

The John H. Glenn, Jr.  
Oral History Project

Interview 2  
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at the John Glenn Archives,  
The Ohio State University

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Interviewer

[Interview 2, Tape 1, Side A]

THOMAS: This is the second of a series of oral history interviews with Senator John Glenn. Today is April 21, 2008. This interview is taking place at the John Glenn Archives at The Ohio State University. My name is Jeff Thomas. Senator Glenn, today I would like to focus on the events leading up to your selection as one of the Project Mercury astronauts and your experiences during the early years of NASA's first manned space probe. In 1957, you had the opportunity to pilot a space flight simulator run by the National Advisory Committee on Aeronautics at Langley Air Force Base. How did this opportunity to pilot the simulator come about?

SEN. GLENN: After my testing days were done at Patuxent River [Navy Air Test Station], I had been assigned to the old Bureau of Aeronautics in Washington, D.C., the Navy's Bureau of Aeronautics, which oversaw the design, building and procurement of new airplanes for the Navy and Marine Corps. And I was in the fighter design branch there at the Bureau of Aeronautics. There was a call that came from Langley Air Force Base,

the NACA base there, the National Advisory Committee for Aeronautics base there, that they were doing some studies on the potential of orbital flight. Some of their test pilots had been running the simulator studies that were dealing with how you re-enter the atmosphere, what your flight path would be, what your orbital track would be around the earth, things like that, that were very elementary at that time. And they had one of the few very large computers that could do a study like that. They wanted some other people to come down from the Bureau of Aeronautics to supplement the work that their own pilots had done on the simulator. I heard about this and I volunteered for it and was selected to go down there. I made, I don't know, several trips, three or four trips down there, something like that, and stayed for two or three days at a time, to run on this simulator doing simulated re-entries. They had a control stick, a little control toggle switch, and things like that there. It wasn't supposed to be a complete simulation. It was supposed to be more computer study of what orbital tracks you could get to and could not get to, and what kind of a trajectory you could make during landings. And so that was mainly what it was. But I enjoyed that very, very much and made my own report on that when I got back to the Bureau of Aeronautics in Washington. So that's how that came about.

THOMAS: So the work there led up to or sort of preceded what NASA was doing later on?

SEN. GLENN: Yes, very much. There had been some rumors at that time that perhaps we were going to get into a manned space program some time. And it had just been in the rumor stage more than anything else. I was very interested in that. Plus this whole idea of the orbital flight, doing runs on the simulator was something I found fascinating. It was great to do whatever happened later on down the road. But it was a lot of fun to do that and looking back now those were very, very elementary studies. But that's where you had to start back in those days. And this I believe was done even before, I think these were done before NACA changed over and became NASA. So it was still the old NACA at that time. Later on then, when President Eisenhower decided he was going to change the whole thing, and change it over to NASA, and open it up completely, I don't know exactly what the time frame reference there was, but I think maybe it was a year or so after I was down in Langley, quite some time.

THOMAS: In addition to these space flight simulators, you also did some tests on G forces at the centrifuge run by the Navy in Johnstown, Johnsville?

SEN. GLENN: No, that came later. That was after we had been selected. We didn't do those things as part of our selection nor did we do real studies up there at Johnsville until after we had been selected.

THOMAS: I see.

SEN. GLENN: Let me add something there. Part of our selection process was to go through a centrifuge, but they were smaller centrifuges—one that they had at Wright Patterson Air Force Base in Dayton. It was smaller. It was a 25

foot arm, and the one up at Johnsville that we worked on later was a 50 foot arm—much bigger centrifuge.

THOMAS: Now, did you go to St. Louis at this time at all, or am I mistaken in thinking that?

SEN. GLENN: I had been to St. Louis a number of times at the McDonnell factory there but not on space matters. That had been when I was at Patuxent and the station there. Of the different airplanes that we tested we had a couple that were McDonnell airplanes. And so I had been out there to the factory there at McDonnell a couple of times on airplane business but not on space related business.

THOMAS: When the call went out for test pilots to volunteer for the space program, after President Eisenhower signed legislation creating NASA, you volunteered right off the bat as I recall.

SEN. GLENN: Well, I thought this would be fascinating to do. As I saw it, it as sort of a follow on to what I had been doing at Patuxent. I had been involved with our highest performance aircraft, and they were looking for people who had a lot of test time, which I had, in high performance aircraft, which I had. Had worked in small cockpits at high speeds and things like that. Another factor was that I had come back from Korea, had combat time in Korea. That was another plus on that. And I didn't just jump at it. I talked to Annie about it first because it was going to mean, what little I knew about what the program would be it was going to be quite a change in just our family activity. I was going to be away from home more and

things like that. It was something I thought had a really big purpose for the country, and if I could contribute in that area, what better use could I make at whatever flight talents I might have.

THOMAS: And your family backed you on this at the time?

SEN. GLENN: Yes, Annie was a little reluctant when we talked about going into space.

That was so different that none of us knew exactly what to expect at that time. So she had a lot of question marks, as I did, too. But the agreement that they wanted when we volunteered for it was that, it wasn't something that was irreversible. They said right from the start that if we got to a point in this where we didn't like what was going on, or didn't like the way the training was going or whatever, you could always stop with no questions asked, and say, "I want to go back to my current service, where I came from," and that was that. That never happened obviously, but that was the agreement going in.

During the time that I was assigned, all the time that I was with NASA, I was still in the Marine Corps. I was on loan to NASA as all the military pilots were. They had some non-military; I think Neil Armstrong had come along in the second group of astronauts. Now Neil had been out of the service, but he was working for NASA out of Edwards Air Force Base and doing flying out there. So NASA, in the second group of astronauts, there were some civilians that didn't come from the military test pilot ranks. But in our first group of seven, we all were military test pilots on loan to NASA for the program, which later some of the people

like Deke Slayton wanted to stay with NASA permanently. So he resigned from his Air Force job and went to work fulltime for NASA. But all the time I was with NASA, I was still in the Marine Corps.

THOMAS: So you could drop out whenever you wanted?

SEN. GLENN: Could have if I wanted to. If I decided at any point that I didn't like it or thought they weren't doing enough on safety or whatever, didn't have to have a reason. All I had to do was write a little note and say, "I resign; I want to go back to the Marine Corps." Or, resign from NASA, "I want to go back to the Marine Corps." and that would have been honored.

THOMAS: When you first volunteered, there was a very large pool of test pilots. In fact, the whittled down listing was 110 names or so. Did you think your chances were fairly good given those odds?

SEN. GLENN: Nobody knew, because the selection committee was very close mouthed. They weren't putting out anything except what the qualifications things had been. I knew that I qualified under what they had put out as the basic selection criteria. But that was all I did know. The group of 110, I think at time it was 134 or something like that is the figure that comes to mind. I don't recall exactly. But that was whittled down to, I think it was 32. And there were 32 people as I recall that were then put through, not just through the paperwork or what your background was, but all the selection process, physically and mentally and every way.

They put us through—sent us out to the Lovelace Clinic, in Albuquerque, New Mexico, and the program was classified at that time.

They gave us fictitious names out there and registered into a motel with fictitious names. We had these fictitious names during the time we were being poked and prodded and all the medical tests that they gave us there. Randy Lovelace had been an Air Force flight surgeon. He had done a lot of work in selection processes. He had sort of this clinic out there, and it was the most advanced place to study physical characteristics of people for flight and things like that. So, we went out there and they put us through all the tests, every test known, whatever they could do to the human body, everything that was known at that time they tried. And it was very complete.

THOMAS: Do you recall how long you were out there?

SEN. GLENN: I think it was like four days or five days, something like that. It wasn't too long. We went through every test there was out there. Some of them—there was even one that just pops to mind, which I've never seen before or since. You'd come and take your shoes off and put your feet in a bucket of ice water. There had been a big study by somebody at that time, that your reaction to that, your blood pressure and your pulse reaction to that, there was a corollary with whether you were liable to develop heart problems later in life. There had been a big study at the time. So even things like that they did. And the balance test, putting you up on chairs and spinning you around, and the balance test, vision, every kind of test they knew how to run on the human body they did. I don't think by the time we got down to that group of 32 that was being checked,

I don't think there were many that failed at that point. I don't recall anybody that was kicked out of the selection process.

THOMAS: No one got irritated with all of the testing and said, "This is not for me, I quit."

SEN. GLENN: No, some of them almost did that later on. We then went to Wright Patterson Air Force Base, and there was a whole different set of tests out there. That's where we went through all the psychological tests. They had psychiatrists giving us multiple batteries of all kinds of tests, both written and visual. When you asked about if anybody quit, the more that I think about it just off hand, there was Pete Conrad, who is dead now. But Pete Conrad wound up in NASA later, he wasn't selected in the first group, but he was being screened in the first group. During one of the psychiatric tests, well Pete had quite a sense of humor and was a lot of fun. He always had a joke about everything. And one of the psychiatrists took a blank piece of paper and slid it across to Pete and said, "What do you see there?" And Pete turned it around and slid it back over to him and said, "The first thing I see is you have it upside down." That probably didn't endear him to the psychiatrist because he didn't make it on that first go-round even though he was fully qualified. But he was picked up on the second round when Neil Armstrong, Frank Borman and Roger Schaeffer and all those people came in.

THOMAS: That sort of brings a question to mind. All of the people who were doing the testing were fairly business-like and very closed-mouth about the whole thing?

SEN. GLENN: Oh yes, very much so. They weren't telling us whether we did good, bad or indifferent, or what we did. They ran all the written psychiatric tests and other tests, too, like a heat chamber, put sensors on you, EKG sensors and leads, and then put you in a heat box. I think the temperature was 135 or something like that, to see how long you lasted and what your body temperature was and what happened, how your body reacted, what the EKG and blood pressure were. So they had tests like that.

They had an isolation test that I've never been in before or since. It was a room that was called an echoic chamber, and what it was, they'd put you in there and you just sat at a desk and they turned out the lights. It was absolutely dark and it was sound proof. In fact, the room was designed so there was no sound inside whatsoever. That was the echoic part of this thing. And there you were in the dark and completely isolated; no sound and no light and they wanted to see how you reacted in there. They had leads on you so that they could see what your response was. They wouldn't tell you how long you were going to be in there, and so, I guess some of the people had some reaction to that, they kept them longer I suppose.

I don't know now how long I was in that, but it was sort of an interesting experience. My reaction to it might be of interest. I thought

what they wanted was nothing, just put your head down and go to sleep, which was normal. That would have been easy to do. Just put your head down on the desk and relax. But I thought they probably wanted you to operate under this, or show your ability to still be awake and cognizant of what was going on in this time period they had you in there. So I happened to have a pencil in my pocket and I felt down through this desk. There was just this desk, nothing on top of the desk at all, and I felt down through the desk and opened the drawers of the desk, and in one of the bottom drawers I found what I thought was a tablet of paper. It was just a pad, I didn't know whether there was any writing on the pages or not. But I turned back to about halfway through this thing thinking it was a blank page. I used to do a little writing, a little poetry, just a little verse and things like that. So I thought that would be a good way to keep myself occupied while I was in there. And so, in the dark I had this tablet and I put my finger where I thought the line was and I would write some poetry across here, and then figure out the next line, move my finger down to the next line and write that. And then you had to remember what you wrote on the first line and the second line, and it was a good mental exercise. And so I kept my time busy doing that. We still have that little poem that I wrote in there somewhere.

THOMAS: Actually, it's in the archives.

SEN. GLENN: Is it here now?

THOMAS: Yes.

SEN. GLENN: Annie had it for a long time.

THOMAS: So they just opened the door and said, “You’re done” at the end of this?

SEN. GLENN: Yes. I think I was one of the shorter ones because I think I was only in there like maybe three hours, something like that. As I recall, there were some people who were in there like six or seven hours. I don’t really remember the time exactly.

So they had the heat chamber, they had the isolation. They had a vibration chamber where they had sound of different amplitude and decibel level. And they’d run this up and down in there, and you had your ears protected by plugs in your ears. But then they’d run this up and down where you could really feel—as you went through a harmonic for instance, of the length of your arm hair—you’d just sort feel a tickling sensation in your arm, which was the harmonic frequency of the length of that bone in your arm. And they’d run the sound up to where you could feel that, and you’d feel a reverberation on your body.

Let’s see, what else? And then the centrifuge—they didn’t run us up to really high G levels on the centrifuge, but it was a 25 foot arm, and I think we got up to five or six G’s on that, to see what your reaction was on that. On all these tests, you were instrumented, your body was instrumented.

THOMAS: They never gave you any indication beforehand or any hint of what all this was about?

SEN. GLENN: No, it was just part of their testing program. We understood that. They were trying to get a baseline on each person.

THOMAS: So you really had no idea after all these tests whether you had done well and your chances of selection were good or not?

SEN. GLENN: No.

THOMAS: I've read where some test pilots sort of stayed away from the program.

SEN. GLENN: Yes. Let me go back a minute because there is something else that is interesting. The initial selection criteria stated you had to have a college degree. Now at that point in my life I had far more than enough credits for a college degree. I had left Muskingum College in the middle of my junior year to go into the military back during World War II. I had never actually received the sheepskin, the actual diploma. But when I was stationed in Washington I did night classes up at the Pentagon that the University of Maryland gave three nights a week. So I had completed some work there. The assessment of our work as test pilots in test pilot school, there was some educational group that came down one time and evaluated that curriculum as being somewhere between a Masters and a Doctoral degree in the areas we were looking at there in aeronautics. Also, I had taken a number of other classes in the Marine Corps. I had taken an accounting course once that the Marine Corps required. So there were a number of things like that that more than qualified me for a college degree. But I just had never gone to get it, never submitted it.

I didn't know this at the time, but on the first go around, after we had gone through all these other tests at Wright Patterson and at Lovelace out in Albuquerque, I had been taken off the list as not qualified because I did not actually have a college degree. At that time, there was a lieutenant colonel named Jake Dill, who was a friend of ours. He had been my CO, my commanding officer, at Patuxant River in a Marine detachment at Patuxant River. And he knew the kind of test work I had done there and had all my old flight reports, a big stack of them like this. Jake heard about this—that I had been taken off the list—and by this time he had been re-assigned and was in the personnel department at Marine headquarters. I didn't know this until afterwards. Jake had heard I was taken off the list and he thought this was ridiculous. He felt I had more qualifications, actual qualifications, than almost anybody that he had heard of that was on the list. He knew about my combat time and my test time in hypersonic aircraft and the work I had done at Patuxent.

So he took all my flight reports and asked for a meeting with the selection committee. I didn't know this. He went over and sat down with them and went through my records, and said he thought this was a little bit ridiculous that I was being cut out of this thing when I had more experience than what they wanted, more than most of the people that were flying. And they reversed themselves and I was put back in the list and selected to be one of the seven.

Jake Dill was one of those people who I have a great respect for. He's gone; he died of cancer some years ago. But after that, when I found out about this later, I thanked him very profusely and he said, "Well, people had helped him along in his life, and he thought the best way to thank them was not to thank them; it was to pass that same thing along to other people." And I always thought that was a pretty good purpose in life. Whatever good fortune I may have had, was to help pass that to other folks.

THOMAS: He thought it was a mere technicality and sort of an injustice?

SEN. GLENN: He did. In that they were talking about a piece of paper, and he was talking actual experience doing things and evaluations that more than qualified me to be a graduate. And later on, much later on, I finally submitted all of this stuff back to Muskingum College and got the degree there. But if it hadn't been for Jake, I probably would have never been in the program.

THOMAS: I had read where, when they called for volunteers, there were, I don't know, a group, I don't know if group is the right term, but some test pilots who stayed away from the program because they thought this wasn't true test piloting work, or wasn't using their skills in the right manner.

SEN. GLENN: There were a couple of thing going on at that time. One, when the decision was being made, before the decision had actually been made to have a manned program, the Air Force out at their test pilot school at Edwards Air Force Base just assumed that they would be the lead

organization in this new effort to go into space. The people out there actually started a program called “The MISS program, Man in Space Soonist.” They actually had this program going, were doing some studies in this area. And they thought they had this thing all locked up. This effort had been going on before NASA was actually formed, and before President Eisenhower gave NASA the responsibility.

The president decided he did not want this to be a military program. He wanted it to be an open program for everybody. It would be a civilian program, with military participation. But he wanted it to be a program that was open for everybody and contrast it with the Soviet program. We were going to be open to everybody all over the world, and he stopped the MISS program out there at Edwards. Well, that left some rather bitter pilots out there at Edwards, who were in test pilot school there primarily, who thought they were going to be involved with going into space.

So there were all sorts of statements made that some of the people who were involved at that time regret now, but they made some statements. I don't know, but there were statements that you indicate, that they didn't want to go into something they didn't have control over, didn't have wings and rudder pedals and a stick and so on. And references were made to the fact that we were being preceded by the chimp flights, to see how they reacted before we put people up there in space. So there were some caustic comments, such as you might have to scrap off the seat

before you could get in if you were following a chimp. So anyway, some of those people haven't quite gotten over it to this day, that they didn't run that program. That was decided at a presidential level and there wasn't anything they could do about it.

THOMAS: What were your initial thoughts when the call came that you were selected as one of the Mercury astronauts?

SEN. GLENN: Well, I was quite elated, because it was going to be a whole new experience. We were volunteering for really a lot of things that were unknown. Everything I had volunteered for before, I tried to gather—if you were going into combat, World War II, Korea, or test program, you had an idea of what you were getting into and what your duties were going to be.

But here we were, seven of us selected, and basically I viewed this whole thing—I thought the space program was going to be here to stay. It wasn't something that was just going to be a one shot and go away. And we in effect were seven people who were almost like starting our own service. There was the Army, Navy, Marine Corps, ground, sea, air, whatever, but here was a group now that was going to stand back and go beyond anything we had ever done. And so we were sort of writing our own rules on this thing. Nobody knew exactly what to expect. It took the limit in all of us in our training and being dedicated to this thing. We didn't know exactly what was going to happen.

I think, too, a lot of people forget what it was like back at that time, with the Soviet Union, because they had a manned program. They were doing test shots of rockets and were being successful, while our rockets, quite often, were blowing up on the launch pad. And the Soviets were actually taking thousands of young people from third world countries into the Soviet Union, training them, and then sending them back to their own countries. This training was something that many people in this country were not absolutely positive about what was going to happen out of this. Was the world going to go Communist or not? This was a big deal. It was in the days that Joe McCarthy, Senator McCarthy, was making all of his wild statements about Communists taking over the State Department and all sorts of things of that nature.

So when we got into a space program we were in competition with the Soviets. It was in the depths of the Cold War. So you looked at it and that's sort of a serious thing. It wasn't just some little development that came along that we were able to participate in that didn't mean much. We were training for something that we hoped would get this country back in the running again against the Soviets.

THOMAS: Seven test pilots became the first Mercury astronauts. The number of slots available, was this known to you beforehand, or was it just vague?

SEN. GLENN: I don't recall if they really started out telling us that there were just going to be seven. I don't remember when we actually knew it was just going to be seven. That was obviously apparent when it came down close to the

time when they were going to announce it and make the final selection. And I don't know, at that time they had their own outline, NASA had its own outline, of how many flights they thought would be required with this first group, and when they would bring another group in. All that was sort of vague at that time, too. I think it depended a lot on what the Soviets did at that time, and how well we did in Project Mercury. It was vague because we'd never done this. This was something that hadn't been tried before.

THOMAS: Did you know any of the other pilots who were selected?

SEN. GLENN: I had not known or met any of these Air Force people, but Al Shepherd and Scott Carpenter and Wally Schirra were all Navy. We were in different units, but I knew them and had been to some conferences with them, things like that. I didn't know them real well at that time.

THOMAS: When NASA announced the selection of the seven Mercury astronauts and they held their initial press conference, it was quite the news item and generated a lot of media and public interest. Did your experience with Project Bullet help you with all of this? Were you better prepared for the amount of attention you received?

SEN. GLENN: No one could have been prepared completely for the amount of attention that we got out of this thing. It felt like a tidal wave came over you. I think perhaps what I had done before, maybe in Project Bullet and some of the action on that, and some of the public relations things that I was involved with then, that may have helped a little bit. In looking back on it

now, I don't think I was as tight lipped as some of the other people were, good or bad.

THOMAS: I imagine it was quite an experience for military test pilots.

SEN. GLENN: It was, for us to be called in. And NASA headquarters at that time was in an old building in Washington. If you come out of the front door of the White House and go right across the street to Lafayette Park, at the far end of Lafayette Park, and turn to the right, the building that's right on the corner, right there, big yellow building I think it is now, an old house, an old home, that was the first NASA headquarters. Hard to believe, but that's what it was at that time. And a big room, or a very tiny auditorium, in there is where we went and where we held the press conference announcing that we had been selected.

THOMAS: What was the reaction of your family to your selection?

SEN. GLENN: Well, they were glad. The kids of course caught a little bit of this in school because it was such a big press event. And a lot of the other kids were asking them questions and things like that. So it impacted them somewhat.

Anyway, I had talked all this over in advance, if I was selected, what our situation would be. By the time we were announced we knew that they were going to headquarter this out of Langley Air Force Base. And some of those who were selected, in fact all of them, chose to go from wherever their bases were to move down there. I was the only one who didn't actually move down there. We were based in Arlington,

Virginia at that time, that's where our home was. We had built our home there. The kids were in a good school right across the street. We didn't want to move them from that, and it was about 180 miles down there from where we lived. Since we were going to be traveling a lot out of Langley anyway, we decided we'd just keep the kids in school and go back and forth. I lived in the officer quarters down there when I was at Langley. Then we traveled an awful lot with training at San Diego, where they trained us for the boosters, and McDonnell Aircraft in St. Louis, where you started training on what these spacecrafts were going to be like, and other places all over the country.

THOMAS: I'd like to talk a little bit about the agreement that you got with Life Magazine through Leo DeOrsey. Who was Leo DeOrsey, and how did he become sort of your agent?

SEN. GLENN: You can imagine with all this attention that the seven of us were having, well we didn't have individual lawyers or anything like that. There were all sorts of things being thrown at us about proposals to do this, do that, whatever. And we were just leaving it up to NASA what they would permit us to do or not. But then beyond that, what did we want to do? We were just focusing on what our job was at that time. And NASA really decided they needed somebody to field this stuff for us and there was a lawyer in Washington who was very well known named Leo DeOrsey. He was mainly a tax lawyer, but he was very sharp. He had managed the stars, celebrities. One of the old time radio people was Arthur Godfrey.

He had represented Arthur Godfrey, for instance, and other people like that, in how they set up their business relationships and so on.

Leo was quite a character in his own right and that, through one of those people in NASA—I had it was the head NASA public affairs officer at the time—knew Leo very well. And he suggested: would we want him to represent all seven of us as a group? We didn't know Leo, and so whatever NASA wanted to do, if they wanted us to have somebody like that, that was fine. So they talked to Leo about it, and Leo said he would consider this, and then he wanted to have a meeting with us.

I still remember the meeting very well, because Leo wanted to have a meeting with all seven of us and our wives out at the Columbia Country Club in Washington, where he was a member. So we went out and we had dinner in a private room. And we had just met Leo. So we had dinner and we finished dinner and Leo said, "Okay, let's get down to business now." He said if we wanted him to he would represent us. And I still remember that. Al Shepherd and I looked at each other, we were both wondering, if there are business things to come out of this, what percent does Leo want, and stuff like that. And Leo, he had not asked a question about this. Leo said if we wanted him to represent us, there were certain things we would have to agree to, certain arrangements and agreements. And I thought, "Uh-oh, here it comes." Leo said the first thing was he didn't want any commission, no money for representing us. And I looked at Al Shepherd and said, "Oh, what's going on. There must be something

wrong here someplace.” The second criteria Leo had was that anytime he had to travel or represent us in any way, all his expenses would come out of his pocket. Now if we agreed to those two things he would represent us. Obviously, we were looking at each other and wondering what’s going on. And Leo started to laugh. And that was the arrangement we had all the time.

Leo was wealthy in his own right, so he didn’t need the money. He was just very proud to have the association with the seven of us and representing us. Every time something came up, someone would make an offer or whatever, we just referred it to Leo for whatever he thought should be done about it. And obviously 99%, more than that, over 99% of the things that people would want, he would just automatically turn down.

THOMAS: They did make an agreement with Life Magazine.

SEN. GLENN: Yes, the Life Magazine thing was widely criticized at that time. And the press in particular was very critical of it. What had happened was that everywhere we went there was just so much attention showered on us. There were press requests to come into your home and them wanting to follow the kids to school, and interview wives, and everything else. And we didn’t want to do that. All of us had agreed, the seven of us, we weren’t going to let them in our houses. That was our place. Our families were having enough trouble just keeping normal lives with all of this, and we felt we just didn’t want them coming in our homes.

That was creating a big furor. The press was very, very critical of that. And so what Leo suggested was that if we wanted to permit people to come in on a controlled basis and interview your wife and your kids and see what your home was like that was something we were giving up. It should be worth something. And all of us had kids that we wanted to provide education money for, and if somebody was willing to pay for that then we'd give the exclusive right to come into your home, just to come into your home, nothing else. As far as what happened in the program outside, what you did in training and flights and things like that, they had no more right to that than anybody else. This was strictly a right to come into your home, and for that then, Leo was able to negotiate, I think it was \$500,000, for all seven of us, for the duration of Project Mercury, which at that time was supposed to be about three years or something like that. By the time you split all that up, it meant that each one of us, I think got, by the time taxes were paid and all that, I think it was probably about \$35-40,000, which was put in an education funds for our kids. No, it wasn't that much, about \$25,000 I think, was put in a fund for our kids. And the press always was critical of that arrangement. But we were happy with it because it did give us education money for our kids. And we could control that and we did.

THOMAS: So instead of all these people calling, it was just Life Magazine?

SEN. GLENN: Yes, we had the agreement, and they objected to it, and it went up as far as the president, and he said, "No, that's okay, if you want to do it that

way, do it, control it.” Cause he didn’t think we should just have to open up our homes to just anybody who wanted to come tramping through anyway. If we had gone that route, how would you determine who came through and how would you limit it? You couldn’t do one or two and quit. Everybody else would be mad. So this was a way of controlling it that was approved up at the presidential level.

THOMAS: Let’s talk a little bit about the initial training that you went through. What were you doing, say, the first year or so training wise?

SEN. GLENN: First off, you had to know the spacecraft and the systems in them. So that was much of our training and our travel. We spent a lot of time out at McDonnell Aircraft, which had been selected to make the spacecraft. Within our group of seven we sort of split up our responsibilities as to what each one of us was going to follow. Because all seven of us trying to follow everything in the whole program, it wouldn’t be the best way to do it. So we each took an area of responsibility that we would follow in particular, and then we had our meetings when we were all back at Langley together, we’d have our meetings. If we were all there we’d have them every week. If we were gone for a couple of weeks at a crack, we’d have them whenever we got back together again. And then each one of us in our special way reported back to the group what the status was, so we kept up with things. Al Shepherd was in charge of the whole recovery area. In other words, how are you going to get picked up. How to deal with the Navy...

[Begin Tape 1, Side B]

THOMAS: Okay, let's pick back up here. We were talking about splitting the responsibilities in the program.

SEN. GLENN: Yes, Al Shepherd was in the Navy, so Al sort of followed what the recovery procedure was going to be, the number of ships, where the recovery areas would be around the world. Deke Slayton followed the booster development. He had been in the Air Force. I had done a lot of work on cockpit layout and instrumentation of cockpits. So we knew somebody should sort of follow how that was being developed in the spacecraft. So I took that one on. Scott Carpenter was on navigation procedures around the world and all that. So each one of us had a different area of responsibility and we would report back in to the whole group when we got back together. It was our way of sort of managing it. Plus, any of us had full access at any time to all the engineers that were involved with this thing. When we first started out, this was called the Space Task Group and they were based out of Langley, where the old NACA had been. We had about maybe 30 engineers that had been assigned out of that NACA group to be part of the Space Task Group. That was the total manned space effort for NASA at that time, along with some secretarial help and all the support list. Seven of us and about 30 engineers who were in turn channeling a lot of the work out to be self-

divided outside to other centers within NASA, or to other civilian agencies outside. So, it started out as a very small group.

THOMAS: As far as dividing up various areas of responsibility, is this something that you worked out with the NASA administration? What was the relationship between the astronauts and the administration in the beginning?

SEN. GLENN: We had complete access to anybody we wanted to have access to, but I don't remember whether they suggested the divided responsibilities. I think probably we just did this on our own, and suggested it to them as how we'd like to operate, and it was fine with them as I recall. I don't remember that there was any question about it. We were the ones with the experience in high speed flight and had the test pilot background. We had that kind of experience. They had the engineering background, the scientific background of testing of aircraft, and that was their area of expertise. And any time that we had any suggestions to make, there was no question about it. They were extremely cooperative in whatever we were curious about and wanted to do and any of the arrangements.

I remember the very first meeting we had. Bob Dillard, who was the director of the program at that time, and he had been with the old NACA, had a whole career with NACA and had been selected to head this manned group in NASA, after that transition from NACA over to NASA. In our first meeting with him he said that anytime we didn't like something that was going on, to let him know, and he would either see that

there were extra tests run or there were procedures set up that we would be satisfied with. Cause we were the ones that were going to have to ride in it. And that's the way it operated, too. If there was anything we wanted more checks on, why we got them, and there wasn't any problem with that.

THOMAS: You had a lot of input and they were very flexible.

SEN. GLENN: Yes. Very flexible. Of course, they had their own ideas, too, about what we were going to be required to do and how we would man a craft like this. It wasn't just all our ideas. They were the ones who were putting the thing together and doing the work on what the spacecraft itself would actually be like.

Max Regae, who has since passed away, he was the one who really was the father of the shape of the Mercury spacecraft. This is sort of interesting. Before that time it would go faster and faster and faster in the air. He thought if you made this thing more streamline, more sharp-nosed, more needle-nosed, that was the way you let the thing go faster. Well, our speeds were going to be fast enough that it was going to burn that needle-nose off, just melt it. And so what do you do? Well, then they came up with the idea of this blunt shape that Mercury had, with a heat shield that would in effect melt off as you re-entered and carry the heat away, just like a tea kettle on the stove. Steam comes out and carries a lot of the heat away. That's what this was designed to do, just the opposite of a needle-nose coming back in. It was a blunt shape, but that blunt shape was

covered several inches deep with a phenolic and resin material that would boil at the temperatures that were around 3,500 degrees during re-entry. And they made that heat shield very carefully so that the amount that bled off, or that burned off, you'd still have about half of it left after a normal mission. I have a little plug that shows the burn on one end and the core going down a ways, and it's that little core that came off after the flight was over. It was just about half the thickness of what it was to begin with. They engineered that one correctly fortunately.

THOMAS: In the initial training, were you traveling as a group of seven a lot, or were you splitting up and coming back together?

SEN. GLENN: Both. If we had something—like if I was doing cockpit layout and I wanted to go see, I wanted to make a trip to talk, not to McDonnell that was going to build the spacecraft, but I wanted to go up and see something along this line, Grumman up in New York or something like that, there wasn't any question at all. You just told them where you wanted to go and you went and did it.

But during the earliest days, most of our travel was together during the very early time period. We were doing training as a group. We went out there where they were making the Atlas booster out in San Diego as a group. We were out there to tour the place, talk to the people. We went to Huntsville, Alabama as a group, where Von Braun was and his group that oversaw boosters; and the Redstone missile in particular that was built

there. So we traveled as a group to all of these different places, where we were going to do training as a group.

We went to University of North Carolina and they had this planetarium. They actually had set up a mock-up of the spacecraft in there. Then we had the star patterns in this planetarium the same as they would be during our flight, on the orbital flight. And so you'd look out the little window and you'd have the same star pattern. The idea of this was that, if you lost radio communications completely and you're up there, how would you get back down? How would you know exactly when to fire? Well, we had this thing, we worked on that simulator enough that, if we had lost communication and we saw the star patterns going by, you knew approximately what star patterns would be in your window. You knew where to fire to come down at a certain area, which would be at least 3,000 miles away. So you're firing your retro rockets in advance to come down. And so we went through training like that. Well, we went up there by twos and threes, because you couldn't put everybody in that trainer at the same time. So we had training like that.

We had other training that was like survival training out in the desert in the middle of the summer time. They wanted us to train in survival techniques wherever we might come down, in case it was an emergency re-entry and we had to come down someplace. So we had desert training. We had sea training. We had jungle survival training. The jungle survival training was done down south of the Panama Canal;

down in the jungles near the Columbia area. And it was in the Indian country where the Choko Indians still live back in there, and they're still very much a remote people. So we trained on how you live out in the jungle and how you survive for 72 hours. They said they could pick us up anywhere in the world in 72 hours. That would be the max. So we trained to stay in all these conditions for 72 hours. We did that down there in Panama where they put us down in the high canopy jungle area. We had two people go in as a team, so they had two people together, and then the flight surgeon would come around once a day to see how you were doing, and you survived in that heavy rain forest in the jungle for 72 hours. It was quite an experience. Neil Armstrong and I were the two that were put down on one site down there, so we lived together. You had just the equipment you would have if you came down in the spacecraft in that remote area.

THOMAS: So you had to scrounge for your food and water?

SEN. GLENN: You had some food; whatever food you would have had in the spacecraft was available to you. They had training then in what you could eat in these areas, whether it was the desert or jungle or whatever. We did training at sea. We stayed in a life raft off the coast of Pensacola. We didn't spend the whole three days out there bobbing around but we went out and survived out there in a life raft for a while, each individual life raft, not all together.

Desert training—that was particularly interesting because you could make like a canopy out of the parachute that would have let the spacecraft down. So you made not only a canopy that would protect you from the sun and the heat, but you also learned how to make clothes, like Arab clothes, layer after layer after layer, out of parachute material over you, which is good. Layer after layer insulates you from the sun outside. You made a vernoose for your head; like you see the Arabs have now. You even had a way of making shoes. You wrap these things up and then you put the cord, the parachute cord, you had those wrapped around your feet to hold it in place so you had actual shoes, so you could walk on the hot sand. And you learned how to dig down about six or eight inches in the sand, the temperature goes down about four or five degrees if you dig down a little bit below the sub-surface. Just things like that that we survived on.

I did one experiment there, too. They had warned us about the dangers of dehydration and how you really had to be careful out in a desert area. You had to get water because you really go down hill rapidly if you don't have water. I had never been intentionally dehydrated or knew that I was dehydrated. So I asked Bill Douglas, our flight surgeon, who was going to come around to each of these sites that each one of us was on. We were only a quarter mile or half mile apart from the other people, each one of us was that far apart. Bill would come around and check us to make sure we were in good shape. I asked would he go along with it if I

intentionally dehydrated and didn't have any water for the first 24 hours I was out there. I just wanted to see what it was like a little bit. And Bill said, "Yes," and he'd come by a couple extra times to make sure I wasn't getting myself in trouble. And so I did that. I didn't have any water for the first 24 hours I was out there. It was amazing to me how fast your body goes down hill in that high heat if you're not having any water. And at the end of that 24 hour period, I was so de-energized that I would have to really think if I was going to pick up something out there. I'd have to think if I wanted to expend the energy to reach across and pick it up. You were down that far. At the end of that time period, Bill wanted me to drink as much water as I wanted, and if I remember the figures correctly, for the next nine hours I drank 15 pints of water and didn't have any inclination to pass any on at all. So you can really get yourself in bad shape in a big hurry. That really impressed me. To this day, whenever we go out I always tell the kids, if they're driving out on a cross-country trip, to always have plenty of water in the car.

THOMAS: Through all this training, did a sense of camaraderie develop between the seven of you, or did you stay individuals in competition with each other?

SEN. GLENN: Both. We all wanted to get on those early flights, of course, so there was intense competition. But there was also a camaraderie. We had been selected as a group. We sort of faced the public as a group. We traveled as a group. And especially when it came close to flight time—when it came to flight time and people had been selected for certain things,

everybody was a tight knit group and everybody was doing their job as well as you possibly could. It was competitive, yes, intensely competitive. But there was also intense camaraderie, too, all the way through. We were proud of the group, proud of what we were doing, and proud of what we represented.

THOMAS: When the selection did come down as far as who was going, you came in third. Was this a big disappointment at the time?

SEN. GLENN: Yes, it was, because we had all been pushing for that number one spot to make the first sub-orbital flight. I was disappointed that I didn't get that. I had been as competitive as anybody in that. I thought I had done a very good job, and so I was disappointed. The way things worked out, it worked out probably better for me than if I had had that very first flight, although I can't compare what happened.

Bob Gilruth selected Al and Gus, and I was the backup for both of them. That meant if one of them came down sick just before the flight, you went in their place. Also, as the person's backup, you act as their surrogate when all the engineering meetings are going on, the safety meetings, and the last check meetings. You're very, very busy as a backup, and so I did that Al and for Gus.

Then I was selected to go—instead of doing another sub-orbital flight, to do the first orbital flight. The way that it came out—although I was very disappointed at the time of the first selection—the way it came out and the way the orbital flight worked out was good in the end. See

before the flights we were competitive, because neither the Russians nor we had anybody in space. And Al Shepherd was getting ready to make the first sub-orbital flight, about a 15 minute flight, up and down and come down about 30-40 miles offshore, come out in the Bahamas, a short flight.

THOMAS: He wasn't in space very long.

SEN. GLENN: No, total flight up and down was—he got up to 120 mile altitude or something like that. It was a flight up and over the top and fall back down again and the parachute came out. And it was to test all the systems. But that was going to be our first person ever into space. We had hoped that this would be the first person in the world to go into space. But a few months before Al was scheduled to go up on that flight, the Russians orbited the earth. So before that what we thought was going to be our first effort to put a person into space also would be the world's first effort. But then the Soviets actually orbited.

Well, we went ahead with the plan just the way it was planned and Al went up and down. Gus then went up and down on his flight. Meanwhile the Soviets had orbited [Yuri] Gagarin and [Gherman] Titov. So they had actually orbited two people before I went up. I was selected to do the first earth orbit, and it would be the first flight on the Atlas missile. The Atlas had had a lot of problems. But I was selected for that. The way it all worked out with the Russians and the scheduling, and the way the flight pattern went, why it was a good thing that I was on the third flight. I have no complaints today about it.

THOMAS: But at the time you were little disappointed.

SEN. GLENN: At the time I was very disappointed.

THOMAS: That's all I have here this afternoon. Is there anything during this time period that you want to discuss or talk about that we didn't cover?

SEN. GLENN: Let me just comment a little bit about the differences on the spacecraft. I think about this because the Russians just a couple of days ago had a flight that went up and came down about 260 miles short of where it was supposed to come down, and they said it had turned into a ballistic flight. My daughter Lynn called up and asked what a ballistic flight was. That was Project Mercury.

In the early days of the program, Project Mercury, once you fired your retro rockets, you had no control of where you were going to land beyond that. In other words, you couldn't fly that thing back like a shuttle. If you got a slightly different impulse out of your retro rockets, or if the timing was off a little bit, it meant that your landing site was going to be way off, because you're traveling at five miles per second, about 4.8 miles per second. So, for every second of error in firing the retro rockets you're going to be five miles off of your target landing spot. And that makes some big differences.

When you're making a re-entry and you're firing your retro rockets—and those retro rockets are normally thrown away—when you re-enter then you have the aerodynamic resistance on that heat shield as you come down. The aerodynamic pattern will be that your center of

pressure will be right in the middle of that circle. Now, if your center of gravity of the whole spacecraft, in other words, the whole center of gravity of the whole spacecraft is at that same spot, then you just come down and make a normal re-entry. You come down and everything goes normal.

If, however, water shifts or there is a transfer of equipment in one part of the spacecraft to the other, it means that your CG is not the same as that center of pressure. Then you're going to be just like a boat in the water, where you can plane one way or the other. As you re-enter and there's a resistance on that heat shield, it will tend to tip toward the center of gravity. If it's way out here on the edge, it will tip towards it. You can use that to actually steer the space craft around and correct your path coming down. That was not planned on Project Mercury, and what we wanted to do was take any misalignment of that center of pressure and center of gravity, take in the alignment like that and null it out, so it did not affect reentry.

So when I fired the retro rockets up there to come back on Project Mercury, I followed that up by setting up a rate of roll of about 10 degrees a second. So that the spacecraft rotated coming back in and if there was a misalignment, it would not skew you off and have you landing someplace off in the boondocks. Think about a boat in the water. The center of lift on that boat is the middle of the boat, so if you tilt the thing like this you go steering around the way you want the boat to go. In effect, the space craft does that same thing off the atmosphere coming down. Mercury is

the only spacecraft we ever had that landed like that. It was just a ballistic re-entry.

Later, on Gemini, they built the thing so that it had an intentional displacement from the center of gravity, from the center of pressure. So that you could then steer it coming back in, to guide it, so you could bring it in. And then of course we went to the Apollo Program, and that was when Neil Armstrong and Buzz Aldrin and Mike Collins came back from the moon. They had a regular heat shield and they could steer it back in, and try and land on the exact spot. But we never got to really controlled landings, really controlling them, until we got the shuttle where it comes back in like an airplane and lands on a runway.

So there was that difference in the spacecraft that came to mind because just a few days ago the Soviets apparently had some sort of malfunction of their guidance system coming back in, and just took a ballistic reentry. And that's what we started out with way back in Project Mercury. Apparently it must have dug in pretty fast into the atmosphere because they said it exceeded their normal G limits. I'm going to be anxious to see in Aviation Weekly in a week or two what kind of G levels that they actually took.

One area of training here that we didn't mention, too, was the centrifuge training up at Johnsville. I don't think we covered that before, did we?

THOMAS: No, we talked about that very briefly earlier but didn't really cover it.

SEN. GLENN: Cause that was some of the hardest training we did. Nobody knew what was going to happen if you had a spacecraft where you were subject to the higher G's than the engineers had predicted, or you came boring back in much deeper and had a heavier G load. How fast or where could the astronaut, or where would he start phasing out of the whole program if he had eight G's, ten G's, whatever.

In normal aircraft flying, a fighter airplane, you're sitting upright. And so when you pull into a tight turn and pull, say, eight or nine G's, which you can do in modern day fighter airplanes, a lot of G's, you're sitting there but the G's going from your head down towards your tail, like your blood wants to drain from your head down towards into the seat. In a spacecraft, it's like you're lying in bed and that bed is being accelerated up, or when you come back in, it's like the bed was being decelerated. And so you take—and obviously in that attitude you can take a lot more G's than you could do in a fighter aircraft sitting upright. In other words, the G vector is straight into your chest when you're in a spacecraft.

Nobody had really determined what we could take or not take. So we went up to the fifty-foot-arm human centrifuge at Johnsville, Pennsylvania, and it was all controlled by one of the rare big computers at that time. This would be about 1959 or 1960. Big computers were so rare at that time; they used to have a special name. That was called Computer Typhoon, I think it was. We went up there and they had us set up on the end of that arm, just like your spacecraft would be out there. And as the

arm started then, your spacecraft would tilt out on the end, so that your G vectors were into your chest just like they'd be in the spacecraft later on. And then we would try and control different things, tests, and that sort of thing. We worked up though—and at first had fairly low G's up to just what the Mercury was supposed to do, about 7.8, 7.9 G's, and did a lot of work there.

Then we determined that we should probably figure out what the maximum was you could take. Nobody had ever done that before. And so we kept working it up and working it up. We got up to where—Al Shepherd and Gordo Cooper and I went up and ran these tests up there for about a week. Each one of us got up to about 16 G's, and even with the vector straight into your chest, that is more than I ever want to do again. That was a gut buster. You were just straining, even though you were lying down with the G's are straight into your chest.

You're in a contour couch that helps support you perfectly. There was a contour couch molded just to my body and one for Alan and one for Gordo. So we each had our own individual shapes on that. When you got up to about seven G's you could no longer reach up and change a switch on the instrument panel. Beyond that, you were just supporting your arms. You couldn't lift them up. Once you got above about, I suppose we were above about 12 or 13 G's for maybe 20 seconds or so, on the end of each one of these arms. And at 16 G's, you're straining every muscle in your body. I mean just strained to the utmost to keep enough blood going to

keep from blacking out. If you even just barely think about relaxing any, your vision starts closing in and you start to pass out. We determined to get to that point, but that was enough. So, we got up to 16 G's. We didn't expect to do that on any flights and I don't ever want to do 16 G's again.

There was another one that I thought was interesting we did, also on the centrifuge. I think this would be good to have on the record. On a normal reentry we'd come down and when you finally get on the main parachute then there's some latches pulled that lets the whole heat shield drop down about four feet on what is in effect a rubber pillow or rubber balloon. So when you hit the water or hit land—that's where it was necessary. If you hit land, then that would cushion your landing, so you wouldn't get torn up. If you came down in the water, you didn't need it. It was nice to have in the water anyway. But the idea was, if you had to make an emergency reentry and you came down someplace in the world, then you would need this cushioning effect to make it possibly to not get broken up inside.

Then somebody came up with the idea, what if you come down someplace like this where the spacecraft was in a 30 or 40 miles an hour wind and you hit at an angle, and as soon as you hit the parachute detaches. And what if this thing goes over and hits then on the small end of the capsule. On the inside, instead of being supported by the seat that you're in, you'd turn out into the straps and what would this do? So, we decided to put that one to a test. In that case, if that happened, we wanted

to make sure that the straps that came over your shoulders and around your gut were adequate for that kind of a deceleration, if you hit and you're popping out of the seat instead of into the seat.

So we devised a test up there. If the small straps designed for this spacecraft were not adequate, then we were going to have to go to some sort of upper body restraint that would spread the pressure out over your whole upper body and your head. Your head is going to snap forward in a situation like that also. So, we went up there and tried to do what we called EIEO runs. Eyeballs in to eyeballs out. And what that meant was, we were going to try and simulate on the centrifuge what would happen if you'd come down in the spacecraft and it hits and bounces and comes down on the small end, and you're thrown out against the straps instead of back into your seat, which was normal.

They could simulate this by having the spacecraft out on the end of this 50 foot arm, and the spacecraft is out here, once you got going around it then, the spacecraft was tilted, was angled, so that you're inside this thing going around it. It's in effect gone from vertical to flat. And then if you're going around at a certain number of G's, they could rotate that capsule out on the end of the arm while you're at three or four G's, or whatever your test rate was. They could rotate it so it would simulate hitting the ground in a spacecraft and then going up and hitting on the small end. So those rotational flights, we ran those. We went from two G's to two G's plus in your chest, rotated to where you are two G minus

coming out. And so that was a Delta of four G's and I think they could rotate that thing at about two and a half seconds from normal G's into your chest, to rotating them out of your chest. I hope you can visualize that.

THOMAS: That was quite a jolt.

SEN. GLENN: Yes, we kept working up what the Delta would be. We'd gotten up to, I think the three of us had done at least four, I think four G's, which meant you went from four G's plus to four G's minus, eight Delta, in about two and a half seconds. And that was getting to be very tough stuff. Those were some tough rides. We never had flight surgeons ahead of us, except that one time. Bill Audry was the flight surgeon, was up there, and he wanted to do the next run ahead of us. And so he went in and I think he did a five maybe, which was a Delta of 10 G's, and that's a real jolt. When he came out of it he was breathless, couldn't get his breath, and so he coughed and coughed and coughed, and wheezed around. So we finally decided we'd stop until we found out what was the effect on him.

We went down to a lab there where they had one of these big anthropomorphic dummies, where you could take different parts of the body off and see what's happening to the organs inside. And so we set that thing up in the same position that Bill Audry had been in inside the spacecraft, and then simulated the vectors of what was going on inside his chest, why his lungs were affected the way they were. What the doctors determined at that time as we rotated this body and simulated the vectors, they determined that what was happening was his heart was just full of

blood. His heart swung around and was hitting the back of one lung hard enough that it was knocking all the air out of one lung. And so when we determined that, or the doctors determined that, we decided that was about enough and that it was time to stop on that test. The odds of us having that—we didn't want to tear somebody up there, and the odds of us ever having to really use that information wasn't very great.

Another thing that happened though, on the very high G runs, the 16 G runs or even ones below that, you would get alveoli, which means little blood ruptures under the skin. No, I'm sorry, not alveoli, those are your lung sacs, the fatikio it's called. And when we did that, you got out on your back, your back was just like somebody sort of—parts of it would be a little black and blue, but mainly there would be just hundreds of these little fatikio, little blood vessels that had broken on your back. On the tumble runs we'd call them—those other ones where you rotated the capsule in the EIEO runs. When you did those and you slammed out against the straps, then when you got out of your suit later on—were going to take a shower and got out of your suit—here were these marks, these fatikio bruise marks clear down across right under where the strap had been.

So we were sort of out on the limits there, I think, of what we should have been doing. Fortunately, we realized it before we hurt anybody doing these things. It did give us a lot more confidence that we would be able to cope with anything we were running into on the flight.

But those were some of those interesting tests we did at Johnsville. And then we did a lot of profiles of just what would be the regular flight and the regular G load, and seeing which you could control with the hand controller. That was part of the training up there. But all these things together gave you a lot of confidence.

Another thing that comes to mind, too, while I'm thinking of it, is the jungle training. There were three spots on the orbital track that if you came down you might very well need, well you hoped you got rescued pretty quick. But there were three very interesting areas of the world. One was Southwest Africa, where you still had the Kalahari Bushmen in those days. Another was the outback in Australia where there were Aborigines. In particular, the one that was really interesting, one of the flight paths came right over across the central part of Papua, New Guinea. And that's where they were still discovering tribes they had never had any contact with then. And they were very, very interesting.

You can imagine, if you came down in one of those areas—you can just imagine Papua, New Guinea. Here you are, out there, and you're coming down in a jungle area, and there was a clearing. And one of the natives there happens to hear a double sonic boom—boom, boom—and looks up and here comes a black speck falling out of the sky down toward him. Then a big white chute comes out on top of it and this thing comes down and lands. The hatch blows off the side and out steps this thing in a silver suit. Now what was going to be the reaction?

My view in thinking about this was: if I was on that particular flight I was either going to be God or dead pretty quick, one or the other. And so as the outcome of part of this training stuff in the jungle and desert and everything else, I decided before the orbital flight to make up a little statement in some of these primitive languages around the world, as nearly as we could simulate where I was going to be or the closest we could come to translating it. And so I wrote out this thing. We had some of the people at the Library of Congress, some of the linguistic experts there and some of their contacts translated this into half a dozen dialects or so. These were the most remote areas. And in that little message I said, “Friend, take me to your leader, big reward,” and all these things.

The idea was, if I came down and stepped out, I would have a way of communicating. And I actually carried that with me on the trip. So there were a lot of things like that that we got into in training that you had to think about. If you’re going to come down in the jungle area, if you’re going to come down out in the desert someplace, and might have to spend a few days with Bedouin Arabs out in the middle of the desert someplace. We had training for all that. So we tried to think about as many things like that as possible. This would be a good place to add this in.

THOMAS: So all in all I’d say your training was as thorough as possible.

SEN. GLENN: It was for everything that we could foresee at that time. We never needed that kind of training. Another one just popped into my mind, too. We were doing desert training out at Stead Air Force Base near Reno,

Nevada in the middle of the summer. They had an old master sergeant there who had done this type of training for a long time and somebody asked about snakes. And he said, well, at that time the treatment was that if you had a snake bite, you'd take your knife and make an "X" in it and then suck the blood and stuff out of that. He said that a lot of people— what they found was that some people would hesitate to suck that out of somebody else, because they were afraid it would poison them. And so people were very loathe to suck that kind of venom out of somebody else. And he said he wanted to show us something. The snake poison was nothing but a type of protein and as long as you don't have a skin break you're completely okay.

To demonstrate this, he had a water moccasin that had just come in. And he got the thing out, milked it for venom in a little shot glass and drank the venom, and he said if he ever got an ulcer in his life, he'd know it because he'd be dead when he did that. And as long as his digestive track was okay, it was perfectly safe. I always thought that was an interesting demonstration, too.

THOMAS: I bet that opened some eyes.

SEN. GLENN: Oh yes. I thought this guy was nuts. Sergeant, what was his name, I always remembered his name. Neil and I had this little place where we made hammocks and strung them up out of some of the material between two little trees. And Neil hung one up for a Choko Indian. We were in Choko Indian country and they said that these Indians roaming around

through the jungle area might—they had done some training in that area before and sometimes they came up and were there. And that was another thing you learned, just how to treat them. We had one guy show up. He came looking around through the jungle with all sorts of paint on. I never did know whether he put it on just for our benefit or whether that's the way he normally ran around. But we gave him some little stuff we had.

Well, that's a good place to end it. If I think of anything else, we can pick it up next time.

[End of Interview]