MIT FORUM ON THE FUTURE OF HUMAN SPACEFLIGHT

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Closing Remarks

Dr. John Logsdon, National Air and Space Museum

Some of these are thoughts I had before showing up today, some are reactions to what was said. I do have a somewhat sense of parentage of this MIT effort. I remember rather vividly a talk given to I think it was a class rather than an early meeting of this group, but it might have been both where I was reviewing the totality of issues in space policy and said the real issue in civilian space policy is the future of human spaceflight, and David Mindell jumped on that and the rest is the white paper and what's followed on it. It's gratifying to see one phrase turn into a very productive enterprise.

I think as we talk about this we have to remember that space is about much more than exploration. Scott Pace and I spent yesterday in a workshop called the Program on Strategic Space Initiatives, and the word exploration was not mentioned once. This was a workshop called at the behest of Bob Kehler, General Bob Kehler, the four star who's head of the Air Force Space Command worrying about his responsibilities for the broad strategic space contributing to national security in the broadest sense. But it makes a point, that we're really only talking about one very visible part of the space enterprise, we're not talking about Earth observation, we're not talking about GPS, com-sats, anything like that.

There were a bunch of Apollo images, and a lot of references to Kennedy, and I'll make some more. It's a good question was Apollo exploration? It certainly was not started with the motive of exploration. It was as somebody quoted find me a space program which promises dramatic results and which we could win. There's no words about exploration in there. I think the issue given all of that is the balance between space that is tangibly useful to people on Earth and space that is also useful but perhaps in intangible ways, or less tangible ways. Exploitation versus exploration is one way of thinking about it. I don't know where science fits in that by the way. MIT is founded on the assumption that science leads to engineering leads to application leads to utility. It's not a place that has its roots in fundamental knowledge for the sake of knowledge. But there's also knowledge as something a civilized society does, and I think exploration, you could put that same paradigm. As Scott said, it's interesting, this man Harry Shipman, he's a professor, was a professor of astronomy at the University of Delaware, I have no idea even if he's still alive. I've never met him. I use the matrix, Scott uses the matrix. It's the best one capture rationale for exploration that I've ever seen, which says can you live off the land and is there anything economically valuable to do, otherwise it is high level tourism and science. Shipman has never showed up at a space meeting to the best of my knowledge. It would be interesting to see who he is.

Why humans? In the memo responding to President Kennedy, Jim Webb and Robert McNamara had a very interesting phrase. They said it's men not machines that captures the imagination of the world. When we send our robots into space, they're optimized for space. You can't ask them how was it because it was what they were designed to do. When we send humans into space, we're not optimized, we're optimized for Earth. And so the question what was it like in this different environment is a relevant question, and I think people want to know the answer to that question. What is a different environment like? You can't at least yet or in 2001 you can't expand the experience of robots so they come back and tell us something that wasn't already part of their coding where humans by having gone places I think can at least at some continuing. I've think we've heard enough about what it's like to be on the Space Station. There's not much variety. How many pictures of people floating around does it take? So it is I think time to get some new experiences so that people can talk about them. I question Mark whether exploration is written into the framework of society. That's a nice phrase, but as somebody, I think David Mindell said in his opening remarks, there are a lot of societies that don't explore. So maybe it's written into the framework of the American self conception of this exceptional society and our concept of exceptionalism has gotten ourselves into some trouble as well as having a lot of benefits.

There were a lot of quotes and references to Kennedy and somebody noted that his May the 25th 1961 speech he said don't start if you're not going to finish. He had a finite finish. In the current conception, the current policy, there's no finite finish. There's not endpoint. In a sense, you can start and say getting to the Moon one more time is enough or going to Mars is enough. The policy says Moon, Mars, and beyond, and the beyond may be a throw-away word at least for humans. As Jeff said in his remarks, the human, there are very few destinations human, at least in a relevant time frame are going to go. Our robots can go much further.

This is you next assignment Professor Mindell. There's been talk in several of the presentations this morning about some sort of accountability framework. Given what you have identified as the primary reasons for doing exploration with humans, that is expanding experiences, power, prestige, pride, how would you design an evaluation framework? It's not cost-benefit. It's not hard to get tangible indicators. I would maybe make the argument that we've been making that judgment by people qualified to make the judgment on a kind of constant basis by providing a substantial budget for human spaceflight, and that the people that can judge whether human spaceflight contributes to pride, power, soft power, national standing are our political leadership, and our political leadership on a bipartisan basis rather continually has been able, has been willing on a pretty stable basis for the last thirty years to provide a meaningful, maybe not adequate, but meaningful part of the public budget for human spaceflight. And I think that's a judgment that it's worth doing. There is an evaluation constantly every year with the budget review because there are obviously people who don't think it's worth doing that would like to cut the budget, and the political judgment is made over and over again. Let's hope that Mr. Augustine and his panel come back in August with a program, with a set of options, one of which Mr. Obama and his advisors and by then even a NASA administrator can embrace as the program that we will go forward with over the coming at least four years. Let's do take Kennedy's advice and say don't, if we're going to start something new this year, let's not do it again four years from now and again four years from now. At some point, the program has to stabilize because it's worth doing. And let me quit at that and turn the floor to David for closing remarks.

Professor David Mindell, Director, MIT Program in Science, Technology, and Society

I'll actually make a brief correction John, which is the phrase you said that started us is why fly people into space because the Future of Human Spaceflight title comes from previous studies done at MIT, the Future of Coal and the Future of Nuclear Power, and we were consciously working with that framework. But it is very much John's inspiration, the basic policy question about why fly people into space. We took that very seriously from his talk a couple of years ago.