

The Dark Side Of The Moon

Politics, Prestige and Marketing in Humanity's First Lunar Landing

On July 20, 1969, the United States became the first nation to land humans on the moon. While the Apollo 11 mission met with an euphoric public reaction then, the "moon-shot" had a less romantic side where national pride, economic profit and short-term political gains in Cold War competition played the leading roles.

by Dave Coleman

"That's one small step for man—one giant leap for mankind." On July 20, 1969, the world held its breath as Neil Armstrong spoke these immortal words from where the "Eagle"—the first manned probe to set down on another heavenly body—had landed on the moon's Sea of Tranquility.

A man on the moon was a feat that most spectators never expected to see in their lifetime—the stuff of comic books and science fiction. The world, and especially Americans, stood awestruck at the sheer triumph of human science and management. Indeed, a culmination of eight years of determined American research and financing, the "moon-shot" was the single largest project ever undertaken in

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peacetime America.

Never again could humans view Earth in the same way. Writer Archibald MacLeish summarized the feelings of many: "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 that they are truly brothers."

But in the 25 years that have passed since that epochal moment, the gleam of achievement has become tarnished. Critical voices of this lofty American dream have questioned the necessity of the enormous expenditure—in dollars, resources and human-hours—and the speed at which the project was completed. They challenge the motivations in which scientific exploration appears to have played only a supporting role. (Soil and rock samples were collected).

Instead, political factors took inspira-

tional pride of place: Cold-War competition with the Soviet Union, the search for international prestige and validation, and the need for a distraction from the accelerated unravelling of American society in the 1960s.

Economic considerations, including spin-off discoveries and subsequent contracts, stood a distant second. In hindsight, commentators increasingly describe America's lunar leap as a great public spectacle, flaunting the super-tech wares of post-war America and self-righteously affirming the ascendance of the capitalist lifestyle.

A race for human advancement—or for America?

A crucial factor in the race to the moon was the Cold War. The 1956 Soviet suppression of a Hungarian rebellion; 1961 division of Berlin by the Wall and failed U.S. invasion of Cuba at the Bay of Pigs; and 1962 Cuban Missile Crisis combined to fuel American paranoia of Soviet Communism. On one hand fearing invasion, the U.S. government was also keen to maintain an exceptionally positive American image both at home and abroad. With nuclear weapons deterring face-to-face conflict, superpower competition took on other forms.

In the late 1950s, a manned Soviet bathysphere descended 45,000 feet below the waves of the Atlantic Ocean, passing

the American depth record by 7,000 feet. The Senate Committee on Un-Prestigious Activities chafed about the "implications of the new Soviet breakthrough for the United States' image abroad."

Members of the Senate, the Pentagon and Naval think-tanks steeled themselves for the race to the bottom of the ocean, with a deadline of 1970. A White House statement, aimed at rallying popular support, asserted that "in a very real sense, it will not be just one man going to the bottom of the ocean...it will be an entire nation."

In a 1961 speech, President John F. Kennedy mimicked these words to emotionalize the space race: "But in a very



Stogies, stars and stripes: mission control as the "Eagle has landed." [NASA]

real sense, it will not be one man going to the moon—we make this judgment affirmatively—it will be an entire nation." With the higher prestige potential of space exploration, the United States government shifted its priorities from the deep sea to near space.

"Ask not what your country can do for you..."

President John F. Kennedy has often been given credit for the forceful zeal that fueled the space program. In May, 1961, Kennedy made his famed proclamation that the U.S. "should commit itself to achieving the goal, before this decade is out of landing a man on the moon."

After his assassination, proponents of the project spoke of fulfilling the charismatic leader's wish. However, Kennedy was by no means a keen supporter of unilateral space exploration. In his first State of the Union address to Congress in 1960, he argued: "today this country is ahead in the science and technology of space, while the Soviet Union is ahead in the capacity to lift large vehicles into orbit. Both nations would help themselves as well as other nations by removing these endeavors from the bitter and wasteful competition of the 'Cold War.'"

There is little wonder that a leader who knew the cost of the moon project would encourage shared technology and financing. In the mid-1960s, cost estimates ranged from a conservative \$20 billion to a far-flung \$100-150 billion.

Space race critic Amitai Etzioni, in his 1964 book *Moon Doggle*, pointed out how this higher estimate was equivalent to the sum required to end the need for foreign aid in Latin America, Africa and Asia. David Baker, an aerospace consultant who worked for more than a decade at NASA, estimates the entire cost of the Apollo project to be \$25 billion: \$95 billion in today's currency.

Although Kennedy proposed cooperation, his successor, Lyndon B. Johnson, held a different perspective. Johnson had been a part of the initial study group that advocated the space race, and from 1960-63 had headed up the National Aeronautics and Space Council. With members of NASA numbering amongst his closest aides, Johnson steamrolled forward with the race to the moon.

For the glory of the red, white and blue

The more intangible value of national pride was also central to the forcefulness of the lunar mission. In *Project Apollo*, a book written in 1969 with cooperation from NASA, one finds this guarded comment: "The Apollo Project represents the visible peak of the most advanced technological challenge that the world has experienced so far and, of course, part of the value to the U.S. from the enterprise can be measured in prestige."

The "prestige race" to the moon represented a national denial of the Soviet Union as a significant world force—"that the communist system would not, could not work."

With the Soviet success of Sputnik 1,

the first satellite to reach orbit in 1957, and Yuri Gagarin becoming the first man in space in 1961, "the United States grew more and more insecure," a critic wrote, "until one day the government decided that we must out-spectacular the Russians on any front."

Charles Pellegrin, former head of strategic planning for NASA, stated flatly: "Apollo was motivated by a desire to show the belligerent countries of the world what our military capabilities were in a way that was more benign than dropping a bomb on them."

More bang for the lunar buck

In the web of causative factors, economics lay at the core. The science-equals-growth formula, an economic model which linked technological advancement to fiscal success, was enthusiastically embraced in the mid-1960s.

NASA bubbled with the potential spin-off discoveries made possible from their research, ranging from perfectly shaped ball bearings to super alloys, from rapid growth crystals to medical miracles. All of these would lead not only to fantastic profits for American companies, but also validate and broadcast U.S. technological preeminence.

The civil service has estimated that the government received close to seven dollars in subsequent contracts, tourism and export orders for every one dollar spent on the lunar landing.

However, critics have questioned the connection between Research and Development and profits. Economist Robert A. Solo noted "after 1953, while expenditures for R & D skyrocket, the rate of increase in output per hour slumps." Etzioni argues that aerospace and electronics received one-quarter of R & D expenditures in the early 1960s but only produced 3.5 percent of Gross National Product.

Space race?

To what degree was the "space race" indeed a race? Until very recently the Soviet Union had claimed no interest in landing cosmonauts on the moon. In the month prior to the landing of the Apollo 11 team in 1969, a Soviet robot probe cruised a scant few miles above the lunar surface. But American intelligence found few indications of any true Soviet attempts to lay the first footprints in the dust.

Findings due to Glasnost have surprised movers in the space business. As

the story goes, in 1990 a U.S. scientific team was inspecting a Soviet facility, touring through a warehouse of space hardware. Upon viewing an unfamiliar piece, they were non-chalantly informed that it was the prototype of a lunar lander.

In fact, the Soviets were prepared to launch a lander in 1968, a full year before the Americans, but failures and explosions repeatedly delayed their missions. Their moon project was finally cancelled in 1974 due to political in-fighting.

Marketing the moon

Americans made all attempts to market the successful moon landing for maximum world attention. In the lead-up to the lunar voyage, NASA had teams of lecturers touring the world with vibrant displays, answering questions which ranged from how the rocket lifts off to how an astronaut goes to the toilet in zero gravity.

The International Telecommunications Satellite Organization set up the first global satellite link-up, to relay live images of the landing to 500 million people worldwide. American retailers reported a massive television buying spree, a sales record that still stands.

Television coverage and live imagery were crucial to the Apollo missions, with hundreds of millions vicariously experiencing the thrill of walking on the moon. In *Project Apollo*, the authors gush at the impact of their images. "One of the most remarkable aspects of this mission was the TV coverage," the authors wrote. "Both black and white and color pictures were received as clear on millions of homes' screens as local broadcasts."

NASA installed a camera on the outside of the lunar lander, so as to have an image of Armstrong as he made the historic first steps. In the transcript of the correspondence between the "Eagle" and Houston base, the greatest concern focussed on whether the camera was properly positioned to record the image.

The moonstruck summer of 1969

No matter how transfixed the world may have been at this historic juncture, life did not come to a stand-still. As the "Eagle" was making its final descent to the Sea of Tranquility, Massachusetts police divers

were dragging Mary Jo Kopechne's body from the car Senator Edward M. Kennedy had driven off a bridge on Chappaquiddick Island.

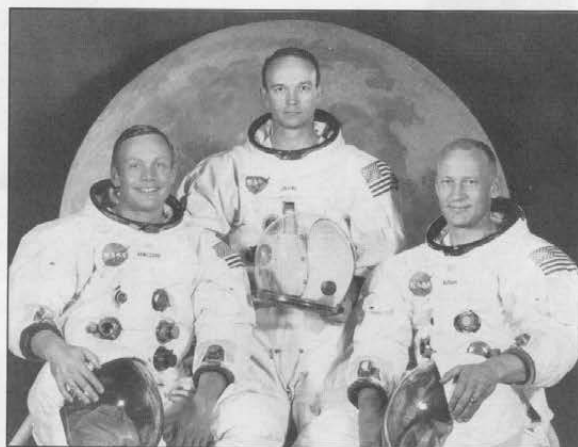
Newspapers were advertising a music festival named Woodstock, where weekend passes would cost \$13.

Editorials in the *New York Times* focussed with concern on the fate of the nation as the war in Vietnam deteriorated, racial conflict intensified and urban problems grew boundlessly. "The moon is an escape from our earthly responsibility," said one editor "and like other escapes it leaves a troubled conscience."

Lyndon B. Johnson, when questioned on the speed at which the moon mission was accomplished, responded "if we can do that in such a short time, I wonder why we can't put the same effort into peace for all time."

Where are they now?

Since December 1972, when Apollo 17 made the fifth and final lunar descent, moon fever has abated. NASA quickly had to learn that the charmed years leading up to the moon landing would never be repeated. As the political and econom-



Apollo 11 crew: Neil Armstrong, Michael Collins and "Buzz" Aldrin. [NASA]

Jersey, has set its sights on serious scientific research of the Earth's only natural satellite.

SSI had planned to launch a robot called a Lunar Prospector in 1992 for a one-year orbiting mission. Although this deadline has come and gone, SSI still aims to proceed with the eventual goal of moon mining sometime in the next century.

International Space Enterprises, an organization of American and Soviet entrepreneurs, boasts that they can land people and goods on the moon for a tenth of what it costs NASA. Part of their corner-cutting comes from using old Russian equipment that is currently gathering dust at the Russian Lavochkin Association.

The group envisions huge returns on astronomical advertising. Michael Simon, one of the American investors, envisions great profits from lens manufacturers in return for their company name emblazoned on moon-based telescopes.

Was it worth it?

Many question the true value of the moon race. Rather than reaching the moon with international cooperation, or learning as much as possible from the mission, it was a push to get there

first and snatch all the glory. A *New York Times* editorial phrases boldly: "Perhaps we begin to suspect that we are twentieth century Vikings, driven, conquering without humanizing qualities. We would know the stars, but we do not know ourselves." ●



[Kirk Anderson]

ic constellations changed, space issues no longer received special treatment.

The private sector has moved into the vacuum left by government and public disinterest in NASA. The Space Studies Institute (SSI), a private non-profit research venture based in Princeton, New