

## CHAPTER 6

# SPACE IN THE POST-COLD WAR ENVIRONMENT

John M. Logsdon

In a thoughtful report issued in December 1992, one year after the dissolution of the Soviet Union, a blue-ribbon panel of the Vice President's Space Policy Advisory Board observed that "[T]he U.S. civil and national security space programs have evolved within a policy framework that reflected the international tensions, as well as the economic and technological constraints and alliance relationships of the Cold War period." The panel suggested that "[T]he end of the Cold War, advances in technology, and other developments present new opportunities for cooperation and progress in space." Given this reality, the group found it necessary to "transform the U.S. space program to meet the challenges of the new post Cold War era."<sup>1</sup> The report suggested the steps needed for such a transformation; its recommendations have as much relevance now as they did in 1992.

The title of this report, "A Post Cold War Assessment of U.S. Space Policy," carried with it an underlying assumption. That assumption was that the "cold war"—the protracted geopolitical, ideological, and military struggle that emerged after World War II between the United States and its allies and the Soviet Union and its allies, that never erupted into direct military conflict between the United States and the Soviet Union, and that ended with the collapse of the Soviet Union in 1991—

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1. Vice President's Space Policy Advisory Board, "A Post Cold War Assessment of U.S. Space Policy: A Task Group Report," December 1992, pp. v, vii. During the administration of President George H. W. Bush, there was in the Executive Office of the President a National Space Council, chaired by Vice President Dan Quayle and supported by a small staff. Supporting the Space Council was a Vice President's Space Policy Advisory Board, which was activated only in mid-1992. The members of the Task Group that prepared this report, in addition to the author of this paper, were all individuals with long and diverse experience in the space sector. They included Laurel Wilkening, Chair; James Abrahamson; Edward "Pete" Aldridge; Joseph Allen; Daniel Fink; John Foster, Jr.; Edward Frieman; Don Fuqua; Donald Kutyna; and Bruce Murray. The report can be found at <http://history.nasa.gov/33080.pt1.pdf> and <http://history.nasa.gov/33080.pt2.pdf> (accessed 9 November 2006).

had had an important and continuing influence on the content and character of the U.S. space program. Given the credentials of the panel, the members of which had long and varied involvement with the space sector, its assessment ought to reflect a reasoned perspective regarding the impact that the end of the cold war should have on the way the United States would henceforth carry out its space efforts.

The panel's report made a key observation that is central to the argument of this paper—that “the quest for leadership has been a fundamental objective of the U.S. space program.” Since the end of World War II, the “U.S. ability to influence the shape and flow of events around the world has been a core national interest.” Successive presidents “have recognized the contributions that the U.S. space program made to the perception of the United States as a leading nation.” With respect to the cold war, “in the 1960s, and for most of the next two decades, space leadership clearly meant besting the USSR in visible, challenging space exploration endeavors.” But, the panel observed, it was global space leadership that was the basic goal, with U.S.–Soviet space relations an important, but not the only, venue for achieving that leadership. At the time the panel report was issued in 1992, the then-current national space policy stated that “a fundamental objective guiding United States space activities has been, and continues to be, space leadership.”<sup>2</sup>

If this perspective is valid, then the end of the cold war would not have changed the importance of space leadership as the underlying goal of the U.S. space program, although different means for achieving that goal would have had to be pursued. If that is the case, then the end of the cold war would be less of a watershed in U.S. space policy than is usually thought. This paper will provide evidence in support of this conclusion.

The relationship between the cold war and U.S. efforts toward leadership in space is thus far from straightforward. The quest for global leadership, rather than direct U.S.–Soviet competition, has been the primary political influence on the evolution of the U.S. space program. As the 1992 panel observed, during those times in the 1957–1991 period when the Soviet Union loomed as a direct peer competitor of the United States, global space leadership indeed meant leadership in comparison to the Soviet Union. But at times when U.S.–USSR relations were not actively competitive, such as after the Cuban missile crisis, the period of U.S.–Soviet détente during the Nixon administration, and the latter years of the Reagan administration when the spirit of *glasnost* colored relationships between the two countries, the U.S. quest for space leadership continued. That did not change with the disappearance of the Soviet Union in 1991.

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2. *Ibid.*, pp. 1–2. National Space Policy NSPD–1, 2 November 1989, <http://www.au.af.mil/au/awc/awgate/nspd1> (accessed 8 November 2006).

## THE COLD WAR AND THE U.S. CIVILIAN SPACE PROGRAM

The focus of this paper is on the U.S. civilian space program, and particularly that major portion of the civilian program carried out by NASA. Certainly the U.S.–Soviet strategic and military rivalry during the cold war was a major influence on U.S. national security space efforts, but those will not be discussed in what follows. So, rather than repeat the word “civilian” below, the reader should assume that all references are to the civilian sector of U.S. space activities. The issue to be discussed is how the intertwining between the desire for global space leadership and the need to demonstrate space superiority vis-à-vis the Soviet Union shaped U.S. space efforts in the 1957–1991 period.

President Dwight D. Eisenhower, even after assessing the international and domestic political impacts of Soviet space successes in the aftermath of Sputnik, came to the conclusion that space leadership, particularly in highly visible space achievements, was not needed to preserve U.S. global standing overall. His efforts to avoid having a U.S. space program driven primarily by competition with the Soviet Union have been well documented. As two careful analysts commented, “[G]iven the political pressures for an all-out space race with the Soviet Union, the degree to which Eisenhower controlled the space policy agenda in the late 1950s stands as a considerable achievement.” Even so, “[I]t would be inaccurate . . . to suggest that he was ever really in command of events.” In fact, they conclude, “[E]arly U.S. space policy was indeed heavily determined by what the Soviet Union did.”<sup>3</sup> The Eisenhower administration in January 1960 issued a formal statement of national space policy that reflected the tension between trying to develop a U.S. space effort based on its inherent merits and one that was competitive with the USSR. The policy suggested that:

[T]o minimize the psychological advantages which the USSR has acquired as the result of space accomplishments, select from among those current or projected U.S. space activities of intrinsic military, scientific or technological value, one or more projects which offer promise of obtaining a demonstrably effective advantage over the Soviets and, so far as is consistent with solid achievements in the overall space program, stress these projects in present and future programming.<sup>4</sup>

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3. David Callahan and Fred I. Greenstein, “The Reluctant Racer: Eisenhower and U.S. Space Policy,” in *Spaceflight and the Myth of Presidential Leadership*, Roger D. Launius and Howard E. McCurdy, ed. (Urbana, IL: University of Illinois Press, 1997), pp. 39–40.

4. National Aeronautics and Space Council, “U.S. Policy on Outer Space,” 26 January 1960, in *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program*, Volume I, Organizing for Exploration, John M. Logsdon et al., ed. (Washington, DC: National Aeronautics and Space Administration Special Publication-4407, 1995), pp. 367–368.

This statement captures well the ambivalent stance of the Eisenhower administration; while desiring a space program of substantive value, it was virtually impossible to avoid the influence of Soviet achievements in space because of their propaganda impacts on U.S. interests abroad and on national morale at home.

Although President John F. Kennedy is best known with respect to space for challenging the Soviet Union to a race to the Moon, the reality is that he, too, was ambivalent about linking space achievement to cold war competition; he saw space cooperation between the U.S. and the Soviet Union as an alternate path to U.S. leadership. Kennedy's first inclination upon taking office was to use space as an area for tension reduction with the Soviet Union; in his Inaugural Address, the new president addressed the Soviet leadership, saying "Let both sides seek to invoke the wonders of science instead of its terrors. Together let us explore the stars."<sup>5</sup> In the early months of the Kennedy administration, there was a concerted effort to find feasible areas of U.S.–USSR space cooperation. But the 12 April 1961 flight of the first human in orbit, Soviet cosmonaut Yuri Gagarin, and its international and domestic aftermath convinced Kennedy that he had to compete in space with the Soviet Union in order to avoid a significant loss of U.S. national prestige and to demonstrate that the United States, not the Soviet Union, was the superior technological and military power.<sup>6</sup>

Kennedy's advisors were blunt in their linkage between space achievement and cold war competition. In their 8 May 1961 memorandum recommending that Kennedy set a lunar landing as a national goal, NASA Administrator James Webb and Secretary of Defense Robert McNamara argued that "[O]ur attainments [in space] are a major element in the competition between the Soviet system and our own . . . . In this sense, [they] are part of the battle along the fluid front of the Cold War." As he announced his decision to go to the Moon, Kennedy equated the venture with U.S. leadership, saying it was "time for this nation to take a clearly leading role in space achievement."<sup>7</sup>

The tension between the imperative to beat the Soviet Union to the Moon and the desire for overall space leadership was implicit in the program that the president approved in May 1961, which had as its central focus the lunar landing objective but also called for an across-the-board acceleration of U.S. space efforts. This tension surfaced in an argument between Kennedy and NASA Administrator James Webb as the president met with his advisors on 21 November 1962 to discuss the NASA budget. Kennedy declared "[T]his is important for political reasons, international political reasons. This is, whether we like it or not, in a sense a race . . . .

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5. Public Papers of The Presidents of the United States: John F. Kennedy, 1961 (Washington, DC: U.S. Government Printing Office, 1962), p. 2.

6. See John M. Logsdon, *The Decision to Go to the Moon: Project Apollo and the National Interest* (Cambridge, MA: MIT Press, 1970) for a detailed account of this decision.

7. James E. Webb and Robert McNamara, "Recommendations for Our National Space Program: Changes, Policies, Goals," 8 May 1961, reprinted in Logsdon, *Exploring the Unknown*, p. 444. John F. Kennedy, "Urgent National Needs," Speech to a Joint Session of Congress, 25 May 1961 in *ibid.*, p. 453.

Everything that we do ought to really be tied into getting onto the Moon ahead of the Russians." Webb retorted "Why can't it be tied to preeminence in space?"

As he prepared to leave the meeting, the president asked Webb to prepare a letter stating his position on why space preeminence, and not just being first to the Moon, should be the country's goal: "I think in the letter you ought to mention how the other programs which the Agency is carrying out tie into the lunar program, and what their connection is, and how essential they are to the target dates we're talking about, and if they are only indirectly related, what their contribution is to the general and specific things possibly we're doing in space."<sup>8</sup>

Webb's letter was sent to the president on November 30. In it, Webb said that in his view "[T]he objective of our national space program is to become preeminent in all important aspects of this endeavor and to conduct the program in such a manner that our emerging scientific, technological, and operational competence in space is clearly evident." Webb emphasized that "[T]he manned lunar landing program, although of highest national priority, will not by itself create the preeminent position we seek."<sup>9</sup>

President Kennedy seems to have accepted the basic argument made by James Webb—that preeminence in space should be the guiding objective of the national space program. In a 17 July 1963 press conference, Kennedy responded to a press report that the Soviet Union was not planning to send its cosmonauts to the Moon, saying, "The point of the matter always has been not only of our excitement or interest in being on the moon; but the capacity to dominate space, which would be demonstrated by a moon flight, I believe, is essential to the United States as a leading free world power. That is why I am interested in it and that is why I think we should continue."<sup>10</sup>

John Kennedy never gave up on the hope that the space relationship between the U.S. and the Soviet Union could be changed from competition to cooperation. With the October 1962 successful outcome of the Cuban missile crisis in hand, in 1963 Kennedy sought to engage the Soviet leadership in reducing global tensions through such agreements as the Limited Test Ban Treaty. Space was part of this "peace offensive." On 20 September 1963, Kennedy went before the General Assembly of the United Nations and said "[I]n a field where the United States and the Soviet Union have a special capacity—in the field of space—there is room for new cooperation . . . I include among these possibilities a joint expedition to the moon."<sup>11</sup>

8. "Transcript of Presidential Meeting in the Cabinet Room of the White House, November 21, 1962." This transcript can be found at <http://history.nasa.gov/JFK-Webbconv/> (accessed 7 November 2006).

9. James E. Webb, Administrator, NASA, Letter to the President, 30 November 1962, in Logsdon, *Exploring the Unknown*, p. 461.

10. "News Conference 58," John F. Kennedy Library and Museum, [http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Press+Conferences/003POF05Pressconference58\\_07171963.htm](http://www.jfklibrary.org/Historical+Resources/Archives/Reference+Desk/Press+Conferences/003POF05Pressconference58_07171963.htm) (accessed 25 August 2006).

11. Public Papers of the Presidents of the United States: John F. Kennedy, 1963, (Washington, DC: U.S. Government Printing Office, 1964), pp. 567–568.

Kennedy's top advisor Theodore Sorenson later explained this apparent switch in policy:

I think the President had three objectives in space. One was to ensure its demilitarization. The second was to prevent the field to be occupied [by] the Russians to the exclusion of the United States. And the third was to make certain that American scientific prestige and American scientific effort were at the top. Those three goals all would have been assured in a space effort which culminated in our beating the Russians to the moon. All three of them would have been endangered had the Russians continued to outpace us in their space effort and beat us to the moon. But I believe all three of those goals would also have been assured by a joint Soviet-American venture to the moon. The difficulty was that in 1961, although the President favored the joint effort, we had comparatively few chips to offer. Obviously the Russians were well ahead of us at that time . . . . But by 1963 our effort had accelerated considerably. There was a very real chance we were even with the Soviets in this effort. In addition, our relations with the Soviets, following the Cuban missile crisis and the test ban treaty, were much improved—so the President felt that, without harming any of those three goals, we now were in a position to ask the Soviets to join us and make it efficient and economical for both countries.<sup>12</sup>

Like Dwight Eisenhower before him, John F. Kennedy tried to avoid direct competition with the Soviet Union as the defining feature of the U.S. space effort, in his case by trying several times during his brief presidency to turn space into an area for cooperative tension reduction rather than zero-sum competition. Even so, much more than Eisenhower, Kennedy was willing to accept the alternative of U.S.–USSR competition if the cooperative option was not feasible. It is impossible to know what might have happened in this respect if Kennedy had been able to complete two terms as president. But with his assassination, the Apollo program came to be seen as one of his legacies, and there was no possibility of shifting it to a cooperative undertaking. Getting to the Moon before the Soviet Union became the defining goal of the U.S. space effort between 1963 and 1969. When, in 1968, it appeared as if the Soviet Union might send cosmonauts *around* the Moon, without landing, before the United States, the Apollo schedule was modified to insert the Apollo 8 circumlunar mission in December 1968. Although the public record supports the argument that this shift was made for programmatic reasons

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12. Theodore Sorenson interview by Carl Kaysen, 26 March 1964, in John F. Kennedy Presidential Library, Boston, MA.

having to do with the fact that the lunar landing module was not ready for a scheduled December 1968 test flight, some (including members of the Apollo 8 crew) have suggested that the threat of being beaten to the Moon by the Soviets was an important factor in the decision to fly Apollo 8 to lunar orbit.<sup>13</sup>

The next major opportunity for determining the character of the U.S. space effort came in 1969, as it became clear that the U.S. would soon achieve Kennedy's goal of a lunar landing "before the decade is out." On February 13 of that year the new president, Richard M. Nixon, asked for a "definitive recommendation on the direction which the U.S. space program should take in the post-Apollo period." The president chartered a Space Task Group chaired by Vice President Spiro Agnew to prepare that recommendation; the group's report was submitted to President Nixon on September 15. It noted that "for the short term, the race with the Soviets has been won" and that "[P]ublic frustration over Soviet accomplishments in space, an important force in support of the Nation's acceptance of the lunar landing in 1961, is not now present. Today, new Soviet achievements are not likely to have the effect of those in the past." Based on this reasoning, the Space Task Group proposed that the political goal of the post-Apollo program should be "to promote a sense of world community" by expanded international participation in U.S. space efforts, rather than to pursue another unilateral demonstration of U.S. strength through space achievements.<sup>14</sup>

The absence of visible Soviet competition in space at the end of the 1960s made such an approach feasible and reduced somewhat the political saliency of the U.S. space effort to overall U.S. foreign policy objectives.<sup>15</sup> As they discussed the significant cuts to the NASA budget that had been made in the immediate aftermath of the Apollo 11 and 12 missions, President Richard Nixon told NASA Administrator Thomas Paine that "[O]ne of our main troubles . . . is that the Soviets have not been flying dramatic missions for a long time" and that "[I]t was an unfortunate truth that new Soviet spectaculars were what the public needed to get interested in U.S. space activities."<sup>16</sup>

Such an approach reflected a more muted view of the impact of the cold war per se on U.S. space efforts. Rather than make bilateral space competition "part of the battle along the fluid front of the Cold War," the United States would use its space

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13. See Robert Zimmerman, *Genesis: The Story of Apollo 8* (New York: Dell, 1999) for a discussion of the various factors leading to the decision to fly the mission.

14. Space Task Group Report to the President, "The Post-Apollo Space Program: Directions for the Future," September 1969, Appendix A, pp. 7, 16, 27.

15. Although the U.S. intelligence community was aware of Soviet development of systems capable of sending cosmonauts to the Moon and of the failures of those systems, this information was not publicly available, and the Soviet Union denied that it had a lunar landing program.

16. Thomas O. Paine, "Meeting with the President," 22 January 1970; Memorandum for the Record, 22 January 1970, NASA Collection, University of Houston, Clear Lake Library.

capabilities as part of its strategy of global leadership, potentially in partnership with many other nations. As long as the Soviet Union remained a strong military and political power, there would be a challenge to U.S. leadership, but the events of the 1960s, from the Cuban missile crisis to the Apollo 11 lunar landing, had changed the nature of the cold war threat and its impact on U.S. space activities. The link between space capabilities and the U.S. global image was not lost on Nixon and his closest advisors. One of them, Caspar “Cap” Weinberger, commented as additional cuts to the NASA budget were being contemplated in mid-1971 that such cuts would provide confirmation that “our best years are behind us, that we are turning inward, reducing our defense commitments, and voluntarily starting to give up our super-power status, and our desire to maintain world superiority.” Nixon responded, “I agree with Cap.”<sup>17</sup>

Weinberger’s memorandum came in the midst of the debate over whether to develop the Space Shuttle as the next major U.S. space program. There is little specific mention of U.S.–Soviet competition in the arguments NASA put forth in trying to convince the White House to go forward with the Shuttle, although NASA Administrator James Fletcher did suggest in his “best-case” paper that “Man has learned to fly in space, and man will continue to fly in space. This is a fact. And, given this fact, the United States cannot forgo its responsibility—to itself and to the free world—to have a part in manned space flight.” He added, “For the U.S. not to be in space, while others do have men in space, is unthinkable, and a position which America cannot accept.”<sup>18</sup>

Rather than continue to compete with the Soviet Union in space during the 1970s, the United States pursued a cooperative strategy. The Space Task Group had suggested that “[I]n the case of the USSR, experience over the past ten years makes clear that the central problem in developing space cooperation is political rather than technical or economic.”<sup>19</sup> As part of its strategy of détente with the Soviet Union, the Nixon administration approved the Apollo–Soyuz Test Project; the 1975 “handshake in space” was intended to symbolize a new era in U.S.–Soviet relations, both in space and overall. This initial high-profile cooperative venture was potentially to be followed by a docking between a Space Shuttle and a Soviet *Salyut* space station and then by joint development of a larger space station.<sup>20</sup> However, this cooperation fell victim to increased U.S.–USSR tensions in the wake of the Soviet invasion of Afghanistan, and was never pursued.

17. Caspar Weinberger, Memorandum for the President, “Future of NASA,” 12 August 1971 in Logsdon, *Exploring the Unknown*, p. 547.

18. James C. Fletcher, “The Space Shuttle,” 22 November 1971 in *ibid.*, p. 556.

19. Space Task Group, p. 17.

20. A. P. Aleksandrov, USSR Academy of Sciences, and A. M. Lovelace, NASA, “Agreement between the USSR Academy of Sciences and the National Aeronautics and Space Administration of the USA on Cooperation in the Area of Manned Space Flight,” 11 May 1977, in *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program*, Volume II, External Relationships, John M. Logsdon, Dwayne A. Day, and Roger D. Launius, ed. (Washington, DC: NASA Special Publication 4407, 1996), p. 215.

Like Dwight Eisenhower 20 years earlier, President Jimmy Carter was not convinced that civilian space leadership was an essential element of U.S. global power. In his first space policy statement, issued on 11 May 1978, Carter listed “United States space leadership” as his third priority for civil space efforts. Later that year, another White House policy statement noted that “[I]t is neither feasible nor necessary at this time to commit the US to a high-challenge, highly-visible space engineering initiative comparable to Apollo.”<sup>21</sup> In this view, Carter was an exception to the judgment of the four presidents who had preceded him that space leadership was important.

As he entered the White House in 1981, President Ronald Reagan brought with him a strongly anticommunist perspective that colored his stance toward the Soviet Union in the first several years of his presidency. The U.S.–Soviet agreement on space cooperation that had been initiated in 1972 and renewed in 1977 was allowed to lapse in 1982. In the first Reagan administration statement of space policy, issued that same year, “space leadership” was once again identified as one of the “basic goals” of U.S. space activities.<sup>22</sup>

As NASA sought presidential approval for development of a space station in late 1983, Administrator James Beggs told President Reagan that “President Kennedy’s decision to go to the Moon chartered a course that resulted in leadership in space for the United States”; that “President Nixon, against the wishes of many, continued America’s commitment to leadership in space by approving the Space Shuttle”; and that “this focus on leadership in space was reaffirmed in your Space Policy.” Beggs suggested that “[I]n the 1990s, leadership in space will have a new dimension, something perhaps that Presidents Nixon and Kennedy could not foresee when they committed America to leadership in space . . . [T]he new dimension will be the presence of the private sector in space.” Beggs referred to the *Salyut* space station as “the centerpiece of the Soviet program” and said, “[W]hat worries me is what the Soviets are up to. What are they planning to fly in the late 1980s and the 1990s? Will they be successful in their plans to dominate space?” Beggs concluded his sales pitch by noting that “[O]ur leadership in space these past 25 years told the world that America was strong and that America accepted the challenge of space, and that she was equal to the responsibilities of leadership.” Asking the president to approve space station development, Beggs concluded his presentation by saying, “[T]he stakes are enormous: leadership in space for the next 25 years.” The final viewgraph accompanying his presentation to the president showed an artist’s conception of the

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21. Presidential Directive/NSC-37, “National Space Policy,” 11 May 1978 in Logsdon, *Exploring the Unknown*, p. 574; and Zbigniew Brzezinski, Presidential Directive/NSC-42, “Civil and Further National Space Policy,” 10 October 1978, in *ibid.*, p. 576.

22. White House, National Security Decision Directive Number 42, “National Space Policy,” 4 July 1982 in Logsdon, *Exploring the Unknown*, p. 590.

space station with the highlighted legend “a highly visible symbol of U.S. strength.”<sup>23</sup> Once again, the goal of space leadership and cold war competition were intertwined for a sympathetic president.

President Reagan not only approved space station development; as he announced his decision in his 25 January 1984 State of the Union address, he also said, “NASA will invite other countries to participate so we can strengthen peace, build prosperity, and expand freedom for all who share our goals.”<sup>24</sup> Although Canada and Europe had made contributions to the development of the Space Shuttle in the 1970s, this announcement escalated international cooperation in the development of the next major U.S. space program to a central feature of U.S. space strategy, marking a definite transition from the unilateral demonstration of national power that had fueled the Apollo program to an approach where the U.S. would demonstrate its leadership as the managing partner in a long-term, highly visible, multilateral undertaking. Still, the invitation to participate was limited to U.S. allies; the existence of the cold war still conditioned the U.S. move toward a cooperative approach.

By the end of Ronald Reagan’s second term in office, the end of the cold war was well in sight, as the reforms of Mikhail Gorbachev took hold and the Soviet Union struggled with its internal economic and political problems. Even so, in the aftermath of the Soviet launch of its very large Energia booster in May 1987, following on the launch of the core of the Mir space station a year earlier, *Time* magazine headlined the cover story of its 5 October 1987 issue: “Surging Ahead: The Soviets Overtake the U.S. as the No. 1 Spacefaring Nation.” The article suggested that the Soviet Union “had surged past the U.S. in almost all areas of space exploration” and that “if unchallenged, Moscow is likely to become the world’s dominant power in space by the twenty-first century.”<sup>25</sup> Twenty-five years earlier, this sort of report might have provoked a debate over how to respond to a new Soviet space challenge, but there was no such reaction in 1987. The U.S. space effort was focused on recovering from the January 1986 Challenger accident and on getting started with the space station, and Soviet space achievements were not perceived as a major threat to U.S. interests.

Rather, the United States revived its space cooperation agreement with the Soviet Union in 1987, and a year later Mikhail Gorbachev suggested to Ronald

23. NASA, “Revised Talking Points for the Space Station Presentation to the President and the Cabinet Council,” 30 November 1983 in Logsdon, *Exploring the Unknown*, pp. 595–600.

24. President Ronald Reagan, “Speech on the State of the Union,” 25 January 1984, <http://www.reagan.utexas.edu/archives/speeches/1984/12584e.htm> (accessed 8 November 2006).

25. Michael D. Lemonick, “Surging Ahead: The Soviets Overtake the U.S. as the No. 1 Spacefaring Nation,” in *Time*, 5 October 1987, <http://www.time.com/time/magazine/printout/0,8816,965658,00.html> (accessed 13 September 2006).

Reagan that the two countries cooperate in a human mission to Mars.<sup>26</sup> The final Reagan administration statement of space policy, issued on 11 February 1988, stated that “[A] fundamental objective guiding United States space activities has been, and continues to be, space leadership.” The statement went on to say that “[L]eadership in an increasingly competitive international environment does not require United States preeminence in all areas . . . . It does require United States preeminence in key areas of space activity critical to achieving our national security, scientific, technical, economic, and foreign policy goals.”<sup>27</sup>

### THE IMPACT OF THE END OF THE COLD WAR: LEADERSHIP THROUGH COOPERATION

This lengthy excursion into the three-way relationship between the cold war, the U.S. quest for space leadership, and the choices that have defined the U.S. civilian space program was intended to demonstrate that even before the end of the cold war the quest for global leadership, rather than direct U.S.–Soviet competition, had been the primary political influence on the evolution of the U.S. space program. Cold war competition was, of course, the single most important contextual factor influencing this quest for leadership in the 1957–1991 period, but it was a secondary, not fundamental, consideration.

If this analysis is accepted, then the end of the cold war should have had a significant, but not decisive, impact on space in the post-cold war era. An obvious impact, of course, was that the Russian Federation, which inherited most Soviet space capabilities, became a politically attractive space partner for the United States rather than a peer competitor. This was especially the case, given the economic problems faced by the new Russian government headed by Boris Yeltsin and the desire of President George H. W. Bush and the successor Clinton administration to support Yeltsin’s democratic reforms.

The United States was quick to recognize the changed situation. In 1992, the United States and Russia reached initial agreement to have the U.S. Space Shuttle rendezvous with the Soviet Mir space station; this initiative resurrected a cooperative concept that had been agreed to 15 years earlier. Then, in 1993, the White House embraced a proposal suggested by the NASA Administrator and the Russian space leadership to invite Russia to join the space station program together with the United States “friends and allies” that had been partners in the program since its inception. In

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26. Memorandum of Conversation, “The President’s First One-on-One Conversation with General Secretary Gorbachev,” 29 May 1988, <http://www.margarethatthatcher.org/archive/displaydocument.asp?docid=110610> (accessed 8 November 2006).

27. White House, Office of the Press Secretary, “Fact Sheet: Presidential Directive on National Space Policy,” 11 February 1988, in Logsdon, *Exploring the Unknown*, p. 602.

essence, the U.S. and the Soviet Union merged their future human spaceflight efforts; the activity which had been the central focus for competition for more than 30 years became a highly visible arena for post-cold war cooperation.<sup>28</sup>

A more fundamental impact of the end of the cold war was the need for a redefinition of the meaning of space leadership, from being superior in space to the Soviet Union in all or most areas, to some other definition. The 1992 report “A Post Cold War Assessment of U.S. Space Policy” recognized this need. It noted that “[W]ith the end of the Cold War . . . the term ‘space leadership’ takes on new meaning.” It suggested that “[T]o remain a leading nation in space continues to be in the U.S. interest.” The report also recognized that “[S]pace leadership must be earned. By maintaining unsurpassed technological capabilities in key areas and using those capacities effectively and efficiently, the United States will have the capability to act independently, visibly, and impressively when and where it chooses.” The Task Group concluded that

Future space leadership, then, requires combining challenge, openness, quality of execution, and productive application of results. Proceeding ahead with a well-conceived, successfully executed national space program aimed at concrete objectives that are scientifically, economically, and socially beneficial, and that serve important U.S. interests, is the best way to ensure leadership in space. Leadership, in this sense, becomes both a goal in itself and the result of excellence in formulating goals for space and achieving them as planned.

It is this concept of leadership that should guide future U.S. activities in space.<sup>29</sup>

Although there had been a growing emphasis on U.S. leadership in cooperative space activities beginning with the 1969 Space Task Group report, which increased with the 1984 decision to make the space station a cooperative undertaking, the 1992 report suggested that the U.S. develop a “cooperative strategy” as a “central feature of its future approach to overall space policy.” The panel recommended that

The United States should take the initiative in shaping a common international agenda in selected areas of civilian and national security space activity . . . . Enhanced international cooperation should be sought not only for its programmatic benefits, but also because it is the preferred way for the United States to influence the direction of future space undertakings around

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28. For a discussion of the evolution of U.S.–Russian cooperation in human spaceflight, see John M. Logsdon and James Millar, “U.S.–Russian Cooperation in Human Spaceflight: Assessing the Impacts,” *Space Policy* (August 2001).

29. Vice President’s Space Policy Advisory Board, “A Post Cold War Assessment,” pp. 13, 15.

the world. Broader national security, political, technological, and economic benefits for the United States can flow from a carefully crafted 'cooperative strategy' . . .<sup>30</sup>

In the 15 years since these words were written, they appear to have been reflected in the U.S. strategy for space. A statement of national space policy issued in 1996 reflected a definition of leadership as both a desirable goal and a product of excellence in formulating and executing the nation's space program. That policy noted that "[F]or three decades, the United States has led the world in the exploration and use of outer space" and that "[W]e will maintain this leadership role by supporting a strong, stable, and balanced national space program." The 1996 policy also recognized the desirability of enhanced international cooperation, saying that "[T]he United States will seek greater levels of partnership and cooperation in national and international space activities."<sup>31</sup>

Whether the U.S. civilian space program has over the past 15 years been implemented at the level of excellence that translates into recognized leadership is, at minimum, questionable, but that is a topic for a different paper. The U.S. approach to fulfilling its leadership role in the partnership now known as the International Space Station has also had its ups and downs. In recent years, the national and NASA leadership appear to have recognized the importance of getting the space program back on a positive track if the United States is to be more than a leader in rhetoric. The most important step in this direction, of course, was the White House decision to make human and robotic exploration of the solar system the overriding goal of the U.S. civilian space program. International participation in space exploration under U.S. leadership was an important element of that decision. The White House also made the tough decision that its leadership role in space required the United States to honor its international commitments with respect to the space station, even as pressures to retire the Space Shuttle and accelerate progress in space exploration argued for a different decision. As the 1992 report suggested, NASA has taken the lead in crafting a "cooperative strategy" with respect to space exploration, and space agencies from around the world are working with NASA to flesh out the substance of that strategy.

Recent events, then, suggest that the 1992 assessment of what actions would best serve U.S. interests with respect to the contributions of its space efforts to broader national goals is now being pursued. The Vice President's Space Policy Advisory Board concluded that the end of the cold war called for a U.S. space program based on excellence in formulation and execution, one which was carried out in concert with other nations. The most recent national space policy, approved on 31 August 2006, states that the first priority goal of the U.S. in space is to "strengthen the nation's

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30. *Ibid.*, p. 42.

31. The White House, National Science and Technology Council, "Fact Sheet: National Space Policy," 19 September 1996, <http://history.nasa.gov/appf2.pdf> (accessed 9 November 2006).

space leadership.” The policy also states that it is in the U.S. interest to “encourage international cooperation with foreign nations and/or consortia on space activities that are of mutual benefit and that further the peaceful exploration and use of space, as well as to advance national security, homeland security, and foreign policy objectives.”<sup>32</sup>

Leadership in space has been an important goal for the United States for almost 50 years. The path to that leadership for the first 30-plus years of the Space Age, during the cold war, was primarily by besting the Soviet Union in visible space achievements. Even so, from at least 1969 on, there has been a cooperative aspect to U.S. space strategy. With the end of the cold war, leadership in space cooperation became the primary path to leadership overall. That shift in focus, from competition to cooperation, is the primary space impact of the end of the cold war.

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32. The White House, Office of Science and Technology Policy, “Fact Sheet: National Space Policy” 6 October 2006, [http://www.ostp.gov/html/US\\_National\\_Space\\_Policy.pdf](http://www.ostp.gov/html/US_National_Space_Policy.pdf) (accessed 13 July 2007).