presented a mood of calm on behalf of the administration, the State Department sent a circular telegram to its embassies and government officials around the world with instructions on how to respond. “Soviet satellite is of military importance only in sense that advancement of science in long run contributes to military technology,” said the telegram. “Our foreign policy should reflect the basic sense of confidence which we feel in the military posture of our country.” The State Department’s instructions ordered all U.S. diplomats and other officials to discount any ideas that Sputnik indicated American weakness, and that they should present an attitude of confidence.\footnote{Christian Herter, “Circular Telegram From the Department of State to All Diplomatic Missions,” \textit{Foreign Relations of the United States, 1955-1957}, Vol. 24 (Washington, D.C.: United States Government Printing Office, 1989), 167.}

President Eisenhower himself finally spoke publicly about Sputnik on August 9, through means of a White House Press Conference. Craig Allen, author of \textit{Eisenhower and the Mass Media}, points out the importance of Eisenhower’s choice of venue. If the President had given a
special televised address on the subject first, in the initial period after Sputnik, it could have possibly alarmed more people than it reassured. Instead, by using the forum of a press conference (a normal occurrence since the televised press conference was first invented in 1955), Eisenhower presented his response to Sputnik as part of the normal routine of his presidency, thus reassuring the American people that their leader was indeed not overly concerned.\footnote{Craig Allen, \textit{Eisenhower and the Mass Media: Peace, Prosperity, and Prime-Time TV}. (Chapel Hill, NC: University of North Carolina Press, 1993), 156.}

The press conference actually covered several different issues, both domestic and foreign policy related. However, President Eisenhower spent the bulk of the time answering questions about Sputnik and defense related issues. The President emphasized that his administration considered the development of missiles and the development of satellites as separate issues, the first defense related and the second a scientific endeavor. Whether the Soviets considered them separate or not was not as clearly stated by Eisenhower. He also said that his administration always gave missile development “top priority,” but that the development of a satellite was not included in that because he did not see satellites as “a security concern.” Eisenhower also stated his belief that Sputnik did not necessarily indicate that the Soviets had a functional, deployable ICBM.\footnote{Dwight D. Eisenhower, “The President’s News Conference: October 9, 1957,” \textit{Public Papers of the Presidents: Dwight D. Eisenhower, 1957} (Washington, D.C.: United States Government Printing Office, 1958), 719.}

As for Sputnik itself, the President said that Soviet’s satellite was only “a small ball” that lacked the scientific instrumentation, and thus the scientific value, that the American satellite would have. Not as clearly stated by Eisenhower was that the small size of the satellite indicated that the rocket needed to send it into orbit may not have been big enough to launch a nuclear warhead. Eisenhower conceded the fact that science can influence defense, but he believed it
was an “evolutionary” influence. New inventions and innovations had long-term influence on defense, not an immediate impact on relative defense capabilities. “I think that given time, satellites will be able to transmit to the earth some kind of information with respect to what they see on the earth,” said Eisenhower. “But I think that period is a long way off.” The President disputed the idea that Sputnik’s launch indicated a failure on the part of the United States to compete with the Soviet Union, claiming that there never was a “race” to put up a satellite. Instead, the U.S. satellite program was geared towards meeting the needs and timetable presented by the International Geophysical Year. When asked whether the Soviet achievement concerned him, Eisenhower responded by saying that Sputnik “does not raise my apprehensions, not one iota.”

President Eisenhower made another statement that same day with the goal of providing the American people with a summary on the Administration’s position on the U.S. satellite program and the status of that program. Once again, Eisenhower re-emphasized the separate nature of America’s missile development and satellite program. “Vanguard has been deliberately separated from our ballistic missile efforts in order, first, to accent the scientific purposes of the satellite and, second, to avoid interference with top priority missile programs,” said the President. “Merging of this scientific effort with military programs could have produced and orbiting satellite before now, but to the detriment of scientific goals and military progress.”

The President clearly indicated that he was “satisfied” with the direction and progress of the

35 Ibid.
Vanguard program, and that if all went according to plan, a Vanguard satellite would be launched by the end of 1958. 37

These public statements of reassurance by President Eisenhower and members of his administration did little to silence the President’s critics. Many commentators in the media and members of both political parties were already criticizing Eisenhower’s muted response to the Soviet feat, and began to single him out as the scapegoat for what they saw as America’s failure to compete. Senator Stuart Symington (D-Missouri), the Chairman of the Senate Armed Services Committee, lashed out against Eisenhower in the press. He blamed the “failure” of the United States to launch a satellite before the Soviets on the President’s defense spending cuts, and announced plans to call a number of Defense Department officials before his committee for “questioning” on the issue. 38

Some officials in the U.S. defense establishment also expressed concerns about the implications of the Soviet achievement. They believed that the military should have been given a greater role in the development of the American satellite program. Others leveled a great deal of criticism at President Eisenhower for the latter’s insistence on keeping Vanguard a primarily civilian project, and for not making the launch of a satellite top priority. Still others blamed poor intelligence estimates about the status of Soviet missile programs, which concluded that the U.S. and Soviet Union were on par with each other in missile development. Interestingly enough, these same officials did state there was inadequate funding for satellites prior to the Soviet

37 Ibid.
achievement. This indicates a contradiction with the criticism made by Senator Symington and others in the media, and shows that the critics of the Eisenhower Administration were not completely uniform in their opinions about where the U.S. had gone wrong.

Even though President Eisenhower expressed an overall lack of alarm over Sputnik, there were some grumblings of concern in some quarters of his own administration. Hugh S. Cumming, Jr., the Director of Intelligence and Research for the State Department, discussed the possible connections between the Sputnik launch and ICBM’s in a memorandum to the Secretary of State. The memo concluded that “a feasible design for Sputnik could be directly adapted to a surface-to-surface missile capable of sending a sizeable warhead 3000-3500 miles.” However, intelligence and technical estimates also concluded that a missile the size and power of an ICBM might not have been necessary to launch Sputnik. Therefore, Sputnik’s launch was not necessarily an indication of the ability of the Soviets to launch an ICBM. Finally, the Cumming memo predicted that the Soviets would probably launch more Sputniks that were larger than the first and equipped with more scientific instrumentation. This last prediction proved to be prescient of the launch of Sputnik II within a month after the memo was written; a satellite that was indeed both larger and equipped with more instruments than Sputnik I.

President Eisenhower absorbed the criticism and concern being expressed by the media and by many members of the government and was shocked by it. In meetings held in the weeks after Sputnik I was launched, the President and his top advisors came to a consensus that Sputnik

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was not a source of overall concern in regards to America’s security. They concluded that America’s forces were still more than adequate to the needs of providing a nuclear deterrent. Even if Sputnik was an indication of the status of Soviet ICBM development, an item the President was not convinced about, and if the Soviets did deploy a few ICBM’s within the next year, large-scale deployment of ICBM’s was still a few years away. Until then, the bomber forces of SAC disbursed to bases all over the world still represented a sufficient deterrent to attack.\footnote{Charles J.V. Murphy, “The White House Since Sputnik,” \textit{Fortune}, Vol. 57 (January, 1958), 99.} Before Sputnik, the administration instituted a policy of keeping a certain number of bombers armed with nuclear weapons in the air twenty-four hours a day. This made them ever safer from a surprise missile attack and better ensured SAC’s readiness to respond.\footnote{Dickson, 111.} The SAC forces would also be supported by the deployment of IRBM’s to Europe by the end of 1958.\footnote{Murphy, 99.}

As for America’s satellite program, Deputy Secretary of Defense Donald Quarles did inform the President in one of these meetings that there was “no doubt” that the Army’s rocket team at Huntsville, Alabama, could have launched a satellite before Sputnik. But the consensus of Quarles and others, including the President, was that sticking with the Vanguard program was the correct decision. Vanguard met all of the needs of the IGY (the original motive for the satellite program), while the proposed Army satellite lacked much of the needed instrumentation.\footnote{Dwight D. Eisenhower, \textit{The White House Years: Waging Peace, 1956-1961} (New York: Doubleday & Company, 1965), 210-211.}

President Eisenhower and his advisors also concluded that Sputnik might even benefit the American satellite program because it established the principle of “freedom of international
space.” If the Soviets could launch a satellite which travels in orbit above all of the nations of the Earth, so too could the United States. Eisenhower saw this as extremely beneficial to future plans for the development of reconnaissance satellites to replace the U-2 spy plane in efforts to gain intelligence on activities inside the Soviet Union. Even though the President wanted to keep the Vanguard satellite a largely civilian operation because it was a contribution to science, his intention was not to make all future U.S. space related endeavors strictly scientific. Eisenhower realized the potential presented by satellites for intelligence purposes, despite his public statements that such satellites were “a long way off.” By the early 1960’s, the United States did begin sending reconnaissance satellites into space (starting with Project Corona), and President Eisenhower played an important role in making that happen.

This kind of thinking was very much a part of Eisenhower’s character, and played an important role in his presidency. Charles J.V. Murphy, writing for the January, 1958, issue of *Fortune* magazine, referred to Eisenhower as a long-term thinker and planner. Although the President was concerned with national defense and security, he was also wary regarding the potential strain such programs might place on the American economy and taxpayers. He also worried about how much a larger, powerful military might burden economic and individual freedom. In a 25 October 1957, joint statement with British Prime Minister Harold MacMillan, Eisenhower expressed his ideas on the connections between defense and economic freedom:

> In order that freedom may be secure and show its good fruits, it is necessary first that the collective military strengths of the free nations should be adequate to meet the threats against them. At the same time, the aggregate of the free world’s military expenditure must be kept within limits compatible with individual freedom. Otherwise,

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45 Ibid.
46 Murphy, 100.
we risk losing the very liberties which we seek to defend.47

There were already dozens of contractors working at ninety-three facilities around the country constructing the components of ICBMs and IRBMs before Sputnik.48 The defense industry was growing exponentially, and the President was determined to keep military spending under control. He did not want Sputnik to be used as an excuse to raise military expenditures beyond acceptable levels.

Eisenhower especially did not desire military spending to increase because of something perceived to not be a threat. “I can’t understand why the American people have got so worked up over this thing,” he said in a meeting with advisors on 20 October. “It’s certainly not going to drop on their heads.”49 But Eisenhower was also prudent about making sure the concerns being expressed in the media and elsewhere were unwarranted. On 15 October, he consulted several of America’s leading scientific minds for advice on how America was doing with missile and satellite development, and how things might be improved. Among the scientists the President consulted were Dr. Detlev Bronk, the President of the National Academy of Sciences, Dr. I.I. Rabi, the Chairman of the Science Advisory Committee, and Dr. James R. Killian, the President of the Massachusetts Institute of Technology (MIT).50

These scientists agreed with the administration’s assessment that funding levels for missile and satellite programs were adequate. However, they also expressed the need for better

49 Murphy, 100.
control and guidance over the various programs. Eisenhower was rather defensive on this last point. He considered it unnecessary to appoint a “missile czar” as many of his critics had been demanding, saying that it was the job of the President to manage America’s military programs. Dr. Rabi suggested that there may not be a need for a manager of all of America’s missile projects, but it would be a good idea to have a permanent scientific advisor for the President to consult with on all science and technical related issues. Killian supported this idea, and also suggested that the science advisor should chair a Science Advisory Committee in the Executive Branch. He also felt that it was important for this committee to be non-partisan in order to keep politics out of the advisory process. Eisenhower told his Special Assistant, Andrew Goodpaster, to take the idea under “advisement.”

In the meantime, the Vanguard technicians and scientists continued their work towards putting America’s satellite into orbit. On 23 October, they conducted a test launch of a prototype of the Vanguard Test Vehicle 2 (TV-2); the rocket they hoped would eventually carry the Vanguard satellite into space. It was launched from Cape Canaveral, Florida, and traveled to 109 miles in altitude. The goal of the launch was to test the actual rocket, and was part of a schedule of tests designed before Sputnik. It was not designed to deflect post-Sputnik criticism of the program. Even if the test had been designed to relieve public concern about America’s satellite program, such relief would not have lasted long.

On 3 November 1957, the Soviets launched Sputnik II into orbit. Once again, they did not notify the rest of the world of the launch until the satellite was safely in orbit. But this time,

\[51\] Ibid., 15-23.
\[52\] Dickson, 140.
the Soviet surprise was not just the fact they launched a satellite, but also the dimensions and weight of Sputnik II. While Sputnik I was spherical, the second Soviet satellite was a nineteen foot cylinder that weighed approximately 1120 pounds, roughly the size of a small Volkswagen. Sputnik II traveled its orbit at speeds reaching 18, 170 miles per hour, and circled the Earth around six times a day.\(^\text{53}\) Sputnik II’s orbital speed was actually slower than that of Sputnik I, but it was over nine hundred pounds heavier than the first Soviet satellite. The new satellite orbited the Earth at an altitude 500 miles higher than Sputnik I, and carried five hundred pounds of scientific instruments to measure solar radiation, temperature, pressure, and for the study of cosmic rays.\(^\text{54}\)

But Sputnik II carried cargo that was possibly far more important into orbit around the Earth—\(\text{the first living creature ever launched into outer space. A small Pomeranian/Samoyed mixed dog named Laika was carried by Sputnik II in a pressurized compartment behind the instrument housing. Laika was hooked up to instruments that monitored its vital signs and fed the dog intravenous fluids and nutrients.}\(^\text{55}\) Because of its canine passenger, newspapers referred to Sputnik II jokingly as “muttnik.” The dog survived the liftoff relatively unharmed, but died sometime during the first week after the launch.\(^\text{56}\) There has been some dispute over when and how Laika died, but the most recent evidence found in the archives of the former Soviet Union indicates that the dog passed away on the fourth day of the voyage from heat exhaustion caused by flaws in Sputnik II’s temperature control systems.\(^\text{57}\) Many newspapers and magazines, along

\(^{53}\) “Vanguard…the U.S. Missile in the News,” Missiles and Rockets, Vol. 3 (April, 1958), 42.
\(^{54}\) “Sputnik II and Pioneer Rider,” Life, November 18, 1957, 43.
\(^{55}\) Ibid.
\(^{56}\) Dickson, 141-145.
\(^{57}\) Siddiqi, 174.
with both U.S. and international associations for the humane treatment of animals, reacted to Laika’s death with a firestorm of criticism and sympathy for Sputnik II’s canine space traveler.58

If the Soviet Union’s official news agency paid any attention to Laika’s death at all, the fact was far overshadowed by the celebratory tone that followed yet another Cold War propaganda victory over the United States. The TASS News Agency released comments from a Soviet scientist named Andreyev on Sputnik II’s implications and its relationship with Sputnik I. “It is now clear to all it was not a question of an isolated breakthrough,” said Andreyev, “but a solid mastering of a new branch of science and engineering.”59 Soviet scientists like Andreyev were touted as heroes of the state by the Soviet media and public.

Reaction to the launch of Sputnik II poured in almost immediately after the Soviets announced its existence in orbit. Alan T. Waterman, the director of the National Science Foundation, said that it was “now clear that the Russians have been working with great determination on a planned series of satellite undertakings. They again deserve credit for a difficult engineering accomplishment.” Just as before, many scientists around the world praised the Soviets for their accomplishments, but a number of them also complained once again about the lack of prior notice before the launch. The IGY agreement did not specifically say that prior notice of the launch should be given, only that data gathered by the satellite must be shared with the global community after its launch.60 However, it can certainly be argued that the Soviet decision not to announce the launch of either Sputnik beforehand violated the spirit of the IGY as an open scientific endeavor.

While scientists praised the Soviets for their second space-related achievement, and complained about the lack of warning, many also speculated about Sputnik II’s implications for future space endeavors. Some scientists believed that the same launch vehicle used to put the 1120-pound Sputnik into orbit could also be used to send a 100-pound probe to the moon.\textsuperscript{61} This speculation on the part of western scientists matched up with the plans announced previously by the Soviets to launch a probe to the moon within the next few years.

As technical experts weighed in on Sputnik II’s implications, the media also responded to the story of Sputnik II. An article that appeared in the first edition of \textit{Newsweek} claimed that Sputnik II forever discounted the idea that a communist system was not competitive with western democracies in the areas of creativity and thought. The same article also speculated about the progress the Soviets made in various scientific and technical fields based upon Sputnik I and Sputnik II. It concluded that the Soviets demonstrated great skill in physics, mathematics, engineering, electronics, metallurgy, and chemistry, by applying knowledge in all of these fields to the launching rockets and satellites. Although \textit{Newsweek} heaped praise on the Soviet Union for its progress in science, it did not do so in an entirely generous manner. Instead, the article’s tone implied that the Soviets were using science as a way of competing in the Cold War, with the eventual goal of gaining technological superiority over the west.\textsuperscript{62}

For President Eisenhower, Sputnik II was a disastrous event that began one of the lowest months of his entire presidency. Much of Eisenhower’s previous success in deflecting criticism leveled at him after Sputnik I was shattered. His prestige as a president entered into a period of

\textsuperscript{61} “On to the Moon,” 58.
decline that lasted until the next year. According to a Gallup Poll conducted after Sputnik II, Dwight D. Eisenhower’s approval rating dropped by twenty-two percentage points from the previous poll before the second Soviet satellite was launched. Eisenhower knew that his presidency was in trouble, and that he had to do something to win back the confidence of the American people.

The President already had plans in place to speak to the American public about issues related to science, technology, and defense to alleviate public concern over Sputnik I. These four speeches would intended to be similar to the radio addresses called “fireside chats” that President Franklin D. Roosevelt used to alleviate American concerns over the Depression and World War II. Eisenhower decided to give one of these speeches a week earlier than planned (7 November instead of 14 November) in response to the elevated level of tension following the second Soviet space success. He also changed the subject of the speech from a general science and society talk to a discussion of America’s national security. The President requested television airtime for special addresses to the American people a total of five times during the fall, 1957. Four of the speeches were related to the Sputnik satellites. Craig Allen points out in Eisenhower and the Mass Media that Eisenhower requested more television airtime during this period than at any other time during his presidency. This serves to underscore the crisis of confidence that many Americans had with the President during this period, and that the Eisenhower administration knew it.

63 Dickson, 151.
65 Allen, 156-157.
The content of the 7 November, speech was very general in nature. President Eisenhower provided some information about America’s state of readiness, the progress of America’s satellite program, and attempted to reassure Americans that he was confident in the nation’s nuclear deterrent capabilities. Secretary of State John Foster Dulles tried to convince Eisenhower to include in the speech information gathered about Soviet military capabilities by the U-2 reconnaissance flights over the Soviet Union. Eisenhower refused because he did not want to announce to the world that the U.S. was sending spy planes over Soviet territory, and thus loose that top-secret resource. Without being able to go into specifics about the status of Soviet missile forces, the speech came off as being too generalized and not overly reassuring to many in the press. Some Americans still supported Eisenhower’s steady, calm approach, but many were not satisfied with what Eisenhower had to say.66

In a speech filled with generalities, there was one solid piece of news that the President presented to the American people. He finally decided to accept the recommendation he received from Dr. I.I. Rabi the previous month and appointed a full time, permanent Science Advisor to the President. The person he chose to fill the post was Dr. James R. Killian, one of the scientists present when Dr. Rabi made his recommendation.67

As previously mentioned, James R. Killian was the President of MIT, and took a leave of absence from that post when Eisenhower asked him to be hid science advisor. Dr. Killian had been MIT’s President since 1949, and was well respected in the scientific community for his intelligent and steady management of that institution. He had already served as a sort of part

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66 Divine, 46-47.
67 Ibid.
time advisor to President Eisenhower, the latter having called Dr. Killian on more than one occasion for advice on technical issues. 68 Robert Divine writes in his book, *The Sputnik Challenge*, that Dr. Killian “was sensitive enough to bureaucratic rivalries to tread carefully in dealing with various government agencies, yet confident enough of Ike’s (Eisenhower’s) trust to insist on knowing everything of importance taking place in the missile and space programs.” 69 Killian himself referred to this balanced position in his memoirs, by defining his role as that of “an advisor and catalyzer, not a government administrative officer.” 70 This made James Killian the perfect choice to fill a position where the President would rely on him for advice, but at the same time count on him not to interfere directly with anyone’s managerial authority over the various political, military, and scientific projects he would be examining.

Though Dr. Killian was not a manager of any specific program, he was the chair of the President’s new Science Advisory Committee and reported directly to President Eisenhower. Among the tasks that the President assigned to the new science advisor was for Killian and his committee to examine the various U.S. missile programs, the Vanguard satellite program, and other military projects related to science, and make recommendations on prioritizing those projects. Eisenhower also wanted Killian to report on whether he and the committee believed that interservice rivalry had affected progress in those areas. 71

Besides appointing Killian to the position of Science Advisor to the President, Eisenhower took other action in response to the increased tension after Sputnik II’s launch. He

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69 Divine, 49.
70 Killian, 31.
ordered the new Secretary of Defense, Neil McElroy\textsuperscript{72}, to accelerate plans for the construction and deployment of America’s first IRBM’s and ICBM’s, and to approve the development and launch of a satellite by Wernher von Braun’s Army missile team working in Alabama. The President also instructed William M. Holaday, the Special Defense Assistant for Missiles, to investigate the possibility of any interservice rivalry within the various missile programs and put an end to it.\textsuperscript{73} The fact that Eisenhower ordered both Killian and Holaday to look into and crack down on interservice rivalry that might affect the development of missiles underscores the concern the President had about the issue.

Around the same time as Sputnik II’s launch, the Office of Defense Mobilization’s (ODM’s) Security Resources Panel presented a report to the President on the status of America’s security. This panel was organized in May, 1957, by the Science Advisory Committee, to investigate the readiness America’s “active and passive defenses” and the status of deterrent forces, and to rate the various systems in place to protect America from Soviet attack. The panel was dubbed “the Gaither Committee” because of its original chairman, H. Rowan Gaither, who left the panel in September because of health problems, but did return in October in an advisory capacity.\textsuperscript{74} Even though the Gaither Committee was assembled before Sputnik I’s launch, the subject of its report was timely with post-Sputnik I and II defense concerns, and its findings were damming to Eisenhower’s take-it-steady approach.

\textsuperscript{72} Eisenhower’s first Secretary of Defense, Charles Wilson, stepped down from his post in October, 1957, for reasons unrelated to Sputnik. Neil McElroy replaced Wilson in the position.

\textsuperscript{73} “Turnabout,” \textit{Time}, November 18, 1957, 19.

\textsuperscript{74} Executive Office of the President, Office of Defense Mobilization, “Deterrence and Survival in the Nuclear Age: November 7, 1957 (aka the Gaither Report),” Printed for the use of the Joint Committee on Defense Production, Congress of the United States. 94\textsuperscript{th} Congress, 2\textsuperscript{nd} Session. (Washington, D.C.: United States Government Printing Office, 1976), 9-12. In future, this source will be referenced in notes as “the Gaither Report.”
The “Gaither Report” concluded that the Soviet Union was quickly catching up to the United States in Gross National Product, and was developing the economic resources to expand their influence further into many parts of the world. It also speculated that the Soviets had enough nuclear material for 1500 warheads of various types, were well on the way to deploying ICBMs, IRBMs, Surface to Air Missiles (SAMs), and were close to developing a Submarine launched missile. As for America’s defenses, the committee rated both active and passive measures in places as inadequate to the task of deterring or defending against a Soviet assault. The report recommended the following measures to respond to these inadequacies and the growing Soviet threat: 1) disperse more of SAC’s bomber forces and improve early warning systems, 2) increase the planned number of ICBMs initially deployed from 80 to 600 and the number of IRBMs from 60 to 240, 3) fund a nationwide fallout shelter program organized and supervised by the federal government, 4) increase research and development funding, 5) reorganize the services’ management of missile programs, among other measures. The estimated cost of these measures, if implemented, was $38 billion.\footnote{Ibid, 12-22.}

After Eisenhower received the Gaither Report, he ordered the members of a number of executive offices to examine the report in detail, and present their reactions to it. The Defense Department agreed with the assessment that improvements were needed, but not on the scale recommended by the Gaither Committee. The State and Treasury Departments were less amiable with the report’s findings. The latter concluded that the federal spending necessary to fund the Gaither Committee’s recommended programs would have a detrimental impact on the federal government’s budget and the national economy. The State Department’s response called
into question measures such as a national fallout shelter program, believing that such programs sent a message of isolationism and defeatism to America’s allies in NATO.\textsuperscript{76}

Scholars have hotly debated the ultimate influence of the Gaither Report on Eisenhower’s decision making. The traditional wisdom, as expressed by Stephen E. Ambrose in his biography of the President, was that Eisenhower “rejected the Gaither Report” and “refused to bend to the pressure.” The evidence used for this conclusion is that Eisenhower did not institute many of the costlier measures of the program, such as the national fallout shelter program. The President also downplayed the significance of the report when knowledge of its existence (despite its classified nature) leaked out to the press.\textsuperscript{77}

But other scholars, such as David L. Snead, point out that Eisenhower did implement many of the measures recommended by the Gaither Report, just on a smaller scale. For example, instead of increasing the number of initially deployed missiles to 240 IRBMs and 600 ICBMs, the President did order an increase to 180 IRBMs and 130 ICBMs. Snead’s view is that Eisenhower did not follow every recommendation of the report, but he did not completely reject it either. While he publicly expressed little concern with the Gaither Committee’s findings, the President did devote the first three National Security Council meetings of 1958, to the committee’s report.\textsuperscript{78}

Any scholar attempting to make a definitive conclusion about the level of impact the report had on Eisenhower’s decision-making runs into a problem of timing. The report was presented to the President at nearly the same time as Sputnik II’s launch, and the President did

\textsuperscript{76} David L. Snead, \textit{The Gaither Committee, Eisenhower, and the Cold War} (Columbus, OH: Ohio State University Press, 1999), 134-136.
\textsuperscript{77} Ambrose, \textit{Eisenhower, Volume 2}, 458.
\textsuperscript{78} Snead, 154.
announce several defense and science related measures in the period after that. How much these decisions relied upon the Gaither Report or other post-Sputnik II discussions is unclear. Eisenhower’s own statements on the report’s importance can be interpreted either way. The safest conclusion is that the Gaither Report was one of a number of items Eisenhower considered when making his decisions in that period, but that he only agreed with some of the report’s conclusions and recommendations.

However, a contradictory flaw in the report itself has not been highlighted clearly by other scholars. This error is significant because it demonstrates why some members of the Eisenhower Administration may have downplayed the report’s findings. The Gaither Committee’s members stipulated that they had “too few solid facts on which to base essential knowledge of USSR capabilities and too few solid facts to learn how they are changing with time.” But the report also makes broad based assumptions about the capabilities of the Soviet Union’s nuclear forces, the growth of its economy, the number of weapons and missiles it has available, and their intentions, based on these “too few solid facts.” This makes the conclusions of the Gaither Report (at least in reference to Soviet capabilities and plans) dubious at best.

Ultimately, any flaws contained within the report did not diminish its impact when knowledge of its existence leaked out to the media by the end of November, 1957. Joined with the launches of Sputniks I and II, the Gaither findings fueled greater public concern over America’s defense. This, in turn, increased the amount of pressure on the Eisenhower administration to show that it could meet the challenge posed by the Soviets in missiles and satellites. A late November Gallup Poll showed that only 26 percent of Americans were satisfied

with the status of America’s defenses. As David L. Snead wrote in *The Gaither Committee, Eisenhower, and the Cold War*, “Eisenhower’s status as a war hero and popular president was no longer sufficient to allay the people’s doubts about weakness in U.S. security.”^80^ The confidence that the American people had in Eisenhower’s ability to manage America’s defense was also greatly hindered by the stroke he suffered on November 25.\(^81\) The President was losing the battle for the hearts and minds of the public, and things were about to get worse.

On 15 December, the Vanguard team conducted another test of their rocket delivery system that was intended for the use of putting America’s first satellite into orbit. Originally, the test was intended to be just an assessment of the rocket, similar to the one conducted in late-October. But the Eisenhower Administration was under increasing pressure from the media, the public, and members of the government to produce some kind of clear gain to counter the Soviet satellite launches. The President told the Vanguard team to use the test to attempt to place a satellite into orbit.\(^82\) Just like Eisenhower, the Vanguard team was under pressure to produce results to match the two Sputniks, even though the program’s progress was on schedule. They agreed to add a satellite to the 15 December, test launch in the hopes of relieving some of the pressure off of themselves as well as the President.\(^83\)

At 11:45AM on 15 December 1957, the Vanguard rocket, complete with satellite, began to rise off of the launch pad at Cape Canaveral. It climbed to an altitude of three feet off of the ground, then fell back towards the pad when the rocket’s booster lost its thrust. When the rocket crashed, it exploded into a fireball that reached 120 feet into the air, 117 feet higher than the

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^80^ Snead, 131.
^81^ Murphy, 232.
^82^ Dickson, 158.
rocket went before it crashed. The satellite itself was thrown 75 feet from the rocket’s explosion and crashed into the sand, broadcasting a steady beeping noise as it was programmed to do when it was released into orbit. One of the reporters watching the failed test seemed to think that the crashed satellite was like a wounded animal. “It seems almost inhuman to let the poor thing go on,” she said. “Someone should go out there and kill it.”

After the failed test, the Vanguard team and the President were quick to emphasize in their public comments that the launch was only a test and that a lot could be learned from the crash. This did little to alleviate the sense of public shame and anger felt by the hundreds who watched the test first hand and the millions of Americans who saw the film footage of the crash on television or read about it in the newspapers. The media began calling the failed Vanguard test with nicknames that alluded to its failure to match the achievement of the Sputniks, such as “Flopnik,” “Dudnik,” and “Kaputnik.” A sign put up on a road near Cape Canaveral the day after the launch read “Cocoa Beach: 8 Miles From Confusion.” As Craig Allen wrote in Eisenhower and the Mass Media: “Millions had tuned in…to watch a launch of a Navy Vanguard rocket, the apparent U.S. answer to Sputnik, only to see their screens fill instead with images of white smoke and flame after the booster exploded.” The American people hoped for an achievement to match the Soviets, but only found more reason for concern and embarrassment. The Vanguard test was a public relations disaster for the United States, even if the Vanguard scientists were themselves not overly concerned.

85 Divine, 71. 
86 “Too Much Talk Too Soon,” 25. 
87 Allen, 161.
The beginning of 1958 was one of the lowest periods of American prestige in the fifties, and was one of the lowest times for Dwight D. Eisenhower as President. “More than three months after the launch of Sputnik,” writes Robert Divine in *the Sputnik Challenge*, “Eisenhower still could not point to any substantial American achievements in either missiles or satellites to balance the Soviet feat.”

In his State of the Union address before Congress on January 9, 1958, President Eisenhower still continued to preach his message of measured optimism and restraint. He expressed his belief that Americans must not overestimate their national strength and technological superiority over their adversaries. But at the same time, they must not underestimate America’s capabilities either. The President stressed the need for accurate and reasoned assessments of America’s current and future strength. He proposed a series of measures to examine and improve America’s deterrent and military organization, all meant to balance military prowess with economic solvency.

“We must never become so preoccupied with our desire for military strength,” Eisenhower said, “that we neglect those areas of economic development, trade, diplomacy, education, ideas, and principles where the foundations of real peace must be laid.”

Eisenhower’s call for reason and calm largely fell on deaf ears. The last three months of 1957, jaded the views of many Americans regarding Eisenhower’s leadership and the status of American prestige and power. In the meantime, *Time* magazine chose Eisenhower’s adversary, Soviet leader Nikita Khrushchev, as their “Man of the Year” for 1957. The issue of *Time* that

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88 Divine, 74.
90 Ibid.
carried the article also featured a picture of Khrushchev and Sputnik I on the cover.\textsuperscript{91} This was yet another blow to the prestige of President Eisenhower and the nation he led.

\textsuperscript{91} Divine, 74.
CHAPTER THREE:  
“WATCH THE SKIES!”

The space race between the United States and the Soviet Union did not occur in a vacuum, nor was America’s reaction to the Soviet victory in the opening round of that race only fueled by the actual Sputnik launch. In order to understand the American reaction to the appearance of the Sputniks, one must place this reaction in its proper context. To accomplish this task, it is important to examine the prevalent mood in America that existed in the decade before October, 1957.

In 1951, movie producer Howard Hawks released a science fiction film entitled The Thing From Another World, that told the story of a group of soldiers and scientists who were battling an alien invader at a remote arctic outpost. This invader was said to be a scout for an alien army that wanted to conquer the human race as a source of sustenance. At the end of the motion picture, after the monster was destroyed, one of the characters described the battle over the radio to reporters, and ended the story with the following phrase. “I give you a warning,” he said. “Tell the world. Tell this to everyone wherever they are. Watch the skies! Keep looking! Keep watching the skies!”

Many film historians credit the Thing From Another World for ushering in a new age of science fiction cinema, filled with alien invaders and atomic mutants from paranoid fantasies. But in a sense, the film and its final catch phrase, “watch the skies,” are symptomatic of America’s national mood in the 1950’s. This was the first full decade of the Cold War and

1 Christian Nyby, Director, The Thing From Another World (Produced by Howard Hawks for RKO Pictures, Inc., 1951).
atomic weapons, and it ushered in the hydrogen bomb and space travel. The world was changing rapidly, and many Americans were struggling to find a sense of security in an age of rapidly advancing technology and the new threat of global communism.

In a sense, the era of the 1950’s really began in the late-1940’s; the dawn of the atomic age. Although the atomic bomb was developed in secret during World War II, its explosion onto the world scene with the destruction of the Japanese cities of Hiroshima and Nagasaki introduced the American people to the now all too familiar picture of the mushroom cloud of atomic destruction. After World War II ended, the United States continued its atomic testing and was the only nation to have the atomic bomb. This changed in August, 1949, when the Soviet Union broke the atomic monopoly with the successful test of their first atom bomb. In that same year, America “lost” China, the world’s most populous nation, to communism, casting doubt on America’s ability to contain the red menace. The American public’s reaction to these events in 1949, was one of strong concern, perhaps comparable to the reaction that eventually developed to the Sputnik Crisis of 1957.

The Americans saw the Soviet Union as an expansionist rival intent on destroying the United States as the only barrier between them and world domination. In order to prevent Soviet communists from expanding their power, the United States had to erect a wall of containment around the Soviet Union and its communist allies. The resolve of the United States to contain communism was further tested in 1950 by the invasion of South Korea by the communist forces of North Korea. This forced President Harry S. Truman to respond with force to defend South Korea and to contain communist imperialism. What followed was a stalemated conflict that

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2 Walter Millis, “The Road to Nowhere,” The Nation, 185 (December 14, 1957), 447.
lasted for over two and a half years and cost thousands of American lives. But at the end of the conflict, communism was successfully contained.³

As events abroad tested America’s ability to contain communism, fears about communist infiltrators within the United States materialized. In 1948, the House Un-American Activities Committee called witnesses to testify about communists in the media and in Hollywood, and their attempts to undermine American cultural values. Shortly thereafter, magazines such as Look began publishing articles about suspected communist plots to take over America from within. At the same time, various “patriotic” organizations began publishing pamphlets meant to spread fear about communists who could be living next door to average Americans, biding their time to launch a communist revolution. Such fears seemed to be confirmed in 1950, by the trial and execution of Julius and Ethel Rosenberg for selling atomic secrets to the Soviet Union.⁴

Perhaps the most famous player in what became known as “the Red Scare” of the late-1940’s and early-1950’s was Senator Joseph McCarthy of Wisconsin. Many scholars often refer to the Red Scare as “McCarthyism” after the infamous Senator’s hunt for communists in American institutions. As the Chairman of the Senate’s Permanent Subcommittee on Investigations, McCarthy led probes into offices of the Federal Government, including the State Department and the military, searching for communist infiltrators and/or sympathizers who were undermining American security. His own Senate colleagues censured McCarthy in 1953, and since then, the Senator has been vilified by scholars as one of the main proponents of anti-communist hysteria in America.⁵

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⁴ Walker, 68-71.
Even though McCarthy’s name has become synonymous with the Red Scare, the Senator himself was not involved in many of the events that were a part of the anti-communist hysteria of the 1950’s. The House Un-American Activities Committee’s probes into the media and Hollywood pre-dated McCarthy’s hearings, as did the infamous blacklisting of writers and movie producers. McCarthy’s investigations and hearings only went after suspected communists within the government. Granted, McCarthy did voice his approval of other anti-communist probes and did use questionable tactics in pursuing communists in his own investigations. But attaching the name “McCarthyism” to the Red Scare has led to an oversimplification of the nuances of the period. Joseph McCarthy was not the cause of anti-communist hysteria in America, as using his name in reference to it might suggest. Rather, he was a symptom of widespread apprehension among Americans about communism and the threat it posed to the American way of life. There is no question that McCarthy’s statements and ideas helped to shape the development of the Red Scare, but it was not the cause of it.

After McCarthy’s downfall, the Red Scare did not end as many scholars have suggested. The methods used to go after communists and those seen as liberal “fellow travelers” changed. As Arthur Herman wrote in his biography of Joseph McCarthy, the crusade against communists and those accused of supporting communism “would be waged in the public sphere and eventually at the ballot box rather than through surveillance cameras, wiretaps, affidavits, and loyalty programs.” The Red Scare would not have been possible if the American public did not

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6 Ibid.
8 Herman, 322.
support, or at least allow, its occurrence. The Red Scare and the fear it generated among the nation’s citizens promoted a consensus culture focused on defeating the perceived menace through unity and reliance on traditional American value systems.

But communists were not the only source of fear for Americans during the 1950’s. On 1 November, 1952, the United States successfully tested the world’s first hydrogen bomb, which was a much more powerful weapon than its atomic predecessor. Much to the chagrin of the American government and populace, the Soviet Union matched the American achievement in August, 1953. As Senator Lyndon B. Johnson said in a speech reacting to the Soviet development of the H-bomb, “we must learn to live in a world where we have the hydrogen bomb, and where the enemies of freedom have the hydrogen bomb.” For the first time, humanity possessed the technological capability to destroy all life on Earth, and many believed that a war between the United States and the Soviet Union would end with that occurrence.

The hydrogen bomb was part of a continuing U.S. policy of seeking superior capability to the Soviet Union in terms of weapons, influence, and technology. Whenever the Soviets matched an advantage gained by the United States, the latter had to find some way to re-gain superiority. After the Russians developed their own atomic bomb in 1949, the U.S. government decided to develop the H-bomb. When the Soviets matched that, the U.S. continued testing their bombs to make them more efficient and capable of fitting in smaller aircraft and on smaller

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11 Walker, 96.
12 Kevin Rafferty, Jayne Loader, and Pierce Rafferty, Directors/Producers, *The Atomic Café* (The Archives Project, Inc., 1982). In future, this will be referenced in notes as *The Atomic Café*.
missiles.\textsuperscript{13} This would ultimately be an important factor in understanding the importance of Sputnik to the Cold War between the United States and the Soviet Union. The development of the satellite broke this long held pattern of the U.S. being the first to make a technological advancement. The Soviets developed the satellite first, so the old formula of response no longer applied to the situation.

Beyond the policy implications of the H-bomb, nuclear weapons also became an enduring part of 1950’s American culture, and helped to shape the development of society within the decade. “It (the H-bomb) aspires to be context and case, to shape public and private life,” writes William Chaloupka in \textit{Knowing Nukes: The Politics and Culture of the Atom}. “It seeks a symbolic position of such force that other concerns would arise within the context of nuclear technology, sometimes even when explicit connections are absent.”\textsuperscript{14} Thus, when Sputnik was launched in October, 1957, it was already innate in America’s H-bomb influenced culture to link the satellite to the ability of the Soviets to launch a nuclear attack on the United States.

The effect of the hydrogen bomb on American culture was ultimately two-fold. Nuclear weapons were a symbol of American power, prestige, and technology, but they were also a source of great destructive power. The fear of the deadly potential of nuclear weapons, combined with the Cold War competition with communism, pushed Americans into seeking a sense of security in the simplistic idea that their nation was always right, and anyone who questioned that was considered an outsider. This allowed most citizens to resolve the idea of

\textsuperscript{13} Mills, 448.

\textsuperscript{14} William Chaloupka, \textit{Knowing Nukes: The Politics and Culture of the Atom} (Minneapolis, Minnesota: University of Minneapolis Press, 1993), 1.
their virtuous nation’s possession of the H-bomb, and the capacity of launching a nuclear war that could lead to the destruction of the world. America would never start such a war, but would use its nuclear arsenal if the other side used theirs.15

Despite this widespread feeling of America’s righteousness in its possession of the H-bomb, there were some who dissented against the development and testing of nuclear weapons. Some of the men responsible for the development of the atomic bomb, including Albert Einstein and J. Robert Oppenheimer, started what came to be known as the Scientists Movement in the early-1950’s in response to the proposal to develop the hydrogen bomb. This group of scientists opposed the development of such a weapon, and also warned against the dangers of the misuse of atomic power for only destructive purposes. At the same time, they advocated the use of atomic energy for productive purposes, such as research and as a source of electricity.16

Ultimately, the Scientists Movement was unsuccessful in preventing the H-bomb’s development, but the anti-nuclear movement continued. As the United States continued to test hydrogen bombs during the 1950’s, more anti-nuclear groups developed around the world. In the United States, a group of newspaper editors, politicians, theologians, union leaders, sociologists, and scientists, formed the National Committee for a Sane Nuclear Policy. This organization’s activities included purchasing a full page add in the New York Times in April, 1958, that featured a large photo of a nuclear mushroom cloud and a message in bold letters: “We Must Postpone Our Coming Tests.”17

15 Margot A. Henriksen, Dr. Strangelove’s America: Society and Culture in the Atomic Age (Berkeley, California: University of California Press, 1997), xxii, 185.
16 Cyndy Hendershot, Paranoia, the Bomb, and 1950’s Science Fiction Films (Bowling Green, Ohio: Bowling Green State University Popular Press, 1999), 28-31.
Such activism against nuclear testing prompted response from those who favored the consensus point of view on America’s possession and testing of H-bombs. *The New York Daily News* responded to the anti-nuclear advertisement in an editorial that called anti-nuclear activists “nutty as so many fruitcakes.” Former President Harry Truman said that the anti-testing movement was not seeing the real world situation, and that unilateral American suspension of testing would not end the threat posed by the Soviet possession and testing of nuclear weapons.¹⁸

As the H-bomb testing continued during the mid-1950’s, international crises connected to the Cold War also added to tensions within American society. In 1954, the Chinese communists began shelling the islands of Quemoy and Matsu, both of which were claimed by the Nationalist Chinese government on Formosa (Taiwan). At the time, the United States recognized the Nationalist government as an ally and the true government of China. President Dwight D. Eisenhower sent U.S. naval forces into the area near the islands and threatened military force to prevent the communist takeover of those islands. He even hinted that nuclear weapons might be used on the Chinese mainland if war broke out. Mao Zedong’s government backed down, but not before the possibility of war loomed large in the American media because of the crisis.¹⁹

International tension increased again in 1956, beginning with the combined British/French/Israeli action in the Suez Canal zone. On this occasion, the United States went against its Cold War allies and condemned the military action taken by the three nations in front of the United Nations. Britain, France, and Israel eventually withdrew their forces. The Suez Crisis was soon followed by the uprisings in Hungary against the communist government there.

¹⁸ Ibid.
¹⁹ Walker, 94-95.
The Soviet military went into Hungary and brutally cracked down on the uprisings there, despite the protests of many of the world’s nations. ²⁰

Between H-bombs, the Red Scare, and various international crises, Cold War America was far from a tranquil place, despite what one might believe watching re-runs of Leave it to Beaver. But what effect did these events have on American culture in the 1950’s? What evidence can we use to explore the nature of societal fears of the period that existed before Sputnik?

To begin with, one can look to the creation of the Federal Civil Defense Administration in January, 1951. The FCDA was tasked with producing materials in print, film, radio, and television program format to educate the American people about the necessity of civil defense programs in case of Soviet attack. These materials were distributed through local agencies, such as public schools, to not only keep the populace informed about civil defense measures, but also to encourage local organizations to spend more money on civil defense programs. In that same year, the NBC television network aired a seven part series entitled “Survival,” which featured information about the threats to America posed by communism and atomic warfare. An estimated that twelve million Americans watched the program for the seven evenings it was on. ²¹

Television and newsreels in general became an important medium for public information (and in some cases misinformation) during the first decade of the Cold War. The FCDA and the three major networks themselves used the visual medium to remind Americans about the dangers of the atomic age. In one public information film, the moderator asked the people who were

²⁰ Walker, 100-101.
watching a question. “Do you know exactly what your family would do in case of an atomic attack, say at 10:00 tomorrow morning? It’s a good question, isn’t it?” The question was followed by footage of an ordinary American woman sipping her coffee when a civil defense warning sounded over the radio. She jumped up and went to find her family and get them to shelter. Although such films and broadcasts were meant to keep people informed, they were also meant to get people to tow a certain line of cooperation with authority in matters of defense. They also did much to remind people about the alleged dangers of communist conspiracies and nuclear weapons, and thus contribute to feelings of nervousness among Americans.

While Americans were being “informed” about the dangers of the atomic age through the visual medium, American school children were also being educated about civil defense and patriotism, thanks to a partnership between the FCDA and the public school systems of America. The relationship between civil defense and public education is examined by JoAnne Brown in her article “A is for Atom, B is for Bomb.” Brown points out that the public schools were a perfect medium for promoting civil defense among the next generation of Americans. This also allowed parents to be kept informed through the information their children were bringing home to them in the form of pamphlets and stories about lessons at school. The FCDA spent a large portion of its budget each year on materials for schools, and encouraged local school districts to do the same. Such materials included a pamphlet for High School Home Economics classes released in 1957, which taught young women about stocking, furnishing, and decorating bomb shelters.

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22 The Atomic Cafe
23 Brown, 150, 164.
One of the most famous and effective examples of the FCDA’s films and printed materials featured a cartoon character named Bert the Turtle. The first pamphlets featuring Bert the Turtle were released in 1951, and the character became very popular among school children of the 1950’s.\textsuperscript{24} One of the films featuring Bert the Turtle, shown widely in American public schools during the mid-1950’s, started with a picture of Bert walking along the street, as a song began to play in the background. “Bert the turtle was very alert,” the song said. “When danger threatened him, he never got hurt. He knew just what to do. He ducked and covered.” The film shows Bert going into his shell when a firecracker goes off behind him. Then, a narrator’s voice said that since humans don’t have a shell like Bert the Turtle, we have to “cover up in our own way.” This was followed by footage of children in different day-to-day situations, such as walking along the street, sitting in class, or enjoying a picnic with their family. In each case, when the a nuclear strike occurs, a flash fills the screen, and the children duck behind a wall, under their school desks, or under a picnic blanket. The film’s narrator then repeats over and over again, “duck and cover, duck and cover.” A song sings the words over and over again.\textsuperscript{25} The words “duck and cover” became a famous axiom of the 1950’s, and the Bert the Turtle films convinced millions of young American children that they could indeed survive a nuclear attack if they followed Bert’s example.

But the FCDA could not have gotten their message to America’s school children as easily without the cooperation of American educators. Besides distributing pamphlets and showing films from the FCDA to their students, the staff and faculty of American schools initiated other programs related to civil defense. Several cities around the country saw atomic attack drills in

\textsuperscript{24} Brown, 165.
\textsuperscript{25} The Atomic Cafe
their schools between August, 1950, and April, 1951. During the same period, New York City’s school system started distributing identification necklaces to students to be worn at all times during the school day. These necklaces featured the student’s name, birth date, and blood type. Changes were also made to the architecture of many schools to make them more “survivable” in case of a nuclear attack.\(^{26}\)

According to JoAnne Brown’s article, America’s teachers and school administrators had a dual purpose in promoting such civil defense programs. First, just like many other Americans in the 1950’s, they felt that cooperation with civil defense and promoting programs related to it were part of their duty as loyal Americans. But beyond patriotic motivations, public educators also wanted to demonstrate a clear connection between defense and education in order to secure more federal funding. Before the 1950’s, public education in America was almost entirely funded at the local and state level. It would not be until the passage of the National Defense Education Act in 1958, that the federal government devoted large scale funding to public education for the first time. Since this was action taken by the U.S. Congress after Sputnik, most scholars connect it solely to the post-Sputnik reaction. “Sputnik dramatized the effort,” writes Brown, “but it did not instigate it. The struggle for federal aid may have been won in the sky, but it was fought in basements, classrooms, and auditoriums, as educators adapted schools to the national security threat of atomic warfare and claimed a proportional federal reward for their trouble.”\(^{27}\)

Schools were not just encouraged to participate in civil defense efforts. Community leaders were encouraged to construct bomb shelters for its citizens. Families were urged to build

\(^{26}\) Brown, 151-161.  
\(^{27}\) Ibid., 148-154.
bomb shelters for themselves in their back yards or basements. Although many people familiar with the Cold War relate family bomb shelters to the Cuban Missile Crisis of 1962, they actually started to appear on the American landscape by the late-1950’s. Once again, the visual medium was employed to encourage the construction of these “safe havens” from nuclear attack. Some films showed families working happily together building bomb shelters in their backyards. A comical looking cartoon that promoted shelter construction featured a little bald doctor diagnosing a patient with “nuclearitis,” a constant fear of nuclear bombs. “He is made blind by the flash of it (the nuclear bomb), deaf by the sound of the explosion,” said the doctor. “The cure is a fallout shelter in your basement.” Once a shelter is built in the man’s basement, he was all smiles. Then, the doctor concluded by saying, “He is getting the message. Are you?”  

Popular movies of the 1950’s also presented messages related to the fears felt by many Americans during the decade. As Nora Sayre wrote in her book *Running Time: Films of the Cold War*, we can use motion pictures “as hidden memories of a decade. Directly or indirectly, they summon up the nightmares and daydreams that drifted through segments of our society, and exploring them from a distance unearths many of the obsessions of the past.” Sayre identifies a number of themes that permeate many 1950’s American movies, including fear of the unknown and a paranoia about hidden enemies that may strike from anywhere at any time.  

Some of the clearest examples from 1950’s cinema that speak to the fears and paranoia of the decade are science fiction films. As previously mentioned, the tag line of “watch the skies”

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28 The Atomic Café.
from the film *The Thing From Another World* could almost be a mantra for Americans of the fifties to follow. Although science fiction is sometimes considered a fringe element of both the visual and literary medium, there were many films of the genre that were widely viewed by the public during the 1950’s. There are plenty of examples that illustrate the tensions of Cold War America of the period.

A classic product of the fear of hidden enemies was the 1955 cinematic classic *Invasion of the Body Snatchers*. The movie starred Kevin McCarthy as a doctor from a small town in California who returns from a medical convention to find the people of his hometown somehow different than they were before. He discovers that the people of the town are being taken over one by one by giant seedpods from outer space. These pods duplicate people while they are asleep and absorb their minds, but do not possess any human emotions, such as love or kindness. Their ultimate goal is to take over the world. In the end, McCarthy’s character is the only one in the town who has not been changed and is chased through the streets by a mob of pod duplicates.30

Ever since *Invasion of the Body Snatchers* was released, scholars and film historians have been debating the significance of the pods’ plot to takeover the world in *Invasion of the Body Snatchers*. Some claim that the pods represent communists who are attempting to takeover America from within, and that McCarthy’s character is the model American resisting godless communist tyranny. Others claim that the pods themselves represent conformity, and therefore conformist thinking is the real enemy in the film. Speculation about what enemy was

represented in the film has not been helped much over the years by those who made the film. Kevin McCarthy himself said that he just thought he was making a scary, but well written film.\(^{31}\)

But one can put aside the debate over what specific enemy the pods from *Invasion of the Body Snatchers* represented and clearly see that the film tapped into the atmosphere of hysteria over enemies in hiding that existed in America at the time. The town featured in the story could be any normal suburban community in America in the 1950’s, and thus the silent enemy slowly taking over the community’s residents from within could be anywhere.\(^{32}\) The pods in the film accomplish this task while the humans of the town are asleep, thus sending the message that hidden enemies subvert society only when its people are complacent.\(^{33}\) A 1950’s American moviegoer walked away from the film with what film archivist Wade Williams calls “a sense that slowly we were being taken over by something sinister.”\(^{34}\) The movie also shows that America’s paranoia over hidden enemies was often difficult to define.

The enemy in another science fiction classic from the 1950’s called *Them!* was much more definite. The basic story of this 1954, film might seem a silly choice for serious analysis because it centers on giant mutant ants who are threatening to take over the world. However, the culprit of the story that is constantly lurking behind the scenes is the atomic bomb. The ant menace was created by the original atomic bomb test conducted in New Mexico in 1945, when the effects of the radiation from the blast slowly mutated the carnivorous insects into gigantic


\(^{33}\) Hendershot, 49.

\(^{34}\) Kevin Burns, Director and Producer, *Hollywood Aliens and Monsters* (Van Ness Films/Foxstar Productions/A&E Network/Twentieth Century Fox Film Corporation, 1997).
size. The mutated ants left the desert and terrorized the population of Los Angeles before they are finally hunted down and destroyed at the end of the film.\textsuperscript{35}

Not only is the film direct about the cause of the danger, it also explicitly suggests to Americans where they may find security from the dangers posed by the atomic age. Both the imagery and dialogue that appear throughout the movie tell Americans to put their trust in authority, communal effort, and Judeo-Christian value systems to see them through the danger. It is ultimately a team of soldiers, scientists, and policemen who hunt down and destroy the ants. When the populace is informed about the threat posed by the ants, they are told their safety is reliant upon cooperation with civil and military authorities. One of the scientists quotes biblical scripture to relate the atomically mutated ants to the beasts of Armageddon. The film points the way to salvation from the threat of the atomic bomb-reliance on organized authority structures, group-think mentality, and religious fervor.\textsuperscript{36}

But this message of collective security was not only limited to science fiction cinema of the period. Communal messages found their way into many different genres of movies during the 1950’s. Detective and police oriented films broke away from the mold of their late-1940’s predecessors. While detectives in the latter period operated alone from dingy offices, the investigators of 1950’s cinematic stories worked in pairs or in groups to find and catch criminals. As Peter Biskind wrote in his book \textit{Seeing is Believing}, “\textit{Dragnet} replaced \textit{the Big Sleep}…Jack Webb replaced Humphrey Bogart.” Biskind identifies a lot of the group-think mentality in 1950’s films of all genres as originating from the popular book by William H. Whyte entitled \textit{the


Organization Man. In the book, Whyte advocated what he called “the Social Ethic,” defined by a sense of cooperative spirit over individualism.\textsuperscript{37} The book and the films both told Americans that collective security was the key to safety from Cold War dangers.

Many 1950’s films also identified another source of safety for Americans to rely upon. American technology and military power was heralded in the cinema of the period. One example highlighted by Peter Biskind is Strategic Air Command, starring Jimmy Stewart. In the movie, Stewart’s character is in the inactive Air Force Reserve after having served with distinction as a bomber pilot in World War II. Just as he is about to embark on a baseball career, the Air Force calls him back to duty flying for the bomber forces of SAC as part of America’s nuclear deterrent. The group-think mentality is supported by the decision of Stewart’s character to put his country before his personal goals. The film also acts as a sort of showcase for the power and majesty of SAC’s bomber forces. Beautiful, panoramic scenes of B-36 and B-47 bombers populate the feature, as viewers are invited to sit in awe of American military might. The Air Force gave its full cooperation to the producers of Strategic Air Command in order to showcase the service’s efficiency and ability to protect the American people.\textsuperscript{38} The message of the film is clear and simple—the United States military can protect the American people from their enemies.

As previously mentioned, another source of security that Americans were told to rely upon was religion. Religious imagery and stories were the center of a number of movies of the period. The biblical epics of the 1950’s, such as The Ten Commandments and Ben Hur, allowed

\textsuperscript{37} Peter Biskind, Seeing is Believing: How Hollywood Taught us to Stop Worrying and Love the Fifties (New York: Pantheon Books, 1983), 53-56.
\textsuperscript{38} Biskind, 64-69.
Americans to escape into a simpler time of good and evil in the world. At the same time, the religious fervor of moviegoers was reinforced, as was the necessity for it in their daily lives. Even films and television shows of the western genre (perhaps the most popular genre of the time) harkened Americans back to “traditional” value systems as a way of meeting the trials and tribulations of everyday life.39

Fictional movies and television programs of the period, whether they were about giant insects, cops and robbers, the U.S. military, biblical heroes, or cowboys, were filled with messages about who, what, and where Americans could look to for safety in an uncertain and dangerous world. This message of reliance on authority and national leaders for security was often reinforced through the news media. President Eisenhower and members of his administration paid consistent attention to the image that came through the media about the ability of the government, and more specifically the President, to ensure security. When times of crisis arose, such as the President’s heart attack in 1955, Press Secretary James Hagerty, Special Television Advisor Robert Montgomery,40 and others worked out clear and concise strategies to put the best spin possible on the course of events.41

As Craig Allen points out in *Eisenhower and the Mass Media*, the Eisenhower administration was the first to attempt to fully understand and use modern communications developed at mid-century. “Not only did Eisenhower preside over sweeping changes in the techniques and traditions of presidential communications,” writes Allen, “but there are also many indications that Eisenhower succeeded in repeated attempts to reinforce a positive image and

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40 Dwight D. Eisenhower was the first U.S. President to have a Special Television Advisor.
promote a ‘personal’ dialogue with millions of Americans.” The evidence Allen presents for this claim are almost consistently high public approval ratings for President Eisenhower during most of his administration, and the fact that Eisenhower was re-elected in 1956 just one year after his heart attack. Many Democrats attempted to make the President’s age and health an issue after the heart attack, but the Eisenhower Administration succeeded in deflecting those attacks in the media.  

So what does Eisenhower’s ability to use the media, or themes of 1950’s cinema, or H-bomb drills in schools have to do with Sputnik? One of the most difficult questions about the American reaction to Sputnik that scholars have grappled with for forty years is how the crisis relates to American society and culture in the 1950’s. Some scholars like Stephen Ambrose, have referred to the time between the end of the Korean War (1953) and the Sputnik launch (1957) as a time peace and tranquility, and that this was the period that most people think of when identifying the fifties as a time of complacency. According to this construct, Sputnik ended the period of complacency that most Americans experienced during the 1950’s.

While Ambrose’s analysis does take issue with the notion that the entire decade was a tranquil one for Americans, his claim about the specific period of 1953-1957 does not stand up to further scrutiny. Granted, the McCarthy hearings and the Korean War concluded by the end of 1953, but the offshore islands crisis involving communist China occurred in 1954, and the Suez Crisis and Hungarian revolt happened in 1956. As previously demonstrated, the censure of Joseph McCarthy in 1953, did not end anti-communist hysteria in America, but only removed

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42 Allen, 5-6.
one of its most outspoken proponents. Bert the Turtle’s “duck and cover” films were still being shown in American schools during this period. Many films made during the period still reflected a mood of paranoia and tension, such as *Invasion of the Body Snatchers* in 1955. The period that Ambrose singles out as being calm and peaceful was still filled with Cold War tension and crises.

Other scholars like Paul Dickson have taken a more complex approach to explaining Sputnik in the cultural Cold War context. In his book *Sputnik: The Shock of the Century*, Dickson acknowledges that tension existed throughout the 1950’s, but he also states that “Americans were feeling self-confident and optimistic about the future” in the Fall of 1957. This confidence, according to Dickson, was shaken by Sputnik.44 Dickson’s thesis stipulates to the subdued fears in American culture during the period before Sputnik, but even he mutes the amount of tension that permeated society of the time.

It is an incredible irony that the 1950’s are considered by so many to be a simpler time, while in fact the 1950’s may have been one of the most complex decades in American history. The fifties were a much more subtle time, and the Cold War tensions of the period were not as consistent as they would be later on. Crises came in fits and spurts, but there was no great gap in crises as claimed by other scholars. The learned observer should recognize that there are small periods of calm in between storms, where tensions may settle down a little bit. But the fear comes back again each time there is a new crisis. Thus, the fits and spurts analogy.

So, where does Sputnik fit into this analogy? In some ways, the Sputnik crisis was just another in a list of crises that plagued Cold War America. But Sputnik was different from the

crises that preceded it in two important ways. In each of the times of Cold War crisis, they always fell back on the idea of American superiority in power and technology, and reliance upon the ability of America’s leadership to see them through the trouble. In an article that appeared in *the Nation* magazine in December, 1957, Walter Millis described the importance of the American perception of superiority over the Soviets. “We committed our national security not simply to a military concept of the world,” wrote Mills, “but to a military policy which fundamentally rested on the assumption of our own superiority in military technology.” But after the launch of Sputnik I, America was slow to respond with its own satellite. When the Russians did it again with Sputnik II, there was still no U.S. response. The pattern of tit-for-tat was broken, and the Sputnik crisis destroyed the American idea of assured superiority over the Soviets. Even the vaunted Strategic Air Command, heralded in the Jimmy Stewart film named after it, did not inspire enough confidence in Americans.

Dwight D. Eisenhower presided over a nation that mostly believed that he could protect them from threats because of his previous record as a general. But as the events of the Sputnik crisis unfolded, the President failed to match the Soviet achievement with an American satellite for the first several months. After the Soviets launched Sputnik II in November, 1957, President Eisenhower continued to act as if nothing was wrong. When his administration finally authorized the first attempt to match the Soviet launch with the failed Vanguard launch of December, 1957, the disaster eroded American confidence in Eisenhower’s ability to lead them even more. Although the United States did match the Soviet achievement in January, 1958, with the Explorer I satellite, the damage to Eisenhower’s image was already done, and would continue

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45 Millis, 448.
to plague him for the rest of his presidency. The authority that protected Americans in films like Them! failed to come through in a time of real crisis.

The two things that Americans could rely upon in the past (superior American power and confidence in American leadership) were not as concrete as before. Thus, the Sputnik launches of October and November of 1957, were able to burrow into the very core of American Cold War fears. This ultimately led to the other important difference between the Sputnik crisis and previous Cold War crises. In the past, the crises had been important for a while, but each slowly faded into the background, as other crises replaced it. The Red Scare did not completely disappear after 1953, but it did settle into the background as a source of quiet, but omnipresent tension. The H-bomb was a part of the new cultural landscape, but its impact on daily life was also sporadic. The Korean War ended in 1953, and other international crises developed but soon abated.

But Sputnik did not go away, and the American reaction to it would remain at the forefront of American national policy and politics for the rest of the decade. Its impact would be felt in a variety of different fields and for a longer period than almost any other single event of the time, with the exception of the development of the hydrogen bomb. Elections would hinge on it, national education policy would evolve from it, and American technological progress would be shaped by Sputnik’s beeping shadow. Therefore, it is important to examine the nature of America’s post-Sputnik reaction, the other forces at work on its development, and the effect this reaction would have on the American political and social landscape.
CHAPTER FOUR:

AMERICA’S REACTION TO SPUTNIK

From the time the beeping signals of Sputnik I were transmitted back to Earth, many people around the world have recognized the importance of the event. The first step towards escaping the confinement of humanity’s earthly sphere is clearly an important achievement. Many scholars in different fields have devoted articles, books, and documentaries to the subject. The implications of the Sputnik satellite to the Cold War competition between the United States and the Soviet Union, and the shock to the American public’s sense of security in that competition, has been highlighted as a topic of special importance by scholars. As the fiftieth anniversary of Sputnik draws closer, the amount of published scholarship on the subject has increased, as has the amount of declassified material released for public consumption. But recognizing an event’s significance is not the same as fully understanding how it unfolded in the consciousness of those who witnessed it. How did Americans really react to the Sputnik launch in October, 1957, and the subsequent events that followed?

In order to answer these questions, one must first look at President Eisenhower’s actions and line of thought after the launch of Sputnik I, and also the mindset of America’s scientific and military establishments at the time. The Eisenhower Administration’s reasoning in the wake of Sputnik I’s launch can begin to be understood from words that were spoken at a meeting held in the White House not long after the launch of the Soviet satellite. In this meeting, Eisenhower’s Chief of Staff, Sherman Adams, asked Dr. Detlev Bronk of the National Science Foundation a very direct question about the implications of Sputnik. “Is there anything in the Soviet
achievement to make us alter our research and development programs,” asked Adams, “particularly in the missile field?” Bronk replied that there was nothing. “We can’t always go changing our program in reaction to everything the Russians do,” said Bronk.\(^1\) The idea that Sputnik did not represent a clear Soviet advantage in military technology and that the U.S. government cannot adopt a reactive policy to Sputnik formed the basis of the Eisenhower Administration’s mindset, at least for the first month of the crisis.

This was the thought process that President Eisenhower brought to the American public—calm, steady confidence in America’s military superiority to the Soviets. The fact that Eisenhower himself did not publicly address Sputnik for the first week after the event supported the “we’re not worried” attitude the President wanted to project. As noted in Chapter Two, all of his statements made to the public on the subject during the month of October, 1957, reflect this same attitude. “We must have faith not to get hysterical,” he said to a group of NATO Chaplains on October 11, “and we must not get complacent.”\(^2\)

Eisenhower did have confidence that most aspects of America’s missile and satellite programs were on the right track, but he also felt that there were some areas related to the issue that needed to be improved upon. The first was American society’s attitude towards science. Some scholars, such as Roger Launius in his article “Eisenhower, Sputnik, and the Creation of NASA,” have accused Eisenhower of having outmoded notions about the importance of science and space travel in modern society.\(^3\) But scholars like Launius confuse restraint in spending

with lack of concern on Eisenhower’s part for America’s support of scientific research. Even though he wished to separate civilian space endeavors from the strict controls of defense, the President did believe that science was a worthwhile endeavor that deserved greater recognition and support by American society.

This is reflected in the President’s Atoms for Peace initiative that went back to the first term of his presidency, in which the nations of the world with nuclear capability would contribute nuclear materials to peaceful research, the results of which would be shared with everyone around the world. On 24 October 1957, at a ceremony presenting the first Atoms for Peace Award, Eisenhower spoke about his regard for science as a new frontier to be explored by humanity. “The rapid growth of science,” he said, “now gives men unprecedented power for discovery in the realm of outer space and mind and spirit.”

But Eisenhower also felt that speeches alone were not going to generate sufficient public support for science, even in the wake of Sputnik I. In a 15 October, meeting with Professor J.B. Wiesner of the Massachusetts Institute of Technology (MIT), both President and scientist bemoaned the attitude among Americans towards science. They believed that if Americans paid as much attention to scientific achievements as they did to football and baseball that there would be greater public support for increased funding for scientific education programs. They also thought that the private sector could do more to support scientific research. But in order for either of these circumstances to occur, Eisenhower believed that there had to be a change in societal attitude towards science. The problem was that both men were not sure how to

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accomplish this goal beyond rhetorical entreaties. The desire to promote science formed part of
the President’s motivation for appointing Dr. James R. Killian as the first Presidential Science
Advisor, hoping the prestige of having a scientist so closely connected to the nation’s chief
executive would increase public interest in science related issues. Eisenhower ultimately had the
same hope for Sputnik; that it would enlighten the American public to the importance of science
while at the same time not be used as the precursor for some radical increase in government
spending on every space related endeavor.\(^5\) Although the President understood the importance
of scientific research, he also believed such research should be well balanced with other
important national efforts, such as a stable economy. As Eisenhower stated in his final address
to the nation as President in January, 1961, “good judgment seeks balance and progress; lack of
it eventually finds imbalance and frustration.”\(^6\)

Eisenhower also hoped Sputnik would pave the way for greater international cooperation
in scientific research, including with NATO allies in the development of defense related
technologies. There were laws passed in the wake of the Red Scare of the early-1950’s that
restricted the share of scientific information with other nations that the President wanted repealed
to enable greater international scientific cooperation.\(^7\) In many ways, this reflected an attitude
publicly expressed by Eisenhower ever since his Atoms for Peace proposal several years before.
He saw Sputnik as an opportunity in the area of science rather than a threat.

\(^5\) Andrew Goodpaster, “Memorandum of a Conference With the President: October 15, 1957,” *Foreign Relations of
608-610.

\(^6\) Dwight D. Eisenhower, “Final Address to the Nation (aka the Military-Industrial Complex Speech),” *Public
Office, 1961), 1035-1040.

\(^7\) Goodpaster, “Memorandum of a Conference With the President: October 15, 1957,” 608-610.
The grand majority of American scientists, naturally, agreed with the President that Sputnik presented a chance to raise public awareness and support for investment in scientific research. Dr. I.I. Rabi, Professor of Physics at Columbia University (and a scientist heavily consulted by Eisenhower after Sputnik), agreed with the President’s assessment that there needed to be a societal change towards science. He said that American students were content to “sit in the bleacher” and watch the unfolding of events rather than take an active role in shaping the future of science and technology. By contrast, Soviet society placed special emphasis on science because the Russians were tired of being viewed as a backward, less technologically advanced people. For them, it was a matter of national pride, while Americans took pride in their luxuries and athletics.  

A greater U.S. public interest in science would lead to greater government, individual, and corporate investment in research. But some in the scientific community were also concerned about the extent of scientific investment, as the motivation for such research would be to maintain technological superiority over the Soviets. Writing for *Scientific American*, correspondent Chester Barnard spoke to the need for greater investment in all areas of scientific research, not just those specific to defense. He argued there had been greater public and private investment in science since the early-1940’s, but that most of this investment was intended to contribute to immediate technological breakthroughs such as the atomic bomb. Barnard said that long-term investment in broad based scientific research had to be included in future public funding in order for society to reap the full benefits of what science has to offer.  

One of the editors of *Science* magazine, Graham DuShane, agreed with Barnard’s assessment. In an

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editorial in the 15 November 1957, issue, DuShane wrote, “the challenge to this country can not be met, except perhaps on a short term basis, by crash programs in particular enterprises.” Instead, America had to plan for the “long pull” of scientific research and development, and invest in greater scientific education.\textsuperscript{10}

But while the scientific community was nearly united in its belief that greater public consciousness of and investment in research might result from Sputnik, they were sharply divided as to the overall implications of the Soviet satellite. Many of these divisions date back to pre-Sputnik disputes because of the controversial participation of some scientists in developing atomic and nuclear weapons. J. Robert Oppenheimer, the leader of the Manhattan Project that developed the first atomic bombs, did not react with alarm to the launch of the Soviet satellite. Instead, he attributed any American concern to that of spoiled losers who were beaten to the achievement. “The Russians are a formidable foe,” he said. “But when they discover something we can only be pleased by their extension of human knowledge.” Oppenheimer believed this was especially true in the area of science.\textsuperscript{11}

It should be noted, however, that Dr. Oppenheimer was by 1957, discredited in some circles because he was one of a number of prominent Americans investigated during the Red Scare and accused of harboring communist sympathies. When Oppenheimer refused to participate in the development of the hydrogen bomb, President Harry Truman questioned Oppenheimer’s commitment to the nation’s security.\textsuperscript{12} Even though modern scholars would regard Oppenheimer as a preeminent scientist of the 20\textsuperscript{th} Century, many Americans in 1957,

\textsuperscript{11} “Where are We; Where are They-Dr. Oppenheimer Speaks,” \textit{Newsweek}, November 11, 1957, 75.
disregarded his comments out of hand because of his alleged communist ties and his refusal to support the development of the H-bomb.

But Oppenheimer was not the only person in the scientific community who took a more optimistic point of view on Sputnik. Dr. Simon Ramo, chief scientist of the U.S. Air Force’s Ballistic Missile Program, also expressed a belief that Sputnik should not be looked on as a threat. He disagreed with the idea that Sputnik gave any indication of the Soviets’ ability to launch a missile attack on the United States. On the contrary, Ramo claimed that available evidence showed American superiority in guidance systems, and that America already had the missiles capable of putting the Sputnik satellite into orbit. These missiles, however, were not used in the civilian Vanguard program because they were military launch systems.\(^{13}\)

But other scientists feared that Sputnik indicated Soviet superiority in missiles and represented a threat to national security. For these scientists, technological achievement added to the overall power base of nations in the modern age of missiles and nuclear weapons. Dr. Edward Teller, the scientist who led the project that developed America’s hydrogen bomb, expressed concern that the Soviets might become the world’s technological leader, and thus gain more power and influence in the world as a result. “The Russians can conquer us without fighting,” he said, “through a growing scientific and technological preponderance.”\(^{14}\) California Institute of Technology president Lee DuBridge, echoed Teller’s point, claiming that even though the U.S. was ahead of the Soviets in some areas, the Soviets were ahead in others, and that Russia’s overall scientific agenda had greater momentum than that of the U.S.\(^{15}\)

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\(^{13}\) Simon Ramo, “We Now Have a Manhattan Project,” *Life*, November 25, 1957, 35.


\(^{15}\) Ibid.
Still others in the scientific community were even more pessimistic about the outlook of America’s scientific and technological race with the Soviets. Luis Alvarez, of the University of California’s Radiation Laboratory, commented, “Soviet science has gone ahead at a fantastic rate and now leads the entire Western world in rocketry and high-energy physics.” He went on to predict a Soviet lead in “almost all fields (of science) in a few years.”

In a similar sentiment from Britain, atomic chemist Kurt Mendelssohn, of Oxford University, predicted that if the western countries did not invest more in technological development that they would “become technologically inferior to the Soviets within ten years,” and therefore vulnerable to Soviet aggression.

Perhaps carrying the greatest weight of all at the time were the opinions of Dr. Wernher von Braun, the head of the Army’s missile program and the man whom many considered to be America’s preeminent rocket scientist. Speaking before Congress in March, 1958, von Braun supported the idea that there was a cause for concern. “The Soviets have grasped the significance of man’s imminent conquest of space and have moved far along the road in that direction,” he said. “Clearly, we must accelerate our efforts in several areas at a rate calculated to overtake and surpass the Russian advantage because the loss of this race inevitably would cost us all we treasure—our freedom itself.”

Of course, it must be recognized that von Braun was one of the strongest advocates of greater investment and military participation in America’s fledgling space program even before Sputnik I was launched.

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17 Ibid.
But even Dr. James Killian, the President’s own science advisor, was critical of some of the decisions made by the U.S. government that allowed the Soviets to beat the U.S. into space and lay the foundation for public concern about America’s technological position vis-à-vis the Soviets. He believed that there was too much secrecy surrounding America’s missile program, which led to “ignorance” on the part of the American people about U.S. missile and rocket capabilities. While he recognized the need for secrecy about many of the technical aspects of American military missiles, Killian strongly recommended to Eisenhower that the latter should better educate the public about America’s various missile programs; a suggestion the President followed up in the wake of Sputnik II in November, 1957. Killian also believed that American concern over Sputnik also had a context in the American atmosphere of the 1950’s. He blamed “the sickness of McCarthyism” for spreading paranoia among Americans, and that Sputnik just seemed to confirm much of the fear mongering that was part of the Red Scare of the early-1950’s.¹⁹

The divisions in America’s scientific community over Sputnik and other issues were readily apparent to President Eisenhower. When the President tried to get Dr. Rabi to work with Dr. Teller and Dr. Ernest Lawrence, head of the University of California’s Radiation Laboratory, Rabi and the other scientists on his committee refused to have any communication at all with the other two scientists. The President commented on such disputes in his diary, in which he wrote, “some of the mutual antagonisms among the scientists are so bitter as to make their working together almost an impossibility.”²⁰

Other observers of America’s scientists agreed with Eisenhower, and believed that the scientific community was too chaotic to be trusted with America’s technological development. Some felt that the government should take more control over scientific projects funded by the government. L.V. Heilbrunn, a Zoology Professor at the University of Pennsylvania, wrote an article for the Nation magazine criticizing the management of funds by the scientific community.  He claimed that “slick operators” in the scientific community mismanaged government funds or committed outright fraud to line their own pockets with money meant for research. Heilbrunn advocated stricter government oversight to prevent such monetary waste by America’s scientists.

Some American politicians agreed with Heilbrunn’s assessment, and proposed measures to allow for greater governmental cooperation with (and control over) the scientific community in work on defense related projects. New York Congressman Victor L. Anfuso, introduced a proposal before the House of Representatives for the creation of a United States Science Academy to train future American scientists. This academy, completely funded by the federal government, would have been similar in structure to the U.S. military academies, but with “less emphasis” on the military side of such a structure. This academy would be an institution strictly regimented to produce young scientists who would work with the government and military to advance America’s technology in defense and other areas. Although Anfuso made his proposal under the guise of assisting America’s scientific community with the training of young scientists, the measure was clearly also meant to exert greater governmental control over future

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21 Although L.V. Heilbrunn’s scientific research was not related to national defense, his views on the mismanagement of Federal funding for scientific research are worth noting.
scientific research. Congress ultimately rejected Anfuso’s proposal, and the idea for the U.S. Science Academy became one of the many-orphaned proposals to come out of the government in the immediate post-Sputnik period. But the fact that such a proposal was introduced indicated concern among at least some in the government over what the scientific community was doing.

While President Eisenhower felt that improvements were needed in the science arena, he also considered the possibility that there was some room for improvement in the military arena. Eisenhower examined a number of defense related issues, and took several small measures in October, 1957, to counter any advantage the Soviets might be trying to develop in missiles. He took initial steps to begin setting up program for the development of an anti-ICBM missile to protect the United States from a Soviet missile attack. The President also gave permission to von Braun’s Army missile team to extend the range of their Redstone missile, if it could be accomplished without an exorbitant amount of money. Perhaps most importantly, Eisenhower concluded that the proposal for a thirty-eight billion dollar defense budget for fiscal year 1958, could not be considered an absolute ceiling. He recognized that if further investigation into the status of America’s military preparedness and missile-related research showed that funds were lacking in crucial areas, that the administration might have to increase military funding in the budget to compensate for defense shortfalls.24

But Eisenhower’s greatest concern in the area of defense in the period immediately following Sputnik, as it had been for some time, was interservice rivalry. The President repeatedly, both publicly and in meetings at the White House, expressed his firm belief that

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rivalries between the different branches of the United States Armed Forces were the greatest single obstacle facing the development of America’s defense related technologies. It led to too much duplication of efforts and wasted spending on parallel projects. Eisenhower also believed that interservice rivalry motivated the highest-ranking officers of each service to try and promote their own military branch’s interests at the expense of the other services. The desire of each branch to one-up the others also promoted an atmosphere of secrecy between the services that also contributed to the problem. Duplication of effort and interservice secrecy rather than sharing of new breakthroughs would ultimately lead to slower progress of each individual missile program.

On 31 October 1957, Eisenhower met with several of his top political and military advisors about the problem, and presented his proposals for how to solve it. The President came to the White House with his experiences from World War II, when as the Supreme Commander of the Allied Expeditionary Forces, Eisenhower worked with allies and various military services in a joint command structure. He saw these different services from different nations work together under this joint command to win the war, and wanted to see that kind of cooperation between the U.S. armed services for the Cold War. Therefore, Eisenhower proposed the idea of creating a Joint Staff system made up of officers from each of the different branches of the military chosen for their capabilities in the areas of leadership, logistics, and organization. The officers chosen for the Joint Staff would be given temporary promotions and raises in pay, and would be placed in a status that was separate from their own branch of the service. They would have to lead the military in such a manner as to promote the good of all of the services.
together. This differed from the already in place Joint Chiefs of Staff; a group of officers from each of the U.S military branches who remained a part of their individual service and represented the interests of that service.

The military leaders present at the meeting were less than enthusiastic about the proposal. General Nathan Twining, Chairman of the Joint Chiefs of Staff, told Eisenhower that he and Secretary of Defense, Neil McElroy, were aware of the President’s concerns and worked diligently to end any sort of interservice rivalry as quickly as possible. Twining believed that the Joint Chiefs of Staff system already in place provided effective management of the military and advice to the President on defense related matters. However, General Twining could have served as the perfect example of the concerns Eisenhower had on the issue. Twining claimed that as Chairman of the Joint Chiefs, he was working on the problem of interservice rivalry. Yet, as an Air Force General, he pushed for a steadfast policy that would prevent the Army from extending the range of their missiles more than 200 miles. Twining believed any such missile system was clearly an Air Force weapon, but President Eisenhower disagreed and refused to commit to an absolute restriction on the range of Army missiles.

Just like he did on the Army missile issue, Eisenhower once again overruled Twining and pushed forward with his proposal for a Joint Staff system. However, the two men did agree that each service’s public information office should be downsized and more responsibility placed in the hands of the Department of Defense’s public information service. Both felt that each branch

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26 Ibid.

of the military used their public information offices too often to sell their branch of the service at the expense of the others.\textsuperscript{28}

In November, Eisenhower continued to press the issue of reducing interservice rivalry. He considered taking responsibility for all of the development of missiles for the military away from the separate services, and ordering all military missile projects to be placed under a separate program within the Department of Defense. This program would have operated in similar fashion to the Manhattan Project, with those in charge reporting directly to Secretary of Defense McElroy, and through him to President Eisenhower. However, the President decided to “shelve” the idea because of the delay it would create in missile development; a delay that could not be afforded in the wake of Sputnik II’s launch on November 3.\textsuperscript{29}

The day after the launch of Sputnik II, Eisenhower hosted a stag dinner at the White House with all of his top advisors, including the Joint Chiefs of Staff. After the dinner, Eisenhower held a meeting with those who attended to press forward with his proposal for the creation of a Joint Staff system. Defense Secretary McElroy and Air Force Chief of Staff General Thomas White, expressed their support for Eisenhower’s decision to shelve the idea of a joint missile development command. McElroy said that tremendous progress in interservice cooperation was being demonstrated in the development of the anti-ICBM missile. General

\begin{footnotes}
\footnote{28} Goodpaster, “Conference With the President: October 31, 1957,” 619.
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White claimed that missile development was the area where interservice rivalry had the least impact.  

Although several people in attendance expressed concerns about Eisenhower’s Joint Staff idea, the most vocal opponent to such a system was Admiral Arleigh Burke, the Chief of Naval Operations. He pointed out to the President that each branch of the armed forces had different missions, and that the officers of each branch had the experience necessary to handle the specific requirements for each service’s function. Burke also expressed his belief that a Joint Staff might become a group of “yes men” for the President, rather than bring each service’s perspective and ideas to the President. Assistant Secretary of Defense Donald Quarles, also expressed reservations about such a radical reorganization of the military’s leadership structure. He believed that the biggest problem related to interservice rivalry was that each service had to appeal individually to Congress for funding. Quarles said that if the appropriations process could be unified for the entire Defense Department that the impact of interservice rivalry on America’s defense could be greatly reduced. But Eisenhower was undeterred by the nay sayers at the meeting, telling those gathered that “our people now believe the services are more interested in the struggle with each other than against an outside foe.”

Yet Eisenhower did not just face opposition to a Joint Staff system within his own White House. There were opponents for the idea in Congress as well. House Armed Services Committee Chairman Carl Vinson (D-Georgia) was one of the chief critics of Eisenhower’s defense policies after Sputnik, and believed that a Joint Staff system placed too much authority

31 Ibid., 626-627.
in the hands of a few officers and threatened civilian control over the military services. “I have not seen demonstrated one single example of interservice rivalry with a dexterous effect upon our war efforts,” said Vinson before Congress on 1 January 1958. “We encourage competition in all phases of American life because through competition we produce better products.” Vinson believed that competition also benefited the services like it did private industry. It should be noted that Vinson had a very strong relationship with the Navy, a fact reflected by the naming of an aircraft carrier after the famed Congressman in 1980.

Another member of the House Armed Services Committee who spoke out against Eisenhower’s proposal was Democratic Congressman Paul J. Kilday. He compared the proposed Joint Staff to the German General Staff that pushed Germany towards entry into World War I. Like Vinson, Kilday believed that a Joint Staff was a threat to democratic institutions that controlled the military. Ultimately, the opposition from such Congressmen as Vinson and Kilday, would lead to the defeat of legislation that would have created the Joint Staff. This was one of the most serious legislative defeats to Eisenhower during either of his two terms as President.

But Eisenhower was not the only one concerned about the military’s management of defense related technologies. Some politicians and political commentators worried about the close association between the military leadership and the private sector. In particular, the aircraft industry heavily relied upon military contracts to stay in business, and the leaders of this industry developed close association with many of America’s top military officers. Companies such as

Lockheed and Grumman Aircraft hired ex-military officers to work as executives, usually from the branch of the service that the company did the most business with. These officers were then expected to use their military connections to help in securing important military contracts. Al Toffler, writing for the Nation magazine, commented that this “intimate association…has given the aircraft industry a stake in the outcome of the continuing inter-service warfare.”34 Quoted in the same article were the concerns of Congresswoman Martha Griffiths (D-Michigan), who said that those who work for the aircraft industry are, in a way, “federal employees” because “every dime that they are paid comes from the taxpayers’ money.”35 Yet there was practically no management or regulation of the relationship between the military and companies with a vested interest in the outcome of interservice disputes, and an industry in the position to exert influence over the outcomes of said disputes.

Such strong connections between the industries that produce American defense technologies and the military indicate just how expensive defense became by 1957. The modern weapons of war were not economical, as advances in technology and efforts to keep weapons up to date with these advancements led to increases in military spending to use that technology. A B-47 medium-ranged bomber cost $1.9 million dollars each, while its larger, longer ranged cousin, the B-52 bomber, were $7 million each. An atomic submarine cost $65 million each, while a modern infantry division equipped for atomic warfare cost $56.8 million.36 As Jack Raymond wrote in The New Republic magazine, “the true problem…is not whether we can

35 Ibid.
tolerate a rise of $1 billion in our record peacetime military spending. It is whether we must spend $10 billion or $20 billion more to meet the Soviet challenge to our national security.”

President Eisenhower understood the cost of maintaining a modern military to deter Soviet aggression, and throughout his Presidency, he tried to maintain a balance between that cost and a sound economy. But some members of the defense establishment were critical of the President’s economic considerations, and claimed that his defense spending measures were based too much on financial rather than strategic considerations. In the wake of Sputnik I, many predicted almost immediately that the President would be placed under increasing pressure to spend more money on defense regardless of economic drawbacks.

Some of this pressure came from former high-ranking military officers who had more freedom to speak out against the President’s defense spending policies than their active duty brethren. Retired Admiral Daniel Barbey, the founder of the Navy’s Amphibious Warfare Center, called for greater spending on nuclear deterrent forces than was being favored by President Eisenhower. Not surprisingly, Barbey believed that greater emphasis in spending should be placed on the Navy’s nuclear forces, especially nuclear submarines. Since nuclear submarines could operate in stealth beneath the waves, the deterrent factor would be greater because the Soviets could not predict where a retaliatory nuclear strike from submarines might come from. However, Barbey felt that the funding for nuclear submarines provided by the Eisenhower Administration was too conservative and should be increased immediately.

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37 Ibid.
38 Jack Raymond, “Russian Moon Spurs Fight by Military to Block Cuts,” Atlanta Constitution, October 7, 1957.
Other ex-military officers were speaking directly to the Sputnik launch and predicting dire consequences if the United States did not somehow match the Soviet achievement. Major General John L. Homer, the former commander of the Guided Missile School at Fort Bliss, Texas, told the *Chicago Daily Tribune* that Sputnik had implications for the ability of the Soviets to spy on American military bases and defenses. Homer predicted that the Soviets would soon have the capability to launch such reconnaissance satellites, and that the United States had to prepare to launch its own satellites to counter the advantage. In the same article, Brigadier General Robert M. Woodward, the director of Illinois Civil Defense organization, expressed his concerns that the Soviets would soon be able to use their satellites as mobile command centers to coordinate a nuclear attack on the United States.40

But not all of America’s former military officers were so grim in their predictions about America’s defensive posture post-Sputnik. Former Joint Chiefs of Staff Chairman General Omar Bradley, called for using intelligence and reason when considering Sputnik’s implications. He hoped that the Soviet satellite would not lead to an overly reactionary increase in military spending, rather that it could be used as the basis for a cooperative effort to develop peaceful uses for space-related technologies. “We can compete with a Sputnik and probably create bigger and better Sputniks of our own,” said Bradley. “But what are we doing to prevent the Sputnik from evolving into just one more weapons system?”41 Of course, it should be noted that Bradley was a long-time friend of Eisenhower’s, so his remarks would naturally be supportive of the President.

As for the leaders of the American military still in the service during the Sputnik crisis, most expressed optimism about the status of America’s defenses, at least publicly. Air Force General Curtis LeMay, the head of the Strategic Air Command, and Admiral Arleigh Burke, both said that they did not think Sputnik indicated that the Soviets had a functional ICBM capable of hitting the United States with any accuracy. They also asserted their certainty the Soviets did not have enough ICBM’s to cause any appreciable damage to America’s strategic deterrent forces. LeMay and Burke firmly believed that the combination of SAC and the naval nuclear forces could make any first strike so costly as to prevent the Soviets from even contemplating it. “There is no doubt that, with the Sputniks, the Soviets did obtain a propaganda success far greater than the actual achievement warranted,” said Burke. “Such Soviet achievements, however, do not have great significance in regards to the present balance of power.” But both officers did agree that the satellite technology Sputnik represented had a possible military application for reconnaissance purposes.  

These sentiments were echoed by Lewis Strauss, the Chairman of the Atomic Energy Commission. He said that the United States was well ahead in atomic and nuclear weapons, and he was almost certainly sure that the U.S. still had an advantage in missile development as well. But he also said that the Soviets were gaining momentum and progressing in their development of missiles at an “impressive” rate. Strauss believed it was imperative that the United States maintained its advantage by any expense necessary. “We can not have assured national defense

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without making sacrifices,” he said. “We are in a period now where great sacrifices will be continuously required to prevent war.”

As divided as the scientific and defense communities were over Sputnik, these two groups also disagreed with each other about another issue brought to the forefront by Sputnik. The testing of nuclear weapons had been a hot button issue off-and-on during the 1950’s, and was raised again by the events of the Sputnik crisis. Most of the scientists Eisenhower consulted with, including Dr. Rabi, recommended an immediate suspension of nuclear weapons testing, with a call for an international agreement for all nations to do the same. Not only would it put the U.S. in a position of promoting peace, it would permit the United States to maintain the lead in nuclear weapons design it had over the Soviets. The Russians would not be able to catch up without further testing.

But Eisenhower’s top military officers disagreed with the scientists’ views. They believed that the Soviets could still equal or surpass U.S. nuclear weapons designs through secret testing in violation of the proposed international agreement, or by stealing nuclear secrets as they did with the Manhattan Project. Klaus Fuchs, a scientist working on America’s first atomic bomb in 1945, had been providing the Soviets details about the Manhattan Project that helped the Soviets develop their first atomic bomb in 1949. Lewis Strauss said that the suspension of nuclear testing would surrender too great an advantage to the Soviets. Eisenhower agreed with the military and refused to suspend nuclear testing. He not only felt that it would be giving the Soviets the potential to develop an advantage in weapons design, but it would also have

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43 Ibid, 44-46.


45 Ibid.
represented a major reversal in established policy that he was not ready to undertake at that time. 46

So how did the public react to what their political, military, and scientific leaders were saying about Sputnik? How did the reaction change over the period of October-December, 1957? Was the reaction immediately one of tension and uneasiness?

First, the Sputnik crisis must be understood as not a reaction to a single event, even though many who have examined the topic might favor this point of view. In reality, the Sputnik I launch was the first of a series of events in the last three months of 1957, that shook America’s confidence in its military, political, and scientific establishments. Following the Sputnik I launch was the launch of Sputnik II a month later, a much larger satellite that matched the size of the standard nuclear weapon at the time. Within the month of Sputnik II’s launch (November, 1957), the Gaither Report’s existence became public knowledge, and speculation was rampant as to its contents and conclusions about the status of America’s defenses. On 25 November, President Eisenhower had a stroke, which placed his fitness to lead the nation under greater scrutiny. Finally, the failed Vanguard launch of 16 December, all contributed to the America’s reaction to the post-Sputnik crisis.

But scholars are divided as to how these subsequent events affected the development of the crisis. Some will place a great deal of emphasis to some of the events, but will only mention others in passing. Documentaries focused on the 1950’s have long recognized Sputnik as a seminal event of the decade, but tend to oversimplify the event and focus almost exclusively on

Sputnik I. When CNN produced a series on the history of the Cold War, the episode that focused on the 1950’s was actually entitled “Sputnik.” It effectively placed Sputnik in the context of 1950’s American paranoia, but when discussing Sputnik itself, it focused most of its attention on Sputnik I and the Vanguard disaster. The episode placed the American reaction almost entirely in the context of these two events. When it came time to discuss Sputnik II, the documentary only focused on the dog, Laika, placed aboard the capsule, and only discussed the complaints many animal loving Americans had about the Russian dog’s suffering.\(^{47}\) Not that the subject does not deserve some attention. Paul Dickson devotes several pages of his book to worldwide protests against Laika’s demise in space. But by choosing this aspect of the post-Sputnik II reaction as the only one discussed, it lends a sort of triviality to the Sputnik II launch when considering America’s reaction.

But at least the Sputnik episode of CNN’s \textit{Cold War} devoted some attention to Sputnik II. Other documentaries have ignored the second satellite all together. The documentary series based on David Halberstam’s \textit{The Fifties} is a perfect example. While it too gives due attention to the Sputnik I launch, and American reaction to it, it does not mention Sputnik II at all. Instead, it jumps directly to the Vanguard disaster.\(^{48}\) Both documentaries make the same mistake of oversimplifying America’s response to the crisis by ignoring or minimizing other related events in order to support an idea that the response immediately developed and crystallized after Sputnik I.


\(^{48}\) Tracy Dahlby and Alex Gibney, Directors and Producers, \textit{David Halberstam’s the Fifties} (History Channel/A&E Home Video, 1997).
Of course, one could conclude that the documentary format does not allow for in depth exploration of complicated topics. Scholars who have written books and articles on the subject have a much better format for detailed examination of the subject. This is true, but writers have also tended to work from certain assumptions about America’s post-Sputnik reaction that are questionable under the correct form of scrutiny.

Either by implication or by direct statement, many scholars have presented the thesis that most Americans reacted with either deep concern or panic immediately following the launch of Sputnik I. Much of this scholarship lays the blame for this at the feet of President Eisenhower, and claims a lack ability on the part of the President to bring people around to his point of view. Roger Launius discusses both in his article “Eisenhower, Sputnik, and the Creation of NASA.” He claims that “there was a rapid and sustained whir of public opinion condemning the Eisenhower Administration” following the launch of Sputnik I, and that the President’s approach to space related issues immediately fell into “disrepute.” Launius clearly believes that the public immediately reacted with extreme concern to Sputnik I’s launch and Eisenhower’s leadership was immediately found to be widely lacking.

Other scholars like Robert Divine are not as direct in presenting this thesis. However, their works do allow for an interpretation of an idea directly posited by Launius. In the Sputnik Challenge, Divine writes that Eisenhower “failed to quiet the fears of the American people that Sputnik represented a fundamental shift in military power and scientific achievement from the United States to the Soviet Union.” He repeats this idea many times throughout the book, and ultimately, Divine’s conclusion is supported well by factual evidence. However, Divine’s

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49 Launius, 326-328.
conclusion is not specific as to when Eisenhower began to fail in his ability to reassure Americans about Sputnik, neither in this statement or anywhere else in the book. Did Eisenhower’s failure begin right from the launch of Sputnik I (as Launius states and Divine implies), or did it develop later with the subsequent events of the crisis? Did public tension and concern follow in the immediate aftermath of Sputnik I, as stipulated to in Launius’ article?

There is evidence to suggest that the nation was not immediately frenzied about the launch of Sputnik I. *Newsweek* magazine conducted a survey through correspondents posted around the U.S. that asked ordinary Americans what they thought about Sputnik I in the week after its launch. People in Boston were described as reacting with “massive indifference” to Sputnik, while in Denver, locals were talking more about football and the Asiatic flu epidemic than they were the Soviet satellite. In Little Rock, Arkansas, which had been in the news frequently during that time period because of the school integration crisis, locals were focused more on the trouble in their own community and on finding ways to forget about it through sports and church activities. “Nobody (in Little Rock) seemed to be worrying about something so nebulous as a satellite,” said the reporting correspondent.51 Perhaps the best encapsulation of the mood in an American city post-Sputnik I was reported by a correspondent in Milwaukee, Wisconsin:

The future historians could cluck but they could not really blame *The Milwaukee Sentinel* for having announced on Saturday morning “Today we make history.” It was referring to the first World Series game ever played in that city. The news of the Russian satellite was on Page 2.52

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51 “Into Space: Man’s Awesome Adventure,” *Newsweek*, October 14, 1957, 37-38.
52 Ibid., 38.
The evidence presented in the *Newsweek* survey of local reactions around the country certainly do not indicate widespread panic and confusion the days following the launch of the first Sputnik. Instead, local concerns ruled the day.

The same kind of lack of panic and focus on local matters was also commented on in Homer Hickam’s memoir, *Rocket Boys*. Hickam, a NASA engineer, grew up in the small West Virginia town of Coalwood, and credits Sputnik with being one of the inspirations for his choice in a future career. But as for the townsfolk of Coalwood, Sputnik was not really being talked about in Church or at public gatherings. Instead, the local football team’s undefeated season was the topic of conversation. “It was taking a while for Sputnik to sink in,” Hickam writes, “at least in Coalwood.”

Unlike the small town of Coalwood, West Virginia, the Sputnik launch did not take a while to “sink in” for the residents of the communities near Cape Canaveral, Florida. When the news of the Sputnik launch reached the people on what would later be called the “space coast,” most did not react with panic or dismay. Instead, the Sputnik launch created a sense of euphoria and celebration, as the U.S. increased its missile testing in the Fall, 1957, partially as a reaction to the Soviet satellite. Thousands of people turned out to watch the missile tests, including one night test of a Jupiter missile conducted on 22 October 1957. A local reporter who witnessed the launch described what the crowd saw in the 23 October, edition of *the Cocoa Tribune*. “The searchlights were on at the Cape, an almost sure sign of action,” he wrote, “when suddenly a great area lighted up and the huge golden sphere soared up from its midst.”

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54 Chuck Johnson, “Thousands See Army’s Jupiter In Night Test; Vanguard Still Awaited,” *the Cocoa Tribune*, October 23, 1957.
But the reaction to Sputnik on Florida’s east coast was not just related to spectacular missile tests. Other more comical examples abound of a seemingly flippant attitude towards the U.S.-Soviet space race, as local entrepreneurs attempted to cash in on the newly dawned space age. One hotel near Cape Canaveral called the Starlite commissioned local artists to paint large space murals on the walls of their dining and lounge areas. They described their new space themed as “Sputnikked up.” Other local hotel got into the space theme by naming their hotels after missiles being tested at Cape Canaveral, including the Vanguard Apartment Motel and Dining Room and the Polaris Hotel, the latter’s one hundred twenty-four rooms making it the largest hotel in Central Brevard County at the time.

This lack of tension lasted for some time after Sputnik I was launched. Several weeks after Sputnik I entered into orbit, Newsweek conducted another national survey to find out what Americans were thinking about Sputnik after having time to think about and learn more from the media coverage and government press releases. The results of the survey showed that most Americans were concerned about Sputnik, but also believed that the U.S. would soon match the Soviet achievement. Most of the people who responded to the survey also did not blame President Eisenhower for any lag in missile development that Sputnik may or may not have represented. Instead, people tended to agree with the President, and believed that interservice rivalry was the primary culprit in slowing down America’s missile development. Few in the survey saw the need for any Congressional inquiry into the matter, but were willing to support greater spending on missiles if the President felt it was warranted. “Most Americans had taken

55 “Walls at Starlite Motel Cocktail Lounge All ‘Sputnikked Up,’” The Cocoa Tribune, November 8, 1957.
56 “Vanguard Dining Room Overlooks Pool, Ocean,” The Cocoa Tribune, October 30, 1957, and “Polaris is Name of a New 124 Room Hotel For Beach,” The Cocoa Tribune, November 25, 1957.
Sputnik to heart,” wrote a Newsweek correspondent, “and had formed opinions that were remarkably hard-headed and discerning. There was concern, but no panic.” Most of those surveyed only felt some hurt pride and a desire to see America catch up to the Soviets with its own satellite.\(^57\) It is important to note that Eisenhower’s concerns about interservice rivalry also seemed to be influencing public opinion, which calls into question the idea that the President was out of touch with the public mood in the first month after Sputnik I.

There were other indications that Americans did not respond with overt concern over the launch of Sputnik I. A new drink recipe circulated through the bars of America called the “Sputnik Cocktail,” which was made with vodka.\(^58\) A number of retailers around the country cashed in on the media attention given to Sputnik by producing various kinds of futuristic merchandise. Satellite hats and other sorts of space-age looking clothing filled the shelves of department stores. Employees at Macy’s Department Store in New York City dressed up in space suits and put up futuristic looking toy displays. In stores around the country, any kind of toy related to space travel flew off of the shelves as America’s children wanted to join in the space age that had just begun.\(^59\) In many ways, Sputnik became just another new fad in America’s popular culture.

What is often overlooked in the scholarship on American reaction to Sputnik is the point of view of children on the Sputnik launch. Some scholars might scoff at using the reaction of children as any indicator of the national mood, but American youth were very much exposed to the realities of the Cold War. Civil Defense education programs, atomic attack drills, the print

\(^{58}\) “We are Serious But With Smiles,” Life, October 14, 1957, 24.
media, and popular films and television programs taught young Americans that the Soviets were the bad guys; the evil communists who wanted to take over the world and nuke America off the face of the Earth.

But in October, 1957, the Soviets also became the first people to send a satellite into space. Instead of reacting with fear, American children tended to be in awe of the idea of a man-made object circling the Earth in space. Many younger Americans became more interested in rocketry and established clubs in their communities to gather together with their friends to design and build rockets. Others scanned the heavens with their telescopes looking for the small object orbiting the Earth, and listened for the sound of Sputnik’s signal on the radio. “You need only give youngsters an exciting goal to find out what an amazing talent for accomplishment the human being has,” wrote David Woodbury in the February, 1958, issue of Reader’s Digest.\textsuperscript{60} It seems that President Eisenhower’s wish for Sputnik to inspire more of a national interest in science, especially among younger Americans, was being realized.

The evidence suggests that the impact of Sputnik was, to use Homer Hickham’s words, “taking a while to sink in” most places around the country. Perhaps the Soviets’ “fellow traveler” represented such a new leap in technology that most Americans had a hard time processing what exactly a satellite was. But there are two other factors that also contributed to the more subdued reaction than one would expect from ordinary Americans, at least to the launch of the first Sputnik. The first is the “nebulous” nature of Sputnik as described by the Newsweek correspondent in Little Rock. It was a small satellite that circled the Earth, and there was a lot of discussion in the media and among America’s leadership about whether or not it indicated a

\textsuperscript{60} David O. Woodbury, “Readin’, Rockets, and ‘Rithmetic,” Reader’s Digest, Vol. 72 (February, 1958), 63-66.
Soviet lead in missile development. But the direct threat was not readily apparent to many Americans. National pride took a blow, and many Americans were embarrassed that the perceived to be backward Soviets beat them to the achievement. But without a clear and present danger to awaken greater national frenzy, Americans remained focused on their own localized issues or problems that more directly affected their lives.

The other, probably greater reason for the lack of panic was the American faith in its institutions established through Cold War Civil Defense organizations and through popular imagery in the media. The groupthink mentality that permeated American society in the fifties prescribed faith in the public’s leaders to see the nation through the crises of the Cold War. These same leaders carried them through the Korean War, the Red Scare, and the other myriad of Cold War incidents during the decade. Why would Sputnik be any different? It is an erroneous assumption to think that Sputnik I, on its own, could shake a decade’s worth of trust that had been engrained in the American people towards the collective security provided by America’s leadership establishment.

But scholars who support the thesis of immediate tension or panic from the American people after Sputnik I, and the failure of America’s leaders to calm that panic from the outset, have evidence on their side as well that must be examined and challenged. One clear piece of damning evidence towards Eisenhower’s leadership after Sputnik I are the President’s poll numbers by the beginning of November, 1957. One Gallup Poll, for example, had Eisenhower’s overall approval rating among Americans at 57 percent, the lowest of his Presidency up to that time. In January of that same year, Eisenhower’s approval rating had been at 79 percent.61 But

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further analysis of these poll numbers dispute the idea that Eisenhower’s drop in approval rating was almost entirely related to Sputnik.

First, it must be pointed out that in the percentages of the poll that were outside of the category of approval of Eisenhower’s job performance, only 27 percent showed clear disapproval. The other 16 percent had mixed or no opinion of the President’s performance. Second, the poll numbers were very much divided along party lines. Among Republicans, Eisenhower still had an 82 percent approval rating, while only 38 percent of Democrats approved of Eisenhower’s management of the Presidency. Finally, there are other forces at work in the October, 1957, political scene that were detrimental to the President’s approval rating.

As the poll itself shows, Eisenhower’s sharpest decline in poll numbers was among white voters in the South. This is not too surprising, considering what was going on in the American South almost simultaneously with the Sputnik I launch. The public school system of Little Rock, Arkansas, refused to implement the Brown vs. Board of Education ruling of the United States Supreme Court to integrate public schools for both whites and blacks. President Eisenhower sent the 101st Airborne Division into Little Rock to force the integration of schools in accordance with the Supreme Court’s ruling. David Halberstam, author of *The Fifties*, quotes a 4 October, 1957, conversation between John Chancellor of NBC news and Harry Ashmore of the *Arkansas Gazette*, that perfectly describes the situation in the context of Sputnik. “This (Sputnik) means that men are really going to go to the moon,” said Chancellor to Ashmore. The latter replied, “and here we are in Little Rock fighting the Civil War again.”

62 Ibid.
63 Ibid.
64 Halberstam, 679. According to David Halberstam’s endnotes, he interviewed Harry Ashmore for the book, and the details of the conversation between Ashmore and Chancellor were told to Halberstam during that interview.
Although many Sputnik scholars mention the Little Rock crisis in passing because it happened around the same time as Sputnik I’s launch, most do not discuss its influence on the Eisenhower’s poll numbers. In the eyes of white southerners, Eisenhower committed a serious breach of their trust by sending the 101 Airborne Division into Little Rock to interfere in what southern whites saw as a local matter. Ashmore’s Civil War analogy was an accurate one to southern sentiment towards Eisenhower at that moment. A U.S. President sent Federal troops into a southern city to enforce orders issued by Federal authority. This was bound to harm Eisenhower’s approval rating in the south. Thus, the effects of the Little Rock crisis must be considered when examining the drop in Eisenhower’s post-Sputnik approval rating.

The other factor that is barely noted in other scholarship on Sputnik is the American economy in the autumn of 1957. In September and October of that year, there was a drop in the amount of overall growth in Americans’ daily income, the first since the post-Korean war recession of 1953. There were drops in other economic indicators as well, including job growth and some stock values. With memories of the 1953 recession still fresh in the public mind, many Americans were concerned that another recession was just around the corner. In fact, concern for the economy ranked equal with concern over defense in a poll conducted by *Time* magazine. Of course, public concern over the economy was coupled with concern over Sputnik, and the latter did influence the former. But the reverse was also true, as the economic indicators influenced the public’s opinion of America’s leadership at the time.

Therefore, the public opinion polls do not conclusively prove that Americans were frenzied or even overtly concerned over Sputnik I, nor do they show overall dissatisfaction with

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Eisenhower’s leadership in the first month. The polls also do not directly connect any
dissatisfaction with Eisenhower’s leadership with Sputnik-related issues. But those who support
those two theories also have another category of evidence to rely upon to support their thesis.
Media frenzy ensued over the Soviet satellite that continued in one form or another until almost
the end of the decade. Sputnik had all of the makings of a good story with its futuristic trappings
and potential political scandal, and America’s media establishment picked up on this from the
beginning.

Starting on the day after Sputnik’s launch, many of the nation’s newspapers printed front-
page articles and produced a myriad of editorials on the satellite and its implications to
America’s defenses. The Atlanta Constitution, in particular, launched scathing attacks against
America’s leaders for not predicting the Soviet satellite’s launch and beating them to the punch.
They also promoted the idea that Sputnik represented a clear threat to American security, with
articles like one in the 8 October, edition entitled “U.S. Now Faces Its Gravest Threat.” In this
article, the author says that the U.S. “must assume that they (the Soviets) have the capability of
building intercontinental ballistic missiles and that these can be built in sufficient quantities to
launch en masse within a few years against targets all over the world.”

Another Atlanta Constitution article painted the threat as one directly affecting its local readers with the following
passage:

It means, of course, that the Soviets do have the ICBM and that it can be launched against
any city in the world, including Atlanta, Georgia. It means that total destruction can
come out of the skies, without warning and without giving civilian populations even the
slightest chance to escape…The manner in which the American people have been misled
about the technical achievements of the Russians is inexcusable. Dangerous chances

have been taken and are being taken with the country’s very existence.  

In the October 5, edition of the same paper, correspondent Allen Head claimed to quote an unnamed official with Project Vanguard, who said that Sputnik I was “enough to scare the hell out of me,” and that it meant that the Soviets “could drop ICBM’s on us.”

The *Atlanta Constitution* was not the only publication that took a gloomy approach to Sputnik I’s implications. The *San Francisco Chronicle* carried an article in its 5 October, edition that claimed the Soviet satellite was a clear and direct challenge to American power and prestige, and showed that the Soviets were gaining on America’s technological level quickly and could even surpass it. The author, John Hightower, also attacked the Eisenhower administration’s stand on the issue by claiming that Sputnik I’s impact “will not be removed by soothing assurances from Washington that the development came as no surprise and that the United States was not engaged in a race with the Soviet Union.” Similar attacks on America’s leaders came from *Life* magazine on October 14, in an article that called Eisenhower’s prioritization of satellites inadequate and “shortsighted.” “Some officials who now belittle Russia’s Sputnik are among those who, in the first place, were not convinced our own satellite program was worth pushing,” wrote the article’s author, C.C. Furnas. “Had they been so convinced, there is every reason to believe that a U.S. satellite could have been orbiting the Earth as early as 1955.” A critical, but less scathing, article appeared in the *Chicago Daily Tribune* on 6 October, stated Sputnik should be regarded as a warning about the Soviet Union’s emerging missile technology.

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Yet the article also did say that the Sputnik satellite itself had only “remote” military implications.\textsuperscript{71}

The negative response from the media towards Sputnik I was not limited to just newspapers and popular periodicals. Technical and political journals also took up the Sputnik story as one bearing grave implications for U.S. security. Erik Bergaust, writing for \textit{Missiles and Rockets}, said “America is too far behind Russia to be able to match her in astronautics.” He went on to call America’s satellite program “pathetic” when compared to the Soviets.\textsuperscript{72} Of course, it should be duly noted that Bergaust was an East German rocket technician, and there was no biographical information provided to allow readers to determine his motives or affiliations. The importance of the article is that it appeared in an American technical publication and its provocative language about America’s rocket program makes it difficult to overlook.

\textit{The Nation} magazine carried an article in its 26 October, issue from British political scientist Patrick O’Donovan, who said that Sputnik proved that the Soviets were a “peer” and a “rival” for the United States in the field of technology. “The American faith in the omnipotence and pre-eminence of their skills and capacities,” wrote O’Donovan, “has been affronted by the Russian satellite achievement and which is now crying out with a steady growth of urgency and hunger for reassurance.” O’Donovan claimed that the Americans had only themselves to blame for allowing Red Scare advocates like Joseph McCarthy drive out of government service scientists like J. Robert Oppenheimer because of their alleged communist ties.\textsuperscript{73}

\textsuperscript{71} “Russia in Front,” \textit{Chicago Daily Tribune}, October 6, 1957.


However, it should be noted that not all of the media reaction to Sputnik was entirely negative. In the first week after Sputnik I’s launch, a writer for *The Wall Street Journal* immediately recognized the political repercussions that the Soviet satellite would have for President Eisenhower, and that the President’s enemies would use Sputnik as “ammunition” against him. The article also predicted, with regret, that the Cold War would “overshadow the promise of programs in peaceful fields” like space travel.74 Another article in the November 4, 1957, issue of *Life* agreed with Eisenhower’s belief that the economic impact of any increase in defense spending must be fully considered before each measure is undertaken.75

But the positive messages coming from the media were in large part drowned out by those that were negative, and many scholars focus on this latter form of media reaction as a gauge of the public’s mood in the wake of Sputnik I. But which came first, the chicken or the egg? Was the media reacting to popular sentiment in the nation at large, or was it trying to create a crisis to sell newspapers? An argument could be made that the publishers of certain newspapers and magazines were attempting to sell their product through negative editorials meant to spread hysteria. The articles printed in these publications would send a message that the safety of themselves and their loved ones was threatened by the Sputniks. People should buy their newspaper or magazine to stay informed.

But any such discussion would be limited by the amount of information scholars can gain about the mindset of the publishers. Publishers’ motives, in most cases, were a probably mixture of genuine desire to inform the public and take advantage of an opportunity to sell their product.

It is ultimately unnecessary to prove whether the tone or content of news sources from the period was based on the public’s reaction or not. The mere fact that the question is a valid one sheds doubt on the viability of using the media as a gauge of the public mood.

Therefore, the thesis that there was immediate national worry over Sputnik I is flawed, and the automatic assumption of its validity should not be a part of any examination of the Sputnik issue. Instead, it would take the series of critical events in November and December, 1957, to weaken America’s confidence in its leaders and institutions, and send the public mood into one of worry and trepidation about whether or not the Soviets had a clear advantage in the Cold War. While the greater concern did not fully crystallize during the first month, the events of November and December would greatly weaken public confidence in America’s leadership.

The events of November were bound to increase public apprehension and decrease the confidence many Americans’ had in their leadership. Sputnik II brought three new causes for concern, and ones that were widely spoken about and written about by members of both the government and the media at the time. First, the second satellite indicated that Sputnik I was no fluke, and that the Soviets did have a viable space program. Second, Sputnik II was much larger than the first satellite, and equaled the size of standard nuclear warheads of the day. Thus, the threat of the Soviet ICBM was much more clear from the launch of Sputnik II than it had been from Sputnik I. Finally, and most annoyingly to Americans, the United States still had not matched the Soviet achievement.

When the Gaither Report became public knowledge in the week after Sputnik II was launched, the public had even more cause for concern because even though the contents of the report were a secret, the rumors were that it contained a rather grave evaluation of the status of
America’s defenses. The letters to the editors of *Newsweek* magazine in early November certainly reflect an increase in apprehension. In a clear criticism of President Eisenhower’s wish to balance economic and defense concerns, one letter from a woman named Brooke Wright, in Pennsylvania wrote that “economy is not always economy, is it?” In another from Massachusetts, another woman named Grace Forbes, wrote that “when I was a child and played marbles, anyone who tried to soften defeat by saying ‘I wasn’t really trying’ was an object of ridicule.” From overseas, a man named John A. De Cruz, wrote from Singapore that “whilst being impressed with their scientific achievement, let us not blind ourselves to the inherent malevolence and degradation of the Russian political manifesto.” Another person named M. Nahan from San Francisco, replied with a pithy rhyme: “The beat is a ‘bleep,’ not a ‘bleat,’ not conducive to counting of sheep. Since Sputnik was spawned, and is whirling around, somehow I just can’t get to sleep.”

The media’s already hysterical reaction to Sputnik I increased in the wake of Sputnik II. The November 18, issue of *Life* magazine carried an article called “Arguing the Case For Being Panicky,” by George R. Price. An article in the issue of *Time* magazine from the same week commented that President Eisenhower was “under new and stinging fire,” and that “it was time for Ike to move fast.” Even a writer for *Science* magazine joined in on the assault against America’s leadership for its response to the Sputnik crisis, with an article that said the situation presented “enough of an emergency” to warrant a complete and critical investigation of how America’s space and missile programs were being managed.

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So how did President Eisenhower respond to the new situation in November, 1957? At a dedication ceremony for the new Atomic Energy Headquarters building on November 8, Eisenhower warned that “man’s judgment and intelligence must measure up quickly to his inventive genius or mankind’s future is bleak indeed.”

His most detailed public messages on the Sputnik crisis in November, 1957, were two speeches on science and America’s security that he planned to give before Sputnik II was launched. The first aired on national radio and television on 7 November, just a few days after Sputnik II, in which Eisenhower spoke specifically about the relationship between technology and national security. Originally, he had planned a more general discussion on a broad range of scientific topics, but adapted the content of the speech to reflect the growing tension after the launch of Sputnik II.

In the speech, Eisenhower listed specific actions that needed to be taken to makes sure that the military had the weapons and technical support necessary to maintain a sound strategic defense and deterrent to Soviet aggression. The first action he announced was the appointment of Dr. James Killian as the first Science Advisor for the President, allowing the nation’s chief executive to receive direct advice in science related programs. He also stated his intention to make sure that interservice rivalry did not interfere with the development of America’s military missiles by increasing the authority of the Defense Department’s Guided Missile Director and by insisting that any new missile programs be put under a single manager regardless of which service wanted the missile. Finally, he called upon Congress to lift the restrictions on

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international cooperation in scientific areas to allow scientists from NATO countries to cooperate in their research.\textsuperscript{81}

Eisenhower continued to talk about the role of science and the military in his second speech on the topic, aired on radio and television on 13 November 1957. In this speech, the President outlined the four main tasks of America’s military to maintain a strong nuclear deterrent, be flexible to meet changing threats in cooperation with allies, keep up a strong home defense, and maintain a sufficient reserve strength. The President told the American people that he was very confident in the ability of America’s armed forces to do all of those things, and to also use funding provided by the American taxpayer wisely. However, he did outline some changes that were needed to improve America’s military posture. He called for a further dispersal of SAC’s strategic forces, improvements to early warning systems, the development of an effective missile defense, increased funding for missile development “where needed,” and an increase in the military’s overall salary scale. But he once again reinforced the need for a balance between military spending and economic solvency. He agreed that economics should not be the sole governance of military spending, but that “over the long term a balanced budget is one indispensable aid in keeping our economy, and therefore our total security, strong and sound.”\textsuperscript{82}

Besides military matters, President Eisenhower also spoke to the idea that America’s future security depended upon insuring a sound education for young Americans. In this area,


Eisenhower called for nation-wide testing of high school students to determine aptitude in important areas of learning, and incentive programs for those students with high aptitude to attend college. He also wanted improvements made to math and science education programs, more laboratory facilities in America’s schools, and fellowships to fund the training of new teachers. The President not only saw this as necessary to maintain America’s strength to face the Soviets, but also to ensure a greater America for the future. In his words, America needed “not just engineers and scientists, but a people who will keep their heads and, in every field, leaders who can meet intricate human problems with wisdom and courage.”

This speech was part of a greater public emphasis that Eisenhower was now giving to educational reform. Summarizing the President’s thoughts on this subject is a passage from a letter the President wrote on December 30, 1957:

In the circumstances of this time we naturally tend to emphasize the need for expansion and improvement in our science and mathematics programs. But in no way do we ignore the constant need and the permanent values of general education that enriches our working lives and that enables us to be better citizens of the Republic and the world. The dynamic drive for better schools and better education will come from men and women—representing all aspects of American life—sitting down together, studying the problems that confront them, working out practical solutions, turning to government only for that which they themselves cannot accomplish at all or so well.

President Eisenhower wanted to see educational reforms, and wanted the federal government to fund education more than it did before. But he also believed that most of the solutions had to come from the local level, adapting to the conditions faced in each community. It was a careful balance between federal support and localized problem solving. Eisenhower also wanted to not

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83 Ibid., 814-815.
just limit educational reforms to science and math related areas. Instead, he wanted any reforms to provide for the creation of better citizens through broad based academic programs.

Eisenhower was not the only one speaking out more about America’s plans in regards to technology, science, and defense related issues. Other members of the Eisenhower administration and the defense establishment in general were becoming more specific in their announcements of plans for future technological endeavors, including those related to space travel. In an article for Look magazine, White House Press Secretary James Hagerty outlined future plans for an American space program, in which he predicted that by 1959, manned aircraft would be operating on the “threshold” of space. Although the U.S. had failed to launch even a small satellite when this article was printed, he boldly claimed that the U.S. would launch larger satellites by 1960. Plans were also outlined to send instrumented probes to the moon by 1965, piloted craft into space by the end of the 1970’s, and to send a man to walk on the surface of the moon by the 1990’s. Of course, the predictions of Hagerty’s article grossly underestimated the timetable of how the space program did ultimately progress, but it does show that the Eisenhower Administration was planning for America to undertake some ambitious space related undertakings sometime in the future. Hagerty even made a prescient prediction, writing that “if you have a life expectancy covering the remainder of the 20th Century, you will live to see man land on the moon.”

High-ranking officers of the military also spoke of more ambitious ideas related to space. Speaking to the House Armed Services Committee in March, 1958, Air Force Lieutenant General Donald Putt, outline a three-step plan for the military’s manned space flight program.

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86 Ibid., 105.
The first step was for the testing of a rocket plane called the X-15 in high altitude maneuvers, to be followed by another high altitude vehicle called a Dyna-soar (short for dynamic soaring vehicle) for testing other techniques necessary for space flight. The result would be a manned orbiter craft that would use the lessons learned by the previous two craft to allow humans to fly in space. Putt believed that the ultimate goal of the military’s proposed space programs would be to establish a base on the moon.\textsuperscript{87} In that spring, both the Air Force and the Army went forward with plans to send probes to the moon sometime in the near future.\textsuperscript{88}

The increase in rhetoric from the Eisenhower Administration on issues related to the two Sputniks and space travel, and the specific actions that Eisenhower was calling for in response to the Sputnik crisis, led some observers at the time to believe that America’s commander-in-chief was changing his attitudes towards the Soviet satellites. Whereas President Eisenhower felt that a very limited amount of action was needed to respond to Sputnik I, in the wake of Sputnik II, Eisenhower “left behind the notions that no speedup was necessary in missile and satellite development,” according to the November 18, issue of \textit{Time} magazine. The article went on to speculate that Eisenhower no longer held the budget to be “sacrosanct even while Red moons spun through the sky.”\textsuperscript{89}

Yet the evidence does not support that conclusion. In fact, much of President Eisenhower’s rhetoric in the period after Sputnik II reflects consistency in his attitudes towards increases in military spending. In the 7 November, speech, Eisenhower said that “we can have both a sound defense, and the sound economy on which it rests—if we set our priorities and stick

\textsuperscript{87} “A Shot at the Moon,” \textit{Time}, March 10, 1958, 13.  
\textsuperscript{89} “Turnabout,” \textit{Time}, November 18, 1957, 19.
to them and if each of us is ready to carry his own share of the burden.” Although he was willing to plan for other future space endeavors if they were considered feasible, he also said that “what the world needs today even more than a giant leap into outer space, is a giant step towards peace.” Eisenhower was speaking publicly more often and in greater detail about science and security, but he had already planned to do so before Sputnik II was launched. The article in *Time* magazine also specifically cited Eisenhower’s decision to appoint Dr. James Killian as the President’s science advisor as evidence of Eisenhower’s changing attitude. But once again, the President was considering the appointment BEFORE Sputnik II. Eisenhower did announce his intention to promote educational reform, yet this was also a line of thought that pre-dated Sputnik II.

In the final analysis, President Eisenhower’s attitude toward the crisis did not change very much from October to November, even though the circumstances of the nation’s mood were changing. With two Sputniks in the sky, no American satellite to match them, and apprehensions over the status of America’s defenses resulting from questions in the media and the political arena, many Americans questioned whether they could trust in their leaders, including their president, to maintain America’s national strength vis-à-vis the Soviets. Scholars’ conclusion that Eisenhower failed from the time of Spuntik I’s launch to convince Americans he had things under control is a flawed one. But at the same time, the conclusion that Eisenhower failed to adapt to the changes of the crisis in his public position or policy proposals is a valid one supported by the evidence. It is ironic that Eisenhower said in a 14 November, speech, that “plans are worthless, but planning is everything,” and that leaders must be flexible to meet

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changing situations. He asserted a need for flexibility, but one of his biggest shortcomings during the Sputnik Crisis was his failure to adapt to changes in the public mood through the events of the fall of 1957.

But not all of the fault lies with Eisenhower, for the President was as much a victim of circumstances as much as he was suffering from a lack of sufficient flexibility. A truly important, but often overlooked, moment of the Sputnik crisis is President Eisenhower’s stroke of 25 November 1957. Up until that time, most Americans, even after the launch of Sputnik I, had great confidence in Dwight D. Eisenhower’s strength to be the President. They trusted “Ike” to lead them through crises. Eisenhower went through other health crises before, including a heart attack in 1955, that left him incapacitated for weeks. But the heart attack came during a period of relative calm on the political and international scene, and the President recovered from his illness well enough to win his 1956 re-election campaign by a landslide. But his stroke of November, 1957, came in the midst of a crisis of confidence in America’s Cold War preeminence which gave his enemies had the perfect ammunition to raise questions about his ability to fulfill the duties of his office.

When President Franklin Roosevelt suffered from severe health problems in the last year of his presidency before his death, he did everything he could to conceal these problems from the American people. Roosevelt knew that if his medical condition became public knowledge, that his ability to lead would be brought under severe skepticism. The President also understood the impact his illness might have in hurting the morale of the American military, while providing

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ammunition to the enemy to use in propaganda attacks on America’s leadership. Unfortunately for President Eisenhower, he was not able to keep his condition a secret, and his ability to lead was under attack by the end of 1957.

In an article that appeared in *Harpers* magazine, a writer named John Fisher came forward as one of a number of voices in the media and in the political arena calling on President Eisenhower to resign because of his stroke and the implications it had for the President’s health. Fisher claimed that many more Democrats would be asking for Eisenhower to quit, but they want him to be weak to improve their chances of recapturing the White House in the 1960 elections. At the same time, the writer also believed that many Republicans felt the same way, but did not say so for reasons of loyalty to the de-facto leader of their party. “There is one last great service which President Eisenhower can perform for his country,” wrote Fisher. “He can resign.”

Adding to Eisenhower’s misery was the Vanguard disaster of 16 December. In this case, Eisenhower’s decision to turn the test into a satellite launch, accelerating the program’s timetable significantly, and the great publicity attached to the launch beforehand, was the President’s own undoing. The irony was that the one definitive, major move to accelerate America’s space program that Eisenhower ordered during the last three months of 1957, turned into a disaster. As an article in the December 16, issue of *Newsweek* said, “with two hefty Sputniks orbiting in space, the world had been treated to the spectacle of the U.S. gathering up its beeping baby moon from scorched ground.”

As President Eisenhower attended the first conference of all of NATO’s national leaders, held in Paris at the same time of the failed Vanguard launch, the public perception of his ability

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to lead the nation was desperately in need of a boost. As pointed out in *Newsweek*, the Paris summit was a much-needed chance for the President to prove he still had what it took to perform the job of President and leader of the free world after his stroke and the Vanguard disaster.\(^\text{94}\)

While at the conference, Eisenhower once again called for greater international cooperation between NATO countries in the sharing of information, including but not limited to science and technical research, to contribute to a common defense against the communist bloc countries.\(^\text{95}\)

The end of 1957, saw the culmination of three months of events that, together, created what has come to be called the Sputnik Crisis. Although President Eisenhower retained much of his personal popularity with most U.S. voters, many Americans were losing faith in the overall governmental leadership to continue to guide them through the stormy waters of the modern age.

\(^{94}\) “Paris, the President, and Prestige,” *Newsweek*, December 16, 1957, 36.

CHAPTER FIVE:
THE AMERICAN MEDIA AND SPUTNIK

Whether in the roll of responder to the post-Sputnik American mood or that of a provocateur of public response, the American media had a significant role in the Sputnik crisis. Almost every news publication in the country weighed in on the events of the fall, 1957, and each one’s editors commented on it in their own way. Even media sources not normally known for their focus on serious news commented on the Soviet satellite and the related events that followed its launching.

Of all of the publications that brought Americans their news in 1957, the most widely read were the newspapers. Papers across the country brought Americans articles, editorials, diagrams, and commentary on Spuntik and America’s response. Any attempt to look at all of the American newspapers’ coverage of Sputnik would take up a whole book in itself, but an examination of newspapers that sample the regions of the country can provide some insight into how local media viewed the events.

The New York Times devoted extensive coverage of the events and attempted to decipher the meaning of the Soviets’ scientific breakthrough, including a small article that analyzed the meaning of the word “Sputnik.” Drawing from its translation “fellow traveler”, the article’s three paragraphs sought to evoke a sense of philosophical meaning to calling the satellite a fellow traveler with the Earth as its traveling companion.¹ On the same page of the 6 October, edition,

Times’ columnist Ira Henry Freeman spoke to the implications of Sputnik to a rapidly changing world. He reminded readers that a seventy-five year old Americans were born in a time when horses were still the most common form of transportation, and saw many changes in their lifetimes. Freeman went on to recount a timeline of technological innovations that changed the world, including the automobile and the airplane, and concluded with the theory that Sputnik’s launch would herald even more world changing inventions.²

Both of these articles represent an overall perspective that The New York Times seemed to present on the Sputnik issue. There was a definite philosophical focus from the paper and an attempt to decipher the implications of Sputnik for society. The Times compared the Soviet Union and the United States in an effort to find how Soviet society permitted the launch of the first satellite while America’s equivalent was still on the ground. Columnist Harry Schwartz pointed out that even though Soviet society’s regimentation may have contributed to Sputnik, he also felt that the cost to the average Soviet citizen must have been enormous. Therefore, the fact that the Soviets launched the first satellite does not necessarily mean societal or even scientific superiority as some claimed at the time.³

These sentiments were echoed by Edwin Dale, Jr., in the 1 December 1957, edition of The New York Times Magazine. In an article entitled “Are We Americans Going Soft?,” Dale presented the opinions of politicians and columnists about the status of U.S. society at the time. He answered the question of the article with the opinion that individual choice, which is at the center of American society, leads to greater consumer choice. This, in turn, leads to greater

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spending and greater tax funding for education and defense. Therefore, America is made stronger by her citizens’ decisions to spend well-earned money on desired goods and services.\textsuperscript{4} This and other articles that focused on social and philosophical analysis presented Sputnik as a world changing event with important implications to many areas of society, but it also led to less technical coverage of Sputnik I and the other satellites than was seen in other papers.

While \textit{The New York Times} took on the social angles of Sputnik, its fellow New York publication, \textit{The Wall Street Journal}, approached Sputnik from a more focused perspective. Not surprisingly, this perspective was financial. The editors called it “inevitable” that the government would be spending more in missiles and satellites, and would probably launch a campaign of higher spending in all areas of defense. This increase in spending might also lead to increased taxes and a greater burden on the American consumer. The \textit{Journal} concluded that Sputnik would cast a long shadow over the financial outlook of the nation in a time when the stock market was already under tremendous stress.\textsuperscript{5}

On the opposite coast from New York, California’s newspapers also responded to the Sputnik crisis with their own brand of analysis. The implications of Sputnik were clear to the editors of the \textit{San Francisco Chronicle}, who proclaimed the satellite’s launching as a clear Soviet victory in the Cold War. They also laid the blame for America’s defeat squarely on the shoulders of America’s leaders. In an article published immediately after Sputnik I’s launch, columnist John Hightower said that the satellite clearly showed “Russia has emerged as a first class military power in the age of missiles and atomic weapons.” Hightower also said that

“soothing assurances” from America’s leaders would not change what the Soviets achieved technologically.  

Another article that appeared in the same issue of the Chronicle blamed the decision of the Eisenhower Administration to de-militarize the U.S. satellite program. The President and other government officials were accused of not listening to scientists and technicians who said that more military resources were needed to get America’s satellite off the ground in a reasonable amount of time.

But the negative reaction from the San Francisco Chronicle was nothing compared to that of the Atlanta Constitution. The editors of one of the South’s most prominent newspapers took an almost exclusively pessimistic outlook on the Soviet satellite and predicted dire consequences for the U.S. “How far behind are we and how long will it take to catch up?,” asked an article from the 8 October, edition of the Constitution. According to the article’s writers, the United States “must assume” that the Soviets have functional ICBM’s as evidenced by the missile that must have been used to launch Sputnik I into orbit. An article from the 5 October, edition quoted experts who confirmed that Sputnik I meant that the Soviets possessed functional ICBM’s. Among them was Dr. Carsbie C. Adams, the President of the National Research and Development Corps, who said that in regards to the missile that orbited Sputnik I, “there should be no doubt left as to the missile’s operational effectiveness.”

Unlike other news sources that inquired IF the United States was behind the Soviets in missile technology, the editors of the Atlanta Constitution already assumed that the U.S. was

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behind and that the Soviets did in fact possess ICBMs. Just like the *San Francisco Chronicle*, the Constitution’s overall position was that America’s leaders were to blame for allowing the Soviets to beat the U.S. to the achievement of launching a satellite. However, while the *Chronicle* claimed negligence on the part of the President and others, the Constitution’s editors accused the U.S. government of outright deception of the nation’s citizens about the status of America’s defenses vis-à-vis the Soviets. The *Constitution* went on to note “The manner in which the American people have been misled about the technical achievements of the Russians is inexcusable,” and “Dangerous chances have been taken and are being taken with the country’s very existence.”

It is possible that the anti-government rhetoric coming from the *Constitution* was in part connected to the decision by President Eisenhower to send federal troops into Little Rock to enforce public school integration. This certainly had an effect on the opinion of the public in the American South, and it is reasonable to assume that it may have contributed to a more negative view of the administration in southern newspapers as well.

But the gloomy mood of the *Atlanta Constitution* was not shared by all of the newspapers in the South. While the Constitution may have presented one of the most negative outlooks on Sputnik of any paper in the nation, papers on the central-eastern coast of Florida approached Sputnik with an extremely positive outlook. Theoretically, the papers from the so-called “space coast” could have reacted in one of two ways to the Soviet satellite. They might have lamented the fact that the rocket and satellite technicians working at facilities like those at Cape Canaveral did not beat the Soviets to the achievement. Ultimately, space coast papers went with the

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alternative perspective; that Sputnik was a positive event because of its potential to influence
decisions for greater spending and attention to U.S. space related fields.

During the first week after Sputnik, an editorial appeared in *The Melbourne Daily Times* by Associated Press analyst Ed Creagh. The column took the position that Sputnik was
deliberately being used by the Soviets as a propaganda ploy and that the U.S. should not be very concerned about it. “The Russians are busy kissing their own reflections in mirror over their triumph in being first with the satellite,” wrote Creagh. He went on to say that the Soviets might think they have won a race, but since the U.S. government did not consider launching a satellite to be part of a race, this was a hollow victory for the satellites. “It isn’t hard to win a race when your opponent didn’t hear the starting gun,” Creagh wrote.\(^{11}\)

While taking shots at the Soviets for the propagandistic nature of their achievement, *The Melbourne Daily Times*’ editors also presented a highly positive view on the significance of Sputnik to space exploration. In an issue that appeared less than a week later, the *Times*’ editors proclaimed that “the conquest of space has begun…this great dream of men has moved from the realm of futuristic fiction to tentative reality.” The editorial predicted that 4 October 1957, should be celebrated as one of the most important dates in human history. The column admitted that the Soviets might be “outpacing us (the U.S.) in a vital field,” but that Sputnik “may be a reminder to us for a good time to come that, not having been first, we have a huge task ahead of us if we would try to be best.”\(^{12}\)

These positive sentiments were echoed by the editors of another Brevard County paper, *The Cocoa Tribune*, who like their fellow columnists in Melbourne downplayed Sputnik’s significance in comparison to America’s technical and defense posture. “In time the United States will have an ICBM and a successful satellite,” said an editorial from the October 16, issue of the Tribune. “Meantime, our defense officials say we have enough other defense weapons to be relatively secure.” The Tribune also expressed great hope for what Sputnik might mean for future efforts by humanity to reach into space, and predicted that missions to the Moon might not be that far over the horizon. “Progress always seems to come faster than we had expected,” said the Tribune’s editors in the October 25, edition, “and it still seems that talk of traveling to the moon is fantastic and irresponsible. Events in recent days, however, prove that such speculation is no longer wild theory but is an imminent prospect which has suddenly confronted us.”

More specifically, *The Cocoa Tribune* focused on Sputnik’s impact on missile and satellite development at Cape Canaveral, and seemed to revel in the increased activity. In the 25 October issue, the editors called a series of missile tests “concrete evidence that the United States government is serious in its announced intentions of stepping up its missile programs to the fullest extent.” In another article a few days later, the paper expressed hopes that increased funding for the Polaris submarine launched missile being developed by the Navy would result in the use of facilities in the Cape Canaveral area for their testing, and would thus bring more funds into the area.

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These positive attitudes did change somewhat after the Sputnik II launch, as articles appeared in *The Tribune* that had a slightly direr outlook. In a column from the 13 November, issue, the editors expressed concerns about the possible dangers if the United States did not match recent Soviet achievements in due course. But even in the wake of the failed missile tests conducted at Cape Canaveral, *The Tribune* maintained a mostly optimistic outlook on the situation. While covering the sense of disappointment felt by the crowd when a missile failed to launch, the same article also treated the incident as strictly routine. In other words, such failures were to be expected and not looked upon as being too ominous. From the perspective of the Cocoa and Melbourne, Florida, newspapers, successes or failures with missile and satellite tests being conducted meant the same thing—more money for testing and more funds flowing into their communities. Thus, Sputnik and the increased attention given to space meant good news for Brevard County, and the local media reflected that mood.

Of all of the nation’s newspapers examined, the one that provided the most balanced perspective and complete coverage of the Sputnik launch was the *Chicago Daily Tribune*. While other papers relayed mainly the course of events for the day and a few facts about satellites, the *Tribune* went into detail about where and when the satellite might be spotted in the night sky, discussed what little technical information was coming from the Soviets about the satellite (including diagrams of Sputnik’s orbit), and provided excellent information about the nature of satellites and what their potential benefit could be to scientific and military research. The

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Chicago paper combined this technical detail with excellent coverage of the events and cogent, calm analysis of the event’s significance.

The *Chicago Daily Tribune*’s editorial comments on the Soviet satellite were cautiously optimistic. The editors expressed a definite sense of warning in the launch of Sputnik I, and believed that the launch indicated that the Soviets were well on the way to developing functional ICBM’s. They argued that the U.S. had “ample warning not to be complacent,” but also called the military implications of the Soviet satellite “remote” and “not disturbing.” As long as the nation’s leaders thought ahead and did what was necessary to match the Soviets in missiles and satellites the U.S. would be secure.19 The *Tribune* also pointed out that the launch of Sputnik and the connection the achievement had towards missiles might lend greater weight to a proposal for nuclear disarmament that was introduced to the United Nations by the U.S., Britain, Canada, and France, on 29 August, 1957, and was being debated at that time in the U.N. The paper saw this as a positive effect coming from the Sputnik launch.20

The *Tribune*’s position was wonderfully expressed by a political cartoon printed on the front page of the first edition to be published after the launch of Sputnik I. The cartoon shows a picture of Eisenhower, dressed in a coon-skinned cap and frontier outfit, sitting in front of a log cabin that is supposed to represent the United States. He is carrying a Davy Crocket-style rifle, and guarding against an approaching bear with the Soviet Union’s national symbol on it. But as Ike guards the cabin against the bear, the cabin is being eaten away from the inside by financial difficulties and weak investment in important projects. The cartoon is captioned with the

following: “Don’t worry about the bear, old-timer, but look out for termites.”

The Soviets were not going to be able to beat the United States unless internal weaknesses and indecision made the U.S. vulnerable.

While the American newspapers each took their own editorial positions on Sputnik, the national news magazines provided their own coverage of the events. Overall, both Newsweek and Time magazines approached the subject as a sort quest for answers as to how the United States was relegated to a seemingly second place position in an important technical field. They went looking for scapegoats to blame for the American defeat and sought any signs that the U.S. might be ready to match the Soviets’ achievement. Newsweek in particular sought to “educate” readers as to why they should be worried about the Soviet satellite and what it meant for the United States.

In its first issue published after the launch of Sputnik I, Newsweek commented that the momentous scientific achievement Sputnik represented “had been reached in a torn world by the controlled scientists of a despotic state.” For the United States and the other nations of the West, the satellite “produced a mood-at best-of chagrin; at worst, the news brought simple fear.” As the magazine covered the nation’s reaction, and relayed the fact that many Americans were not very fearful over the launch of Sputnik I, the editorial position was one of disbelief over the apparent lack of overwhelming public panic. After presenting public reaction, Newsweek quoted a missile expert who also felt dismay by the lack of strong reaction by many Americans. “All people are talking about is the (World) Series and did Notre Dame win,” said the expert. “My

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God, don’t they realize what’s happened?” In part, the presentation of public opinion is presented in a sort of “shame on you” attitude towards Americans for their complacency.

When Sputnik II was launched, and the first U.S. attempt to launch the Vanguard satellite resulted in a spectacular crash on the launch pad at Cape Canaveral, Newsweek increased its rhetoric of concern. According to their editors, the U.S. was facing a “calamity” and demanded to know what America’s leaders were going to do about it. The Soviets had orbited “two hefty Sputniks,” but the U.S. could not get one “baby moon” off of the ground. This was a “humiliation” for the United States, and Newsweek wanted to know “why” this was allowed to happen.\(^{23}\)

As the tension built through the months of November and December, 1957, both Newsweek and Time looked for any signs of changes in policy or major revisions of timetables for missile and satellite development coming from Washington. When President Eisenhower appointed Killian to be his science advisor, ordered von Braun’s Army team to start developing a satellite, and called for a crackdown in interservice rivalry in the military, the editors of Time called it a “turnabout” for the President’s policies. An article in the 18 November, issue of the magazine claimed that Eisenhower was finally making strong, positive changes in America’s space policies, and took the position that it was about time it happened.\(^{24}\) In the meantime, the editors of both magazine sought answers and ideas that would put America on top again. Time magazine focused much of its search for answers on education and why American schools were not producing more scientists. In November, 1957, Time presented the results of a study that

\(^{22}\) “Into Space: Man’s Awesome Adventure,” Newsweek, October 14, 1957, 38.
\(^{24}\) “Turnabout,” Time, November 18, 1957, 19.
showed that most U.S. high school students did not want to go into science related fields because of what the editors called the “Einstein Complex.” Young people thought of scientists as being strange old coots that were not paid enough for their work.\(^\text{25}\)

The magazine went on to cover the various proposals being presented to improve America’s schools, especially efforts to train more American students to be scientists and scholars as a response to the Soviet space challenge. Among these was an idea for separating students based on IQ test scores into different schools. Those students who scored below a certain level on the tests would be kept in regular school, while students with higher scores would be sent to high achievement schools. These schools would present much stricter standards of instruction and more complicated material in an effort to produce students better capable of competing with the Soviet Union in the areas of science and technology.\(^\text{26}\) Whether the problem was education or leadership or funding, \textit{Newsweek} and \textit{Time} examined all possible solutions for what both magazines perceived to be a dangerous situation in the wake of Sputnik.

But other national news publications that were not as well known for hard news also weighed in on Sputnik. The 9 November 1957, edition of \textit{The Saturday Evening Post} carried an editorial on the launches of Sputniks I and II. The column took the position that the Soviet satellites represented an impressive scientific accomplishment, but the Soviets also deliberately wanted to use the Sputniks to panic America and its allies and create confusion. The article conceded the possible military applications for the technology used to launch Sputnik, but Sputnik’s existence did not indicate any great peril in the immediate future. “Americans must

\(^{25}\) “Knowledge is Power,” \textit{Time}, November 18, 1957, 22.
stand firm against the efforts of Soviet Propaganda to use it (Sputnik) as a scare machine,” said the Post’s editors.27

This calm approach to examining Sputnik was also favored in an article by Henry Hazlitt that appeared in the December, 1957, issue of Reader’s Digest. In his article, appropriately titled “No Time For Hysteria,” Hazlitt agreed that Sputnik’s launch could have meant that the Soviets had the ICBM. However, Sputnik’s launch also provided the United States with a warning about Soviet advances in missile technology and could provide motivation for America’s leaders to match the Soviets’ achievement. According to Hazlitt, the greatest danger from Sputnik came from allowing hysteria to grip Americans and thus give the Soviets a propaganda victory. He also believed that Sputnik did not indicate Soviet technological superiority, but instead showed that the Soviets were equal to the U.S. in some areas of technical progress.28

While editorials that appeared in The Saturday Evening Post and Reader’s Digest presented a “nothing much to worry about” position on Sputnik, the popular weekly magazine Look had a more worried tone to its coverage of Sputnik. Columnists writing for the magazine tended to be more critical of America’s leadership for their failure to beat the Soviets to launching a satellite into space. One article that appeared in the 7 January 1958, criticized President Eisenhower for what the editors perceived to be a lack of strong leadership. The article’s writers accused Eisenhower of squandering the period in the immediate aftermath of Sputnik to respond with firm action. By doing so, the President sacrificed much of his prestige to the whims of administration critics while providing them with ample ammunition for their

attacks. “Sputniks I and II struck the blow that broke the idol,” said the article, as its writers accused Eisenhower of playing “too much golf” and “sermonizing” on remaining calm that failed to reassure an anxious public.\textsuperscript{29}

While \textit{Look} criticized Eisenhower for his alleged lackluster performance, another article that appeared in the magazine in February traced the problem to the close of World War II. Columnist Peter Van Slingerland accused America’s leaders of committing a series of “blunders” that allowed the Soviets to steal vital German missile technology at the end of the war. “The Communists did not get all of the basic German research on missiles,” said Van Slingerland. “But what they got was enough to contribute perhaps 15 to 20 percent to the launching of their Sputniks.”\textsuperscript{30} In a way, the article was an indirect attack on Eisenhower because as the Supreme Commander of the Allied Forces that moved into Germany, he was one of the leaders who “allowed” German missile secrets to fall into Soviet hands. It also implies that the Soviets’ achievements in missile design were primarily due to what they stole from the Germans at the end of World War II, thus downplaying Soviet scientific ingenuity.

Yet the most surprising editorial position taken by the softer news publications of the period came from \textit{Life} magazine. Many people then and now think of \textit{Life} as being a photographic publication with some small articles, but in 1957, the magazine took strong editorial stands on the Sputnik issue. At first, \textit{Life}’s articles about Sputnik mostly called for a calm and reasoned approach to evaluating the satellite’s implications. The 21 October 1957, issue included an article entitled “Common Sense and Sputnik” that advocated diligence in

\textsuperscript{29} “Ike’s Second Term Tragedy,” \textit{Look}, January 7, 1958, 10.

overcoming any Soviet advantage represented by Sputnik, while relying on reason in making
decisions. “Sputnik’s monopoly of outer space will be brief,” said the article. “The U.S. moons
that will challenge it are likely to be even more informative—and less secretive.”

But starting in November, even before Sputnik II was launched, Life’s editorial position
began to change to one that was far more critical of America’s leadership. An article in the 4
November, edition spoke of a “widespread feeling that the White House has been in a sort of
national vacuum in the post-Sputnik crisis,” and advocated larger increases in military spending
than favored by the President. The article’s writers saw such spending increases as necessary
even if taxes had to be increased to reduce the burden on government coffers. Following the
launch of Sputnik II, the more concerned tone coming from Life’s pages became stronger, as
evidenced by another article in the 18 November, issue. In “Arguing the Case For Being
Panicky,” writer George R. Price predicted a five-stage timetable that would see the Soviet
Union take over the world through their superiority in numbers and sophistication of ICBM’s as
evidenced by the Sputnik satellites. “Once again, as in our revolutionary period,” wrote Price,
“we have come upon ‘times that try men souls; only now we are not rising to the danger with the
spirit of earlier days. We have seen about us a multitude of signs pointing directly toward our
defeat by Russia; yet we have pretended that these did not exist.”

Within less than a month, Life’s pages went from carrying articles advocating “common
sense” to ones that were “arguing the case for being panicky.” Perhaps this shift in tone in Life
indicates insight into the public mood. As previously discussed in Chapter Four, there is strong

31 “Common Sense and Sputnik,” Life, October 21, 1957, 35.
evidence to suggest that most Americans were not panicked by the Sputnik I launch, and did not become truly fearful until the events of November and December, 1957. The editors of Life might have been among those who shared those sentiments. The editorial position of the magazine could very well support the theory that it was the course of events starting with Sputnik II’s launch that created the real panic. However, as previously established, the editorial positions of the media may or may not be genuine indicators of the public mood. But Life’s change in tone, considered with the other evidence, does add weight to the theory that Sputnik I did not create immediate hysteria.

As the popular news magazines weighed in on the Sputnik related events of the fall, 1957, so too did America’s various scientific and technical magazines and journals. Collectively, these magazines’ editorial position was very predictable considering they represented the scientific community on an issue for which funding for scientific research was an extremely important talking point. All expressed the belief that scientific and technical research should have greater funding and be given a greater place of importance in America’s national life.

However, America’s scientific publications also took a more specific editorial position that argued against short term, crash programs for America’s missile and satellite research. One of the editors of Scientific American magazine, Chester Barnard, wrote an editorial for the November, 1957, issue. Barnard criticized the emphasis on funding for projects that would produce immediate technological breakthroughs. “We cannot,” he wrote, “either from the standpoint of dollars or personnel, try to compress into one or two generations the broad range of work which in the end must be carried on over a number of generations to come.” Instead,
Barnard argued, funding for scientific research must be long-term and have goals that are far reaching.\textsuperscript{34}

One of the editors of \textit{Science} magazine, Graham DuShane, agreed with Barnard’s position in an issue of the magazine that also appeared in November, 1957. “The challenge to this country,” wrote DuShane, “cannot be met…by crash programs in particular enterprises or by shifting scientists and engineers from one project to another.” Like Barnard, DuShane advocated more funding for long-term research, but he also believed that reform was needed in America’s educational institutions at all levels so that more students are allowed to discover their talents and find more opportunities to see those talents fully realized. The result would be building the next generation of America’s scientific and technical community.\textsuperscript{35} Another problem identified by the editors of \textit{Science} magazine was a lack of firm, coordinated leadership of America’s scientific research, more specifically the areas related to missile and satellite research. In another article that appeared in the 8 November 1957, edition of \textit{Science}, the editors said “some leader must arise and get the program highly organized to do the job.” The problem was not just posited as one of scientific goals, but also “national pride” and “the respect of the rest of world.”\textsuperscript{36} The editors of \textit{Science} were establishing the importance of long-term research, education, and leadership as not just an issue for the scientific community, but an issue for the nation as well. They clearly wanted to make science an area of greater importance in the minds of America’s leadership and public.

Falling into line with both *Science* and *Scientific American* was the journal *Missiles and Rockets*. In a November, 1957, editorial, writer Tom Wilcox called for greater cooperation between the government and America’s corporations to provide joint funding for research into advancing U.S. technologies in all areas over a long-term basis. He also reminded readers that the most important part of any form of scientific research, including that being done on missile and computer technologies, was the human element. Wilcox believed that “we must not negate the judgment of man if we are to succeed” in maintaining America’s technological edge.37 It is somewhat surprising that a journal devoted to the technical particulars of the various missiles being developed by the United States would carry Wilcox’s more human-centered article. But in a way, Wilcox was reminding *Missiles and Rockets* readers that human beings are the ones who were ultimately making the new gadgets celebrated in the journal.

When it came to the various missile programs discussed in *Missiles and Rockets*, the journal not only celebrated successes in missile testing and development, but also defended these programs after failures in testing or launches. The columnists who wrote for *Missiles and Rockets* were among the strongest defenders of the Vanguard program. When the first Vanguard satellite was launched into orbit in March, 1958, an article by William O. Miller was published in the first issue after the launch that praised the achievement. Miller spent much of the article reminding readers that even though it took many failures to finally achieve a successful launch, many of these failures contributed to the final success. “The fact that the two previous shoots were in actuality ‘tests’ seem to have been lost to the general public,” wrote Miller. He praised

the scientists and technicians who launched Vanguard for getting the work done under
tremendous “psychological pressure” brought by the media, the public, and the government.
Miller also congratulated the people working on Vanguard for developing such a complex and
sophisticated delivery system and satellite in a relatively short period of time. While editors
and writers who were critical of America’s missile and satellite programs abounded in other
magazines of the period, not many could be found in the pages of *Missiles and Rockets*.

While America’s scientific and technical journals weighed the importance of the Sputniks
to research and development of new technologies, political journals discussed the implications of
Sputnik to all areas of foreign and domestic policy. Even though both *The Nation* and *The New
Republic* are both well-known left-wing political publications, it is much harder to identify the
overall editorial position of these magazines on Sputnik-related issues because both carried
articles that presented a wide range of opinion. One article that appeared in the 25 January 1958,
issue of *The Nation* agreed with the scientific publications on the issue of research and
development funding. Its author, Stringfellow Barr, condemned the emphasis placed on crash
programs and rushed projects that disregarded the consequences for the nation’s scientific and
technical communities. Barr wondered whether such an emphasis on crash projects might
actually weaken America’s overall scientific position by ignoring the benefits of long-term
research. He also believed that a lot of these short-term programs were based a lot of “maybes”

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and “almosts” coming from the speculative comparisons of Soviet and U.S. satellite and missile programs.\(^{39}\)

Barr was not alone in his criticism of America’s technical research programs. In another article appearing in a later issue of *The Nation*, columnist Carl Dreher attacked U.S. missile programs on a slightly different basis. Like Barr, Dreher criticized the emphasis on short-term goals in America’s technical research. He attacked U.S. scientists for focusing too much of their engineering skills on missile and space projects while ignoring many more earthly problems. Dreher also accused the military of developing missiles that were only for show because their weak instrumentation and guidance systems made them ineffective weapons. He used the Atlas missile as an example and claimed the Atlas would be obsolete by the time it was deployed in appreciable numbers. “Only children delight in noise and force for their own sake,” wrote Dreher.\(^{40}\)

But other articles that appeared in *The Nation* were far less critical of America’s technological position vis-à-vis the Soviets. Sociologist C. Wright Mills\(^ {41}\) wrote an article for the December 7, 1957, issue of *The Nation* that called the technological competition between the Soviets and the U.S. an “idiot’s race” that relied too much on the “score at any given moment.” Instead, Mills argued, the U.S. and the Soviets should put aside their ideological and political differences to cooperate with each other in areas of peaceful research into space and other scientific areas. He believed that science was becoming “a cultural and social fetish” for both

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\(^{41}\) C. Wright Mills was a well-known sociologist from the period, known for such works as *White Collar* and *the Power Elite*. He was well known for his position that “war not Russia is the enemy,” and his opinions would have carried a great deal of weight in certain circles.
nations in their Cold War competition. Instead, Mills believed that science related projects should be used as the basis of greater understanding between the two superpowers.42

Like the opinions expressed in *The Nation* magazine, the articles that appeared in *The New Republic* during this period also delivered a range of messages to readers. In the December 9, 1957, issue of *The New Republic*, Hans Morgenthau wrote about the apparent “decline of America” as indicated by the two Soviet successes at launching satellites while the U.S. still had not gotten one off the ground. He believed that America was in a definite position of “technological inferiority” that the world clearly recognized. “Since the United States has failed to live up to its reputation not greatness in one field,” wrote Morgenthau, “its greatness in all fields is being doubted.” He claimed that since America’s strength in the scientific arena was now seriously in doubt that its power in general was open to question. This perceived weakness provided temptation for American adversaries to test U.S. power and resolve.43

Yet another article that appeared in an issue of *The New Republic* published later that same month seemed to take the opposite position of Morgenthau’s. In an article entitled “How Real is the Soviet Threat?”, Frederick Schuman, a Professor of Russian History and Politics at the College of William and Mary, called such reactions as Morgenthau’s reactionary and claimed they resulted from hysterical notions about Soviet motives. Schuman argued that there was no clear evidence that the Soviets had plans of global domination, and claimed that the threat of force alone would not bring the Soviets to any kind of negotiated settlement. He believed that true safety for the U.S. would not come from only emphasizing new and better weapons systems.

“When each side can destroy the other,” wrote Schuman, “all calculations of relative strength are pointless and all talk of ‘superiority’ or ‘inferiority’ is nonsense.” Instead, negotiation and diplomacy was the key to solving the problems of the Cold War, albeit from a position of strength on the part of the U.S. Schuman believed that Sputnik did not erode this position of American strength and the U.S. could still deal with the Soviets in diplomatic terms with a solid power base to back it up.44

The media as a whole presented a confusing variety of opinions that included optimistic, cautious, worried, and fearful conclusions from different sources. This varied array of messages from the public’s sources of information added to the public’s overall feeling of confusion. One must consider that American culture of the fifties, with its follow the leader mentality that called for trust in established forms of leadership and public information, would be especially prone to confusion when their usual sources of information presented no firm answers to the people. Therefore, the Sputnik Crisis can not be examined without taking into account the role of the media and how it contributed to any hysteria that developed over the last three months of 1957. In fact, one could argue that the newspapers and magazines rivaled the Sputniks as a source of concern because the former failed to provide people with definitive answers to the questions that permeated the public consciousness.

CHAPTER SIX:

THE POLITICS OF SPUTNIK

Historian Stephen Ambrose examined American politics during the fifties in his biography of Dwight D. Eisenhower, characterizing it as a time when the President seemed to have a magnetic hold over the trust of the American people making any political attacks against him impotent. “He inspired a trust that was as broad and deep as that of any President since George Washington,” wrote Ambrose. ¹ Eisenhower’s biographer did assert it was “wrong to think of the fifties as a whole as an era of good feelings,” with such examples as the nasty political battles of the 1952 Presidential campaign to blot such an idea.  But the political atmosphere of the 1950’s included a remarkable amount of accord between Eisenhower and the Democrats. Sputnik destroyed that consensus, as the Eisenhower Administration came under fire from many politicians in both parties over his reserved response to the crisis. ²

The end of this consensus and Eisenhower’s relatively untarnished image did not happen immediately. As an article from the 7 January 1958, issue of Look magazine points out, there was a “slow breathe-through” for Eisenhower after the launch of Sputnik I in October, 1957. For a while, Eisenhower seemed to be maintaining a hold on the crisis through his “no worry” attitude. But the events of November, 1957, beginning with the launch of Sputnik II, brought President Eisenhower under increasing attack from political opponents and from a public that no

² Ibid., 426.
longer believed that there was nothing to worry about. With questions about Eisenhower’s response to the Sputniks and his health in the wake of his November, stroke, the President found himself “at the heart of the insecure atmosphere” in America at the beginning of 1958. “History offers no other instance in this century,” said the article, “of an American President, fresh from a smashing second-term victory, who slumped so fast and so far in the first year of his second term.”

By December 15, most polls indicated that the majority of Americans held Eisenhower specifically, and to a lesser extent the Republicans in general, to be the most to blame for the apparent Soviet lead in missiles and satellites.

It appeared as if conditions were improving for the Democrats by the end of 1957, with increases in consumer prices and an inflationary atmosphere, coupled with drops in the stock market and farm prices. Yet none of these issues matched that of the public concern over the Soviets’ apparent progress with missiles and satellites. Sputnik would become the issue that the Democrats would rally behind and use to assault the Eisenhower Administration in the final years of the 1950’s.

One of the first prominent Democrats to respond to the launch of Sputnik was Senate Majority Leader Lyndon B. Johnson. On the night of Sputnik I’s launch, Congress was not in session and Senator Johnson was vacationing at his home in Texas. Within hours after the media announced Sputnik’s launch, Johnson received word from Senator Richard Russell, the Chairman of the Senate Armed Services Committee. The latter asked Johnson and his Military Preparedness Subcommittee to investigate the implications of the Soviet satellite for America’s

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3 “Ike’s Second Term Tragedy,” Look, January 7, 1958, 10-11.
national defense. At the conclusion of such an investigation, the committee would then submit a series of recommendations to the President on how the nation’s defenses might be improved to meet the changing Soviet threat. “For a nation entering the new space age, one urgent need was a national policy,” wrote Johnson in his memoirs. “I thought the Congress had an obligation and an unparalleled opportunity to help forge that policy.”

Johnson’s committee opened hearings into the issue of America’s defenses on 25 November 1957. In the politically charged atmosphere in Washington at that time, Johnson himself said in his memoirs “it would have been easy enough to create a partisan issue.” But did Johnson make a partisan issue over Sputnik? This has been the subject of much debate by scholars to the present day. While other politicians were clearly trying to use Sputnik for political gain, Johnson’s role in any partisan attacks on the Eisenhower administration was not as clear, mainly due to the contradictory nature of the Senator’s own statements at the time.

On 16 December 1957, Johnson released a statement that accused the Eisenhower administration of not taking decisive action to fix the problems associated with America’s missile and space programs. But less than a month later, at a meeting with members of CBS network affiliates, Johnson said that members of Congress and the media must not look for individuals to blame for failures or others to praise for recognizing these failures. “There is an ever-present danger that we shall frame our answers in terms of credit and blame,” said Johnson.

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7 Ibid., 273.
8 Dickson, 159.
“To do this now could well be fatal.” The Senator sometimes contradicted himself in the same speech about laying blame for America’s missile and satellite setbacks. In a 7 January, 1958 address to the Democratic Conference, Johnson called partisanship a “barrier” to progress in evaluating America’s strengths and weaknesses. But then Johnson goes on to say that the blame for the failures of Vanguard lie with America’s leaders, namely those in the Eisenhower Administration, not with the technicians who worked on the project.

The result of these contradictions in Johnson’s statements has led to widely diverging opinions among modern scholars about his role in the political attacks on Eisenhower in the wake of the Sputnik crisis. Robert Caro accuses Johnson of clearly using the Sputnik issue for his own political advantage in his book Master of the Senate. The author points out that Johnson repeatedly assured President Eisenhower and Secretary of Defense Neil McElroy that the Preparedness Subcommittee’s investigations would be fair and non-partisan, but then repeatedly referred to a “Pearl Harbor” like atmosphere in his public statements on the issue. These references to Pearl Harbor are in sharp contrast to Johnson’s apparent lack of overriding concern after the launch of the first Sputnik, which Caro says is indicated by the fact that Johnson only spent a total of six days in Washington after Sputnik I was launched, and did not start the subcommittee’s hearings until nearly a month after the launch of Sputnik II. Caro portrays

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Johnson as using the media and the headlines his committee’s hearings were getting to place himself at the center of the issue and the effort to resolve it to the public’s satisfaction.\(^{11}\)

Caro’s portrait of Lyndon Johnson is one of a skilled politician who did use partisan strategies and media mastery to paint himself as a hero and the Eisenhower administration as the villain. This was despite the fact that he probably knew the situation was not really dire for America’s defense capability from evidence of U.S. vs. Soviet capabilities given to him by the Defense Department. “Lyndon Johnson,” wrote Caro, “briefed repeatedly by the Pentagon, must have been aware of these reassuring facts, but his statements continued to be short on facts and long on ‘Pearl Harbor’ atmosphere.”\(^{12}\) In the end, says Caro, Johnson’s subcommittee hearings produced not much more than “headlines.”\(^{13}\)

Historian Robert Dallek does not share the views of Robert Caro on Lyndon Johnson’s political motives. In his book, *Lone Star Rising*, Dallek portrays Johnson as being genuinely concerned about the implications of Sputnik to America’s technological and military power. He did not see a reason to panic over Sputnik, but did believe there was room for improvement in the areas related to missile and satellite development, and sought the areas where those improvements were needed. Dallek believes that Johnson did see the political advantages for himself and the Democrats in the issue, but also feared a “witch hunt” that would not create solutions to problems, but only angry rhetoric about who was to blame for those problems.

\(^{12}\) Ibid., 1027-1028.
\(^{13}\) Ibid., 1030.
When other Democratic Senators, like Stuart Symington, tried to engage in partisan attacks on the Eisenhower Administration, Johnson “sat on” them.\textsuperscript{14}

As for the Preparedness Subcommittee hearings, Dallek points out that Johnson established a series of guidelines for the hearings that were intended to blunt the partisan sharpness that might have characterized the proceedings. Among these rules were that the Soviets were the only enemies and that the past was only to be used as a guideline for future recommendations, not as a source of evidence for attacks on anyone’s actions or inactions. Finally, any witness’ testimony was not to be judged based on that person’s party or political ties, but rather on the witness’ expertise and the content of their testimony. Ultimately, Dallek credits Johnson with supervising an investigation that produced seventeen recommendations for improving America’s space and missile efforts, while at the same time not directly attacking the Eisenhower Administration.\textsuperscript{15}

But even Dallek, whose views of Lyndon Johnson are more positive than other authors, does not completely paint the Senator as saintly and above the political fray. Johnson “was not simply a selfless patriot,” wrote Dallek. “He also took partisan advantage of the hearings, but in more subtle ways.” The greatest political victory that Johnson scored, according to Dallek, was that “he identified the Democrats with a greatly expanded space effort that would serve the national defense.”\textsuperscript{16}

Beyond the political points scored by Johnson through his administration of the Preparedness Subcommittee’s hearings, the investigation also produced a list of

\textsuperscript{15} Ibid., 530-531.
\textsuperscript{16} Ibid., 531.
recommendations for improving America’s space and defense efforts. Johnson’s committee believed that further strengthening and dispersal of the Strategic Air Command’s bomber forces was needed, as well as improvements to America’s early warning systems. Also included among the recommendations were improvements to the anti-missile and anti-submarine programs and modernization of America’s ground forces. In regards to missiles, Johnson and his committee believed that a strict production schedule should be provided to the Congress for the Atlas, Thor, and Jupiter missiles, and an accelerated development schedule for the Titan and Polaris missiles. They also wanted to see a rocket motor developed that was capable of producing one million pounds of thrust, reduced lead time for the development of new weapon systems, better research and development funding, and better incentives for the retention of technical personnel in government service.17

Along with the specific recommendations of his subcommittee, Lyndon Johnson also called for increased effort and emphasis on America’s space program. He cited the fact that the Soviets had already grasped the importance of space to the Cold War, and the testimony of scientists who testified before his committee, both of which stressed the importance of space to America’s security and knowledge. He also chastised those who listened to “the bookkeeping concerns of fiscal officers,” an apparent dig at Eisenhower’s budgetary concerns.18 “If outer space is allowed to become the province of earth’s imperialists,” said Johnson, “then the freedom we have fashioned at so high a price shall fall into eternal jeopardy.”19

18 Johnson, Speech to Democratic Conference, 41-43.
19 Johnson, Speech to CBS Affiliates, 53.
If Johnson was more reserved in his criticism of the Eisenhower administration’s missile and space policies, the same could not be said for many other members of Congress. One of the first to go on the attack after the launch of Sputnik I was Senate Armed Services Committee Chairman Richard Russell. In an article that appeared in the October 6, issue of the *Chicago Daily Tribune*, the prominent Democratic Senator said that Sputnik clearly indicated that the Soviets had missile capable of launching a nuclear attack on the United States, and that America had no equivalent capability yet because of the Eisenhower Administration’s defense funding cutbacks. “Russia’s launching of an earth satellite,” said Russell, “confronts America with a new and terrifying military danger and disastrous blow to prestige abroad.”

Another Democratic Senator, Henry Jackson of Washington, demanded that the Eisenhower Administration reverse its defense funding cutbacks in the face of the clear Soviet ICBM threat.

Members of the House of Representatives joined the chorus of panicked statements and attacks on President Eisenhower in the period after the launch of the first two Sputniks. Congressman Jack Brooks (D-Texas) said that the Soviet Union “can be expected to use its technological superiority to work against, rather than work for, free people and the sacred rights of each individual human being.” He went on to say that “the very survival of democracy itself” was dependent on the United States regaining the technological lead over the Soviet Union. In an Armistice Day speech, Congressman John W. McCormack (D-Massachusetts) indicted the Eisenhower administration for holding back important information from Congress and the

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American people about weaknesses in America’s defenses, and called on the public to pressure the President to take stronger action to improve America’s missile and satellite programs. “It is vitally important that we be strong militarily---and powerfully so,” said McCormack. “That we be first in everything---and where we are not---that we quickly equal or better the position of Communist Russia.”

Some in the Legislative branch did not directly criticize the Eisenhower Administration, but blamed American culture in general for a lack of commitment to America’s security at the expense of their own soft standard of living. Republican Senator Styles Bridges commented in an article for the New York Times Magazine that Americans should “be less concerned with the depth of pile on the new broadloom rug or the height of the new tail fin on the new car.” Instead, they should “be more prepared to shed blood, sweat and tears if this country and the Free World are to survive.” In another article for the New York Times, Bridges said that it was time for Americans to think less about money and more about the common good. He believed that this would require a change in America’s national psychology. But of all of the Senators who raised the alarm in the wake of Sputnik, perhaps no other member of either house of Congress was more outspoken in his criticism of the Eisenhower Administration than Democratic Senator Stuart Symington of Missouri. In the days following the Soviets’ success of Sputnik I, Symington attacked Eisenhower’s defense policies and called for an immediate investigation by the Senate Armed Services Committee of all U.S. missile programs. He called Sputnik “proof of growing Communist superiority in the all-important

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25 “Senators Attack Missile Fund Cut.”
missile field,” and accused President Eisenhower of keeping this important “truth” from the American people.26 “Unless our defense policies are promptly changed,” said Symington, “the Soviets will move from superiority to supremacy. If that ever happens, our position will become impossible.”27

Senator Symington again raised the question of a “missile gap” in which the Soviets had a clear lead over the U.S. in missile development and deployment. Symington developed the missile gap concept prior to the Sputnik I launch, but few gave much heed to his claims until the Soviet’s orbited the world’s first satellite. He claimed to have sources that showed a clear Soviet lead in missiles that was becoming untenable, and predicted that the Soviets would have complete supremacy in missiles by the early-1960’s. Symington biographer Linda McFarland theorizes that the Senator’s sources of information were members of the defense establishment that he knew from his time as Secretary of the Air Force under President Harry Truman. Symington insisted that Eisenhower’s estimates of Soviet missile capabilities, which came from CIA reports, were inadequate and that the administration was underestimating Soviet missile capabilities.28

As a member of Lyndon Johnson’s Preparedness Subcommittee, Symington was active in the hearings held in the winter of 1957, to investigate the status of America’s defenses. But when the subcommittee released its final report, Symington believed that the recommendations were not enough and that the report failed to level sufficient criticism at Eisenhower and his funding of US missile programs. He threatened to release a minority report that was more

26 Ibid.
critical of the President and went further in its recommended course of action, but Johnson warned Symington that if he released such a report, no one on the committee would support him.29

Symington did not follow through on his threat, but continued to speak out on the missile gap issue throughout the spring and summer of 1958; with what Symington biographer Linda McFarland called a “relentless zeal.” He entered news articles into the Congressional Record that attacked the administration’s defense policies, many of them written by some of Eisenhower’s strongest media critics like syndicated columnists Joseph and Stewart Alsop.30 Symington also cited reports on America’s defenses from 1957 and 1958, and said that a comparison of those reports showed that no action was being taken to shore up weaknesses in America’s defenses.31 He even tried the direct approach by writing a letter to President Eisenhower on 29 August 1958. Symington told the President that it was clear that the United States was lagging behind the Soviets in missiles, and demanded stronger action from Eisenhower to close the gap.32 Of course, the timing of this letter might indicate that political motives were behind its composition, considering it was written just a few months before the mid-term elections.

His role as the most vocal critic of the Eisenhower administration and the source of the phrase “missile gap” earned Symington a place of importance in the post-Sputnik political debate. According to Linda McFarland, Symington’s rhetoric on the missile gap “defined the

29 Ibid., 88.
30 Ibid., 89-91.
issues that dominated Democratic criticism of the Eisenhower Administration and became the standard around which all could unite.” But Symington himself would not politically benefit from his attacks and could not use the missile gap issue to his greatest advantage because his criticism often made his party leaders uncomfortable. As Robert Dallek wrote in his biography of Lyndon Johnson, LBJ “sat on” Symington during the Preparedness Subcommittee hearings to keep him from turning them into a showcase for partisan attacks on the President. Senator Richard Russell, a supporter of the missile gap theory himself, bristled at the articles that Symington was introducing into the Congressional Record in the Summer of 1958, and accused Symington of questioning President Eisenhower’s loyalty. Although many Democrats supported the criticism of Eisenhower’s defense policies, they also knew that it was politically unwise to challenge “Ike” Eisenhower’s patriotism and integrity. Despite the questions regarding his administration’s record, the old general still had immense personal popularity with most of the American people.

Ultimately, the Democratic Senator that would reap the most benefit from the missile gap and related issues was not Symington. Rather, it was Massachusetts Senator John F. Kennedy who skillfully used these issues to help him rise to much greater national prominence. Kennedy was not a widely recognized public figure before 1957. He had earned the respect of many Democratic leaders for his role in Adelai Stevenson’s 1956 presidential campaign. But beyond his good looks and party loyalty, Kennedy failed to distinguish himself on the national scene. In fact, many viewed the forty-year-old Kennedy as being handicapped by his youth because it

33 McFarland, 59.
34 Dallek, *Lone Star Rising*, 531.
35 McFarland, 89.
made him vulnerable to attacks on his alleged inexperience and lack of maturity. Kennedy biographer Robert Dallek points out that the perception of Kennedy’s lack of experience was due in large part to the fact that he had not introduced a major piece of legislation in the Senate and was not identified with any major national issue.

Sputnik would change that. Kennedy had found an issue capable of increasing his stature with voters. As Dallek pointed out in his book An Unfinished Life, Sputnik and concerns over missile gaps were issues that were “easy to explain to voters,” and Kennedy had the charisma speak to the public about the issue in a clear and concise way. “For the first time since the War of 1812,” said Kennedy of Sputnik, “foreign enemy forces potentially had become a direct and unmistakable threat to the continental United States, to our homes and our people.” Besides being able to use the Sputnik issue to raise concerns about defense, Kennedy was also able to use it as a symbol of the need for changes in leadership to meet the challenges of a new age of progress. Sputnik became part of the fabric of the arguments for passing the torch to “a new generation of Americans” as Kennedy put it in his inaugural address upon becoming President in 1961.

In the spring of 1958, Senator Kennedy began a relentless assault on Eisenhower’s Administration on defense related issues and became one of the most prominent proponents of the missile gap theory. Kennedy and other Democrats demanded the Eisenhower Administration

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38 Ibid, 290.
release the Gaither Committee Report. When the President refused, Kennedy accused Eisenhower of deliberately keeping the dire picture painted by the report from the American people. While he did not have access to the report, Kennedy had consulted with several members of the Gaither Committee and used their opinions to strengthen his attacks on the Administration.\(^4^0\) In August, 1958, Kennedy began to warn about the dangers that were on the horizon unless America’s leaders took decisive action to catch up with the growing Soviet lead in missile development.\(^4^1\)

Kennedy did not restrict his criticism of Eisenhower’s military policies to the missile gap controversy. After the President sent U.S. Marines into Lebanon in the summer of 1958, Kennedy accused Eisenhower and the Defense Department of mishandling the operation by not providing enough transport and airlift support. “It should be obvious from our Lebanon experience,” said Kennedy, “that we lack the sea and airlift necessary to intervene in a limited war with the speed, discrimination, and versatility which may well be needed to keep it limited---and without weakening our ultimate retaliatory power.”\(^4^2\) This attack was part of Kennedy’s overall assault on the Eisenhower Admistration’s “New Look” policy of reducing conventional forces and reliance on a nuclear deterrent now hindered by the “missile gap.”

\(^4^0\)David L. Snead, *The Gaither Committee, Eisenhower, and the Cold War* (Columbus, Ohio: Ohio State University Press, 1999), 174-175.
\(^4^1\)Dallek, *An Unfinished Life*, 224.
Kennedy’s attack on Eisenhower on the Lebanon issue elicited a strong rebuke from Republican Senator Prescott Bush of Connecticut. He called Kennedy’s attacks “unwarranted” and asserted his belief that the success of the operation indicated that U.S. personnel had all of the transport and airlift support needed. Bush also implied that Dwight D. Eisenhower, the man who commanded the largest amphibious operation in history during World War II (D-Day), had more expertise than Kennedy did on the issue.

Senator Kennedy’s criticism of the Eisenhower Administration on defense ultimately crystallized into an argument of priorities. “Those of us who call for a higher defense budget,” said Kennedy, “are taking a chance on spending money unnecessarily. But those who oppose these expenditures are taking a chance on our very survival as a nation.” He asserted that the missile gap was a fact that “everyone agrees now exists,” and accused Eisenhower of ignoring the findings of different committees that proved the reality of a Soviet lead in missiles. He also criticized Eisenhower’s “new look” philosophy of defense that relied upon a reduction of conventional forces because it reduced America’s capability to respond to low intensity conflicts without the nuclear option. In the end, Kennedy was able to successfully portray himself as the guardian of America’s survival, while at the same time presenting Eisenhower as being more concerned with finances than defense.

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43 Senator Prescott Bush was the father of President George H.W. Bush and grandfather of President George W. Bush.
46 Ibid., 1229-1233.
But were Kennedy’s motives strictly political or did they stem from a genuine concern for America’s national defense? Robert Dallek, whose analysis indicates a dual purpose to Kennedy’s post-Sputnik rhetoric, provides the most balanced answer to this question. Dallek believes that Kennedy “hoped both to serve the nation’s security and score political points.” The Senator believed that the Eisenhower Administration was not providing enough solid information on the status of America’s defenses, as indicated by the President’s refusal to release the Gaither Report. This made Kennedy suspicious of Eisenhower’s motives and raised his apprehensions about America’s security. But at the same time, Dallek asserts that Kennedy “saw a clear political advantage” in his rhetorical support of the missile gap theory. “The opportunity to take political advantage of what seemed like a major failing on the part of the Eisenhower Administration was irresistible,” wrote Dallek.47 Whatever his motives, it is certainly clear that JFK reaped the benefits of the hysteria that followed Sputnik and it assisted in his 1960 presidential bid.

Not all of the members of the U.S. Senate were as critical of the administration. Some rose to the President’s defense and decried the criticism of America’s missile and satellite programs. One of these Senators was Leverett Saltonstall (R-Massachusetts), who accused defense policy critics of basing their arguments on too much opinion based on rumors and not enough factual information. He pointed out that America’s first IRBM was already in production and that the Atlas ICBM had been successfully tested. The United States also had a clear lead in the development of nuclear powered naval vessels and that the Strategic Air Command was the best-equipped bomber force in the world. To counter the missile gap theory,

Saltonstall noted the figures they were using for American missiles were based on “developmental objectives,” i.e. the initially planned numbers of missiles, while figures for Soviet missiles were based on maximum capable output. Therefore, Saltonstall claimed, the critics who referenced an alleged missile gap were using a flawed methodology for analysis. “Complacency certainly has no place in our consideration of the adequacy of our nation’s defenses now or in the future,” said Saltonstall, “but equally certain, we must not become panicky about them.”48

Senator Edward Martin (R-Pennsylvania) joined in the defense of Eisenhower’s budgetary concerns by stating America “cannot buy either defense or offense,” but must depend “on the spirit of the people.” He claimed significant defense spending increases might result in inflation and the decreased value of the dollar, which would only hurt the spirit of the American people and reduce their confidence in the government.49 These sentiments were echoed by Congressman Ben F. Jensen (R-Iowa), who said that America must not “listen to the clarion call from unthinking liberals” to spend a lot more money on defense. “Congress must and will appropriate sufficient funds for more than adequate defense,” said Jensen, “but certainly we will demand 100 cents worth of defense for every dollar spent.” He praised Eisenhower’s restraint in defense spending and expressed confidence in the President’s leadership.50 Another voice of restraint was Senator Gordon Allott (R-Colorado), who pointed out that accusations from

members of the Senate deriding defense policies help to serve Soviet interests by making
American’s question their government.\textsuperscript{51}

But those members of the government that defended Eisenhower’s policies were not
enough to silence the mounting criticism. In the wake of the Sputnik crisis, the President found
himself under pressure to increase missile and satellite program funding. Marquis Childs, a
1950’s Eisenhower biographer, wrote, the President “was a military man and we had a secure
sense that all was well with our national defenses so long as he was in the White House…But
now, with the successful orbiting of the two Sputniks, this confidence was for the first time
shaken.”\textsuperscript{52} Eisenhower now found himself under scrutiny from politicians and the public for the
issue that he had been best known for—national defense.

The President’s frustration with this new reality was demonstrated in a meeting with
presidential advisor Emmett John Hughes, during the last weekend of October 1957. Angered
with both Democrats and right-wing Republicans who were criticizing his missile and satellite
policies, Eisenhower’s infamous temper boiled up to the surface. “The idea of them charging me
with not being interested in defense!” barked the President to Hughes. “Damn it, I’ve spent my
whole life being concerned with the defense of our country!”\textsuperscript{53} In meetings with his Chief of
Staff, Sherman Adams, Eisenhower also expressed anger at the hypocrisy of many of those
members of Congress who were calling for higher spending on satellites and missiles after
Sputnik, when only a few months ago they supported cuts in government funding for scientific

\textsuperscript{53} Emmett John Hughes, \textit{The Ordeal of Power: A Political Memoir of the Eisenhower Years} (New York: Atheneum, 1963), 248.
research. Just like Eisenhower, none of them could have predicted the psychological impact of the Soviet satellites that eventually developed, yet they expected the President to have been prepared for it. Eisenhower also criticized those who cited intelligence that said the Soviets were ahead in missiles because their information was based only on Soviet successes, not the failures that the Soviets almost definitely suffered but did not make public.\textsuperscript{54}

In numerous private meetings with his advisors, President Eisenhower charged that if America was behind the Soviets in missile development that a great deal of the fault lies with Harry Truman’s Administration. During the Truman presidency, little funding was put towards missiles, which gave the Soviets a head start in their development. Missiles were given priority funding by the Eisenhower Administration, and the President was confident that the U.S. had since closed the lead the Soviets had in a remarkable amount of time. He was also confident in the superiority of America’s overall nuclear deterrent.\textsuperscript{55} While Eisenhower privately stated Truman should share the blame if America was indeed behind the Soviets in missiles, he did not often say this publicly. Eisenhower believed that any attempt to criticize his Democratic predecessor would be seen by the public as nothing more than political defense and would give his critics more ammunition. The President also wanted to stay above the political fray as much as possible because he felt nothing substantial could be gained by doing so.\textsuperscript{56}

More importantly, Eisenhower could not speak publicly about how he knew that the Soviets were not really far ahead of the U.S. in missile development. To do so would have meant revealing information about the U-2 program and admitting that the U.S. was flying spy

\textsuperscript{55} Eisenhower, \textit{Waging Peace}, 390.
planes over Soviet territory. Eisenhower could only speak in generalities and express his firm confidence that there was no missile gap. This ultimately was not enough to reassure the public. As Robert Divine wrote in *the Sputnik Challenge*, “in the wake of Sputnik, Americans wanted more than broad verbal reassurances from the hero of World War II.” In fact, the image of Eisenhower as “the hero of World War II” probably worked against Eisenhower because this made him look like a representative of a time now outdated by the world’s entrance into the Space Age.

Aside from what Eisenhower could not say to the American people about the issue of missiles, there was also quite a bit that the President failed to say that may have reassured the American public. As Craig Allen points out in *Eisenhower and the Mass Media*, the President spoke less to the public in general during 1958, in comparison to his appearances at press conferences, public speaking engagements, and photo opportunities in previous years. Instead, he relied more on Press Secretary James Hagerty to speak to the public and present the Administration’s point of view on the issues. The result was what Allen referred to as “one of the two biggest public relations miscalculations of Eisenhower’s career,” with the Francis Gary Powers U-2 incident of 1960, being the other.

The refusal to release the Gaither Report also assisted in preventing a resurgence in Eisenhower’s public image. The President denied all requests to release the Gaither Committee’s findings as the document contained and referred to classified information and gathering techniques that required absolute secrecy. Eisenhower also strongly believed in a

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58 Divine, 183.
Presidential right to consult with any advisors he saw fit without having to worry about the content of those consultations becoming public. President Eisenhower had supported this principle in the past when Senator Joseph McCarthy tried to subpoena presidential advisors during the Army-McCarthy Hearings in 1954.

Additionally, the President believed the contents of the Gaither Report contained a number of “inflammatory” statements about alleged American weaknesses; ones that Eisenhower did not agree were factual. Eisenhower felt that releasing the report would only cause undue panic among Americans and add fuel to the firestorm of criticism being leveled at his administration. So Eisenhower kept the report under wraps and it resulted in the attacks by Kennedy and others.

Paul Dickson points out an ironic footnote to the issue of the Gaither Report in his book, *Sputnik: Shock of the Century*. When John F. Kennedy and Lyndon B. Johnson ascended to the Presidency, neither declassified the very report they themselves had demanded to be made public under Eisenhower. Instead, the Gaither Committee’s findings remained secret until 1973 when then President Richard Nixon declassified the report. By that time, the Gaither Report timeline had since passed and many of the ‘secret’ technologies had become public knowledge.

Of all of the politicians involved in the post-Sputnik debate, Richard Nixon was perhaps in the most unique position. Even though Nixon was Eisenhower’s Vice President, his opinions of the implications of Sputnik were probably more in line with Democrats like Kennedy and

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61 Adams, 413-414.
62 Dickson, 161.
Johnson. He disagreed with members of the Eisenhower Administration like Sherman Adams, who called the launching of satellites an “outer space basketball game.” Nixon felt such “flippant” remarks made the Administration look foolish and out of touch with the realities of the Soviet accomplishment. He also differed with President Eisenhower on defense spending, believing that there should be a sharp increase in funding for America’s missile and satellite programs. “We could make no greater mistake than to brush off this event as a scientific stunt,” said Nixon in an October, 1957, speech.63

Beyond the implications for America’s defense and space policies, Nixon also believed the fact the Soviets beat the United States into space was a sign of growing weakness in American society. He felt that this weakness was caused by a decadent reliance on modern conveniences and an obsession with making money.64 Like Eisenhower, Nixon believed that Sputnik was a signal that improvements were needed to America’s education, especially in the areas of science and mathematics. He also agreed with the President that more funding for education should come from the federal coffers, but that the decisions on how to use that money should come from local school systems.65

The Vice President was trapped by his position in the wake of the Sputnik crisis. Stephen Ambrose discusses this issue in Nixon: The Education of a Politician. Nixon disagreed with his President on the implications of Sputnik and on increasing defense spending. But as Eisenhower’s Vice President, Nixon could not, as Ambrose put it, “go off on his own.” He had to remain loyal to his President, and was linked to the Eisenhower Administration’s defense

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64 Herbert S. Parmet, Richard Nixon and His America (New York: Konecky & Konecky, 1990), 433.
65 Ibid., 375.
policies as a result. Anything Eisenhower might be blamed for by his political opponents, Nixon had to share that blame as part of the administration. Thus, when Nixon ran for President in 1960, he had to run on the Eisenhower Administration’s record. According to Ambrose, this was Nixon’s ultimate problem. “People who trusted Eisenhower (with defense issues) because he was who he was could not be expected to extend that same trust to Nixon,” wrote Ambrose. “For Nixon it was imperative that the United States do something spectacular in weapons technology before the 1960 election.” Since Eisenhower did not want to give in to pressures to spend “spectacular” amounts of money on missiles and satellites, Nixon was left with no political recourse.  

The result was that in the 1960 presidential race, Kennedy was able to bombard Nixon with the same attacks as the Senator leveled at Eisenhower over defense issues, and these attacks had more impact on Nixon than on the old World War II hero. In the second presidential campaign debate, Kennedy said that the relative strength of the United States in military, political, psychological, scientific, and industrial areas, vis-à-vis the Soviet Union, “deteriorated” during the eight years of Eisenhower’s presidency. He claimed the Eisenhower Administration “has not met its responsibilities” and left a hazardous situation for America in the 1960’s. Nixon could only reply that he was proud of the Administration’s record, and that he had no regrets about his part in creating that record.  

Nixon continued to try and defend the Eisenhower Administration’s record in the Third and Fourth debates with Kennedy. In the final debate, Nixon accused Kennedy and other critics

of being the cause of any perceived American weakness internationally with their unfair attacks based on half-truths. He also said that America’s military power was superior to that of the Soviets and that the economy was sound because of Eisenhower’s economic policies. Kennedy countered that the Eisenhower Administration favored a “status-quo outlook” on the world, and did not keep up with changing times. “I don’t believe that our relative strength is increasing,” said Kennedy. “And I say that not as the Democratic standard-bearer, but as a citizen of the United States.”

Kennedy was able to maintain the idea that Nixon, as part of the Eisenhower Administration, he bore part of the responsibility for allowing a missile gap to develop in favor of the Soviets. He was supported in this by, among others, the man who became his running mate in the 1960 election---Senator Lyndon Johnson. In a 13 July 1959, speech, Johnson claimed that the Eisenhower Administration was conceding a three to one advantage in missiles to the Soviets for the first three years of the 1960’s. He also accused Eisenhower and the Defense Department of covering up deficiencies in spending on important projects, such as missile development. He decried Eisenhower’s budgetary restraint, saying Americans would never “get a full dollar’s worth of defense for every tax dollar devoted to this purpose until the Department of Defense stops budgeting…on the basis of pre-established dollar ceilings.” The missile gap issue paid off handsomely for the Kennedy-Johnson ticket in the 1960 election.

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Yet the post-Sputnik criticism of Eisenhower’s defense policies helped the Democrats long before the 1960 election. During the mid-term elections of 1958, the Democrats scored significant victories in the Congressional races, increasing their majority on both houses by substantial margins. They also won most of the gubernatorial and larger metropolitan mayoral races held around the country that year. Even the Republicans who did win re-election did so with smaller margins than in their previous elections. Most independent voters also swung over to the Democratic side in the election for the first time in six years.70

When analyzing the reasons for the Democratic victory in 1958, Nation columnist Carey MacWilliams identified the main cause as “a new political mood” that stemmed from a deep, sub-surface uneasiness and sense of impending disaster. “The silo may be bulging,” wrote MacWilliams, “there may be money in the bank and two cars in every garage, but still we don’t like this feeling of having somehow defaulted in our commitments as Americans.” He went on to call the 1958, election “a strong vote of ‘no confidence’ in the Eisenhower Administration,” and a “revolt against a stale and stupid political leadership.”71 Within a year after Sputnik, the missile gap criticism of the Eisenhower Administration that resulted from the Sputnik Crisis, combined with a shaky U.S. economy, provided big political dividends for the Democrats.

Since the missile gap theory was the most important political and defense related issue resulting from the Sputnik crisis, it is important to examine the issue and answer important questions surrounding it. Did the missile gap exist, and if it did not, how were so many Americans convinced that the missile gap did exist?

To answer these questions, a good source of analysis to consult is Edgar M. Bottome’s book, *The Missile Gap: A Study of the Formulation of Military and Political Policy*. On the question of the missile gap’s existence, Bottome identifies the tendency to use figures on Soviet missile production that relied upon “maximum capability” of output. In other words, analysts looked at how many missiles the Soviets might have been able to produce if they used all of the Soviet Union’s available resources to do so. Different agencies gathering intelligence on Soviet missile production and capabilities came up with differing estimates, but they all tended to rely upon the “maximum capability” principle. This was also previously alluded to in Senator Leverett Saltonstall’s August, 1958 speech, on the floor of the Senate.

The only hard intelligence that showed that the Soviets were not using the maximum amount of resources to produce missiles came from the U-2 reconnaissance flights and missile tracking stations in Turkey, but this information could not be shared with the public. However, those sources of hard intelligence did show that there was no missile gap. Like the U.S., the Soviets did not produce many of their first generation liquid fueled ICBMs. Instead, both Eisenhower and Khrushchev came to the same conclusion that it would be better to use that money to speed up the development of the more efficient solid-fueled ICBMs for future production and deployment. Robert Divine echoes this analysis in *The Sputnik Challenge*, pointing out that most of the figures coming out of other intelligence sources proved to be inflated in their estimates of the number of Soviet missiles. Since Eisenhower had the U-2 and

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73 Ibid., 176-177.
Turkey missile tracking station intelligence reports, his estimates proved to be the most accurate.\textsuperscript{74}

So how did so many Americans accept this fallacious theory as fact by the end of the 1950’s? According to Bottome, the greatest single factor in promoting the existence of the missile gap was confusion. Americans were “inundated by projected figures” from many different sources, including President Eisenhower, the Department of Defense, the CIA, and a myriad of scientists and politicians who all weighed in on American and Soviet missile capabilities. Not every source of analysis had access to the same sources of intelligence, and relied on varying estimates coming from different intelligence gathering agencies. The media also failed to do an adequate job of sifting through all of the analysis. Newspapers and magazines often printed reports on Soviet military capabilities without confirming the source of the information or corroborating the reports. Rumors were often quoted as fact, as was the case with the alleged remarks made by Secretary of Defense Neil McElroy in a closed meeting with Congressional leaders. McElroy allegedly said that the Soviets would have a three to one advantage in missiles, but there was considerable disagreement between those present at the meeting as to whether McElroy actually made such a statement. It did not matter because some politicians and several media positions quoted the contested statement as an “official confirmation” of the missile gap’s existence. Any increases in the estimates of the number of Soviet missiles were accepted, but any attempt to reduce estimates was seen as an attempt to cover up the truth.\textsuperscript{75} In this atmosphere of confusion, politicians like Kennedy and Symington

\textsuperscript{74} Divine, 183.
\textsuperscript{75} Bottome, 102, 176-186.
who had a vested interest in promoting the missile gap were able to lead Americans to the belief of the gap’s existence.

Although President Eisenhower was ultimately proven to be correct in his estimates of American and Soviet missile capabilities, he was not able to convince the majority Americans of this fact for the remainder of his presidency. He did score some successes in the area of space with the launching of four American satellites by the end of 1958, and the development of a more ambitious space program. In the area of defense and missiles, Eisenhower may have been successful in developing a defense policy that relied on factual information, but as Robert Divine puts it, the President ultimately failed in the political arena “to persuade the American people that the dawn of the space age had not eroded the nation’s security.” The result was that the Democrats were able to use the wave of post-Sputnik defense concerns as a major contribution to their political victory in the 1958 mid-term elections, and ultimate victory in the 1960 presidential election. “In the 1960 campaign,” wrote Eisenhower in his memoirs, “the charge of a missile gap remained a useful piece of demagoguery.” There were certainly a lot of partisan attacks on the Eisenhower Administration after Sputnik, motivated by both the desire for political victories and genuine concern about the implications of the Sputnik satellites to America’s power and prestige.

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76 Divine, 183-184.
77 Eisenhower, Waging Peace, 390.
CHAPTER SEVEN:  
SPUTNIK’S AFTERMATH

At 10:48PM EST on 31 January 1958, a team of American rocket technicians and engineers, led by Dr. Wernher von Braun, launched a Jupiter-C missile from Cape Canaveral, Florida. The missile carried a tube-shaped satellite that was eighty inches long and weighed a little over thirty pounds called Explorer I.¹ Unlike the December 1957, Vanguard launch this experiment succeeded. America had finally placed its first satellite into orbit around the Earth. Although President Eisenhower authorized the launch of Explorer I to jump-start America’s troubled satellite program, he did not publicize the test beforehand as he did the failed Vanguard launch.² Americans were to be pleasantly surprised that their nation finally answered the Soviet achievement after nearly four long months since Sputnik I went into orbit.

Explorer I was only the first in a series of Explorer satellites launched in 1958. Explorer II on 5 March, and Explorer V on 24 August, failed to achieve orbit. These failures were matched by two further successes by von Braun’s team with the launch of Explorer III on 26 March, and Explorer IV on 26 July. The instrumentation packages contained in the US satellites were designed in the true spirit of the IGY. The Explorer satellites conducted studies of the Earth’s upper atmosphere and its interaction with cosmic rays from the sun. The information

¹ “Vanguard…the U.S. Missile in the News,” Missiles and Rockets, Volume 3 (April, 1958), 42.
provided by the Explorers led to the discovery of the Van Allen Belts that surround the Earth and protect it from the Sun’s most harmful ultra-violet radiation.³

While von Braun’s team launched their Explorer series, the Vanguard program still proceeded in their quest to orbit. After another failed attempt in February 1958, the Vanguard team achieved success on 17 March 1958. The spherical Vanguard I satellite was over six inches in diameter and weighed a little over three pounds.⁴ Vanguard I entered into orbit 2,463 miles above the Earth’s surface, the highest orbit achieved by any satellite launched up to that time. Unlike its more famous predecessors, Vanguard I is still in Earth orbit and will remain so for an estimated 200 year minimum.⁵

Although the Vanguard program seemed to many at the time to be rife with problems, the launching of Vanguard I in March, coincided almost exactly with the stated goals of the program for the IGY. It had achieved orbit in accordance with the timetable set in its proposal to the IGY --spring, 1958. The Vanguard launch system was complex, and the failed tests of the rocket in December, 1957, and February, 1958, were only intended as tests. As William O. Miller wrote in an article for Missiles and Rockets, “never before in the history of rockets has such a complex and sophisticated vehicle gone from the drawing board to orbit in such a short time—a little over two years.”⁶ Once in orbit, the Vanguard satellite returned valuable scientific data on the Earth’s atmosphere and magnetic field and the data was shared with the global scientific community.⁷

Despite the psychological pressure brought to bear by Sputnik and the Explorer program taking

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⁴ “Vanguard…the U.S. Missile in the News,” 42.
⁵ “Vanguard to Last 200 Years,” Science, May 9, 1958, 1108.
⁷ Ibid.
away their status as the Free World’s first satellite, the Vanguard team had completed their original IGY task on time.

But because of the circumstances of the Sputnik crisis, the public and historical evaluation of the Vanguard program has produced mixed results. As Constance McLaughlin Green and Milton Lomask point out in the official NASA history of the Vanguard program, the satellite’s contributions are “widely misunderstood, doubtless partly because questions about the might-have-beens obtrude themselves.”

However, the authors point out that Vanguard did not receive priority funding or public attention before Sputnik I’s launch. Despite these handicaps, Vanguard achieved the goals set for it by the IGY. They also point out that Vanguard’s delivery system was used as the model for the Delta rocket that still remains in use to launch satellites.

Thus, Sputnik’s impact was one of detriment to the prestige of the Vanguard program, which is only now being appreciated by those looking back with hindsight on the much-maligned project.

On 18 December 1958, the United States placed an entire 4,500-pound Atlas missile into orbit with Project Score. As the largest object orbited by either the U.S. or the USSR at that time, Score was designed to demonstrate the booster capability of America’s Atlas missile to the Soviets and quell critics at home. Upon achieving orbit, a payload package within the body of the Atlas activated, sending a radio signal to all of the people of the Earth in the form of a Christmas greeting from President Eisenhower. The President announced the successful launch of the satellite at a diplomatic dinner held at the White House that evening with foreign and U.S.

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9 Ibid., Pages 1-3 of Chapter 14.
dignitaries in attendance. This was similar to the manner in which the Soviets announced the launch of Sputnik I at their embassy party over a year before.

While the Americans were achieving space successes in 1958, the Soviets continued to advance in their space program. On 27 April 1958, they experienced a failure with one attempted satellite launch, but succeeded in orbiting the 2,926-pound Sputnik III satellite on 15 May. Several days after Sputnik III entered orbit, the Soviets released a report to the IGY committee on the scientific findings of the first two Sputnik satellites. The report provided valuable data on radio and optical observations of the satellites, Earth’s ionosphere and atmospheric density, cosmic rays, and biological data from Sputnik II’s canine passenger. By the end of 1958, both the United States and the Soviet Union contributed a great deal of information to the IGY from their satellites that provided a better understanding of how the Earth’s various systems function.

But as the American and Soviet satellites orbited the Earth in 1958, America’s political leaders were already considering the future of the nation’s direction in space. In December, 1957, on orders from President Eisenhower, Dr. James Killian and his Science Advisory Committee examined the possibilities for developing a more ambitious space program. They concluded that a space program governed by the Department of Defense might not be the most effective approach. Such a program could limit the objectives to those with military value and could deter qualified scientists who would not be comfortable working so closely with the military. This would also tag U.S. space efforts with a military character and deny the US the

10 Divine, 204.
11 Dickson, 184-185.
ability to use this same criticism against the Soviets. Therefore, Killian’s committee recommended the creation of an independent civilian agency that would also cooperate with the Department of Defense due to the military delivery assets needed for such a program to be successful. While utilizing military technology, this organization would operate as a separate entity whose goals were governed by scientific interests. Killian’s group recommended that resources from the Army, Air Force, and Cal Tech’s Jet Propulsion Laboratory be incorporated into such an agency. “The overall plan must permit and provide for bold, imaginative research and planning,” wrote Killian in the committee’s report. “It must recognize the importance of providing the means of incentives for pure scientists to move effectively into space research without regard to practical applications.”

As Eisenhower’s science advisors examined ideas for creating a civilian space program, Congress also sought to better organize space efforts. On 8 January 1958, Congressman Kenneth Keating (R-New York) introduced a bill before the House of Representatives to create a Joint Congressional Committee on Outer Space. The proposed committee would be composed of nine members from each house of Congress, no more than five of whom would be from the same political party. The chairmanship of the committee would be rotated between members of the House and Senate. The duties of the committee included congressional oversight of research and development of all space related projects, management of international outer space agreements, and control of the information provided to the public on space activities.

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ensured that any American space effort would have direct oversight and involvement from the legislative branch.

As for Eisenhower, he found Dr. Killian’s proposal for the creation of a separate civilian space agency to be sound. The President firmly believed that many space related projects were primarily of scientific interest and had limited military application. However, he also desired to make certain any new organization was run soundly and recoiled from giving control of such an agency to a committee. Instead, Eisenhower believed that the director of such an agency should report to the White House, and that the President should have final authority over the agency. Dr. Killian agreed with President Eisenhower’s conclusions on this matter, but also added that even though the agency should be a civilian endeavor, military assets would have to be provided, such as facilities, missiles, and technicians. Eisenhower agreed with this conclusion. Both Killian and Eisenhower also decided that the best solution would be to reorganize and expand the existing National Advisory Committee for Aeronautics (NACA), after some changes to the structure of the organization. The new organization would ultimately be called the National Aeronautics and Space Administration (NASA).\textsuperscript{15}

Killian’s committee developed the goals for the new agency in the spring, 1958. Once the goals were established, they were then divided into a four-phase timetable. The phases were informally labeled: Early, Later, Still Later, and Much Later Still. During the early phase, NASA would be primarily concerned with experiments related to physics, geophysics, meteorology, experimental communications, space physiology, and simple lunar probes. Later,

\textsuperscript{15} Andrew Goodpaster, “Memorandum of a Conference With the President: March 5, 1958,” Dwight D. Eisenhower Papers, Eisenhower Library, Abilene, Kansas, found online at www.eisenhower.utexas.edu/dl/NASA/Binder12.pdf.
the agency would tackle experiments related to astronomy, extensive satellite communications, biology related to space flight, more sophisticated probes to the moon, and rudimentary probes to other planets. NASA would also work towards orbiting of human space travelers during this period. The goals for the Still Later phase included automated and human exploration of the moon and automated exploration of other planets in the solar system. The much later phase of the timeline called for human planetary exploration. As they developed these goals, the members of the committee also incorporated their insistence that space exploration should not in any way hinder important scientific experiments on Earth. They pointed out that failures were inevitable, but that these occurrences should not be allowed to prevent the space program from going forward. Those working in NASA should examine the reasons for the failure, work to correct them, and continue their work.¹⁶

President Eisenhower also came to a conclusion regarding an important aspect of the space program that would fall under NASA’s responsibility. He determined that manned space flight was not to be a military concern because of its then perceived limited application to defense. The President also determined that America’s human space explorers should be part of a civilian organization to promote the peaceful purposes of their mission, although many of these participants would probably come from the military due to training related issues. The Eisenhower Administration determined that an initial budget for NASA in fiscal year 1959 would be around $250 million.¹⁷ The funding that the Department of Defense initially allocated

for manned space flight research, in the order of $117 million, would also be transferred to NASA.\textsuperscript{18} The decision of the Eisenhower Administration to give manned space flight to NASA, and the transfer of funding for that purpose, eventually formed the basis for the development of Project Mercury, which sent America’s first astronauts into space.

The planning by Killian’s committee, the President, and other members of the administration, culminated with legislation sent to Congress on April 14, 1958, that called for the creation of NASA. In a special message to Congress earlier in that month, Eisenhower specified the priorities of this agency. These included the expansion of human knowledge, the development of manned and unmanned space vehicles, the effective mobilization and use of America’s technical resources and personnel, and the promotion of international cooperation in space activities. In this message, Eisenhower expressed his feelings about the nature of NASA’s mission and the purpose of space exploration:

\begin{quote}
I recommend that aeronautical and space science activities sponsored by the United States be conducted under the direction of a civilian agency, except for those projects primarily associated with military requirements. 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 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.\textsuperscript{19}
\end{quote}

This statement, and the work behind it by the Eisenhower Administration, became the founding principles of NASA as a civilian agency tasked with conducting and promoting the peaceful exploration of outer space.

\textsuperscript{18} Divine, 154.

As the legislation was debated on the floor of both houses of Congress, Eisenhower was able to overcome questions about presidential authority’s management of the agency. He also wisely secured the support of the Senate Majority Leader, Lyndon B. Johnson. On 7 July, Eisenhower met with the Senator at the White House in a one-on-one meeting to make certain they were on the same page with the proposed NASA legislation. Both agreed on the modeling of the agency’s administrative framework and that the ultimate authority for NASA should be held by the President.\textsuperscript{20} With the support of Senator Johnson, and other prominent legislators like Democratic Senator Richard Russell and Republican Senator Styles Bridges, the National Aeronautics and Space Act was passed in August, 1958.\textsuperscript{21} When the National Aeronautics and Space Administration came into operation on 1 October, 1958, T. Keith Glennan of the Case Institute of Technology in Cleveland, became its first administrator.\textsuperscript{22} In November, 1958, Senator Johnson spoke before the United Nations about NASA and commended the bi-partisan effort to promote the peaceful exploration of space. He also praised the cooperative efforts of Congress and the Eisenhower Administration to bring about NASA’s inception. “On the goal of dedicating outer space to peaceful purposes for the benefit of all mankind,” said Johnson, “there are no differences within our government, between our parties, or among our people!”\textsuperscript{23}

After NASA came into being, President Eisenhower continued to transfer valuable space-related assets over to the new organization. Among the initial funding items listed for NASA

\begin{footnotes}
\item[21] Dickson, 191.
\item[22] Divine, 186.
\end{footnotes}
were $10 million for the development of a rocket engine that would produce one million pounds
of thrust. It was felt that such an engine would be useful for the development of a “man-on-the-
moon” program,\(^\text{24}\) and thus laid the very early foundations of the Apollo program of the 1960’s.
President Eisenhower also transferred Wernher von Braun’s army missile team and the Cape
Canaveral missile testing facility to NASA. As the new organization began its mission,
Eisenhower continued to stress his belief that the American space program should not be used to
match or beat the Soviets. “Our plan is a positive one,” said Eisenhower, “and I see no reason
for thinking of it merely as competition with somebody else.”\(^\text{25}\)

While Eisenhower and Congress were creating a civilian organization for the scientific
exploration of space, the President re-explored the potential military use of satellite technology.
Specifically, Eisenhower revisited a proposal from a previous report produced by Dr. James
Killian and the Technology Capabilities Panel (TCP). On 14 February 1955, the panel
recommended, among other technological improvements, the development of reconnaissance
satellites.\(^\text{26}\) Eisenhower understood the importance of having as much information as possible on
your opponent’s activities, and the U-2 spy plane was the best tool he had available at the time to
satisfy this need.\(^\text{27}\) But the President also recognized the vulnerability of the U-2 or other

\(^{24}\) Piland, “Memorandum for Dr. Killian on Notes on NASA: April 10, 1958.”
reconnaissance flights over Soviet territory, and believed spy satellites would be a safer alternative.\textsuperscript{28}

Before Sputnik, Eisenhower had given responsibility for developing a reconnaissance satellite to the Air Force, whose technicians began work on a reconnaissance satellite designated WS-117L. But delays plagued the project because of the technical complexities of the WS-117L design.\textsuperscript{29} The Air Force also assigned the satellite lower priority funding because it was viewed as less important than such projects as missile development.\textsuperscript{30} Sputnik and the U.S. civilian satellite project both gave much needed motivation and resources to the development of a viable reconnaissance satellite by the U.S.

The Soviet satellites also resolved a primary area of concern for Eisenhower--open skies. Through Sputnik the Soviets had inadvertently handed the United States the right to “violate” Soviet air space at orbital altitudes. As Sputnik soared above America, Eisenhower did not protest a violation of US air space--thus creating the principle of freedom of space by all nations. As military space historian Dwayne Day wrote, the Soviets “unwittingly played into the Eisenhower administration’s hands” by launching the Sputnik satellites.\textsuperscript{31}

Another important contribution that came from America’s civilian satellite programs was the development of materials and designs for objects that were capable of surviving re-entry into

\textsuperscript{29} Philip Taubman, \textit{Secret Empire: Eisenhower, the CIA, and the Hidden Story of America’s Space Espionage} (New York: Simon and Schuster, 2003), 225.
the Earth’s atmosphere. These objects, such as the Jupiter-C nose cone launched and recovered by von Braun’s team in August, 1957, allowed for the development of a much simpler reconnaissance satellite than the one being worked on by the Air Force. A spy satellite could be developed that used a camera and film package that would be launched into space, circle the Earth and take photographs, then return to Earth where the film would be recovered and developed by U.S. intelligence agencies.  

The Sputnik launches of 1957, motivated the Eisenhower administration to consider alternatives to the WS-117L that could be developed and deployed faster. In April, 1958, the CIA acted under the President’s instructions to begin development of a reconnaissance satellite called CORONA. Under the direction of Richard Bissell of the CIA, the CORONA program drew on resources from not only the CIA, but also the Air Force and some civilian groups. The main contributions of the Air Force to the program operated were the Thor missiles that would be used to launch the satellites and a launching facility at Vandenberg Air Force Base in California. Much of CORONA’s instrument package and guidance system were developed by the RAND Corporation, whose technicians predicted that the first CORONA satellites could be launched within one to two years after the program started. The project was kept under the strictest secrecy and would be know to the public as a scientific satellite project called Discoverer. Separate funding systems buried deep within various CIA and Air Force projects

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32 Taubman, 224.
were used to fund the program. The word “CORONA” or the letter “C” were never referred to in written documents or conversations about the project.\textsuperscript{34}

Elaborate ‘science’ plans were made to launch test animals on the CORONA satellites to maintain the program’s scientific cover story. This included launching a monkey on one of the satellites with the reconnaissance camera package stuck between its legs. When it was found that the monkey would block the camera’s view, CORONA’s engineers considered using a system of mirrors to allow the camera to shoot around the satellite’s passenger. This idea and the concept of using test animals for CORONA in general was later dropped due to logistical problems and the deaths of a number of test animals in CORONA test launches.\textsuperscript{35}

A number of technical problems needed to be overcome before CORONA achieved operational status. These included getting the satellite to return to a desired location and the development of a camera and film package that could take detailed enough pictures from orbit and survive the journey.\textsuperscript{36} Because of these and other technical issues, the CORONA program suffered a number of failures throughout 1959 and the first half of 1960.\textsuperscript{37}

Through all of the failures, President Eisenhower continued to press for the development of the CORONA satellite and saw it as a vital program. “Let’s not worry about it,” said Eisenhower. “Let’s stay with it. It’s so important, and we need it. We need to just keep going with it.”\textsuperscript{38} Dwayne Day emphasizes the importance that Eisenhower gave to the project, writing that “from the first time he gave serious consideration to the concept until the day he left office

\textsuperscript{34} Taubman, 226-246.
\textsuperscript{35} Day, “The Development and Improvement…,” 52-59.
\textsuperscript{36} Taubman, 226.
\textsuperscript{37} Day, “The Development and Improvement…,” 52-59.
\textsuperscript{38} Goodpaster, “Comments for ‘CORONA…,” 174.
in January, 1961, (Eisenhower) viewed satellite reconnaissance as a precious commodity that he had to protect with ‘bodyguards’ of cover stories, half-truths, misdirections, and diversions.”39 The persistence of the President and the engineers working on CORONA paid off. On 10 August 1960, the first successful mission of the CORONA program was launched and recovered with detailed photographs of the Soviet Union’s defense installations taken from Earth’s orbit.40 This was the first time a satellite had been used for strategic reconnaissance, and opened a new area of intelligence gathering that the United States would put to effective use in the decades to come.

In the meantime, Eisenhower had to rely upon the U-2 reconnaissance plane to provide him with intelligence on Soviet military capabilities. But by the time of the Sputnik crisis, President Eisenhower was less willing to authorize U-2 flights over the Soviet Union as he had since June, 1956. He was constantly worried that one of the planes would be shot down over Soviet territory, sparking an international incident that could possibly lead to armed conflict with the Soviet Union. Eisenhower also believed that secretly flying spy planes over Soviet territory was what historian Michael Beschloss, called a “distasteful” form of intelligence gathering because the President realized how Americans would feel if the Soviets were doing the same thing over American territory. But the President was also under increasing pressure from the defense and intelligence communities, as well as the proponents of the missile gap theory, to obtain as much hard intelligence as possible on Soviet missile production. Many of those who

advocated more U-2 flights told Eisenhower that since none of the planes had been shot down by
the Soviets so far that there was no evidence to suggest it would happen.\footnote{Michael Beschloss, \textit{Mayday: Eisenhower, Khrushchev, and the U-2 Affair} (New York: Harper&Row Publishers, 1986), 150-151.}

The result of this pressure was an order from President Eisenhower in January, 1958, for
more U-2 flights over Warsaw Pact territory. The first of these flights occurred on 28 January,
when a U-2 flew over Albania without incident. However, another U-2 flight over the eastern
Soviet Union on 1 March, was detected and tracked by Soviet radar installations. On 6 March,
the Soviets issued a formal protest to President Eisenhower, but U.S. leaders officially claimed
ignorance of the flight in their reply. Even though Eisenhower denied knowledge of the flight,
he also promised to take steps to make sure it did not happen again. The Soviets sent another
communication to President Eisenhower on 21 April, that included detailed information about
the U-2’s March 1, flight plan. Eisenhower decided to once again end the U-2 over flights into
Soviet airspace.\footnote{Curtis Peebles, \textit{Shadow Flights: America’s Secret Air War Against the Soviet Union} (Novato, CA: Presidio Press, 2002), 204-205.}

However, the pressure from CIA Director Allen Dulles and others for more over flights
continued to build. In February, 1960, Eisenhower once again gave into the demands to order
more U-2 flights over the Soviet Union. The President was convinced by his advisors that
improvements made to the U-2 design since 1958, would render it a lot more difficult for the
Soviets to detect or shoot down. Eisenhower approved four more flights over Soviet territory,
but said that all flights must cease by 1 May, before the upcoming Geneva Summit with Soviet
Premiere Nikita Khrushchev. By March 28, none of the ordered flights provoked any form of
response from the Soviets, and the President allowed one more flight over Soviet territory.\footnote{Ibid., 254-259.}

This last flight, on 1 May 1960, became the fateful mission of Francis Gary Powers, who was shot down over Soviet territory. Powers and his wrecked plane were paraded before the world by the Soviets as an example of “American deviousness.”

While the President’s decision to use the plane was based on an ever increasing amount of pressure by administration critics about its handling of missile development policy that began before Sputnik, the Soviet satellites added an immense amount of public pressure. Of course, the missile gap that became such a troublesome issue for the Eisenhower administration after Sputnik turned out to be pure fiction. Both Eisenhower and Khrushchev decided to forgo the construction of large numbers of liquid fueled missiles like the U.S. Atlas and Titan missiles. Some Atlas and Titan missiles were constructed and deployed in the field as part of America’s nuclear deterrent forces, but these missiles could not be kept ready to launch because of the volatility of the liquid fuel needed to power them. Solid fueled missiles that could be kept fully fueled and ready at all times were only a few more years away. Therefore, bombers remained the primary nuclear deterrent for both sides until the early-1960’s. Neither nation built many of the first generation missiles, although some U.S. Titan II missiles remained in service until 1980.\footnote{Edgar M. Bottome, \textit{The Missile Gap: A Study of the Formulation of Military and Political Policy} (Cranbury, New Jersey: Associated University Press, 1971), 182-183.}

Despite the accusations of a “missile gap,” the U.S missile program progressed remarkably fast considering the late start it had. The first generation of liquid fueled ICBM’s like Atlas and Titan I became operational and ready to be deployed within five years after the
programs were initially begun. The second generation, solid fueled Minuteman missile became operational within four years after its program started, requiring less time than its liquid fueled cousins. The Jupiter and Thor IRBMs became operational in even less time; an estimated three years from the start time of their programs. The Polaris submarine launched missile went into operation approximately three years after that program was started. The United States government spent approximately $9 to $10 billion on various missile programs by May, 1960. Almost all of this spending came from the funding decisions made by the Eisenhower Administration, while funding for missile development before Eisenhower’s presidency was almost negligible.\(^45\) Perhaps the ultimate irony of the criticism leveled at Eisenhower and the allegations that he allowed a missile gap to develop is that the U.S. missile-based forces at the heart of America’s strategic deterrent during the 1960’s and after came from the diligent efforts of the Eisenhower Administration. Another post-Sputnik initiative of the Eisenhower Administration that would have long standing repercussions for U.S. policy was the National Defense Education Act (NDEA). This piece of legislation generated by a cooperative effort between Congress and the Eisenhower Administration to bolster American education in the wake of Sputnik has been described by historian Robert Divine as “a modest extension of federal aid to education in the name of national defense.”\(^46\) In terms of monetary numbers, this conclusion might be true. Eisenhower did not want the federal government to drastically increase its involvement in education, and thus did not want a massive increase in federal spending. He, along with Vice President Nixon and


\(^46\) Divine, 205.
others, felt that local communities should decide how best to improve their schools based upon the unique situations facing each school system. The federal government should help with some funding; especially for certain areas of education such as math, science, and foreign languages, and these federal expenditures would be matched by other sources. This was especially true in the area of scholarships for those interested in technical fields or educational careers. A large portion of the funding from the NDEA was for these scholarships. Yet Eisenhower was also wary of the idea of Federal involvement in what was traditionally a local concern. He made sure that the NDEA included measures that prevented the Federal government from interfering directly with the curriculum or standards set by local school systems. The act was a funding measure for certain programs only, not to be used as an inroad for Washington to take over American schools. Eisenhower consistently stressed the idea that the NDEA was part of necessary measures to improve national defense and was not meant to be a part of an agenda of educational reform.

Despite his wariness of involving the national government in education, Eisenhower was also concerned with finding some way for the government, and specifically the President, to help with the promotion of education in American culture and to assist in the development of the next generation of American scientists and technicians. The National Defense Education Act was his answer to this challenge. In January, 1958, when Eisenhower sent the legislation to Congress, he relayed his feelings on the importance of the NDEA. “This emergency program stems from national need,” said Eisenhower, “and its fruits will bear directly on national security. The
method of accomplishment is sound: the keystone is State, local, and private effort; the Federal role is to assist—not to control or supplant—those efforts.”

But even though the National Defense Education Act was not a sweeping federal program to involve the national government in education, there were still critics who feared that the Act represented too much federal intrusion into what was traditionally seen as a matter for local governance. Among those critics was Ezra Taft Benson, the Secretary of Agriculture, who wrote a letter to the President in 1960, in which he cautioned against increasing federal education funding beyond strictly conservative levels. “The consequences of an injudicious increase in Federal aid to education,” wrote Benson, “would be Federal control, the impairment of free inquiry and the extinction of many independent and church-related colleges. We must continue to guard against Federal control of education.” The NDEA did not represent a large increase in federal control of education, and Eisenhower may have agreed with Benson’s sentiments. Yet for its time, the National Defense Education Act was considered by a number of people to be a radical concept.

Despite these concerns, the National Defense Education Act was signed into law on 2 September 1958. The NDEA was a conservative program of federal educational spending, but it did create the precedent for the first time that the federal government did have a role to play in the education of America’s youth. Beyond that, the act and the Sputnik crisis in general had other implications to American education. As pointed out by Paul Dickson in *Sputnik: Shock of*

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the Century, “schools placed new emphasis on the process of inquiry, independent thinking, and
the challenging of long-held assumptions. The emphasis moved from teaching facts to
fundamental principles.” Thus, the legislation and the crisis that gave birth to it led to a
fundamental shift in the educational culture of America, with a Federal role and new approaches
to teaching as its characteristics.

The National Defense Education Act was one of several successes that can be credited to
the Eisenhower Administration in the post-Sputnik period. The development of a scientific and
spy satellite programs, the creation of NASA, and an effective missile force were among others.
There were failures along the way, such as the U-2 incident of 1 May 1960, and the failure of
Eisenhower to change the structure of America’s military command with the creation of a Joint
Staff. But despite rough beginnings in its response to Sputnik in the last months of 1957, the
Eisenhower Administration eventually responded positively to the crisis, though this fact was not
recognized at the time and would not be for several decades after Eisenhower’s presidency ended.

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49 Dickson, 229.
CONCLUSION

The breadth of historical events that are addressed by scholars is far ranging. What determines the subjects that receive the most attention from historians? At times it maybe a generational touchstone as with the assassination of John F. Kennedy. Scholars write about a seminal event in their lifetime. For others it could be a cultural fascination and still others a deep seeded desire to understand how and most importantly why.

It is easier to comprehend why so many works have been written on some general subjects – such as war or noted individuals. However it is difficult to understand why certain events are overanalyzed and others receive little scholarly attention. Five centuries from now when historians look back to the twentieth century – it will be seen as one of vast human conflicts and the opening of a new age. The launch of Sputnik I on 4 October 1957, was the first day in the space age – where humanity took its initial infant steps off this planet. It was one of the most important events of an overall century of scientific achievement unlike any seen in history. It is curious that an event that marked the tomorrow of a new era has so little attention in works by American scholars. Perhaps it is a simple as “we” did not achieve this great accomplishment – it was the Soviets. Why Sputnik has not received an overabundance of scholarly attention does not negate the fact Sputnik was a world altering event – it marks the beginning of the era we all currently occupy.

The Soviets’ “fellow traveler” orbited the Earth, almost everyone has recognized Sputnik’s importance as a world-changing occurrence. From the NBC commentator who said
that Sputnik “forever more separates the old from the new,”\textsuperscript{1} to Arthur C. Clarke who called it “one of the greatest scientific advances in world history,”\textsuperscript{2} thoughtful people then and now see the Soviet satellite as the center of a whirlwind of change that occurred during the latter half of the twentieth century. There has also been an almost uniform thesis regarding Sputnik’s impact on the American people. Sputnik I was launched, the American people became more fearful about the status of U.S. defenses and technology, and America’s leadership failed to appease them for some time. This theory has been advanced through books, articles, and documentaries on the subject for the past forty years.

But just because this has been a widely accepted conclusion it does not make it so. In fact, making the assumption that something is a fact just because everyone’s analysis seems uniform is a fallacious approach to the study of history. Of course there are many facts that are incontrovertible. The Sputnik satellite was launched on 4 October 1957—this is a fact that cannot be questioned because it is one based on a physical event that was witnessed. But conclusions of analysis can be and should be scrutinized by other scholars, regardless of how accepted it is amongst them.

The theory that America reacted with overt concern and worry almost immediately after Sputnik I was launched is certainly open to question. To begin, the evidence used to sustain the theory is flawed. The emphasis on media reaction as a barometer of public consciousness provides the foundation of the thesis. The results of public opinion polls from the period are also open to interpretation as to what caused any kind of negative polling numbers evaluating

\textsuperscript{1} “Red Moon Over the U.S.,” \textit{Time}, October 14, 1957, 19.
America’s leadership. Were Americans truly concerned over Sputnik, or was it a shaky economy and other domestic issues that worried the average person? The common assumption about a panicked America also assumes a nationwide reaction. But how did regional reactions affect polling numbers? Case in point—negative poll numbers for President Eisenhower from the South were at least partially attributable to the Little Rock integration crisis that occurred a month before Sputnik.

There is able evidence that suggests a large number of Americans did not panic after the Soviets launched their first satellite. Most were certainly disappointed that America did not beat the communists to it and there was a sense of national embarrassment. But a sampling of the public mood in October, 1957, does suggest that many Americans, perhaps a majority, were not hysterical and trusted that their leaders would take action to match the Soviets’ achievement and would keep American safe. There is also evidence to suggest that many Americans agreed with President Eisenhower’s assessments of Sputnik I’s implications.

When Sputnik and America’s reaction is viewed it must be done in the contextual framework of American society in the 1950’s. While not universal, American culture of the era had more trust in authority and leadership. There was confidence in the nation’s strength to meet its enemies on every front and win. Any fears were tucked away in the tiniest corners of Americans’ minds and only surfaced through some venues, such as civil education materials and popular films of the period.

The initial launch of Sputnik I was not enough to jolt Americans out of this confident mindset and create a sense of panic. Just like other crises of the 1950’s, Americans reacted with concern and regained confidence that U.S. institutions were capable of responding to Sputnik in
time. What changed this were the events that began to unfold in November, 1957, when the Soviets repeated their previous success with the launch of Sputnik II; a satellite of much larger proportions that seemed to clearly indicate that the Soviets had missiles capable of carrying nuclear warheads as far as the United States. Although the exact content of the Gaither Report was unknown, knowledge of its existence and the fears of what it may have contained led to wild speculation about what the Gaither Committee suggested regarding weaknesses in the nation’s defenses. The Democrats, finding a weakness in Eisenhower’s Administration, stepped up their attacks on the Republican President. Senate Majority Leader Lyndon Johnson started his investigative hearings soon after. Adding to the worry about Eisenhower’s ability to lead was the President’s stroke of 25 November, which made many people wonder if the aging commander-in-chief could still do the job. Finally, in December, the Americans were told that they too would be sending up a satellite, only to see it crash on the launch pad at Cape Canaveral, Florida.

It was this series of events in November and December, 1957, that created the true crisis and truly began a period of increased concern about America’s status in the Cold War conflict with the Soviets; not the initial Sputnik’s launch. Americans’ worst fears seemed to become a reality. Perhaps their leaders were fallible and their military did have weaknesses. Maybe there was room for question about America’s capability to compete in a rapidly changing world. The ethos of American culture in the 1950’s was called into question, and the once submerged fears were brought closer to the surface.

There is sufficient evidence to support the argument that the public as a whole did not overreact until the events of November 1957, began to confirm their worst fears. The launch of
Sputnik II brought forth trepidation about what Russia’s initial lead in the space race meant for America’s position of strength in the Cold War. Sputnik began a series of political debates that dominated American politics into the next decade. The missile gap dominated the partisan politics of the late-1950’s, as Democrats attacked the Eisenhower Administration for allowing America’s defenses to weaken and for permitting the Soviets to gain a lead in missile technology. Many Republicans were also concerned, but were more restrained in their criticism of President Eisenhower for fear of weakening their party’s position nationally. Some administration critics like Stuart Symington attacked the administration for its defense policies before the Sputniks were launched. But the crisis that developed in the months after the communist satellites orbited the Earth made the theories of administration critics like Symington appear more credible.

This post-Sputnik criticism certainly had an impact on the legacy of Dwight D. Eisenhower as President of the United States. For the first two decades after his presidency ended, many scholars regarded Eisenhower as the grandfather who played golf through his eight years as President while Americans had their heads in the sand. Much of this flawed image of Eisenhower was only later corrected by the declassification of important documents and the scholarship of such historians as Stephen Ambrose and Fred Greenstein. But where did the idea of Eisenhower as a weak President originate? There are many causes of it, but among the chief culprits is the scathing attacks Eisenhower suffered after what many considered to be his lackluster reaction to the Sputnik crisis. His last few years in the White House were definitely his most challenging and Eisenhower’s image was never quite as solid as it was before 1957. Sputnik initiated a series of crises that would tarnish Eisenhower’s presidential legacy for many
years to come, and brand the President with a legacy of being inarticulate and anti-intellectual. Only within a relatively recent period has his stock as a president been raised from the lower end of presidential performance rankings.

While Sputnik diminished one man’s presidency, it did much to create opportunities for another man to become president. Before the Sputnik crisis, John F. Kennedy was just another young politician who’s main claim to fame in national circles was his good looks and excellent public speaking ability. Most of the people who knew his name nationally were only those who followed the Democratic Party closely. But with Sputnik and the apparent credence it leant to the missile gap theory, Kennedy found an issue to run a national campaign on. He became one of the leading democratic critics of the Eisenhower Administration and warned Americans that danger lay ahead if major changes were not made. Kennedy’s opponent, Richard Nixon, had to shoulder the legacy of Eisenhower’s administration without the stature that the former general had with the public. Kennedy was free to attack everything that went wrong from Sputnik to the Francis Gary Powers U-2 incident of 1960, which itself indirectly resulted from the post-Sputnik crisis. The rocket that launched Sputnik into orbit also helped to propel John F. Kennedy into the White House in the 1960 elections.

Other changes resulted from the Sputnik crisis besides who occupied the White House upon the conclusion of Eisenhower’s presidency ended. Before the Soviets launched their first satellites, most Americans regarded space exploration as a fanciful notion that was further in the future. Their nation’s modest pre-Sputnik space effort reflected that attitude. Most Americans did not pay much attention to the Vanguard programs or the International Geophysical Year that spawned it. The Sputniks opened peoples’ eyes and brought the future into their present. The
space program became a number one priority as the Cold War’s climate combined with science and engineering skill to make the space race something that would become a strong force in the nation’s public consciousness for decades to come.

Almost all of America’s future space efforts were born in the aftermath of Sputnik, as its leaders and public finally encouraged scientists and engineers to think big and find ways to create spectacular space-related accomplishments. The National Aeronautics and Space Administration (NASA) was born in this atmosphere. America’s satellite development, astronaut program, and the projects that eventually landed the first people on the Moon were developed under NASA’s banner. While Sputnik made its imprint on America’s early space efforts, so too did Dwight D. Eisenhower, who has not received nearly enough credit for his contributions to the American space program. It was his firm belief that space exploration should be a civilian endeavor only supported by military resources that led to the creation of NASA as a civilian organization. This action showed the world that United States wanted to explore space for the benefit of all humanity. It was also President Eisenhower who approved the initial funding for what became the Mercury program that sent America’s first astronauts into space and the first funds for research into rocket engines that would ultimately develop into the Apollo-Saturn booster series; the machines that brought the first humans to the Moon.

While Eisenhower made important contributions to civilian space efforts, he also secretly worked to use space-related technology to benefit America’s intelligence gathering capabilities. He was the driving force behind the CORONA Project that created America’s first spy satellites. From that time to the present, satellites have been one of the most important intelligence
gathering tools in America’s arsenal, and the thanks for this tool’s existence go to the post-
Sputnik environment and to President Eisenhower’s leadership.

Satellites have not only proven to be useful for gathering intelligence or scientific data.
They have altered the very fabric of our life -- in terms of how we interact with and use
technology. The live reports from all over the world the viewing public sees on the news today
is made possible by satellites. Television in general has been revolutionized by satellite
technology, replacing the old methods of broadcasting that involved airing a show on the east
coast then sending a kinescope copy to California to air on the west coast. Phone technology and
telecommunications have been greatly improved by the use of satellite communications. In a
sense, they have made the world smaller, as images and sound are now, to quote one
documentary, “plunged through the ether at the speed of light, reducing time and space to
milliseconds.” Satellites have made modern weather prediction possible – saving tens if not
hundreds of thousands of lives since the first weather satellites orbited the globe over forty years
ago. Sputnik I’s transmission represented the first step in that process of change.

Yet the Soviet satellite’s implications stretch beyond just technological advancement.
Another change that resulted from the Sputnik crisis was embodied in the National Defense
Education Act (NDEA), and the dialogue about education that started in fall 1957. Before that
time, the philosophy of American education was local control with minimal, if any, federal
involvement. It was not the business of Washington to tell local school districts how to run their
schools. Because Washington had little or no control over schools, the national government also
had little responsibility for funding schools.

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3 Discovery Communication, *Flight Over the Equator* (Discovery Channel/Assignment Discovery, 1998).
The NDEA represented a change in the latter, although the federal funding for education that was part of the act was modest. As for the former, the Act still left control of public schools almost strictly in the hands of the local school districts. However, the precedent for Washington’s involvement in education was set by the NDEA. Because of this precedent, the Federal government not only began actively funding public education, but has steadily increased its direct involvement in public schools over the past forty years. The journey to such Federal education initiatives began with the National Defense Education Act, and the latter originated from the Sputnik crisis.

The Soviet satellite, and the American space initiatives that followed, also inspired many members of a younger generation to take part in one of the greatest eras of change in history. One need only read the memoir of retired NASA engineer Homer Hickham, who as a boy saw Sputnik I cross the evening sky from his home in the small town of Coalwood, West Virginia.

I saw the bright little ball, moving majestically across the narrow star field between the ridgelines. I stared at it with no less rapt attention than if it had been God Himself in a golden chariot riding overhead….All my life, everything important that had ever happened had always happened somewhere else. But Sputnik was right there in front of my eyes in my backyard in Coalwood, McDowell County, West Virginia, U.S.A….I was a boy in Coalwood, West Virginia. All of a sudden, that wasn’t good enough.4

When Americans witnessed the Sputnik satellites orbit the Earth, launched by their Cold War competitor, they too decided that many things were not good enough. They witnessed the dawn of the space age and although the initial reaction by most may not have been all that positive, the tiny little “fellow traveler” eventually inspired future generations of Americans to reach for the stars.

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