On Neil Armstrong, the Moon, and Our Future in Space

A FuturePortal Feature Article

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The first man to set foot on the Moon, civilian pilot-astronaut Neil Armstrong passed away in late August at the age of 82 from heart surgery complications. A month earlier, the nation lost our first woman and the youngest American to fly in space, scientist-astronaut Sally Ride to pancreatic cancer at age 62. Ride was admired by millions of Americans, just as Armstrong was revered by the prior generation and well-wishers the world over. Both of these Americans' accomplishments were tremendous, but those of Neil Armstrong were truly "a world apart."

A remembrance of Armstrong was presented by NASA TV and is posted on YouTube. As expected, NASA is a treasure trove of related resources, specifically at the Apollo Mission Pages, History Archive, and a 2009 Apollo 11 40th Anniversary Feature. We also found a remarkable set of remembrances in UC Magazine from the University of Cincinnati where Armstrong taught from 1971-1979. Personally, I clearly remember millions of people the world over, including me, glued with rapt attention to the live television broadcasts of the Apollo 11 astronauts on the Moon. Those of us who lived through Apollo 11 remember the boost it gave our nation in a confounding world, somehow living through the mutual assured destruction (MAD) of the Cold War, primed for this deliriously hopeful development. As the Cold War ground on, the Apollo triumphs receded and the Soviets throttled back on grand designs in space. By the time Sally Ride rode the second flight of Shuttle Challenger to orbit in June 1983, America's space program seemed to have lost some luster with the general public. In a cruel twist for NASA and space advocates, the Space Shuttle missions – as hard and dangerous as they proved to be – created a sense of regularity and the commonplace.

For students of futures studies and foresight professionals, the recent passing of Armstrong and Ride highlight potentially big lessons we can apply to today's approach to our future. We recommend exploring those questions by starting with the testimony

Armstrong left with the House Committee on Science, Space, and Technology about one year ago, September 22, 2011, posted as both full text and a summary on the Committee's website. The first man on the Moon was joined by the last man on the Moon, fellow Apollo astronaut Gene Cernan – both of whom spoke eloquently on behalf of continued human spaceflight.

Juxtapose their earnest testimony with the interesting news – just one month after Armstrong's death– that the Curiosity Rover found evidence for an ancient, flowing stream on Mars. Amazing new knowledge is out there, but shall we harvest it to the fullest? And to what ends? Are these past and present feats merely historical baubles, leftovers from the Cold War, pretty but unaffordable in heavy competition for precious dollars and attention? As federal budget issues take shape and limited resources are applied to other needs like climate science, developing energy resources, solving health care challenges, and eliminating the national debt, is a return to the Moon unrealistic? These are the questions Neil Armstrong, Gene Cernan, Sally Ride and their comrades have bequeathed.

Some doubt we should "choose to go the Moon" again (to borrow a famous phrase from President Kennedy) for these and other reasons. Other knowledgeable experts make a strong case for going back to the Moon to take advantage of resources and to advance humanity in the process. NASA is simultaneously pursuing a typically American commercial initiative (CCiCap) and a NASA-developed program including a heavy launcher (SLS) and manned spacecraft (Orion) for interplanetary missions, none too soon for the newly jobless residents of Florida's Space Coast. In this presidential election year, real options for a US space future are mixed among political rhetoric. Though the idea may be unsavory to many, politics is something futurists must account for and must engage in, so as to contribute potentially positive visions.

Past lessons form a basis for the work of Paul Spudis, Senior Staff Scientist at the Lunar & Planetary Institute in Houston. He speaks with credibility on behalf of new plans for going to the Moon. Spudis and his perspectives are featured in a video by the education-oriented Futures Channel. His organization, Spudis Lunar Resources, offers a body of work and ongoing discussion. He also writes an enlightening blog, "The Once and Future Moon," for Smithsonian Air & Space Magazine. Lest we forget amidst the tumult of financial disorder and political campaigns, we are not alone in this matter. As

futures students, educators and practitioners, we recognize the fully globalized aspects of new competition. It is no secret that China is aggressively pursuing a future manned Moon program of its own. In a recent blog post, Spudis opines, "Now, just as we find the Moon to be an attractive destination, we shrink away from the challenge, watching as others blaze trails we once traveled."

Are Spudis and other advocates of manned space exploration merely dreamers – as we humans are apparently designed to be? Futurists and experts from many walks of life must weigh the risks and costs with the potential payoffs of human space flight to new worlds. We should look at them in the way the best investors and entrepreneurs do, with one eye on current resources and one eye on future needs and possibilities. A good futurist will investigate all perspectives, determine how we measure them, and prepare "what if?" scenarios. Policymakers will depend on sound foresight in weighing space goals with social, economic, foreign policy and other issues. Futures and foresight professionals must assist decision-makers on the if, how, and when to proceed? Not just could we – but can we, should we, and will we? Like space itself, the issues are expansive and complex.

After all is said, we owe good answers to the legacy of our native sons & daughters – the Apollo 1, Challenger and Columbia astronauts who gave all in the line of duty, and to all the others who blazed a trail to the heavens – our best and brightest. We owe it to the legacy of national hero and pioneer for the ages, Neil Armstrong. Most especially, as citizens of a great nation in a challenging time, we owe it to ourselves.