

Memo for the record.  
Conversation: WHL and Robert Seamans  
RE: Webb Project  
DATE: February 12, 1991

This was a telephone interview.

I said that I wanted to spend some time talking about some of the budgetary decisions. He said that the first major decision had to do with the cutback in 1963 by Congress. That was the year also that Holmes had tried for a supplemental. He wanted to speed-up the lunar program. But, in many ways, what he was trying to do, we thought was unwise. There were a lot of factors that contributed to the congressional cut. It was Holmes. It was the Kennedy speech about cooperation with the Russians. And other factors.

I remember that we were surprised at the size of the cut, but we regarded it as not fatal to the program. It was essential, however, to recoup the loss in following years. In the next year, Webb talked about a bare-bones budget, and he talked about the fact that we needed to get the funds we were asking in order to have a fighting chance to make the moon.

As a result of the cutback and what happened the next year, we lost a year. I think we had originally planned on 1967. Well, we slipped to 1968, and then with the fire, we lost another year, to 1969. 1965 was a tough year. That would be the FY 1966 budget. That was the year that Johnson was trying very hard to keep the budget under \$100 billion. That was a tough year. The BOB was trying to hold us back. That was the year that Webb had to go to the ranch. It was a year in which we had no new starts. We had a whole series of negotiations, with the last couple being at the ranch.

If I look at my previous notes, I'll see that that's the year in which I went with my family to Europe and Webb had asked me to come to the ranch with him.

Every year, the BOB gave us a rough time. Before we went up the Hill, through bargaining, we had gotten most of this restored. Our development programs went through stages: definition, building, and operations. We tended to build up rapidly, and then phase down. We never had a time when BOB was really easy on us. But we generally worked these things out.

Bell was a straightforward Cambridge type. Gordon was not as experienced, but he quite sophisticated. Schultze had a problem with LBJ. He would often say: "I might think this a good idea, but I can't sell it to his nibs." He was tough too. All were good. They were trying to push a 10 lb sack into a 5 lb bag.

Damn few agencies and departments were able to come to a complete agreement with the discussions with BOB. They usually were at loose ends and had to be worked out with the President. So I'm pretty sure it was December 1965 when Webb took this trip to the ranch to discuss the FY 1966 budget.

We were trying to get Voyager started. We knew we had this capability. With the Saturn V, you could take a lot of hardware to the planets. Our original idea was to send up two probes with the Saturn V. We had this tremendous capacity. We could put two Voyagers on one big launch vehicle. It didn't eventually fly. It didn't get approved. It was expensive. We may have forced the space science people to go over-board on the launch vehicle.

After the fire, I remember that I wasn't brought in on a meeting that involved Mac Adams. He had been asked to review how to proceed with Voyager. I attended. But I was not involved. Webb may have felt that I was too locked into the existing concepts of the Voyager program. He probably wanted another opinion on the launch vehicle.

I asked him about the MOL decision back in 1965. I asked if he thought it hemmed NASA in. He said no. The MOL program was relatively small, and I believe it only involved one half billion dollars a year. So it didn't really impede us that much. Although, certainly, Anderson and Webb would have seen it as the DOD nose under the camel's tent.

McNamara and Johnson were quite close at the beginning. Then, all of a sudden, McNamara found that he had a new job with the World Bank. The problem, of course, was Vietnam. It was not going well.

That \$100 billion figure was a sacred number with Johnson. He didn't want to be the President that put the budget over the top.

Our peak expenditures for Apollo were 1965-66. Generally, the expenditures occur later than the authorizations and appropriations. We needed these new programs to get started, but the fact that we didn't get them didn't mean we weren't busy. We had all this new hardware coming out of Apollo. We had to bring it together. We had to train crews. We felt bad about the lack of follow-ons, but we were busier than hell.

What we were after was long-term U.S. pre-eminence in space. We had been trying to avoid a single-minded crash program. We thought the Saturn vehicle gave us this. We were creating this wonderful capability. On August 21, 1967, LBJ accepted a one half billion dollar cut by the House Appropriations committee. It forced us to come up with a space lab. Instead of building a module whole cloth, we made use of a Saturn stage as a space lab. This turned out to be successful. We were able to put this stage

up eventually. And this decision had to be made at the end of 1967.

The Voyager ended up smaller scale. We got rid of the idea of using Saturn. We went back to a smaller launch vehicle. We scaled this whole thing down. Our hand was forced by the budget situation. The real cost of the cutbacks was the Saturns. We had a certain number of Saturns we wanted to build. We just couldn't get the money to build more. So, there was a genuine decision to liquidate the Saturn rocket. When the lay-offs came, we laid off contractors first. We had to get the moon project done. We had plenty of people in NASA to keep busy. We had an enormous amount of work to keep them busy.

In the end, Webb was criticized for two reasons: (1) he was not able to get resources toward the end; and (2) his approach was a technology dead end. This was the Wiesner view. I think that view is bologna.

After the moon landing, we had this wonderful capability. The problem was we had no public support for follow-on work. I handed in my resignation at the end of September 1967. My last day was January 6, 1968. When I left, I thought we had a good chance to make the moon. I was in Mission Control in Houston when we were on the moon. I had been there for the launching too. Webb was there for the launching, but then he went home. Apollo landed dinner time in Houston. The astronauts had 6 hours of sleep. I don't know how they were able to sleep though. Then they made their egress to the lunar surface.

I remember that I went out to dinner with Jackie Cockran. She is the famous female pilot. The fact that Webb was back in Washington did not surprise me. He was not a hands-on person. He didn't like to go to the field much.

We talked a little bit about Jim's resignation. Jim's view was that after Nixon was elected, there had to be continuity. Webb was a political man. Nixon would not want to continue Webb. Paine was apolitical. He might be continued. Webb turned out to be right. He discussed this with Johnson. Johnson said yes, that's a good idea. But then he surprised Webb by saying, let's announce it right now. In Seamans' view, Johnson treated Webb the same way he treated McNamara.

I asked about the Russians. Webb seemed to be constantly referring to the Russians as having a great capability. But at the time no one believed this. Seamans said that the only thing we knew was that they were building a big launch vehicle, like our Saturn. We had photographs that showed them putting up a building. A building like an assembly building. We saw a vehicle bigger than the Saturn V. We saw it on the pad. Then we saw later a whole in the pad. As if there had been an explosion.

Then we saw another vehicle appear. The only possible use of a vehicle this size would have been for a trip to the moon. So we knew there was a competition, but we didn't know for sure -- we didn't have proof -- until just a few years ago, when there was this brief opening in U.S.-USSR relations, and we learned more about the Russian space program. He sent a copy of this material to Webb, and Webb sent me a copy. Kathy, we should have that material in the file. You should check to be sure that we have that material on the Russian space program. It was a xerox of something in a Russian paper, I believe.

The Russians, said Seamans, were working on this moon program all throughout the 1960s. They had it done except for this big launch vehicle. The second time they tried it, it got off the ground, and blew up. Then, we made the moon first, and they cancelled out in 1972. Webb truly believed what he was saying about the "Russians are coming." And he had grounds to believe that. But the problem was, this was all classified information.

So, in winter 1968, I went back to MIT. I gave a speech before the Sloan School of Management. I talked about the Apollo program. A bunch of assistant professors yelled at me: "What right have you got to come into a classroom and tell such falsehoods? You're telling us that you got to the moon using contractors and not increasing the size of the government bureaucracy, and that you went out to industry. The truth is that you went out so you could get more companies to spread the wealth around. It was pork-barrel, pure and simple." The problem I had with what they were saying is that they were so vicious in their attacks. I was astounded by the mood on campus. Anybody who had any connection with the government just didn't have credibility.

Here I was in the northeast now. Living in the midst of all this protest against the government and against Vietnam. Then I was asked to be Secretary of the Air Force. I took the precaution of going to my four older kids. 11-26 ages. What should I do? It was Vietnam time. I remember when the ROTC building was torched at Harvard.

I asked about Johnson and his behavior. I heard that he had been erratic. Seamans says that he was more erratic as a Vice President. He was drinking a lot. He knew he was on the outside of the Kennedy Administration. But once he became President, and took over, he had achieved the goal that he had wanted all his life. He was in "pig heaven." He really did have a social agenda. But then he got saddled with Vietnam, and he was not about to let the Commies push him around. I believe he was having medical problems toward the end. Maybe some angina.

So Webb was sort of caught in the middle of things. He was caught between Vietnam, Johnson's social agenda, and the NASA

program. Webb had to deal with all of these. By then, NASA was not front and center in Johnson's day to day concern. After all, he was President, and people were getting killed every day in the war for which he was commander and chief. Down underneath, Johnson was pro space. He showed up for the launch of Apollo 11, I believe. Congress hung in there. Some of them did so, amazingly. Teague was amazing. I believe, Anderson hung in there. I think when you look at it, you have to be impressed with the amount of support that was maintained for NASA in spite of the dismal environment we were in in the latter 1960s.

I think you have to give credit to Webb, says Seamans. Any other man would have been chewed up by the situation in which he found himself. He would have been chewed up in small pieces. It took enormous personal strength for him to maintain control of the situation and the environment so that it didn't overwhelm him. I don't know how he was able to keep the President, the executive office of the President, and the Congress all going together along together. And how he was able to do it for that period of time I just don't know. That was a remarkable achievement. This was a time, after all, when Congress and the President were in general having a falling out. He got these various actors, critical to success, to keep together long enough to get to the moon. I think a lot of it had to do with his ability to appeal to various interests in different ways. To certain people he would talk about patriotism. He really understood human factors. He would talk on grounds they understood. He would talk about the Russians. He could talk to intellectuals. He could talk to the roughnecks in the Senate. He could talk to sophisticated businessmen.

I think he was floored one time when the mayors turned against him. That really bothered him. I remember them attacking the space program and the money that was being spent on the moon. He came back at them, showing that the money that was being spent on the moon was really being spent down here on earth, and he went into great detail on its value. I think that was a part of Webb's genius. At that point, I, WHL, interposed the statement that it seemed to me that Webb was able to use politics for good purpose. That he was a great politician. He was able to build this coalition of support around the program, and keep it together long enough to get the job done. Seamans agreed, and he said that that's the problem today.

You have this Augustine Commission, and this is being followed-up by a synthesis group. I am on it. And the question is what kind of approaches are we going to use to get to Mars. The White House thinks that NASA is a "not invented here" factor. They'd like to get some other ideas. Now, it turns out that if you wanted to go to Mars, the ideal time, technically, when Mars, moon, and earth are all in alignment, would be the year 2018. So the question I asked of this group was how do you keep support

through the 1990s and beyond the year 2000. You have to have a program that demonstrated value all the way along. The returns have to be continuous. You need their support. A lot of people worry about whether the present NASA is capable of doing the job.

I have certainly my doubts about Admiral Truly. I think you need a person in charge of NASA who is more flexible. Has more imagination. Maybe an admiral is not the best person for the job. I certainly think you need an executive with more flexibility in hiring and firing, certain key people.

There is talk about how you need to convert Centers from civil service to JPL to get better scientists and engineers. But I don't know. Certainly, Admiral Truly is a fine man. But he doesn't have real clout, and he doesn't have that much imagination.

Seamans did say that he and Webb made a conscious decision to protect Apollo when the cutbacks came.