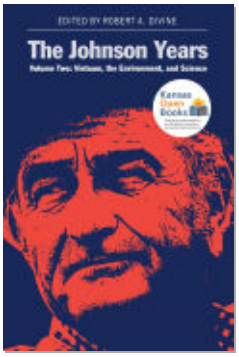
8. Lyndon B. Johnson and the Politics of Space



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8 | Lyndon B. Johnson and the Politics of Space

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ON OCTOBER 4, 1957, THE SOVIET UNION began the space age with the launching of Sputnik, the first man-made satellite to orbit the earth. Lyndon Johnson, who was then serving as Democratic majority leader in the Senate, exploited the sluggish response of the Eisenhower administration to this dramatic breakthrough and thus established his own credentials as the nation's leading political spokesman on the challenge of outer space. From that time on, LBJ's political career would be closely associated with every major policy decision relating to space, from the creation of the National Aeronautic and Space Administration (NASA) to the development of the Apollo program to put men on the moon.

Although nearly all observers agree that Johnson became identified in the public mind with the effort to conquer space, there is considerable controversy over the exact nature of his role. In his memoir *The Vantage Point*, LBJ asserted that from the first moment he learned about Sputnik until Americans landed on the moon in July, 1969, he was personally involved in every aspect of the American space program. Other commentators, notably George Reedy, disagree, claiming that Johnson initially seized on space for political advantage and that he never developed the deep commitment to this issue that he did to civil rights, education, and the war on poverty.[1] In fact, LBJ did develop a strong interest in America's space program, but it came about haltingly and only reached its full potential after he had become president. And even then, the competing demands of the Vietnam War prevented him from doing all that he could to advance the American effort in space.

I

Johnson's initial involvement in space issues reflects the ambiguity that marked his entire approach in this area. He was slow to respond to the opportunity presented by Sputnik, but once he had grasped its potential, he exploited it skillfully to gain maximum political advantage.

LBJ was at his Texas hill-country ranch when the Russians sent up Sputnik on Friday October 4, 1957. In *The Vantage Point*, Johnson claimed that on that very evening he conferred by telephone with aides in Washington, telling them to begin gathering data on the American missile and satellite programs. In a 1969 interview with Walter Cronkite, Johnson recalled having stared up at the sky that once seemed so friendly and now "seemed to have question marks all over it because of this new development" and realizing "that this country of mine might, maybe, perhaps not be ahead in everything."[2] Yet the record indicates that it was his mentor, Senator Richard R. Russell of Georgia, who urged him to take the lead in investigating the American failure to be first in space and that it was George Reedy, his chief Senate political aide, who pointed out the historical and political significance of Sputnik.

At his home in Winder, Georgia, Senator Russell, chairman of the Armed Services Committee, was bombarded with telegrams from other senators who demanded that his committee investigate the American missile program. Senator Stuart Symington of Missouri, who was already a possible Democratic presidential candidate in 1960, wired Russell on October 5, 1957, that he considered Sputnik "proof of growing communist superiority in the all-important missile field" and urged Russell to hold "complete hearings" before the full Armed Services Committee so that "the American people can learn the truth."[3] Symington, a former secretary of the air force in the Truman administration, had long been a critic of the Eisenhower defense program, and Russell apparently feared that Symington would turn Sputnik into a partisan crusade. The Georgia senator had long considered Lyndon Johnson as his protégé, a relationship that LBJ had nurtured, so Russell now decided to let the majority leader frame the Democratic response. As he explained later, "I had more or less turned this whole matter over to Senator Johnson."[4]

At Russell's suggestion, Johnson reactivated the moribund Defense Preparedness Subcommittee of the Senate Armed Services Committee in order to conduct a preliminary inquiry into the American satellite program. On Monday, October 7, Johnson telephoned members of his Senate staff, instructing them to notify the Pentagon of his intent; and on the same day, Russell told Symington and others who were calling for hearings before the full committee that he had authorized Lyndon to have the staff of his subcommittee "look into this matter and assemble all available facts for evaluation."[5]

Over the next ten days, Johnson took full command. At his direction, Preparedness Subcommittee staff members Solis Horwitz and

Gerald Seigel received a preliminary Pentagon briefing on missile and satellite programs and made arrangements for a fuller presentation to Senator Johnson and other key members of the subcommittee in early November. Meanwhile, Johnson flew back to Washington and met with the ranking Republican member of the subcommittee, Senator Styles Bridges of New Hampshire, and assured him that he would not turn the inquiry into a partisan attack on the Eisenhower administration. Johnson made the same point to Secretary of Defense Neil McElroy, telling him that Russell wanted to cooperate with the administration in an orderly inquiry that would have "a rather stabilizing effect" on Symington and other senators who were still demanding a full-scale committee investigation under Russell's leadership.[6]

II

Johnson shifted from behind-the-scenes maneuvering to public advocacy on Sputnik in mid October, largely under the prodding of George Reedy. Reedy himself was slow to grasp the impact of Sputnik until Charley Brewton, a former aide to Senator Lister Hill, flew to Texas to persuade Reedy that Sputnik offered both the Democrats, who were on the defensive because of the desegregation issue in the public schools after the Little Rock crisis, and Lyndon Johnson, personally, a chance to seize the initiative. On October 17, 1957, Reedy sent LBJ a long memo, urging him "to plunge heavily into this one."

Reedy stressed two points. First, Sputnik marked the opening of a new age in history: "The Russians have left the earth and the race for control of the universe has started." Just as the Romans had used roads to establish their dominion, the British had used control of the sea, and Americans had used their mastery of the air, the nation that could conquer outer space would dominate the world of the future, Reedy argued. In view of the importance of the issue and the failure of President Eisenhower to reassure the American people after Sputnik, it fell to Lyndon Johnson to take the initiative in educating the public on space by leading a congressional inquiry into the American missile and satellite program. By identifying himself with the new age of space, Johnson could advance his own political career and at the same time perform a vital national service. Above all, Reedy counseled, LBJ must rise above partisanship to conduct a fair and impartial inquiry, one that would be directed at uncovering the facts, not at assigning blame. "This may be one of those moments in history," Reedy concluded, "when good politics and statesmanship are as close to each other as a hand in a glove."[7]

Johnson quickly followed Reedy's shrewd advice. In two speeches in Texas, one at Tyler on October 18 and another at Austin on the next day, LBJ staked his claim to leadership on the space issue. In both addresses he spoke about the magnitude of the Russian achievement, declaring that the "Soviets have beaten us at our own game—daring, scientific advances in the atomic age"—and that "the Communists have established a foothold in space." He repeated, almost word for word, Reedy's comparison to the Roman and British empires to stress the importance of catching up with the Russians in space. And then he made space "a direct responsibility of mine," stating that he planned to use his Preparedness Subcommittee to "take a long careful look" at the American missile and satellite program. Finally, Johnson promised an impartial investigation, one that would be devoid of "charges and counter-charges. . . . Our need is to put aside our angers and to work together as we step into a new age of history."[8]

Two weeks later, after a long Pentagon briefing on the American satellite effort that Johnson, Russell, and Bridges attended, Russell authorized LBJ to "launch an all out investigation into all aspects of our missile and satellite programs" in hearings before his Preparedness Subcommittee. In private, Russell explained to Johnson that he had chosen LBJ over Symington, who "has a lot of information and would raise a lot of Hell, but it would not be in the national interest."[9] In his public statement on November 4 that announced these hearings, Johnson said they were not intended "to fix blame or put anybody on trial." Instead, the hearings would focus on "the question of what is to be done" and the search for "bold, new thinking in defense and foreign policy."[10]

In a telephone conversation with Bridges on the next day, November 5, Johnson lamented the administration's refusal to take Sputnik seriously, claiming that Secretary of State John Foster Dulles had told him that there had been no adverse reaction abroad. LBJ said that while he was not going to search for scapegoats, he was not going to cover up any wrongdoing either. And he added, "There is no question but to admit the Russians are ahead of us on this." When Bridges asked what he should say to the press about the hearings, LBJ replied, "Say you are in complete agreement with Senator Johnson and that this should be a national investigation instead of a partisan one."[11]

Thus, in the first month after Sputnik, Johnson, after a slow start, had taken control of the space issue. He used his close relationship with Richard Russell to outmaneuver his potential rival in 1960, Stuart Symington, who actually had better credentials in the missile field,

and LBJ capitalized on Reedy's advice to take a nonpartisan approach to win over Republican Styles Bridges. Most important, Johnson was establishing himself as the nation's leading political spokesman on space.

III

Lyndon Johnson moved quickly to organize the Preparedness Subcommittee's hearings. He asked Donald C. Cook, a utility executive who had worked with him on an investigation during the Korean War, to head the staff. When Cook declined, Johnson followed Cook's suggestion of Edwin L. Weisl, Sr., a partner in a prestigious New York City law firm, who accepted when Johnson stressed the importance of the inquiry to national security. LBJ allowed Weisl, who brought his son, Edwin L. Weisl, Jr., and a younger partner in his firm, Cyrus R. Vance, as his assistants, to plan the hearings and to select the witnesses. Johnson maintained close supervision over the preparations, with two trusted staff members, Solis Horwitz and George Reedy, working closely with Weisl. At the same time, LBJ kept Richard Russell informed about the subcommittee's plans.[12]

Once again it was Reedy who supplied Johnson with the best advice on procedure. Reedy reiterated the need to keep the proceedings strictly bipartisan in spirit, and he laid out the basic strategy that Johnson would follow at the hearings. To avoid excessive defeatism over Sputnik yet not to engage in the apparent complacency of the Eisenhower administration's reaction, Reedy suggested that Johnson present Sputnik to the American people as a challenge—one that would require "a call to action instead of a summons to a siesta." Comparing the Soviet achievement to Pearl Harbor, Reedy wanted Johnson to point out that the initial defeat had led ultimately to victory over Japan; "We lost the battle but we won the war." And so, Reedy argued, there was still time for the United States to rally from the shock of Sputnik and to beat the Russians in space.[13]

Johnson also received more practical advice on how to proceed. Reedy urged him to open the hearings with testimony by well-known scientists, who could suggest ways in which the United States could move ahead in its space program. In particular, Reedy warned against becoming bogged down in details of the missile program and advised him to avoid air-power advocates such as General Curtis E. LeMay. Instead of focusing on the issue of intercontinental ballistic missiles (ICBMs), the hearings should explore "what we can do to raise our level of technology and place ourselves in a position where we can

meet any Soviet challenge." But another of Johnson's advisers, lawyer James H. Rowe, Jr., also reminded LBJ of the political necessity of creating "a sense of urgency to counteract the complacency of the administration. . . . Lyndon Johnson's greatest contribution can be—and should be—to carry on psychological warfare against Eisenhower."[14]

Johnson displayed his mastery of the situation at a meeting of the subcommittee on November 22, 1957, three days before the hearings were due to open. He gained quick approval for his staff appointments, deftly outmaneuvered Symington's attempt to include General LeMay in the list of witnesses, and succeeded in limiting each senator to only ten minutes of questioning for each witness by what he termed "a gentleman's agreement." Above all, despite Rowe's advice, Johnson stated his intention of keeping politics out of the hearing chamber. Praising Styles Bridges for his cooperation, Johnson declared that "the sole objective of the inquiry is to determine ways and means of securing the defense of the United States." Appealing to patriotism, he vowed that there would be "no 'guilty party' in this inquiry except Joe Stalin and Nikita Khrushchev." The material that the subcommittee's staff had assembled, he warned, was so "deeply disturbing" that even "the most hardened ward-heeler would forget politics if he knew the facts." Therefore, Johnson promised, he would do nothing to embarrass the "one man who can give the orders that will produce the missiles. That man is the President of the United States."[15]

In stressing a bipartisan approach, Johnson was heeding Reedy's initial observation that Sputnik was a case in which good politics and statesmanship were "as close to each other as a hand in a glove." Undoubtedly, Johnson knew that the facts that he would bring out in the hearings would reflect badly on the Eisenhower administration and would force it to admit that mistakes had been made. But he also believed that he would be performing a patriotic service in forging a new national consensus to meet the Soviet challenge in space. He expressed his hope to President Eisenhower that the hearings "will make a constructive contribution to the security of our country."[16]

IV

Whatever Johnson's motives may have been, he conducted the hearings in such a way that the entire country would be fully aware of his role in responding to Sputnik. From the opening session in late November until the hearings concluded in January, 1958, LBJ was at center stage. He introduced each witness, made sure he was the first

senator to engage in cross-examination, and summarized the highlights of each day's testimony in his closing remarks. When witnesses discussed classified information in secret sessions, it was the chairman who briefed reporters afterwards about what had been said behind closed doors.

Senator Johnson set the tone for the hearings in his opening statement on November 25, 1957. Calling Sputnik a threat to the nation's security, "perhaps the greatest that our country has ever known," he cautioned against excessive pessimism. Asserting that the nation should accept the Soviet action in space as a challenge, LBJ asked Americans "to respond with the best that is within them." Again he stressed bipartisanship by declaring, "There were no Republicans or Democrats in this country the day after Pearl Harbor." Declaring that Sputnik was "an even greater challenge than Pearl Harbor," he expressed his belief that the facts that would be disclosed at the hearings would "inspire Americans to the greatest effort in American history."[17]

Johnson shrewdly allowed prominent scientists such as Edward Teller and Vannevar Bush to monopolize the early sessions, postponing testimony on the military implications of Sputnik and the tangled missile program until December. Teller was especially effective, advocating a trip to the moon, which he said would "have both amusing and amazing . . . consequences." Other witnesses, notably General James Gavin and Wernher von Braun, favored large rocket boosters that would be capable of sending a spacecraft to the moon. Such an ambitious effort, Gavin claimed, would require "the solution of many complex, difficult, challenging, scientific problems that all in themselves will contribute a great deal to understanding about the environment of man on the earth." Von Braun was even blunter, arguing that the conquest of space was of "tremendous military importance." In launching Sputnik, the Russians were in effect saying, "If we want to control this planet, we have to control the space around it," von Braun concluded.[18]

While the hearings continued, Johnson developed a carefully thought-out position on space, which he articulated in press conferences, public addresses, and letters to his constituents. The basic theme was familiar—the United States was facing "the most serious challenge to its security in our history" as a result of Sputnik, "a disaster . . . comparable to Pearl Harbor." Opportunity accompanied the danger, however. "The world is entering the Age of Space," he declared again and again, and there was still time for the United States to regain its rightful role of leadership. Comparing Sputnik to the Alamo, Johnson told a Texas audience that "history does not reward

the people who win the battles but the people who win the war." By rising above partisanship and pulling together, Americans could turn the new space era into "our finest hour." Johnson always closed his letters and speeches on a positive note. "The unknown is beckoning to us," he proclaimed. "Flights to the moon are just over the threshold," as the Age of Space gave promise of stirring times that "made his blood tingle."[19]

LBJ's attempt to identify himself as the nation's foremost spokesman on space came to a climax in early January. In an effort to preempt President Eisenhower's annual State-of-the-Union message on January 8, 1958, Johnson called a special caucus of Democratic senators for January 7, explaining to Richard Russell, "I cannot overemphasize what I believe to be the importance of this meeting."[20]

At this Democratic conference, Johnson made his boldest statement yet on the space race with the Soviet Union. In contrast to Eisenhower's attempts to play Sputnik down, LBJ pointed out the high value that the Russians were placing on outer space. In a rare partisan thrust, he blamed the administration's concern over a balanced budget for limiting the American satellite program; but Johnson's focus was on the future, not the past. "Control of space means control of the world," he stated bluntly. "From space, the masters of infinity would have the power to control the earth's weather, to cause drouth and flood, to change the tides and raise the levels of the sea, to divert the gulf stream and change temperate climates to frigid." He went on to warn that Soviet control of space, "the ultimate position," would be more dangerous than "any ultimate weapon." There was only one possible American response to the Russian effort to seize "the ultimate position," he concluded; "our national goal and the goal of all free men must be to win and hold that position."[21]

After this deliberate effort to seize the initiative from the administration on the space issue, Johnson moved to block efforts both by the staff of the Preparedness Subcommittee and by Senator Symington to issue a minority report that would be critical of the Eisenhower administration. Instead LBJ prepared a seventeen-point program that stressed such future goals as building large rocket motors for space flights and creating a new federal agency to direct the nation's space program. In what Cyrus Vance later described as "one of the most skillful pieces of diplomatic statesmanship that I have run across," Johnson won approval for his report in the course of one morning's subcommittee meeting, making only a few slight changes to ensure unanimity. Then he overcame a final roadblock by calling Stuart Symington, who had missed the crucial meeting, and reading him

the report over the telephone. Warned that if he dissented he would be alone, the Missouri senator, who was in the bathtub at the time, had no choice but to agree.[22]

By the time the subcommittee had completed its hearings in late January, 1958, Lyndon Johnson had succeeded in turning Sputnik into a personal political triumph. In their astute account of Johnson's techniques as Senate majority leader, Rowland Evans and Robert Novak cite this episode as a "minor masterpiece" in the larger Johnson tactic of advancing the interests of the Democratic party without directly confronting a popular Republican president. Yet the beauty of Johnson's approach was that he wrapped his political purposes so artfully in bipartisanship that someone as close to the scene as Edwin Weisl, Sr., could argue that LBJ had scrupulously avoided playing politics with the Preparedness Subcommittee hearings. "I admired your passion for unity," Weisl wrote to Johnson, "on matters concerning the survival of our beloved country."[23]

Johnson, quite rightly, gave much of the credit to Richard Russell, especially for serving as a "brake" on his "impetuosity." In a letter to the Georgia senator in late January, 1958, LBJ expressed his "heartfelt thanks for the way you stood by me during a very difficult and trying period."[24] Johnson's private correspondence also suggests that he was moved by more than purely political concerns. Apparently he did feel that Eisenhower's lack of concern over Sputnik was endangering the nation. As he wrote to a friend on the eve of the hearings, "It may be essential to infuse boldness into those who have not exhibited it in the past, but who are obviously the only people in a position to act." And after the hearings were over, he took pride in "arousing our people to the implications of the present danger. . . . There is certainly more a sense of urgency in Washington now than there was several months ago."[25]

In responding to Sputnik, Johnson appears to have been moved both by political expediency and by a genuine sense of national peril. As George Reedy had pointed out, this was one of those rare times when what was good for Lyndon Johnson politically was also good for the nation. From this time forward, Johnson would be identified in the public mind as an advocate of an expanded American effort in space. Unfortunately, LBJ's fondness for hyperbole had led him to overstate the military importance of exploring outer space and to play down its scientific value. As a result, Johnson was responsible for popularizing the concept of a space race with the Soviet Union that would distort the American space effort in the 1960s.

V

In 1958, Johnson adopted a more statesmanlike pose as the leading architect of the new American space agency. Shifting his attention from the contest with the Russians to the control and direction of the national effort in space, LBJ once again used his legislative skill to serve both the nation and his own growing political ambitions.

On February 6, 1958, the Senate voted to create the Special Committee on Space and Aeronautics, which was to frame legislation for a permanent space agency. Johnson packed the committee with senior senators, all busy with their own committee chairmanships and all heavily indebted to LBJ. It was not surprising, therefore, that at the first meeting of the special committee on February 20, LBJ was unanimously chosen as its chairman and was given free rein to select its staff and to decide on its agenda. The key question to be resolved, Johnson explained to his colleagues, was who in government "should have jurisdiction over scientific aspects of space and astronautics."[26]

In his dealings with the Eisenhower administration about the formation of the new space agency, LBJ displayed his usual deft touch. Careful not to overplay his hand, he let the administration take the lead in proposing new legislation; he would prefer to be a watchdog, looking out for loopholes and weaknesses to correct. As he explained to the president, the American effort in space could not be "wrapped into one neat little package. It reaches into practically every aspect of human endeavor and it is going to require an extraordinary effort." But Johnson did promise "wholehearted cooperation" in "what we anticipate will be a joint enterprise."[27]

President Eisenhower responded on April 2 with draft legislation that would expand the thirty-year-old National Advisory Committee for Aeronautics (NACA) into the new National Aeronautics and Space Administration (NASA). A director, who would be appointed by the president, would head the new agency, aided by a seventeen-member advisory board, which would have no administrative responsibility. The staff of Johnson's special committee immediately focused on the chief weakness of this clumsy arrangement—the failure to provide for a central policy-making body that would resolve potential conflicts between civilian and military space projects. Aware of the jurisdictional disputes that had plagued the American missile program, Johnson's aides warned that the administration's proposal did not give NASA the clear-cut "authority over the entire space program so that it can be handled with foresight rather than on a trouble-shooting basis." Therefore they recommended that the Senate insist on a small "Policy Board" of five to seven members, which would be

charged with formulating "the aeronautic and astronautic policies, programs and projects of the United States."[28]

In the ensuing legislative process, which included brief public hearings and protracted redrafting sessions, Johnson let his staff do most of the work. He became absorbed in other issues, especially attempts to alleviate heavy unemployment, which had been caused by the 1958 recession. Gerald Seigel and Edwin Weisl, Sr., did the actual legislative drafting, aided by George Reedy, who was distressed by Johnson's lack of interest. "We'd shove the bills into Johnson's hands and get him to introduce them and that's the way the act emerged," Reedy recalled twenty-five years later.[29]

Johnson, however, did involve himself personally; he insisted on a central board to set policy and to decide between conflicting civilian and military proposals about space. At the special committee's hearings, he grilled administration witnesses on this point, asking the director of NACA, "Under this bill. . . , who is going to make the decision as to who controls what? Now who . . . is going to decide what is civilian and what is military?" At Johnson's insistence, the Senate bill included a provision for the nine-member Space Council, including the secretaries of State and Defense, the director of NASA, and the head of the Atomic Energy Commission (AEC), to set comprehensive space policy and to designate specific programs.[30]

President Eisenhower refused to accept the Space Council at first, fearing that it would be a powerful body, on the order of the National Security Council, that would consume too much of his time and attention. When the legislation became stalled in a conference committee, Ike finally asked for a personal meeting with LBJ in order to explain his desire for a purely advisory body, "not one which makes decisions." The two men met on Sunday July 7, 1958, and quickly reached agreement. When Eisenhower expressed his concern that the Space Council would make too many demands on him, Johnson suggested making the president chairman of that body. Ike accepted this compromise, telling James R. Killian, his science adviser, that he did so "in order to see the bill move ahead."[31]

President Eisenhower signed the act creating NASA on July 29, 1958. Lyndon Johnson could take pride that it contained the Space Council that he had fought so hard to create. Ike knew, however, that he had outmaneuvered Johnson. Over the next three years, the Space Council met on only rare occasions, and then with Killian, not Eisenhower, presiding. Johnson could not force the president to use the Space Council to give central guidance to the nation's space pro-

gram, but he did have enough power to block an administration move in 1960 to eliminate this body entirely.[32]

In the long run, Johnson was once again the real winner. He had continued to enhance his reputation as the nation's leading spokesman on space by appearing to be the father of NASA. At the same time, he had softened his image by toning down his hard-line rhetoric on the space race with Russia. Instead, he had gone out of his way to speak about working for a space effort that "will bring peace in our time." At the opening of the spring hearings, he had spoken of striving "to convert outer space into a blessing for mankind, rather than a threat of the destruction of civilization," adding that he had "no intention of rattling sabers among the stars." His real goal, he told one correspondent in April, 1958, was to engage in "the greatest of mankind's adventures" by promoting programs aimed at "searching out new galaxies of human thought." He even accepted the president's invitation to give a speech before the United Nations in November, 1958, in which he stressed American support for the peaceful exploration of outer space. In contrast to his nationalistic response to Sputnik, Johnson used the creation of NASA to develop a constructive approach to the challenge of space.[33]

VI

Lyndon Johnson's next major contribution to the American space program came in 1961, when he was serving as vice-president under John F. Kennedy. During his last three years in office, Dwight Eisenhower had kept careful budgetary limits on NASA, approving the Mercury program for manned flights around the earth in the early 1960s but rejecting plans for a lunar landing, which was estimated to cost $30 billion. When NASA advocates compared it to Columbus's voyage, Ike replied that he was "not about to hock his jewels" to send men to the moon. Although neither Kennedy nor Johnson made space a major issue in the 1960 election, most observers expected the new administration to speed up the American effort to catch up with the Russians in space.[34]

Even before JFK had taken office, he had decided to put his running mate in charge of the space program, both to exploit Johnson's reputation as a leading authority on space policy and to give him something useful to do. On December 20, 1960, after a meeting in Palm Beach, Kennedy announced that he would ask Congress to make the vice-president the head of the Space Council. Congress approved this change in April, 1961, enabling LBJ to become the formal head

of the agency that he had forced on Eisenhower and that now could begin to frame the comprehensive program that Johnson felt had been so conspicuously lacking in the previous administration.[35]

LBJ's first task was to help Kennedy find a new head for NASA. Jerome Wiesner, the president's science adviser who favored scientific experiments over manned space flight, had originally been given this assignment, but the scientists whom he asked to serve all declined, in part because they feared that Johnson would not give them a free hand in running NASA. In late January the vice-president conferred with Senator Robert Kerr of Oklahoma, who had succeeded LBJ as chairman of the Senate Space Committee. At Kerr's suggestion, Johnson met with James E. Webb, an experienced bureaucrat who had served in the Truman administration and who subsequently had managed one of Kerr's oil companies in Oklahoma. A shrewd "off-the-ballot politician," as Tom Wolfe has described him, Webb at first resisted LBJ's blandishments. But when Johnson persisted and Kennedy made a personal request, in which he assured Webb that he would be free to run NASA, subject only to the president's wishes, Webb agreed to serve. In time a close bond would develop between Webb and Johnson, but the new head of NASA made sure from the outset that the vice-president would not interfere with the way in which he ran the agency. Also, as Webb noted later, he sensed that while Kennedy wanted to use Johnson's expertise and reputation on space, the president was determined to make all the important policy decisions himself.[36]

Johnson quickly learned the limits of his power. In a memo to the president shortly after the inauguration, LBJ proposed that Kennedy delegate supervision over all national-defense and space agencies to the vice-president. On January 28, 1961, after a face-to-face meeting in the Oval Office, JFK sent Johnson a formal reply, turning him down gracefully. Instead of the general supervision that LBJ had requested, Kennedy asked Johnson to preside over National Security Council meetings when the president was out of Washington and to maintain close liaison with all governmental agencies that were concerned with national defense and space. To help Johnson carry out these duties, Kennedy told Johnson that he had asked these agencies, including NASA, "to cooperate fully with you in providing information."[37]

The first major decision on space policy during the Kennedy administration came in late March, 1961. James Webb, after spending six weeks in studying NASA's programs and budget, submitted a request for a 30 percent increase in NASA's Fiscal Year (FY) 1962 budget,

so as to permit a possible moon landing, tentatively scheduled for the mid 1970s, to take place before the end of the decade. David E. Bell, the director of the Bureau of the Budget, immediately raised objections, pointing out that such a large increase, slightly more than $300 million, could only be justified if Kennedy wanted to reverse Eisenhower's decision and make a moon landing part of JFK's effort "to catch up to the Soviet Union in space performance."

This dispute forced the president to turn his attention to the space program for the first time since taking office. In White House meetings that Johnson attended on March 21 and 22, 1961, Webb and Bell debated the question of expanding the space effort to include a moon landing in the 1960s. Johnson spoke out strongly in behalf of Webb's plans for a bigger program, but Kennedy finally decided to delay any decision on a moon shot. Instead, he compromised by approving $125 million in additional funds for NASA, which would be enough to speed up the work on the big boosters that would be necessary for flights to the moon.[38]

Events soon forced the president to act more quickly than he had intended. On April 12, Soviet cosmonaut Yuri Gagarin became the first man to orbit the earth; once again, the United States, which had postponed its first suborbital flight until May, had been outstripped by the Russians in space. Two days later, Kennedy discussed the possibility of an American flight to the moon as a way to get ahead of the Soviets, but he delayed making any decision when Webb told him that such an effort would require a program on the order of the Manhattan Project and might cost as much as $40 billion.[39]

A week later, after the fiasco at the Bay of Pigs had added a new sense of urgency to the effort to restore American prestige, Kennedy called Johnson to the White House to ask him to convene the Space Council and to consider how the United States could catch up with the Russians in space. In a brief memo the next day, April 20, the president spelled out the issues that he wanted LBJ to address. As part of "an overall survey of where we stand in space," Kennedy specifically wanted to know if "we have a chance of beating the Soviets . . . by a rocket to go to the moon and back with a man. Is there any other space program which promises dramatic results in which we could win?"[40]

Although the president would wait for Johnson's report before announcing his decision, it is clear that Kennedy had already made up his mind. His criticism of the Eisenhower administration for having fallen behind the Russians in missiles and space, his campaign theme of getting the nation moving again, and his intense sense of competi-

tion with the Soviets in the Cold War—all pointed to a moon shot as the only possible way of recapturing the respect of the world. And the choice of Johnson, the foremost advocate of an expanded American space effort, to conduct the study and to make the recommendations suggests that Kennedy was only ensuring that the moon shot would bear the stamp of authority. Johnson's role was to confirm a decision that the president had already made.

Whether or not LBJ understood the part that he had been asked to play, he performed it with skill and enthusiasm. Over the next two weeks, he met regularly with the Space Council to ponder the questions that Kennedy had asked. For technical advice, Johnson relied heavily on NASA officials, especially Dr. Hugh Dryden, a strong advocate of the moon-landing program that Eisenhower had refused to promote but that was still being planned for the 1970s as Project Apollo. On April 22, Dryden informed Johnson that there was "a chance for the U.S. to be the first to land a man on the moon and return him to earth if a determined national effort is made." The earliest possible date would be 1967, Dryden wrote, and the cost would be about $33 billion, $10 billion more than the projected NASA budget for the next ten years.[41]

LBJ then set out to develop a consensus for an accelerated Project Apollo. He expanded the Space Council deliberations to include Senators Robert Kerr and Styles Bridges, the chairman and the ranking GOP member of the Senate Space Committee, and he personally chose three private citizens to represent the general public—Frank Stanton of CBS, Donald Cook of American Electric Power Service, and George Brown, head of Brown and Root, the major Houston construction firm. All three were businessmen, and two, Cook and Brown, had been closely associated with Johnson in the past. LBJ also went outside the Space Council to consult with the leaders of the House Space Committee and with three key governmental military and scientific spokesmen, General Bernard A. Schriever of the air force, Admiral John T. Hayward of the navy, and NASA's Wernher von Braun.

The advice that Johnson received from these different sources all pointed to the same conclusion. Speaking for the businessmen, Cook stressed the importance of gaining "leadership in space," commenting that to strive for anything less would mean "a second-rate program, worthy only of a second-class power." General Schriever thought that it was "overridingly important" for the United States to win the space race with the Russians. Johnson at first kept relatively silent, letting others air their views, but as the meetings of the Space Council progressed, he began to speak out for a vigorous ap-

proach, and he challenged those who expressed doubts by asking, "Now, would you rather have us be a second-rate nation or should we spend a little money?"[42]

Johnson gave a clear indication of the direction in which he was moving in an interim report to Kennedy on April 28, 1961. Stating that nothing less than "world prestige" was at stake in the space race, LBJ admitted that the Russians were still clearly ahead. But he added, "The U.S. can, if it will, firm up its objectives and employ its resources with a reasonable chance of attaining world leadership in space during this decade." The way to do this, he concluded, would be through "manned exploration of the moon," which would have "great propaganda value" as well as providing the United States with the chance to develop the experience and technology for "even greater successes in space." Then, following Dryden's recommendations, Johnson told Kennedy that a moon shot was possible by "1966 or 1967," at a cost of an additional $10 billion over a ten-year period.[43]

With the April 28 memo to the president, Johnson's role in the Apollo decision was essentially over. He had done precisely what Kennedy had wanted: LBJ had built a strong case for a moon landing and had produced a unanimous recommendation from the bureaucracy. On May 8, Johnson submitted a much-longer document to Kennedy; this was a detailed budgetary analysis, prepared by NASA and the Pentagon, of the costs that would be involved in an accelerated moon-landing program. Then Johnson left on a three-week trip to Southeast Asia. On May 25, two days after he returned, Kennedy announced his decision in a speech to the Congress. Citing the support of LBJ and the need to overtake the Russians in space, the president declared, "I believe this Nation should commit itself to achieving the goal, before this decade is out, of landing a man on the moon and returning him safely to earth."[44]

There has been considerable speculation about one final aspect of Johnson's contributions to the space program during his vice-presidency—the choice of Houston for the manned space center for Project Apollo. Johnson and Webb have repeatedly denied that the vice-president was responsible for building this $60 million facility south of Houston, claiming instead that any political influence could be attributed to Congressman Albert Thomas of Houston, who chaired the appropriations subcommittee that funded NASA. While undoubtedly Thomas did exert his influence independently of LBJ, a recently released memorandum from Webb to Johnson on May 23, 1961, two days before Kennedy announced his Apollo decision, offers new insight into Johnson's role. Bringing LBJ up to date after his return from Southeast

Asia, Webb pointed out that both Thomas and George Brown "were extremely interested in having Rice University make a real contribution" to the Apollo program. Noting that Rice had 3,800 acres of land available and that NASA needed to establish a new research facility for Apollo, Webb told Johnson that he believed it would serve the national interest to build up a strong science and engineering center in the Southwest, similar to those that had grown up around Harvard and the Massachusetts Institute of Technology in New England and around the University of California on the West Coast. Noting the availability of easy water transportation of heavy rockets by barge to Florida, Webb saw the Houston location near Rice as very attractive, adding, "George Brown has been extremely helpful" in bringing this possibility to his attention.[45]

On September 19, 1961, NASA announced that it had chosen a site south of Houston on which to build its manned spacecraft center for Apollo, on one thousand acres acquired from Rice University. Friendly journalists repeated NASA's explanation for the choice: "The availability of year-round water transportation between centers gives the United States a major advantage in the race for the moon with the Soviet Union." Johnson had wisely followed Webb's advice to keep a low profile: avoid any "end-runs," and let "the merit of this program" permit it to move through Congress "with minimum political infighting."[46] The choice of Houston for the manned space center was not the result of crude political pressure by Lyndon Johnson; instead it resulted from LBJ's foresight in involving George Brown in the Apollo decision and in choosing a man as sensitive to political considerations as James Webb to head NASA. In his own indirect way, LBJ played as important a role as Albert Thomas in making Texas the focal point of the nation's expensive new effort in space.

VII

After Kennedy's tragic death in 1963, Lyndon Johnson was in a position, as president, to carry through on the original Apollo decision. Yet once in the White House, he found that many other issues competed with space for both attention and funding. Johnson never abandoned his determination to beat the Russians to the moon, but the course of events, especially the Vietnam War, forced him to impose some very real limits on the American effort in space.

Within a month of becoming president, LBJ had to face up to the very high cost of the decision to land men on the moon. In December, 1963, Budget Director Kermit Gordon explained that an increase of

$583 million in the NASA budget for FY 1965 made up almost one-third of all budget increases proposed for that year. Although Johnson had promised Virginia's Senator Harry F. Byrd, whose support was vital for pending legislation to cut taxes, that he would hold NASA spending to no more than $5 billion in 1965, the president finally told Webb that he would receive $590 million in new funds, in order "to give NASA a 'fighting chance' to accomplish the lunar landing within this decade." Although NASA would exceed the $5 billion ceiling by nearly $250 million, Webb promised to keep actual expenditures in 1965 just under that magic figure. Congress finally appropriated $5.25 billion "to maintain the lunar landing program and other manned space flight programs on schedule," in the words of Budget Director Gordon.[47]

This expensive commitment made Johnson fearful that the Republicans would hammer away at the Apollo program in the 1964 presidential campaign. In June, before the GOP convention, Milton S. Eisenhower wrote to Johnson, on behalf of a Republican study group that Eisenhower headed, to urge that the 1970 deadline for putting a man on the moon be dropped so as to permit a "sounder program for manned lunar exploration" at a much lower annual cost. Johnson tactfully replied that while he would not let the target date become a "straightjacket," he did not see any reason "to slacken in our nationally approved effort to reach the moon as soon as we can."[48]

The nomination of Barry Goldwater led to considerable activity in the White House in regard to space issues. Aware that Goldwater had called Apollo "a terrible waste of money" and had declared that "all manned space research should be directed by the military," Johnson's aides, led by press secretary George Reedy, prepared long memos defending the space program and developed breakdowns of NASA spending by congressional districts to show its beneficial effect. Campaign statements that were prepared by the Space Council declared that under Kennedy and Johnson, the United States "has narrowed the space gap" inherited from Eisenhower; they also repeated Johnson's May 20, 1963, statement, "I do not believe that this generation of Americans is willing to resign itself to going to bed each night by the light of a Communist moon."[49]

In the fall campaign, Johnson stressed other themes, notably economic abundance and a responsible foreign policy, but he did make occasional references to the continuing space race with the Soviet Union. Citing the danger of letting "those who would destroy freedom" achieve mastery of the universe, LBJ told a St. Louis audience on October 21 that the United States "must maintain a leadership for the free world in outer space." A week later, he declared in Los

Angeles, "You cannot be first on earth and second in space." Yet earlier that month the Russians had once again surpassed the United States by sending the first three-man spaceship into orbit. Warned in advance of the upcoming Soviet feat, Johnson had declined to issue a public statement promising that the two-man American Gemini would be launched early in 1965.[50]

Once he had safely been returned to the White House, Johnson took full advantage of the successful Gemini program to reinforce his public image as the leading architect of the American space effort. His aides planned Rose Garden ceremonies honoring the astronauts and trips to space facilities as ways to achieve what one aide termed "visible identification with the Space Program at a period of conspicuous successes." When Virgil I. ("Gus") Grissom and John W. Young made the first Gemini flight in March, 1965, LBJ telephoned them after their safe return. In a later visit to the manned space center in Houston, Johnson claimed that the United States was no longer behind in space; but he then went on to stress his peaceful goals: "The race that we of this generation are determined to be first in is the race for peace in the world." By the time of the fourth and fifth Gemini flights in December, 1965, Johnson was telling the astronauts that they had taken the nation "one-step higher on the stairway to the moon" and that this effort not only increased "our knowledge of technology" but also would lead "to a better life for all."[51]

Despite this high-flown rhetoric, Johnson was aware of the danger of overplaying his role. When aides asked him to approve of White House ceremonies to honor the astronauts after each Gemini flight, LBJ responded cautiously: "Let's play it by ear." He refused to be pinned down by the television networks, which wanted to have cameras recording all of his telephone conversations with the astronauts while in orbit. As he told Reedy, "I don't want overexposure attached to me." Yet the president was aware of Trendex polls that documented the strong public interest in the space program, with 69 percent approving the commitment to put a man on the moon before 1970.[52] In his own shrewd way, LBJ was trying to continue to extract the maximum political benefit from a program that he still believed was serving the national interest.

VIII

Throughout his presidency, Lyndon Johnson faced two major and closely related questions concerning space policy. The first dealt with the future: What goal should the United States seek beyond the moon

landing? The answer to that question increasingly came to depend on the available funding. Two developments in the mid 1960s—the expensive Great Society domestic programs and the unexpectedly high expenditures for the Vietnam War—caused a serious financial squeeze that tested LBJ's commitment to winning the space race and led to a sharp reduction in NASA's budget.

The issue of future space programs grew inescapably from the budget process itself. On January 30, 1964, the president asked James Webb to "review our future space exploration plans" and give him a progress report by May 1 and final recommendations by September 1. Johnson acted at the suggestion of his new science adviser, Donald F. Hornig, who pointed out the need to have a clearer idea of the nation's space goals in making decisions about specific budget items, such as a controversial nuclear rocket. The goal, Johnson told Webb, was to match "hardware and development programs to prospective missions."[53]

In his interim report in May, Webb began by stressing the progress that had already been made on a "ten-year $35 billion program" that was directed toward a moon landing by the end of the decade. Then in very broad terms, he sketched out possible future efforts, ranging from manned exploration of the moon to unmanned flights to the nearer planets, including "the landing of an instrumented payload on the Martian surface," a step that could help in "unraveling the long-term history and evolution of the solar system." Webb promised that in his September report he would evaluate these various possibilities and make some specific recommendations for the president to consider.[54]

After requesting several extensions, Webb sent LBJ his final report in February, 1965. It was brief, cautious, and quite conservative in its conclusions. There was no mention of manned flights to the planets or even of an orbiting space laboratory. Instead, Webb focused on two projects. The first would be "the exploration of Mars through the use of large unmanned soft-landing spacecraft." Calling this "a major undertaking" that would eventually cost more than $1 billion, Webb recommended aiming for a 1971 flight, with a possible fly-by of Mars in 1969. The second, which was soon termed Apollo Applications, was "a systematic program" of manned flights around the earth and to the moon, which would use the Saturn rockets and the Lunar Module that had been developed for Apollo. The result, Webb explained, would be "to extend into the new medium of space the leadership we now have an aeronautics."

Although Webb did attach a report by the Future Programs Task Force, which outlined longer-range missions for the 1970s and 1980s, such as orbiting space stations and the manned exploration of Mars, he limited his recommendations for the present to the unmanned Mars soft landing and the Apollo applications. These projects would not require any new rocket boosters, would "round out and strengthen our basic on-going space effort," and would do so "efficiently and at acceptable cost." This last consideration was clearly uppermost in Webb's thinking; presumably, it was what he thought Johnson wanted. White House aide Jack Valenti summed up Webb's report in an accompanying memo to LBJ in which he pointed out, "These recommendations require no major new launch vehicle systems . . . and assume that resources on the order of those currently programmed ($5¼ billion per year) will continue to be available."[55]

Webb's report reflected Johnson's determination to make the Apollo program his administration's primary goal in space and to avoid making any other commitments for the future. A report that was prepared by two Space Panels of the President's Science Advisory Committee in 1966 reinforced this position by calling simply for "a balanced effort" for the post-Apollo space program. While this report mentioned lunar exploration and unmanned planetary probes that would lead ultimately to manned flights to nearby planets, science adviser Hornig carefully added, "The Panels considered and rejected the idea of setting a new dominating space goal, such as a manned landing on Mars by a specific date."

Lyndon Johnson clearly had no interest in setting the agenda for the space program of the future. Instead, faced with growing budgetary pressures, he was intent on achieving the goal that he and Kennedy had set for the nation in 1961—landing men on the moon before the end of the decade. He would do everything he could to advance that goal through Project Apollo, even if it meant sacrificing vital first steps toward more ambitious space ventures.[56]

IX

The first financial squeeze on NASA came in the fall of 1965, when the administration began to plan its budget for the 1967 fiscal year. Space spending had reached its peak in newly appropriated funds in FY 1965 at $5.25 billion; the amount for FY 1966 was only slightly less, $5.17 billion. These figures were deceptive, however, for actual expenditures in FY 1966 were running at an annual rate of $5.6 billion

as Project Apollo began to reach full stride, using money that had been committed but had not been spent in previous years.

The timing was unfortunate. The heavy NASA spending coincided with the far-larger sums that were suddenly needed by the escalation of the Vietnam War in 1965. On November 22, 1965, Budget Director Charles Schultze, who had replaced Kermit Gordon earlier in the year, informed Johnson that FY 1966 expenditures were running at a projected rate of $108.8 billion, more than $8 billion in excess of the $99.7 that had been budgeted. Vietnam accounted for more than half of this increase; but the space program, with an overrun of $500 million, was the next-largest contributor, costing much more than any of the domestic reform programs.[57]

Table 8.1. The United States Space Budget, 1959–69 (in $ millions)

Fiscal Year	Appropriations for NASA	Expenditures by NASA
1959	305.4	145.5
1960	523.6	401.0
1961	964.0	744.3
1962	1,824.9	1,257.0
1963	3,673.0	2,552.4
1964	5,099.7	4,171.0
1965	5,249.7	5,092.9
1966	5,174.9	5,933.0
1967	4,967.6	5,425.7
1968	4,588.8	4,723.7
1969	3,990.9	4,251.7

Sources: Homer Newell, *Beyond the Atmosphere* (Washington, D.C.: Government Printing Office, 1980), p. 382; Richard Hutton, *The Cosmic Chase* (New York: New American Library, 1981), p. 201.

On the next day, Johnson sent a memo to the heads of all departments and agencies. Citing "the current expenditure outlook and all the uncertainties in Southeast Asia," he asked them to hold spending "*to the absolute minimum* required for carrying out essential responsibilities." Equally important, he summoned these officials to his ranch in Texas in mid December to review their FY 1967 budget requests. The need for fiscal restraint was reinforced by a memo from Gardner Ackley, chairman of the Council of Economic Advisers, who told Johnson that the only way LBJ could avoid asking Congress for an immediate tax increase would be to keep spending for 1967 under $110 billion.[58]

The economy drive that was necessitated by the Vietnam War led Budget Director Schultze to propose a cut of approximately $300 million in NASA's requested allotment. Giving "the manned lunar landing schedule" the highest priority, Schultze made most of the cuts in post-Apollo programs, notably Apollo Applications and the 1971 Mars soft landing. Webb fought hard for these future programs, forcing the budget director to acknowledge that his cuts would have "political repercussions" with both Congress and the aerospace industry. Johnson backed Schultze by agreeing to the $300 million cut, which put the NASA budget at an even $5 billion, but the president drew the line there. When Schultze submitted a plan for reducing the total budget by another $2 billion that would include a $300 million further reduction for NASA, Johnson refused, because the additional cut would mean delaying the moon landing until the 1970s.[59]

The FY 1967 budget cuts put James Webb in a very difficult position. Within the administration, he fought hard for a large-enough NASA budget to fund unmanned flights to the planets and to conduct basic scientific research as well as to carry out Project Apollo. Yet the scientific community, which favored unmanned flights and was skeptical about the moon landing, pushed hard for more money for space science. And in Congress, advocates of the space program on the key appropriations committees sought even more funding, both out of conviction and out of political consideration for the economic stimulus that the space program was providing for their constituents.[60]

The situation became particularly difficult during the spring of 1966 as Webb sought to persuade Congress to approve the lower appropriations bills for NASA in FY 1967. Space "hawks" in Congress resented cuts in the unmanned Mars flights and feared that the Republicans would accuse the administration of permitting the Russians to move "permanently ahead in the space race." At the same time, Webb asked Johnson for guidance on how to implement the budget cut, since it would mean releasing "some 20,000 people . . . from NASA operations, plus 60,000 from research and development and an additional five to ten thousand from construction by July 1, 1967."[61]

Although the two men conferred, there is no evidence of how LBJ instructed Webb to handle these firings. By May, 1966, Webb was resorting to his ultimate weapon, the fear of Russia's beating the United States to the moon. Claiming that he had done his best "to minimize any political risk to your Administration" from the cuts in NASA's budget, Webb warned that it would be impossible to maintain "a forward thrusting effort in space" in view of the reduced budget. Ap-

parently referring to Luna 9, an unmanned Russian spaceship that made a soft landing on the moon in early 1966, Webb added, "This is particularly true in light of what the Russians are doing and are going to do." The only way to regain the lead, he concluded, would be for the United States to increase spending dramatically. "My judgment is that the 1968 budget will be a major turning point," Webb concluded, "with indicated requirements on the order of $6 billion of new obligational authority."[62]

Although he must have known there was little chance of getting $6 billion in the FY 1968 budget for NASA, Webb fought hard for this goal. When Budget Director Schultze set a guideline of only $5.1 billion for NASA, Webb made his case for an additional $1 billion in a letter to the president on August 26, 1966. He reminded Johnson that in 1961, LBJ "had almost had to drive me" to recommend the expensive moon-landing program to Kennedy. Yet in just five years, with an expenditure of over $22 billion, they had built a space program that promised to reach the moon by 1969. Another NASA budget in the $5 billion range for 1968, however, would be disastrous, leaving Webb with "no choice but to accelerate the rate at which we are carrying on the liquidation of some of the capabilities which we have built up."

It was not the fate of Apollo that was at stake, Webb continued; rather, it was the future of the American space program. "There has not been a single important new space project started since you became President," he told Johnson. Although Webb was aware of the heavy burdens that were being imposed by the competing demands of the Great Society and the Vietnam War, he still felt that this failure to prepare new space ventures was "not in the best interests of the country." He regretted being so blunt, but the White House had recently asked him to draft a presidential speech on space, charting a course "that would constitute a ringing challenge for the next half century," and he felt that he had to let LBJ know his true feelings. If the president chose to make such a "ringing challenge," Webb would back him to the hilt; but such a commitment would require annual NASA budgets on the order of $6 billion for the next few years.[63]

Several weeks later, Charles Schultze sent to Johnson his rebuttal to Webb's August letter. He agreed with the director of NASA that the issue was future space programs, not the moon landing. Affirming the need to *"maintain its capability in manned space,"* including such possibilities as earth orbital stations and even a manned flight to Mars, Schultze still questioned the assumption that the United States, for fear of falling behind the Russians, should do everything

in space that was technically feasible. Above all, he challenged the idea that it was necessary to strive to keep "the *peak level of industrial manpower*" that had been achieved during the Apollo build-up. "The space program," he reminded LBJ, "is not a WPA."

Schultze claimed that a continuation of a $5-billion annual budget for NASA would carry only a slight risk of delaying Apollo beyond 1969 by reducing the production of Saturn V boosters from six to three a year. It would involve a setback for what he termed "NASA's ambitious plans for unmanned scientific flights," pushing back the soft landing on Mars to 1973, but still permitting Apollo Applications to proceed on schedule. The budget director specifically denied that a $5-billion figure would force "the liquidation" of some NASA capabilities, as Webb claimed. Instead, Schultze compared this sum to the $2 billion that was being budgeted in 1968 for elementary and secondary education and the meager $1.8 billion for the war on poverty. "I don't believe," Schultze concluded, "that in the context of continued fighting in Vietnam we can afford to add *another* $600 million to $1 billion in the space program in 1968."[64]

Johnson finally resolved the dispute over the space budget in December in a meeting at his Texas ranch, which was attended by Webb, Schultze, and White House aid Joe Califano. This conference was held after Webb had told Califano that out of loyalty to LBJ he was ready to "fit the space program" to whatever "budget number" that "Charlie [would] give him." In fact, the two antagonists had narrowed down their differences from approximately $1 billion to less than $300 million. Schultze and Webb agreed that "we must continue our manned space flight capability, . . . that we should *not* announce a major new goal—like sending a man to Mars, that we can mount, at a reasonable cost, a useful series of Post-Apollo flights" involving "a number of important long-duration earth-orbit experiments."

They disagreed on two issues—namely, the cost of these future programs and the budgetary margins that would be required in order to ensure success. Schultze proposed limiting the amount that would be budgeted for post-Apollo efforts in 1968 to $455 million, while Webb wanted an additional $182 million for further tests of the equipment and for more scientific experiments. Webb placed ever greater emphasis on his request for $100 million more for Apollo. He wanted the money for insurance, as a cushion to provide financial flexibility in case of any unexpected setbacks in the moon-landing program. All the space flights to date, he pointed out, including the ten Gemini missions, had gone well, but "the margins between success and failure in these flights had been very thin." The budget cuts in 1966 and 1967

had forced NASA to "steadily draw down our margins." He pleaded for the extra $100 million for Apollo, as well as the $182 million for future programs, so as to build in a greater margin of safety. "I realize that these additional amounts are large," he concluded, "but I believe that the impact of an unsuccessful space program—which we would be risking unless they are provided—would be even more costly."[65]

Despite this ominous warning, Johnson sided with Schultze and held the NASA budget for FY 1969 to just over $5 billion. Webb took this setback gracefully, telling LBJ that he would "strike a very positive note" in explaining the administration's decision to the press and to Congress, calling it part of a continuing effort "to deny the USSR a hostile hegemony in space." Webb then sent the president the outline of a proposed public statement, which referred to "a strong space program of which Americans can be proud." But the future, Webb explained, was not so certain. "The manned lunar landing schedules must today assume the virtually total success of each test, each delivery, each flight if we are to meet the target date." And unless the administration were to begin building more Saturn boosters than was currently planned, "we will have, at best, a costly gap; at worst, a lack of space flight capability in the years to come." Thus Webb raised the specter of a space gap in the 1970s, reminiscent of the very situation that Johnson had warned the nation about after Sputnik.[66]

Webb's fears reflected the zeal of the bureaucrat, not a measured assessment of the Johnson space program. Despite the onset of the Vietnam War in 1965, the amounts spent on space, as opposed to the budget figures, actually rose in 1966 to $5.9 billion and remained at a relatively high level of $5.4 billion in 1967. The editors of *Aviation Week and Space Technology* recognized this fact in praising Johnson in January, 1967, for having resisted growing pressure from Congress to make sharp cuts in space spending.[67]

In fact, Johnson was pursuing what he perceived to be the continuing national consensus on space. A White House survey of the views of congressional leaders in late 1966 revealed strong sentiment for cutting NASA's budget, especially the post-Apollo program. But no one wanted to limit Apollo. Thus, Republican Congressman Gerald Ford commented, "Do not touch the moon program," while Democrat Carl Albert warned that the administration could not "take the risk of losing the race to the moon." Webb told associates that he thought LBJ was beginning to lose "his original enthusiasm" and even had "become indifferent" to the space program under the strain of Vietnam and the resulting antiwar turmoil.[68] But LBJ's commitment to Apollo never wavered. As a realist, he was forced to sacrifice the less-popular post-

Apollo program in order to preserve his enduring priority—sending an American to the moon ahead of the Russians.

X

What Webb had feared most finally occurred on January 27, 1967—a fire swept through the Apollo command module during a stationary test at Cape Kennedy, killing astronauts Roger B. Chaffee, Edward H. White III, and Virgil I. Grissom. Johnson learned of the tragedy that evening from Webb, who then took charge of the subsequent investigation and report, which was critical of NASA's procedures. By letting his agency shoulder the blame, Webb spared the president from political damage, but the space program never fully recovered. From this time forward, there was growing resistance from the public and Congress in regard to heavy spending for NASA, and there was increasing skepticism about the need to beat the Russians to the moon.[69]

A crisis in fiscal policy during the summer of 1967 proved to be an even greater problem. Faced with a potential budget deficit of $29 billion as a result of the Vietnam War, Johnson decided to ask Congress for a 10 percent increase in income taxes. Even then, warned economic adviser Gardner Ackley, without corresponding cuts in spending, the nation would face a runaway inflation that "would make it *almost impossible . . . to sustain prosperity and job opportunities after Vietnam.*" Aware that Congress would not raise taxes without making major reductions in spending, Johnson decided to pare down the FY 1968 budget, which was still in the appropriations stage in Congress.[70]

Johnson and Schultze quickly agreed that NASA spending in 1968 should be held to just under $5 billion, almost $600 million less than the 1967 expenditure for space. To accomplish this goal, Schultze said it would be necessary to reduce the 1968 appropriation by $500 million, cutting it from $5 billion to $4.5. Webb at first resisted, claiming that Apollo was "just now getting back to speed" after the fatal fire and warning that the Russians would be "flying vehicles larger than the Saturn V by next year." But once he understood that Johnson was giving the tax increase highest priority, the NASA director agreed to go along with the reduced appropriation, though he still hoped to receive at least $4.6 billion.

Two issues remained to be settled. First, there was the question of where to make the reductions in NASA's budget. Charles Schultze outlined two alternatives: abandoning the 1969 target date for the moon landing or cutting back sharply on all of the post-Apollo pro-

grams. The budget director favored the first alternative, arguing that it would be better not to sacrifice long-term goals in order to land on the moon in 1969 when "technical problems" might make achieving this goal impossible. "Why not make a virtue out of necessity," he asked. But for Johnson there could be no abandonment of his and Kennedy's pledge to put men on the moon before the end of the decade; at the president's insistence, the half a billion dollars that was cut from NASA's budget came from such future programs as Apollo Applications and the soft landing on Mars.[71]

There was even more disagreement on how best to handle the cuts in Congress. In the House, strong pressure had built up over the summer to reduce NASA's budget by $400 million. Democratic leaders were willing to fight against such cuts, but Budget Director Schultze advised LBJ against such tactics, pointing out that the administration itself now planned to pare NASA spending by $500 million in 1968. "If the space program has to be cut this much," Schultze argued, "it would be better to have the Congress do it." Moreover, the administration's acceptance of congressional cuts would "help in the fight over the tax bill" by winning over conservatives who insisted on reductions in spending and even by pleasing "some of the liberals who have urged cuts in the space program rather than in the Great Society program."

Webb once again found himself in opposition. He claimed that any administration statements approving congressional reductions in NASA's budget would be viewed as a betrayal by those who had loyally supported Johnson's space program from the beginning. "The friends of the program," such as Republican Senator Margaret Chase Smith of Maine, would deeply resent it if the president " 'knifed' the very activities he had previously been urging them to support." At the very least, Webb wanted the administration to remain silent and let NASA "make the cuts internally."

Johnson sided with Schultze, issuing a public statement endorsing the congressional cuts. Citing the threatened deficit of $29 billion and the need for a 10 percent tax surcharge, LBJ declared, "The times demand responsibility from us all." Much as he regretted the circumstances, he agreed that "we must now moderate our effort in certain space projects," but he reaffirmed his ultimate goal: "to master the challenge of space."[72]

The $500 million slice in NASA's budget caused Johnson great personal anxiety. In late September, when Webb was about to go before congressional committees to endorse the budget cut, LBJ sent him a confidential telegram. "Be sure to make abundantly clear that

I do not choose or prefer to take one dime from my budget for space appropriations for this year," the president told Webb. He only did so because Congress "forced me to agree to effect some reductions or lose the tax bill."[73]

The outcome confirmed the conflicting views of Johnson's advisers. As Webb had predicted, space advocates in Congress felt betrayed by the administration's about-face, with Senator Smith declaring that LBJ had "literally pulled the rug from under those who direct the space program." But after some delay, Congress did enact the 10 percent income-tax surcharge, which Schultze felt was so crucial to the economy. When Congress appropriated $4.59 billion for NASA, Webb was able to cut enough from the future programs to hold actual 1968 expenditures down to $4.83 billion, a reduction of almost $500 million from his original estimate. And although Webb felt that "confidence" in the achievement of the moon landing before the end of 1969 had been lowered by the cuts, Johnson could still take comfort in Webb's assurance that "the goal of the manned lunar landing in this decade is preserved."[74] Despite the Vietnam-induced increase in taxes, LBJ's commitment to Apollo had survived intact.

XI

Lyndon Johnson's last year in the White House witnessed both the continued decline in the space budget and the first tangible sign that the United States would, in fact, land men on the moon by the end of the 1960s. With little debate, the administration accepted congressional cuts that reduced NASA's funds in FY 1969 from $4.3 billion to just under $4 billion. Although these reductions further weakened future space programs, they did not affect the moon-landing schedule. Before the end of 1968, two NASA flights put that effort on target: in October, Apollo 7 successfully tested the spacecraft for the moon shot on 165 orbits of the earth, and in December, Apollo 8 saw three astronauts fly around the moon and return to the earth without incident.[75]

James Webb, unfortunately, was not able to preside over these triumphs. In mid September, frustrated by growing opposition in Congress and by continuing budget cuts, he submitted his resignation to President Johnson, who quickly accepted it. For the first time, Webb felt free to make public his fear that cuts in the post-Apollo programs would enable the Russians to win the space race. Commenting on a recent unmanned Soviet flight to the moon, Webb claimed that it proved that the Russians were developing capabilities in space

"that could change the basic structure and balance of power in the world."[76]

Two of Johnson's assistants voiced sharp disagreement to the president. Donald Hornig, the president's science adviser, called Webb's statement "grossly exaggerated," arguing that the Russians, who had not yet developed a booster as large as Apollo's Saturn V, were at least a year behind the United States. Edward Welsh, head of the Space Council, was almost as blunt, calling Webb's comment on the Russian lead "inaccurate" and maintaining that "the U.S. has had more successful missions to the Moon and to the planets than has the USSR and has obtained more information about outer space in these missions."

The president, who realized that his own role in cutting back on NASA's budgets was involved, backed Webb to the hilt. His response to Hornig's suggestion that the President's Science Advisory Committee make a public report in regard to Webb's charges was negative: "Drop it! That is my feeling," he instructed his staff. He sent both Hornig's and Welsh's memos to Webb for a "prompt reply," suggesting that he have "all his scientists . . . support him and me." In his responses, Webb reiterated his belief that the cuts that Congress had forced upon the president, coupled with evidence of Soviet advances "across a broad spectrum," meant that "the present trends are against the United States." Johnson echoed this argument in his formal reply to Hornig on October 10, in which he turned down a public report by the Science Advisory Committee and defended Webb for loyally submitting to budget cuts which had been dictated by "overall fiscal requirements."[77]

No one knew better than did Lyndon Johnson how hard Webb had fought to preserve the post-Apollo programs; it was the president, not the director of NASA, who had decided to sacrifice future space programs to ensure the success of Apollo. The attacks on Webb served only to strengthen the bond between the two men. In his formal letter of resignation, Webb expressed his appreciation for LBJ's trust and then added, "You never failed to base your actions on a deep understanding that the space program, perhaps more than any other, opens mankind's door to the future." LBJ was equally appreciative. At a ceremony marking the success of Apollo 7, he awarded to Webb NASA's Distinguished Service Medal, and after the flight of Apollo 8 to the moon and back, Johnson termed Webb "the single man most responsible" for the success of the space program and "the best administrator in the Federal Government."[78]

Apollo 8 did in fact mark a triumphal finale for Johnson's contributions to the American space effort. During the six-day flight to

the moon, the president spoke both to the astronauts and to their wives by telephone, as TV cameras recorded the scene in the Oval Office. On December 26, with the Apollo spacecraft on its way back to earth, Joe Califano told LBJ that this mission indicated "the near certainty that we will be the first to land on the moon." Johnson apparently agreed, telling Webb the next day that "I have never been more proud of American scientific accomplishment than I am today." Apollo 8 touched off what one NASA official described as an "unprecedented wave of popular enthusiasm"; *Time* magazine even scrapped its original choice for "Man of the Year" in favor of Frank Borman, James A. Lovell, Jr., and William A. Anders, the three astronauts who had flown around the moon.

For Johnson, Apollo 8 was a fitting climax to all of his endeavors since Sputnik. In a White House ceremony on January 9, 1969, honoring Borman, Lovell, and Anders, LBJ recalled the early days of the struggle: "There were those men in our government who ten years ago fought to guarantee America's role in space. . . . I am glad that I was one of them." Noting that this was the last time he would take part in a space ceremony as president, Johnson concluded, "I am proud that I have stood with the space effort from its [illegible]s—and I am so glad to see it now flower in this most marvelous achievement."[79]

His pride was justified. From the time that he chaired the Preparedness Subcommittee hearings through his service as head of the Space Council under Kennedy, he had set forth the goal of achieving American preeminence in space. One can question the sincerity of his initial motivation, mixing, as it did, political expediency with concern for the nation's welfare. And one can also argue that Johnson placed too strong a nationalistic emphasis on the new frontier of space, reducing a vital scientific quest to a Cold War cliché. But Johnson's steadfast dedication to the goal of putting a man on the moon can never be doubted. His determination overcame all the obstacles, even the competing claims of the disastrous Vietnam War, to making good on the pledge that he and Kennedy had made to the nation.

In addressing Congress after Apollo 8, Frank Borman said that Archibald MacLeish had best captured "the feelings that we all had in lunar orbit" in a prose poem that MacLeish had written for the *New York Times* in December, 1968, as Borman, Lovell, and Anders were circling the moon. Lyndon Johnson must also have appreciated the poet's tribute to his finest achievement:

> To see the earth as it truly is, small and blue and beautiful in that eternal silence where it floats, is to see ourselves as riders

on the earth together, brothers on that bright loveliness in the eternal cold—brothers who know now they are truly brothers.[80]

Notes

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