



SpacePolicyOnline.com

Meeting Summary
April 25-26, 2011

1961-1981: Key Moments in Human Spaceflight

(This summary appeared as an article on SpacePolicyOnline.com on May 3, 2011 entitled "Pondering History: NASA Celebrates 50 Years of Human Spaceflight.")

On April 25-26, the National Aeronautics and Space Administration (NASA) and the National Air and Space Museum held an [event](#) commemorating 50 years of human spaceflight (HSF). Presenters led discussions on a variety of topics that considered new ways to look at past events, questioned some long-held assumptions, and offered glimpses of what to expect of the future of HSF.

Michael F. Robinson of the University of Hartford set the tone of the conference by offering an interesting suggestion: dispensing with the frontier analogy of the westward expansion in America to understand U.S. HSF efforts. Instead, he offered the exploration of the Arctic as a more useful parallel. In contrast to space, the expansion to the West was primarily motivated by economic and social development and was always conceived as "not just a place to explore, but a place to settle." Consequently, "we need to abandon this idea that extreme space will be a place where we can develop self-sustaining colonies" and embrace the idea of space as an "extreme, essentially uninhabitable" environment. The Arctic "gives us a sense of where space exploration could go," because its exploration, while relevant in terms of cultural impact, did not lead to the same kind of radical economic and political consequences enabled by the expansion to the West. Moreover, it suggests a way forward in terms of funding. Robinson believes that space exploration is driven by similar primarily spiritual and psychological payoffs with little public value and thus is unlikely to win substantial government support; therefore, if it is to be done, the money will have to come from private rather than public sources. He cited Robert Peary's 1909 North Pole expedition as an example. The federal government was stepping back from funding such exploration missions because of waning interest, he explained, and Peary was funded primarily by private sources.

During a later session, James Spiller of the State University of New York's College at Brockport, offered another explanation of why the frontier motif, so resonant in the 1960s, may no longer be relevant. Viewing space as the next frontier is not a "natural way" to frame the rationale for a HSF program, he said, and is salient only in the historical context of the shock of the 1957 Sputnik launch. Spiller suggested that elements implied in this theme such as an expected economic bonanza made it fitting for the anxieties of that time and turned HSF into a powerful tool to make meaningful a costly Cold War program. Yet these underlying elements faded away quickly, he said. Spiller described his beliefs about what he considers other implied elements of the motif, such as manifest destiny, racial supremacy and progress against nature and savage peoples that in his view were subsequently weakened by the civil rights movement of the 1960s, modern environmentalism, and the Vietnam War. The rise and fall of the frontier motif as a compelling argument for HSF can thus be traced back to its alignment with the mood of the

nation at the time and is best described, not as an inevitable analogy, but as a “cyclical historical construct,” he said.

Underlying this discussion was the larger issue of public engagement, which was repeatedly brought up during the conference. NASA’s Amy Kaminski, for example, spoke about the agency’s short-lived spaceflight participant program for the Space Shuttle. Kaminski recounted how, after Apollo, NASA saw the need to make the HSF program “relevant to people.” By 1980, the agency had succeeded in fostering public expectation that one day anybody would be able to access space aboard the Shuttle and that it would be akin to flying in an airplane. NASA eventually created a program to choose non-astronauts who would fly aboard the Shuttle. In 1985, NASA Administrator James Beggs announced the selection of a teacher, Christa McAuliffe, and later confirmed that the second participant would be a journalist. All of this though, became “moot,” said Kaminski, after the Challenger disaster in 1986. The accident “shattered” the image of technological optimism of the Shuttle, conveying instead the high risk involved. From a safety standpoint, subsequent administrations “questioned [the] appropriateness of flying citizens.” Yet although the agency eliminated the program, Kaminski argued that the spaceflight participant program did succeed in bringing NASA and the public together, noting the level of excitement surrounding the Challenger flight prior to the tragedy. Kaminski said that the legacy of the Space Shuttle spaceflight participant program is a passion among educators for HSF, and noted that at least three astronauts with education backgrounds have been recruited by NASA as fully trained “educator astronauts” since then. (One of those is Barbara Morgan, who was the backup to McAuliffe.) Kaminski further noted that the selection of a teacher was a smart move because “it was her presence that fulfilled [the] aim of connecting the agency with the public.” Since education involves everyone, NASA succeeded in making the Challenger flight relevant to all. The success was, of course, severely limited and the question remains: how many more citizens would have flown had Challenger succeeded?

Former NASA Chief Historian, Steve Dick, in turn, talked about exploration, discovery and science, and how they affect public perception of HSF initiatives. He began by explaining how those words, often used interchangeably, refer to different activities. Exploration, he said, is *searching* for something new, discovery is *finding* something new, and science is *explaining* something new. The point of understanding the difference is to realize that “when they occur together, the result is more than the sum of their parts.” Looking at the Shuttle through this lens, he concluded that it was not “a robust exploration vehicle,” and while science was performed onboard, neither scientists nor the public see it as important as Apollo. Dick explained that the Shuttle was “not conceived as a science project,” and the Shuttle not being involved in discovery or exploration, also played a part. Thinking of the Shuttle as a “social experiment,” Dick concluded that “science without exploration or discovery is not enough to sustain public support.” Taking a lesson from the Shuttle, the United States “should take the path that best combines science, exploration and discovery,” which he believes means going beyond low-Earth orbit once more.

A session on international initiatives offered a glimpse of the rationale and activities of other countries involved in HSF efforts. The Heritage Foundation’s Dean Cheng offered a review of the history of China’s HSF program which, like that of the Soviet Union and the United States in the 1960s, is mostly driven by prestige. Cheng noted that the Chinese HSF program experienced a “rocky start” due to constrained human, technological, and financial resources, but that it has contributed to China becoming a “space power of first rank.” In terms of rationale, China views HSF as a “natural result” of the increasing complexity of space activities, Cheng said, adding pointedly that there is “no space race today for human spaceflight.”

India’s recent announcement of plans to pursue its own HSF program were also discussed. Ashok Maharaj of Georgia Tech suggested that India would benefit by dispensing with the idea

of a race altogether. Maharaj described India's progress in space and its efforts in creating a "custom-made" program to suit the primary goal of socio-economic development. It was only at the end of 2003 that India began to enlarge this vision to allow for the possibility of its own HSF program to become part of the mix. Similar to China, India sees HSF as the next logical step in maturing the program, he said. India is also pursuing HSF to avoid being "left out," and to "represent the Third World" in this pursuit. With respect to the space race paradigm, "starting late has its advantages," argued Maharaj and enumerated some of the lessons India has gleaned from the experience of other countries. More to the point, he said that China has already achieved key HSF milestones and would be too far ahead by the time India is able to launch an astronaut into orbit. Instead of rushing to catch up, he said, India should move ahead in HSF for its own benefit, striving to achieve HSF milestones without compromising its other space-related activities.

Note: See Ms. Delgado's [commentary](#) reacting to this conference.

