Breaking in the Space Shuttle—Robert Crippen

Astronaut Robert Crippen, pilot of the first Space Shuttle mission (STS-1), in the cabin of the Columbia *orbiter during a mission simulation on 10 October 1980. NASA Image 80-HC-600.*

I like to look forward, but I am also a great student of history. I believe there are many lessons, both positive and negative, that we can learn by looking back. Quite often, we tend to forget some of those.

I'd like to speak a little bit about the era in which I entered the astronaut corps. I joined NASA in kind of a weird way—in the time period when everybody going into space was a test pilot. I was attending the Air Force Test Pilot School, even though I'm a Navy guy. In that time period, they were going through and selecting astronauts from the test pilot class, and I put my hand up and said, "I'd like to join." It turned out that both NASA and the Department of Defense were selecting astronauts, and, somewhere in the selection process, I ended up having to make a choice. There were lots of folks on the NASA list, and there weren't many folks on the Department of Defense list, so I figured that was my best chance to fly. So I said, "Send me to DoD for something called the Manned Orbital Laboratory," or MOL for short.

I did get selected for that program, which was canceled for various political reasons in 1969. During Apollo 11, when Neil and Buzz were on the Moon and Mike Collins was orbiting around the Moon, I and the other MOL crewmembers were interviewing with Deke Slayton saying, "Hey, you got any room for us in the program?" It turned out Deke said, "Okay. We could use some of you. But there's not going to be a chance to fly until around 1980 when we get the Space Shuttle done." At this time, the Space Shuttle wasn't even an official program. He said, "Well, I don't need all fourteen of you, though, so I'll take

everybody that's thirty-five and younger." That cut us right in half, and I happened to be in the half that managed to go down to NASA.

When I arrived there, of course, NASA was right in the midst of the Apollo program. It turned out that we were already starting to cancel Apollo flights because of various financial and political reasons. But NASA had already moved a little bit out of the test pilot regime and picked two different groups of scientists. NASA administrators decided that scientists needed to learn how to fly. So these new scientists-astronaut trainees initially were sent off to the Air Force Training Command to learn how to fly and become pilots. The first of this group to fly was Harrison Jack Schmitt on the last Apollo flight, Apollo 17. Then there was a scientist-astronaut on each Skylab mission. Joe Kerwin, an M.D., flew on the first flight, Owen Garriott was on the second Skylab flight, and Ed Gibson was on the last.

So we were already starting to broaden the scope of what we wanted as far as crewmembers. There was a long hiatus between Skylab and the first Shuttle flight. The Shuttle was announced during Apollo 16, but it took a while to develop the Shuttle. We had one interim flight (Apollo-Soyuz mission), but we didn't have many people in the astronaut office. I think we got down to somewhere around twenty people. So it was pretty small, which I thought heightened my opportunity to get [to] fly—not like it is today with around 160 in the office.

But I was fortunate enough to be standing in the right place at the right time when the crew selection was made for the first Shuttle flight, and I was selected to be the pilot along with

Commander John Young. I always need to clarify that none of us red-hot test pilots wanted to be called a copilot. I was really the copilot, and John was the real pilot on the flight.

I was twenty-eight when I was selected to fly on MOL, but I was forty-three when I flew STS-1. So sometimes it does take perseverance. So if you have to wait a little while, it's not all that bad.

In 1978, three years before the Shuttle became operational, it was obvious that we would need a broader category of astronauts. The 1978 group was the first time that we selected what we referred to as mission specialists, who did not have to be pilots. We did not train them as pilots, but we did make them backseaters on the T-38, and, essentially, they all learned to fly.

That was also when we decided that we ought to have some women onboard. People keep talking about manned spaceflight, but it's better today to refer to it as human spaceflight. I was taught that very well on my second flight, STS-7, when Sally Ride was one of our mission specialists, and she kept correcting me if I said manned spaceflight. In addition to Sally, Kathy Sullivan happened to be on my last flight, and Kathy was the first U.S. woman to perform a spacewalk. So we broadened out who flies, the kind of categories we're looking for, and, as we move forward with the International Space Station, we do need more scientists rather than test pilots. This will be true even when we go back to the Moon and go on to Mars, which we certainly will, as Mr. Goldin said.

I will conclude by saying it is going to be interesting to see if somebody could pull together a symposium forty years from now and look where we're at in spaceflight. I hope some of the

things that Mr. Goldin mentioned about the Moon and Mars will be realities at that time. It has been a privilege for me to have an opportunity to play a small part in that.