
Expose the Myths About The Apollo Program

President Bush has announced a program to return to the Moon and head for Mars. But unless the lessons of Kennedy's Apollo program are learned, there is little chance for success. Marsha Freeman reports.

Five days before President George Bush made his speech at NASA headquarters in Washington, proposing to open a "new age of discovery" in space exploration, the *Washington Post* printed an article stating that the President's aides wanted him to have a "Kennedy moment." That phrase referred to the proposal announced by President John F. Kennedy, before a Joint Session of Congress on May 25, 1961, in which he said, "I believe that 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 the Earth."

During the more than 40 years since President Kennedy made that speech, almost every analysis of why and how the decision was made to go to the Moon has been based upon fallacies of composition, a genuine misunderstanding of the purpose and goals of the Apollo program, or a willful rewriting of history, in order to prove that such an optimistic undertaking could never be repeated.

On Jan. 14, President Bush outlined an ambitious series of goals for manned space exploration, including a return to the Moon, and manned missions to Mars. Without learning the lessons of the Apollo program, which carried out the first manned landing on the Moon, there will be no possibility to meet the expectations the President has outlined.

As an efficient method for understanding the real history of the greatest peacetime mobilization of this nation's scientific, engineering, and industrial capability, it is useful to review and rebut the myths that surround the Apollo program, and examine their relevance to the space exploration initiative that has recently been proposed.

The Battle for Men's Minds

There is a misunderstanding as to why President Kennedy proposed that the United States embark on a manned lunar program to begin with. The generally accepted explanation is that he aimed to "beat" the Soviet Union in the space race, in order to show the, primarily, military might of the United States, during the Cold War. The President, after all, had campaigned accusing the previous Eisenhower Administration of allowing a "missile gap" to develop with the Soviet Union, and the same rockets that take men into space can carry nuclear weapons.

At the end of the Second World War, when the German rocket team had demonstrated the possibility of space flight, utopian think-tanks, such as the RAND Corporation, proposed that America should develop satellites and other space capabilities to carry out psychological warfare against the enemy. In a report titled, "Time Factor in the Satellite Program," in October 1946, RAND wrote: "The psychological effect of a satellite will, in less dramatic fashion, parallel that of the atomic bomb," giving "pause to any nation which contemplates aggressive war against the U.S." It was assumed that space technology, as RAND recommended, would remain under the auspices of the Army Air Forces. This study was followed up three years later with a conference to discuss "Methods for Studying the Psychological Effects of Unconventional Weapons."

President Eisenhower, and the powerful President of the Senate, Lyndon Johnson (D-Tex.), rejected this proposal, and, in 1958, established the civilian National Aeronautics and



The response to the international goodwill tour of the Apollo 11 astronauts, who are seen here in Mexico City, Sept. 23, 1969, brought to fruition President Kennedy's effort to win "the battle for men's minds." Inset: Apollo 11 astronaut Edwin "Buzz" Aldrin on the Moon; the first, not last, step in the Kennedy space initiative.

Space Administration. Unlike the Soviet program, a U.S. space program of exploration should be carried out, they believed, not in secret, but in full sight of the world.

To meet the military challenge, President Kennedy embarked on a defense build-up, including the development and deployment of intercontinental ballistic missiles. And in his May 1961 speech—which was not called to announce a new space policy, but to address “Urgent National Needs”—the President outlined the challenges before the nation, describing them as a “long and exacting test of the future of freedom.”

He spoke of the subversion of developing nations by the Communists, and, toward the end of his speech, proposed a solution: “Finally, if we are to win the battle that is going on around the world between freedom and tyranny, if we are to win *the battle for men's minds*, the dramatic achievements in space which occurred in the recent weeks should have made clear to us all, as did the *Sputnik* in 1957, the impact of this adventure on the minds of men everywhere who are attempting to make a determination of which road they should take” (emphasis added).

“Since early in my term,” the President reported, “our efforts in space have been under review. . . . Now it is time to take longer strides—time for a great new American enterprise—time for this Nation to take a clearly leading role in space achievement, which in many ways, may hold the key to our future on Earth.”

When the new President was initially considering what

the United States should do, to appeal to the minds of men in the competition between the American and Soviet forms of government, he considered various options. These included such projects as large-scale water development through the development of new desalination technologies. But he made his choice of a bold space initiative six weeks before he announced the Apollo program, after Russia's Yuri Gagarin became the first man to orbit the Earth, on April 12, 1961. The visibility, challenge, imagination, and effort entailed to place men in space, the President became convinced, would be the “great project” through which countries would turn toward cooperation with the United States, rather than the Soviet Union.

Just as Franklin Roosevelt's Tennessee Valley Authority became synonymous around the world with American system economic development, the space program would demonstrate what America could achieve. Speaking in Muscle Shoals, Alabama, in 1963, at a commemoration of the 30th anniversary of Roosevelt's signing the legislation that created the TVA, Kennedy disputed those who said that the TVA's work was done, since it had built dams and tamed the rivers in the Valley. Kennedy stressed that its importance was as a model for the rest of the world. He believed the space program could serve the same purpose.

For those who propose that the Apollo program was a military initiative to surpass Soviet might, it is difficult to explain why President Kennedy invited the Soviet Union,

multiple times, to join the United States in this endeavor. Kennedy saw space exploration as a war-avoidance policy, where two nations with opposing ideologies, while competing, could work on common goals.

A War-Avoidance Policy

In his Jan. 20, 1961 inaugural address, President Kennedy stated: "Let both sides seek to invoke the wonders of science instead of its terrors. Together let us explore the stars. . . . I invite all nations—including the Soviet Union—to join with us in developing a weather prediction program; in a new communications satellite program; and in preparation for probing the distant planets of Mars and Venus—probes which may someday unlock the deepest secrets of the Universe."

In early February, Kennedy asked his science advisor, Jerome Wiesner, to set up a NASA-Department of State task force to recommend areas of space cooperation. On April 4, Wiesner presented the President with a Draft Proposal for U.S.-U.S.S.R. Space Cooperation. More than 20 possible areas for cooperation were listed, including a joint manned mission to the Moon.

Then, on April 12, Gagarin became the first man to orbit the Earth, putting the United States in second place. And the April 15-19 failed Bay of Pigs invasion put the President in a much weakened position, not all that different than George Bush's failed war in Iraq. President Kennedy believed that the United States, through his Administration, had to regain a positive footing in both domestic and foreign policy. A goal that could restore America's prestige, Vice President Lyndon Johnson recommended, was a manned mission to the Moon. Kennedy concurred.

A year later, on Feb. 21, 1962, with the Soviet Union still ahead of the United States in space, Soviet Chairman Nikita Khrushchov sent a letter to Kennedy, congratulating him on the flight of John Glenn. He also said: "If our countries pool their efforts—scientific, technical, and material—to master the universe, this would be very beneficial for the advance of science and would be joyfully acclaimed by all peoples who would like to see scientific achievements benefit man and not be used for 'cold war' purposes and the arms race." Khrushchov had his own agenda, but Kennedy responded to the face value of the proposal.

On March 7, Kennedy sent a reply to Khrushchov, which proposed cooperation in operational weather satellite systems, operational tracking services, satellite communications, and space medicine research. Khrushchov coyly responded on March 20 saying, "Until an agreement in general and complete disarmament is achieved, both our countries will, nevertheless, be limited in their abilities to cooperate in the field of peaceful use of outer space." But the door had been opened.

On March 27-28, 1962, Soviet and American scientists met in New York for the first round of discussions on cooperative research; and in July, an initial agreement was reached and joint work started.



Contrary to the popular misconception that the Apollo program was a "dead end," President Kennedy, seen here in December 1962 inspecting the Nuclear Rocket Development Station in Nevada, accelerated the nuclear propulsion program, to enable future missions to Mars.

On Sept. 20, 1963, President Kennedy asked in a speech before the United Nations: "Why, therefore, should man's first flight to the Moon be a matter of national competition? Why should the United States and the Soviet Union, in preparing for such expeditions, become involved in immense duplication of research, construction, and expenditure? Surely we should explore whether the scientists and astronauts of our two countries—indeed of all the world—cannot work together in the conquest of space, sending some day in this decade, to the Moon, not the representatives of a single nation, but the representatives of all our countries."

On Nov. 12, ten days before he was assassinated, President Kennedy signed National Security Action Memorandum No. 271, giving the NASA Administrator the lead responsibility within the Executive Branch in developing substantive proposals for U.S.-Soviet cooperation.

While there certainly was pressure on the Federal budget, and opposition to the expenditures that were being made by NASA to meet the President's Apollo directive—which some proposed could be reduced through international collaboration—Kennedy also saw joint space exploration as an amelio-

ration to the tension with the Soviet Union over Cuban missiles, the Berlin Wall, and the Cold War.

It would be a wise lesson for President Bush to learn, that visionary projects in science and technology, in which America sets an example for the rest of the world, can play a defining role in international relations, rather than clashes of civilizations and pre-emptive wars.

A Science Driver for the Economy

Some of the most inane opposition to President Bush's Jan. 14 Moon-Mars speech, has been by Democrats who simply repeat, like parrots, what they have been told for forty years—that money should not be spent “in space,” when there is so much need for resources to solve economic problems on Earth. This idea is often accompanied by the lie that the Apollo program achieved its goals because it was given a “blank check” by the Congress, and spent indecent amounts of money to accomplish little besides public relations. The nation is in such bad shape, this argument continues, that it could hardly afford the luxury today of a Moon-Mars program. “It is not worth bankrupting the country,” remarked Presidential hopeful Howard Dean in response to President Bush's proposal.

Aside from the obvious fact that NASA spends no money “in space,” but instead uses the money to create new industries, improve infrastructure, support education and scientific institutions, and develop more productive technologies on Earth, such comments turn the fundamentals of economics on their head.

President Kennedy understood what it would take to place a man on the Moon. In his inaugural address, he also stated: “I am asking the Congress and the country to accept a firm commitment to a new course of action, a course which will last for many years and carry very heavy costs of \$532 million in Fiscal 1962; an estimated \$7 billion to \$9 billion additional over the next five years. If we are to go only halfway, or reduce our sights in the face of difficulty, in my judgment it would be better not to go at all.”

To prepare the country for the vast mobilization of resources the Apollo project would require, President Kennedy also sent to Congress within his first months in office, legislation to up-grade education, health care, water management, and other infrastructure.

As Presidential candidate Lyndon LaRouche has stressed throughout his entire life's work in economics, it is precisely such national investments in infrastructure—such as education, health care, transportation, energy, and science—combined with the drive toward goals that challenge the existing capabilities of a society, that will uplift the population of a nation, not hand-outs that are supposed to “eliminate poverty.”

In fact, the space program does not “cost” anything; it is the best investment a nation can make. A study conducted in 1976 by Chase Econometrics estimated that for every dollar

spent in the space program, \$14 were returned to the economy in new jobs, factories, and technologies. And social improvements, such as in health and education, could not even be quantitatively included in their equation.

The Chase study also found that Federal dollars spent on research and development by NASA, with its mission orientation, were four times as effective as other R&D spending, and that the applications of technological breakthroughs were visible in the economy *within two years* of their achievement. The economic return from the Apollo program did start with the 1969 Moon landing, but virtually as soon as the program was announced.

A study done by *EIR* in 1986 revealed that during the 1950s, there was a steady decline of new orders for capital goods in industry, with a net loss of 211,000 metalworking machine tools. In 1963, there was a net addition of 124,000 such tools. During the Apollo decade of the 1960s, orders for non-defense manufacturing capital goods more than doubled, as heavy industry basically “rebuilt” itself, following its post-war stagnation.

President Kennedy recognized that to stimulate economic growth, it was necessary to provide an incentive for industry to implement the necessary policies. To do this, within 90 days of taking office, he called for an investment tax credit to spur capital formation. Unlike President Bush's self-destructive tax cut to households, supposedly to increase consumption and goose up the economy, Kennedy's economic advisors reasoned that the investment in new plant and equipment and creation of new jobs would more than pay for any loss to the Federal Treasury from the investment tax credit. And they were right.

Studies have also demonstrated that it was not simply millions of dollars of NASA contracts, but a general and pervasive *optimism* that drove physical economic growth during the Apollo years. Before Congress could even enact the laws to increase the space budget, small and large companies expanded their facilities, hired more employees, and eagerly got ready for the challenges ahead. In 1962, the editors of *Fortune* magazine described the coming era as one of “hitching the economy to the infinite.”

The technology developed to allow rockets to launch into space, and the spacecraft designed to carry, protect, and monitor human travellers, stretched the existing limits of technology. Developments in rocket technology led to improvements in every application of energy production using fossil-based fuels. Studies and development programs for nuclear power and propulsion for space travel created the next-generation, high-temperature nuclear designs, still awaiting commercial development.

Technologies such as portable electron beam welding had to be developed, because the components of the Saturn V Moon rocket were too large for conventional welding stations. New materials to withstand the heat, cold, and radiation of space have been applied to every facet of the economy.

Every person who has access to modern medical treatment has benefited from space technology, from intensive-care room monitors, diagnostic imaging devices, and artificial limbs, to heart-assist devices.

Space-based remote sensing and communications technologies created weather forecasting, and have improved agriculture, located new raw materials, warned of impending natural disasters, and increased the productivity of fishing, among dozens of other applications, including telemedicine, to bring modern medical techniques to the remotest regions of the Earth.

The Apollo program directly employed more than 400,000 people in highly skilled, well-paying industrial jobs, most of which required a dramatic upgrading in the capabilities of the workforce. Millions more were employed in feeder industries, or those spun off from the new technologies that were developed.

The most long-lasting economic impact of the Apollo program, however, was the creation of tens of thousands of scientists and engineers; not just those who worked for NASA, or in the aerospace industry, but all of the young people who saw the possibility that man was reaching for the infinite, and wanted to make a contribution.

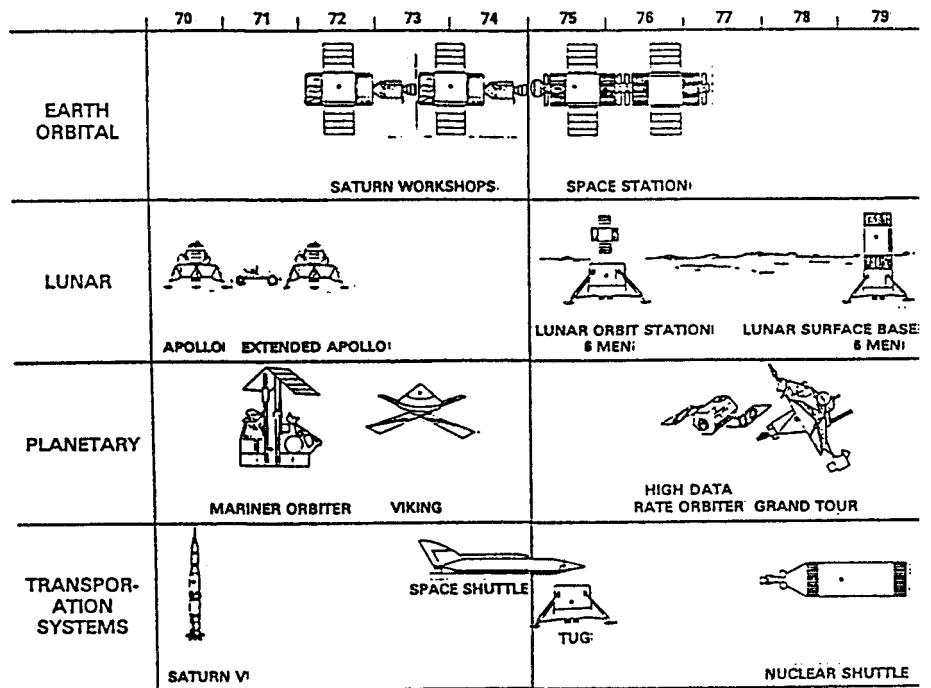
President Bush appears to believe that he could only propose a Moon-Mars program, as long as it did not cost too much money—when, in fact, a properly funded program that could meet his goals, would be the greatest legacy he could leave for the economic well-being of future generations.

Opinion Polls vs. Leadership

A persistent popular myth about the Apollo program is that President Kennedy had the mandate to announce it because there was support for it, whereas today, no one is interested in a visionary space program. A poll of over 1,000 adults carried out by Time/CNN immediately after President's Bush's Jan. 14 speech, for example, indicated that 61% of those polled were opposed to the initiative. About 9% said they would support spending "billions of dollars" on space exploration, while 40% said they would rather improve education, etc. All that these results actually show is that the majority of the American people understand economics, and education, as poorly as does the White House. President Kennedy faced a situation no different, of broad opposition.

The broad scientific community opposed the expenditure of large sums to land a man on the Moon. Dr. Philip Abelson, editor of *Science*, the magazine of the American Association

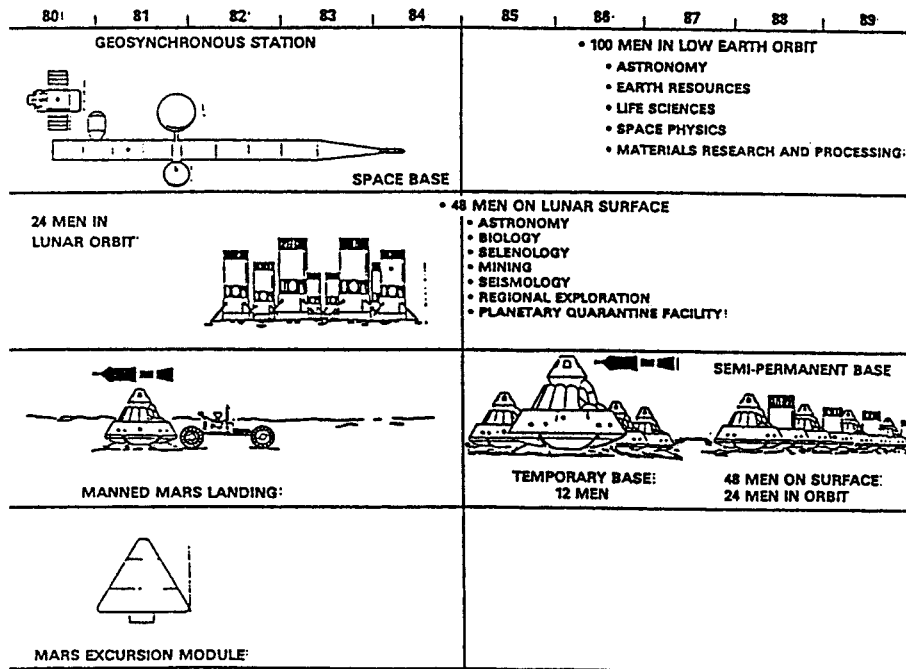
Von Braun Integrated Space Program, 1970-90



for the Advancement of Science, wrote: "NASA has sought examples of technology fallout from its program. To date, those cited have not been impressive. The problems of space are different from the earthly tax-paying economy. . . . I believe the program may delay conquests of cancer and mental illness."

Scientists feared that NASA funding would mean a diminution of support for their research. In fact, the lack of adequate scientific and engineering manpower was well recognized, and provisions for support of higher education were included in the space budgets. But that did not convince the President's own science advisor, Dr. Jerome Wiesner, who opposed the Apollo program from its inception. He continued to argue against it even when it was under way. President Kennedy's entire Science Advisory Committee believed that "such spectacles [as manned space flight] may be drawing an undue amount of support away from a more rational science program," the *New York Times* reported before President Kennedy's speech.

When the mission to land a man on the Moon was under consideration, President Kennedy's Council of Economic Advisors, and Labor Secretary Arthur Goldberg, proposed that the President approve a substantial increase in public works programs, rather than new space spending, because they believed that would provide a better stimulus for the economy. At the time of President Kennedy's speech, polls showed that less than half of the American public supported such an effort.



President Kennedy did not propose the Apollo program because it was “popular,” and he consistently made clear that it would be difficult, risky, and expensive. It was a question of leadership. In his inaugural address, he stated: “I believe we possess all the resources and talents necessary. But the facts of the matter are that we have never made the national decisions or marshaled the national resources required for such leadership. We have never specified long-range goals on an urgent time schedule, or marshaled our resources and our time so as to ensure their fulfillment.”

As the program moved forward, increased expenditures were required to meet the goal, and opposition from the Congress also increased. NASA never had a “blank check,” from Congressional committees. The initial consensus in Congress to support Apollo, energized by the vision and forcefulness of President Kennedy’s personal initiative, was short-lived.

Three months after his Apollo speech, the President’s request for a \$1.5 billion NASA budget was cut by \$75 million on Capitol Hill. Space scientist Wernher von Braun warned that this would create slippage in the program’s schedule, and prevent the hiring of an additional 600 people. NASA’s leadership had, annually, to justify to the Congress and the budget office every cent that was spent by the space program.

President Kennedy had warned that if the nation were not willing to fund Apollo at the level that was necessary to accomplish the goal, it should not do it at all. While the President was alive, his leadership prevented the emasculation of the effort. But after his assassination, although the Congress

and Lyndon Johnson were not about to terminate the martyred President’s Moon program, they were unwilling to fund the effort to ensure, as he had outlined, a continuing program of exploration.

The opposition to the Kennedy space program, which always existed, gained the upper hand due to President Johnson’s acquiescence to the escalation of the war in Vietnam, and also his “war on poverty.” These “competing” programs to spending on space doomed President Kennedy’s vision for the space program to an early demise. The replacement of Kennedy’s optimistic economic plan by the drug-infested, anti-technology counterculture, sealed its fate.

The Long-Range Vision

It is often said that the United States has been unable to carry out any long-range plan for manned space exploration since the 1960s because the Apollo program was a “dead end”; that there was no program to follow the lunar land-

ing; that it was a “space spectacular,” done for purely political reasons, an expensive flash in the pan. This view reveals an ignorance of space history, from well before the Apollo program, as well as a misrepresentation of what the President actually proposed.

Although it appeared to the public and many in public office that President Kennedy was proposing something truly “fantastic” in going to the Moon, the proposal was actually the culmination of work that scientists and space visionaries had been carrying on for decades. The first scientifically-informed visual presentation of such an adventure was unveiled in Germany in 1929 in movie theaters. The technical advisor for the film *The Woman in the Moon* or *Frau im Mond*, was scientist Hermann Oberth, whose published works had already described the physics, rocket technology, and biomedical research needed for an “Apollo” mission.

Oberth, and his young collaborators, including teenager Wernher von Braun, not only did experiments in the 1930s to try to tame the new field of rocketry, they held public lectures, debates, demonstrations, and published popular articles to organize public support. Once in the United States, after the war, von Braun, Krafft Ehricke, and others among the German space pioneers joined forces with American enthusiasts—including television producers and magazine publishers—to lay out their vision for the next 50 years of manned space exploration.

To the better informed, President Kennedy’s Apollo announcement was not such a big surprise. Von Braun had au-

thored and co-authored popular and well-illustrated books with titles such as *Man on the Moon* and *Across the Space Frontier*. In 1955, the Walt Disney television show aired, “Man in Space,” with von Braun appearing, to explain the basics of rocketry and space travel.

The vision started with winged space planes to take man into Earth orbit; next came the construction of space stations in orbit where men would live and do research; and culminated with the construction and assembly at the station of interplanetary vehicles to explore the Moon and the planets. When President Kennedy announced the Apollo program, von Braun’s team had already designed the rockets that would make the plan realizable, and had outlined a multi-decade program to colonize space.

Because an important feature of the President’s plan was to demonstrate to the world that the United States could match and surpass the Soviet Union in space technology, he decided to change the order of the plan. He asked the scientists and engineers to skip a step, and devise a way to take astronauts to the Moon, without a space station as the intermediate jumping-off point. This, he reasoned, would save enough time to meet his deadline of “within a decade,” as well as push the state-of-the art in rocket and other space technology at a quicker pace.

Although this approach was not the orderly, step-by-step plan the pioneers had envisioned, they realized that they were finally going to get to the Moon. And because they had listened to or read the President’s speech, they knew that the Apollo program was just the beginning, and not a dead end.

The Moon, and Then Mars

The myth of the “Apollo dead end” has persisted for decades, for the simple reason that no long-term plan followed it. However, that was not the intention. When he announced the Apollo program, President Kennedy also said the following: “We propose additional funds for other engine developments and for unmanned explorations, explorations which are particularly important for one purpose which this nation will never overlook: the survival of the man who first makes this daring flight.

“Second, an additional \$23 million, together with \$7 million already available, to accelerate development of the Rover nuclear rocket. This gives promise of someday providing a means for even more exciting and ambitious exploration of space, perhaps beyond the Moon, perhaps to the very end of the Solar System itself” (or at least to Mars, which is what the nuclear rocket was being designed for).

The lack of a post-Apollo vision for space exploration is often blamed on President Richard Nixon, who, facing an economic crisis, would not commit to a long-range space effort. But, in fact, as soon as it looked reasonably assured that an American would be able to land on the Moon, the political momentum shifted to the doomsdayers and the naysayers in the Congress, the think-tanks, the media, and the

“popular culture.” There was no point in going into space, when there are limits to growth, technology is dangerous, and I’m “doing my own thing.”

At the same time, the NASA budget became the direct trade-off with the rising Defense Department expenditures for the escalating war in Southeast Asia. The peak year for funding for NASA was 1965. That year, layoffs started at NASA’s Marshall Space Flight Center, as the development work on the Saturn V Moon rocket reached completion. While NASA had plans aplenty, there was no approved post-Apollo program. For the first time, a President supported a cut in the space agency’s budget, even though Administrator James Webb warned that the \$300 million reduction in the post-Apollo applications program would have serious consequences in the aerospace industry.

It was not NASA that lacked the vision. The space agency carried out advanced planning activities from its inception. Between 1962 and 1965, NASA spent \$70 million studying what to do following the success of the Apollo program. A report by NASA Administrator James Webb in 1965—conservative by design, since the lunar landing was still a half-decade away—proposed that there be a “systematic program” of manned flights around the Moon and Earth, using the Saturn V rockets developed for Apollo. But faced with rising defense costs, President Johnson asked Webb to postpone any post-Apollo plans.

To Webb, like the technical people who were the heart of the space agency, the lunar landing was never the only goal of the space program. At a briefing in 1965, he stressed that what NASA had developed was the “capability to fire, to launch, to get into orbit.” From there, you could go virtually anywhere.

From 1965 to the landing on the Moon in July 1969, Webb and others watched while not only post-Apollo planning, but the very infrastructure that the nation had built to land a man on the Moon, was dismantled. In 1967, Webb warned that a declining budget would leave him “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.” He told Lyndon Johnson that there “has not been a single important new space project since you became President.”

By the Fall of 1968, James Webb—the man who had organized a space agency, almost from scratch, to be able to carry out the lunar landing—could not see any course that would stop the take-down of the nation’s space future. Three months before the first human beings would orbit the Moon, during Apollo 8, he resigned.

His chosen successor, Dr. Tom Paine, would pick up the fight for a long-term future for space exploration following the lunar landing. There was no lack of vision.

A Real Moon-Mars Program

Months before the first Apollo 11 landing, President Nixon established a Space Task Group to develop policy rec-

ommendations for the post-Apollo period. Two months after the landing, the Group presented its finding, stating that “a manned Mars mission should be accepted as a long-range goal,” and that to accomplish this, the NASA budget should be increased to \$6 billion. Instead, between 1965 and fiscal 1971, the NASA budget declined by more than 40%.

The plan which was developed by Wernher von Braun, to run from 1970-1990, centered around a 12-man space station, a reusable Earth-orbital shuttle to service it, a multi-purpose space tug for in-orbit operations, and a reusable nuclear-powered interplanetary shuttle. This infrastructure, to be built up during the 1970s, would then allow the establishment of a lunar surface base, and the first manned landings on Mars.

Faced with an economy that was unraveling due to a series of international financial crises, President Nixon and his “economic advisors” determined that no long-range plan would be adopted. In 1972, the development of a reusable Space Shuttle was approved; the rest of the vision would have to wait for better times.

The constraints on Shuttle funding throughout its development, resulted in an only partially reusable vehicle that is more expensive and less safe to operate than the original design.

In 1984, in his State of the Union speech, President Ronald Reagan initiated the development of the second piece of space infrastructure the von Braun plan had proposed—a space station. Once again, funding constraints, justified by economic theories based on false premises, doomed the project to delays and cost-overruns.

Recognizing that a long-range plan was needed, Reagan established the Presidential National Commission on Space, headed by former Administrator Tom Paine. Once again, the multi-decade von Braun program was brought forth in their 1986 report, but, once again, there would be no leadership taken to implement the program.

In 1989, during a celebration of the 30th anniversary of the first lunar landing, President George H.W. Bush, also looking for a “Kennedy moment,” stood on the steps of the National Air and Space Museum and announced the United States would go back to the Moon, this time to stay, and on to Mars. When NASA informed the President what such an effort would cost, it was abandoned.

The report of the Columbia Accident Investigation Board, released last August, stated that one of the problems in the space agency that led to the Shuttle accident, is that there has been no long-range plan, no vision. A space agency with no mission orientation, the report stated, is a space agency adrift. President George W. Bush proposed a Moon-Mars program that could fill that bill. But he has not learned the lessons of the Apollo program.

President Bush has proposed a plan that is premised on the idea that it will not cost very much money. He plans to abandon the Space Shuttle and space station infrastructure



In 1986, the National Commission on Space released its 50-year Moon-Mars mission program. There has been no lack of plans, only of the leadership to implement them.

that exists, to “save” enough money to pay for trips to the Moon and Mars. This will fail.

The only reasonable and potentially successful way to proceed, is to dust off the plans for space exploration that have been proposed, and re-proposed for the past 40 years. Such a plan would require the build-up of the infrastructure to lay the basis for planetary exploration.

Instead of trying to “sell” the program to the Congress and the American people through reassurances that it will not cost much, he should be proposing that this new thrust into space is the best hope for reversing 30 years of failed economic policy, and turning the ballooning budget and trade deficits into positive territory. Instead of fooling himself, and trying to fool the American public into believing that we are in the midst of an oxymoronic “jobless recovery,” the President should explain that each dollar NASA spends on his new space initiative, will return to the economy highly-skilled jobs, new industries, a boost to education and optimism, and new technologies.

The President should not concern himself with whether his Moon-Mars program is popular; it won’t be. He should assume there will be opposition, ready his ammunition, and prepare his forces for the fight.