NASA JOHNSON SPACE CENTER ORAL HISTORY PROJECT
EDITED ORAL HISTORY TRANSCRIPT

ALAN L. BEAN
INTERVIEWED BY JENNIFER ROSS-NAZZAL
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ROSS-NAZZAL: February 23rd, 2010. This interview with Al Bean is being conducted in Houston, Texas for the JSC Oral History Project. Jennifer Ross-Nazzal is the interviewer, assisted by Rebecca Wright. Thanks again for taking time to speak with us this morning.

BEAN: It's my pleasure, Jennifer and Rebecca.

ROSS-NAZZAL: I'd like to start by asking you what involvement you had with the [Space] Shuttle Program before the ASTP [Apollo-Soyuz Test Project] flight ended.

BEAN: I had none at all because I was the commander of the backup crew for ASTP, so the three of us, Jack [R.] Lousma and [Ronald E. Evans]—you get to be 77, you don't always remember. That's something to keep in mind here. You think you remember things but you don't always really remember them right.

We were busy training here, learning Russian, going to Russia and all that, so didn't have much to do with the Shuttle at all. The Shuttle then was being run by Ken [Thomas K.] Mattingly [II] and John [W.] Young and Bob [Robert L. "Crip"] Crippen as the key people. Dick [Richard H.] Truly was involved. The guys that were going to fly it first were there, and also George [W. S.] Abbey of course was the boss of everybody. He was very hands-on, so I

didn't have anything to do with it. Then when ASTP was through I came over and began to work on the Shuttle a little bit, and began to start thinking about new astronauts.

ROSS-NAZZAL: Tell us about how that evolved. You moved from Apollo operations and then you started working on, as I understand it, Shuttle operations.

BEAN: I did, so I began to fly the simulators and the Shuttle aircraft and make comments. One of my favorite things is we were doing a rendezvous in the Shuttle, and you do the rendezvous mostly in the overhead window, not from the front of the aircraft. The ball that was installed there at the time was giving you information as if you were looking out the front of the Shuttle, which was not the way you wanted to think looking out the overhead window. You wanted to think of that as the front. I can remember talking with George Abbey and others, saying, "We've got to do something with this ball here.

"We've got to make it where you can switch between the ball in the front cockpit and the way it works." As if that were the front cockpit and you were looking up and the tail would be the bottom, because your eyes are what you're using and you don't care what the rest of the thing looks like. That turned out to be an expensive change, but a necessary change. We worked on that for quite a while and it was adopted. My guess is that nowadays it's fundamentally that, but refined and better. Things that we didn't think of and, "Doing the rendezvous, it'd be better if we did this."

I worked on that. As I remember, George Abbey said one day that he thought it might be a good idea if I, in addition to working with the Shuttle, would be in charge of operations and training, which meant working with the new guys and gals, so I said okay. I was glad to do it.

Didn't know anything about it—I was not on the selection committee. I'm not sure when they were selected, when they reported. I was busy working on the Shuttle.

Then they show up. I know that well before they showed up, we began to think about what the training program would be, so we started working with the people down in our training department. Of course they'd trained other astronauts, so we realized that we had a kind of baseline to go with. Did we think we could improve it? The kind of guy I am, I always feel you can improve it. There's a better way to do it if you can think about it, certainly after you've gone through it. So we made some changes to it and thought about it.

One of the things that I recommended we do—and I have no idea if they're doing it now, probably not. You know how things come and go in any organization. [Charles P.] Pete Conrad used to say a new broom always sweeps clean, and he was right. New people want things differently, just like I thought I knew of a better way than we'd done it. One of the things that I thought we ought to do a lot of—in addition to much more aviation safety, because that's where we had lost astronauts in the past. We decided we were going to do much more emphasis on safety flying T-38 airplanes, because historically we lost a lot of astronauts doing that.

Another thing I felt was important is when we finished our training, our group, we knew the beginning things about spacecraft and space suits and we'd gone to survival training—the standard things that we were going to do again. But we didn't know how to do our collateral duty. Each person was assigned somebody. Like I think Sally [K.] Ride was heat shields—we were assigned different jobs. Nobody ever told us how to work with NASA at these jobs.

I remember being completely baffled by how to do it, and I didn't feel like for quite a long time I was very effective, because I really didn't know how to work with NASA. NASA works differently than the Navy does, and certainly many other organizations. So I felt like we

needed to do some training in that so when people got out of the training they could hit the ground running.

I did not feel that I was the best person to do that because there were other people there—Dick Truly comes to mind—that were much more effective than I was in dealing with NASA and how to do it. How to get the information, how to convince people to do it, all that. So we came up with a series of lectures by the people like Dick Truly. I can remember approaching Dick and saying, "We want you to do this."

He said, "What do you want me to do?"

I said, "Well, I want you to tell these new astronauts how you wish you'd been told or how you now know—I don't know how to do it as well as you do. I want you to figure out what to tell them." I may have approached John Young or not. John is not the kind of guy that wants to do that, so even though he's effective in his own way, it's not the way that is as good as Dick Truly or Bob Crippen or some of the other people. I can't remember who I asked to do it, but I asked to do the ones that I thought were the most effective.

When they did start, they were much more effective than our group or other groups, because they had been told by people that knew how to work with NASA how to do it. I sat in on a few of them just to hear what their opinion was, because I knew that they were good. Whether they're doing that now or not, I don't know. They should, but that's just my idea. It's not like I knew everything, that's my opinion.

Meanwhile, I'm most of the day working on the Shuttle. Another place that I felt like we needed help was the Shuttle Training Aircraft; it was configured with a computer so it flew like the Shuttle. My opinion was—and it wasn't necessarily the majority opinion—that the Shuttle was too hard to fly, particularly landing. It just was too much work. You had to constantly be

making adjustments. Much harder than a regular airplane. Even the KC-135, which was a [Boeing] 707, was easier to fly than the Shuttle in terms of moving the stick and things. Not reading the gauges, but the flying qualities they call it.

So I did a number of complaints, you might say, about the flying qualities. Of course that doesn't go over big with Chris [Christopher C.] Kraft and others. That's their baby, this is their baby. [They think] that it was good enough for John Young, "How come you don't like it?"

I said, "I don't know flying qualities"—I had some training in it—"but we've got the people out at Edwards [Air Force Base, California]. That's their whole life, making test airplanes fly good. Let's get them in here and let them fly the Shuttle Training Aircraft and let them tell us what's going on." Man, they didn't like that. They didn't like going to another NASA Center for expert advice. I said, "They're experts, we're not. We're experts in other ways. We're experts in rendezvous, we're experts in launch." But believe me, it didn't sell.

George Abbey didn't like it. None of the powers liked this idea, because it was going to another NASA Center for skills. They wanted [JSC] to develop it. I said, "Okay, we can develop as much as you want, but we're not ever going to make it. Those guys have done the same thing with 40 or 50 airplanes, and we're going to do it with three?" They didn't like that. Now I would be a lot more subtle, but then I wasn't then.

Anyway we trundled on. It takes a while for a different idea, not that it's better, to catch hold of senior people because they've already got their ideas. That's how they got to be senior, and so they're not interested too much initially. Everybody claims they're interested in change, but in my experience, not many—it takes time. After a while they did go out and get these people that were experts out there and have them come in and fly the Shuttle. And indeed, as a result of their report we changed it, because it wasn't flying good.

I remember it, because I went through the hardship of trying to sell it. John and Crip probably don't remember it so well, because they were happy with what they had. They just ended up with something better in my opinion.

It may be flying different now. Now that we've had all this experience, hopefully the guys that flew it in space came back and said, "The flying qualities need to be adjusted during the first part of entry, atmospheric entry, and then they need to be shifted over to landing"—then they shifted once again when you're over the field. I don't even know any of this anymore, but that's how it's done. And that's NASA's job, to figure out how to do these complicated things as good as we can do them, so that when we build the next Shuttle or whatever, it was better than what we started.

We started with minimum knowledge—more knowledge than anybody else—but then each flight hopefully you know more. We did that with the command module, we did it with ASTP, and all those others. I was busy thinking about those items, plus others: flying the simulator, seeing how it did rendezvous, seeing displays [and asking], "Is this the right amount of displays? Are they in the right place? How do you take the software and what do you monitor during launch?" A lot of things that now seem like that's the way it's always been, [but when we started] no one knew how to do it.

That's why astronauts exist. Astronauts exist because they are the people that were chosen because they could fly airplanes. This Shuttle or any spacecraft, the closest analogue on Earth is high-performance airplanes. That's why we don't see any commercial pilots, even though some of them have more flying skill than test pilots—believe me, they do, [like] this guy that [recently] landed in the Hudson River [New York state], my hat is off to that guy [Chesley B. Sullenberger III, 2009 successful crash landing].

When somebody flies an airplane, you think, "I can do better than that." It's almost like the Olympics, "I can do better than that," or "lucky." But I thought that guy [Sullenberger] is a lot better than I am. Better than most people I know. He was cool and did the right thing, he was perfect.

Well, there are a lot of other pilots that can do these things, but they don't have the background training of flying a bunch of high-performance airplanes. He's never flown an airplane [when] the engines quit in the air, except once.

That's what you learn in test pilot school, and learn then why it is—how to change it, what can be done. Most people that don't do it, even though they could be better pilots, are not able to think that way. It's learning to think a certain way. Like lawyers think in different ways. You think differently than I do, because you're in a different field, and to be good in your field you have to [think differently]. To be good being an artist, I think differently now than I did as an astronaut.

I was trying to help the Shuttle evolve to be as good as we could make it without flying it yet. Just flying the simulators and thinking about it and comparing it, and flying the KC-135 and the Shuttle—we did it all, and we modified—all this is an iterative process. Astronauts, that's the part they bring to the Johnson Space Center. This guy over here, he knows 100 times more in Mission Control [Center] how you need to control a spacecraft in orbit, but he doesn't know how to fly it. And we don't know how to control it, and that guy over there knows the hydraulic system 100 times better.

So what you've got to do to invent this thing, to create these things, is work together with all these individuals somehow. Somehow you've got to work with the guy that really knows hydraulics, to make sure that you know the part about hydraulics you need to fly it. He needs to

know a different thing about hydraulics to do his job. The same with Mission Control person. He has to have different data. Some of the same, but different data to be a good mission controller. I don't know how to be a good mission controller. I did know how to be a good astronaut.

That's what I said about learning the job, because for example in the Navy or the Air Force you go to a squadron. Let's say you're flying F-22s, the most advanced airplane. They give you a handbook that tells you what to do, and you go do it. Test pilots flew that thing and then wrote that handbook and said this is what pilots need to do to be as safe as they can be, and as effective as they can be. That's why astronauts exist. That's just a little background.

So, the new astronauts show up. When Bob Crippen and John Young began to train steadily to be the first [Shuttle] flight, Abbey said, "You're going to be the acting chief of the Astronaut Office," so I began to do that too. That isn't very hard really. The hard part is keeping these people under rein, because they are very ambitious and imaginative and energetic. They want to do everything in the world.

They've got a great attitude, but when you got a whole bunch of them, then they step on each other's toes. Just like me, they've got individual attitudes. If this guy is in charge of displays, you can't let these other people do too much without going through him, or suddenly the guy in charge hears from all these other people, "Well nobody else likes what you want to do. Everybody else wants a digital display and you want a round one, what are we going to do about that? We also like digital."

So keeping these energetic, smart, ambitious people sort of working together, that's kind of what the job is almost. Also, George Abbey at that time was very hands-on. Much more in the Astronaut Office than anyone I ever saw before. He's what I call a power guy. I guess

everybody likes power, but a power guy—he came to exemplify this to me—is a guy that likes to have the power so he can do things with other people. I like to have power so I can do what I want. That's most people, and a little bit of the other. George Abbey, he wants to do what he wants, but then he wants you to know that you can't do anything unless he says so. Even though you know this already, he is going to keep demonstrating it to you, because that's what he likes to do. I began to understand some of these power people in Washington [DC]. I'd never run across anyone like this. Now I understand them so much better, so much better.

Deke [Donald K.] Slayton was a great leader. He had a lot of power, he assigned crew members—but he wasn't trying to tell you every day he was in charge. You knew he was in charge. He left you alone unless he had to come and make a decision. Otherwise, "We hired you because we counted on you, now go do it."

Something I began to learn as the acting chief of the Astronaut Office was that George Abbey wanted to really do that job. Took me a little while to catch on, then when I caught on, well, we got along great, because then I understood him. As opposed to like Deke Slayton or some of the other heads of the Astronaut Office, he was much more hands-on and much more the way I just described.

So along come the new astronauts about this time. I can remember the first meeting. I thought a lot about it, because I wanted very much to have them be good astronauts, as good as I could help them be. My job was just helping them be good. The first meeting up there in the conference room on the top floor of Building 1, I can remember I asked them the question, "Do you know what I'm worried about the most for all of you in this room?" Then I waited and they came up with some ideas. I said, "None of it. I'm worried that some of you are going to get

killed in T-38s and never get to fly in space. Now that you've been chosen an astronaut, you think you're better than you are. You're the same person that you've been all along."

I can remember when I got to NASA after being chosen as an astronaut, I thought I was better than I was. I thought, "Well, if they've chosen me as an astronaut I must be one of the best, I can probably fly airplanes better" than I thought I could, so I had a couple of close calls. Only I was lucky and didn't get killed. It took me these close calls—I told them this story—to realize that I wasn't any better than I thought I was before I showed up here. I said, "That's why we've lost so many guys in these airplanes, is because they're like that. Just like you. You're here today, you're feeling great. You're, supposedly, the best of the best. Maybe you are or not. I don't know, but you're not any better flying airplanes than you've ever been. You better be careful."

In fact one of the things I'm most proud of, we haven't lost a single person in a T-38 accident since then. I believe it's not me, but it's the emphasis on, "Look here, this is dangerous business." You think the danger is in spaceships. They are more dangerous than airplanes, but you fly airplanes a lot more. And you got to be careful, because we lost a lot of people. We should have lost more, because some people have done the dumbest things, you can't imagine, in airplanes, that I can't imagine they would have done years ago. But when everybody thinks you're great, you begin to think you're great. It's a contagious thing.

We had safety lectures once a month, and we emphasized it. George Abbey tuned in to this. He made some changes out in flight operations, and they were good ones that put a little more control on this and made you a little more responsible for things. This has been a good thing, haven't lost anybody. Boy, right at the first, we lost people all over the place.

Of course we knew women were coming. We didn't know what to think. I didn't. I'll just tell it from my point of view. I thought, "I've never been in a squadron with a woman. I've never done this." A lot of things that you do as an astronaut aren't that genteel, so being the culture I was at, I thought men are really supposed to be astronauts. "That's a man job, but maybe we can teach women to do it." That was my attitude. I had a good attitude, but that was as far as it could go. That was my mindset. I thought, "We're going to do everything equal. We're going to work. And maybe they can do this, I don't know." I thought many of them aren't going to like this.

We get there and we're working day to day. I'm in charge of the office, so I'm on Monday morning meetings. One day we wanted a report on the tiles that were on the Shuttle. The person in charge of the heat shield, as I remember, was Sally Ride. I think, "This is not a woman's job to know anything about heat shields on spaceships." She gets up there and gives this briefing. I think, "She knows a lot more about heat shields, and it seems natural to her, than I know about heat shields. It seems just as natural to her to be talking about heat shields." I'm still having difficulty with it, because she's a woman talking about a man's thing, but she did it great. So then that takes my paradigm and shifts it around a little. A little, because I had a lifetime of this other paradigm.

We go to parachute training, we go up in Oklahoma, we went down to survival training in the jungle—we're doing all this, and the girls are doing okay. I didn't even know what to call them exactly. I knew we shouldn't—I just called them girls because they were younger, but I didn't know if they were women astronauts or lady astronauts or what. You've got to realize none of us knew this. We were trying to figure out what to do, but we all came from this other environment.

They [the women] are doing all this grungy stuff, like living in the jungle on iguanas. They're doing just as good as the guys. And I'm thinking, "Why would a woman want to do that?" Shows my attitude. We get to Homestead Air Force Base [Florida] where we do the in-water training. You learn to do the Dilbert Dunker [pilot training device] where it puts you upside down in the water, then you get carried aloft in a parachute, then you get cut loose and you go into the water. Then you've got to shed your parachute, and then you've got to get in your raft—you drink water, it's a mess. Also takes upper body strength. I'm watching all this, and they seem to do okay. They end up in their raft just like the guys do. I'm thinking, "Well, seems to be okay here." You can see I'm starting to shift my paradigm a little bit.

About the last thing you do, which isn't much fun, is they have this big boat going maybe 20 knots or something, pretty fast. Then they put a harness on you and run you up to about twice as high as this ceiling, maybe higher, over the water. Then as they go along, at a certain time they cut you loose and you drop into the water. Which means you go way down, but they haven't disconnected you from the boat so it starts pulling you up. There you are being dragged behind the boat, as a parachute would do in windy conditions—a lot of aviators have died. They got better connectors now, but still you've got to know how to do it. They don't let you disconnect to begin with, they make you learn to turn over using your legs and arms and then ride this thing as if your parachute is towing you without you drowning. It's tough, I thought it was tough.

I can remember when I did it—you do it every ten years—dropped in the water, came up. Did it, I didn't do it really good. A guy is on the back of the boat with a bullhorn telling you, "Get your head up, turn over now." You're supposed to know it already, but you forget. When I did it—after you get loose and do the other stuff, another boat comes by. There's always a boat

near you, a little speedboat in case you get in trouble with divers and stuff. They come by and get you. The little boat catches up with the big one, then you get back on board the big one. I get on board the big one. The guy tells me what I've done wrong, and then he tells me to go get in line and do it again, because you've got to learn to do it.

So we're down there with all the astronauts, plus about 35 or so Air Force/Marine/Navy people, men mostly. A few women, not many. Our six women, they were there. Of that whole bunch, let's say 50, there were only two people that didn't have to do it over. Both of them were our women astronauts. That changed my attitude right there. I said, "You know maybe this is a woman's job, and they're letting us do it." Because none of the men were able to do it the first time, but two of the six—one third of them—did it right the first time. It was amazing to me. It was fun working with them.

I was planning about this time, thinking about what I was going to do. Was I going to fly the Shuttle? I was doing all the things you do to be a Shuttle commander. I was getting as much simulator time as anybody, flying the Shuttle Training Aircraft, flying T-38s and everything like that. I was thinking, "I don't know what to do." But finally I decided that they had enough good young men and women that could fly the Space Shuttle as good as I could or better.

But I had a skill and an experience and I said, "In my opinion someone needs to do this job, to record this great human adventure in fine art so that it will remain." It doesn't replace the movies, it doesn't replace the books other people write. But it's a great enough event in human history, that recording it this way is something that only I am interested in doing, but it's worth doing. It was a big decision because I'd worked my whole life to get where I was, and I was looking forward to flying the Shuttle and I liked doing that job and I knew how to—my whole

life had been directed to doing that job. I had the best job in the world for someone like me, and I could do it well.

Indeed they haven't missed Alan Bean, but if I hadn't done this job [painting] it wouldn't exist. And I believe that 100, 200, 300 years from now all these paintings will be around, because they're the first paintings of humans doing things off this Earth. When humans go to Mars they're going to do the very same things, because this is what humans do. I think all these paintings will someday be in museums and be known just as paintings by early other explorers are in the same way. This is probably more valuable because it is the first time humans went to another world. So I'm glad I did it.

It's been tough. It's been hard to do, because it's been changing—some of the left brain things that I was good at being an astronaut are not good for being an artist. Everything is right brain and left brain, but to survive as an astronaut you better be mostly left brain. To survive as an artist you probably ought to be at least equal. Looking back on it, this is a funny part of the story that I didn't realize till I became an artist.

I notice that when I was doing NASA things, or working on my income tax, if somebody phoned me I could pick up the phone and talk to them and make sense, because both of those things were left brain. I never really particularly believed necessarily completely left and right brain. If I'm painting—even today, but I noticed it early on—and somebody phones me, I will pick up that phone, and I'll say, "Hi, who's this?"

"This is John Young."

"Hi, John. How are you? What are you doing?" He would have talked to me for maybe a minute, and then I would have to say, "What did you say, John?" I might even say if I didn't

know the person, "Who is this?" I was over in my right brain and I could not jump back in the left for a little while. It wasn't like suddenly I could just take off in left brain thinking.

It took me a while of just saying, "Why am I so screwed up?" Then I began to understand that I was over in my right brain and I can't do left brain things immediately, just like if you're in your left brain you can't do right brain things immediately. That's why artists warm up before they paint. Artists would say, "Before I start painting I usually draw for about 15 or 20 minutes."

"What do you draw?"

"I don't know, just anything." Because they're moving their brain over to the right side where they're going to need it. If they start in their left side on their work they're going to screw it up, because they're not where they were. I know it sounds crazy. Would have sounded crazy to me until I experienced it. Now I just expect it, I just expect it to go that way. Often I'll say when I'm confused like that or do something wrong, "That's why they call it art. It's different."

You call John Young, say, "How do you get to your house?" He'll say, "You go down NASA Parkway and you get to this street, it's got a light, take a left, you go about a half a mile, take a right on this street." That's the people I've been with my whole life. I started hanging out with artists. They don't think that way. I can remember the first time I caught on to this. I was going over to this artist's place. Smart artist, good artist. He says, "You exit [Loop] 610 South at Braeswood. You take a right and you go about a mile and then you take on this street, then you go down about eight blocks and here I am on the right." Okay. I exit at Braeswood. I take a right. The first street on the left, I think that looked like the name of the street that he told me. But I'm going to go down here a mile and a half, so I go down there a mile and a half—it was the first street. It was the first damn street on the left. He doesn't know that, he doesn't know it till

today. I will bet you if you phoned him and said, "How do you get to your house?" he would not go back—it's not a right brain thought.

What I discovered, that's one of the reasons it's very hard to learn to paint and do music and other things, is because the people that do it well never go back and think about it sequentially. They just can do it, they've forgotten how they learned. They don't go back and say, "How did I learn this? Did I do this, this, this and this?" They don't. It's just not right brain stuff. It takes a while to catch on. I advise the people that want to be artists—besides saying don't go to school to do it. Go to school and get a business degree, because you're an independent businessperson as an artist if you want to do it.

Then when you got a business degree you go to art school at night or then enroll in art school or take art from—because an art is a master/apprentice job, it's not like school. Nobody comes out of college can compete in the art world, period. I've never met one, I've never seen one, I've never even heard of one. They all have to go learn it from somebody, because the people in art school can't tell them how to do it. They can teach them art history, but they can't tell them how to paint a painting. They have to get with an artist, like they did in the past, and become a student. The guy walks around and changes their tree so it looks better, and then they see it. Then he tells them how he changed the tree maybe. Or maybe he doesn't, because he might not even know. That's what it takes.

Luckily I found a couple of artists that I could watch. I would be sitting with them, and they would do something. I would say, "Now wait a minute, you told me three weeks ago to do this and this, and you didn't do it here."

He would say, "Yes I did, I did this."

I said, "No you didn't, you did this." Then instead of going back and changing that thought, they would say, "Well this is a special case where we do it like this because of something else."

Not true. They had learned after they left art school and started working with a master, then they learned the way I just described. The guy came by and showed them how to do it. They never went back in their head and said, "I didn't learn that the second year, they told me to do this." I think probably that's true in dance and music and other things. It's very hard to learn right brain things in a left brain way. That's a good way to start, but they've forgotten they don't do it. So I just began to watch the guy and he was a great artist, a wonderful person, Lajos Markos.

That's a strange thing that I had to relearn as an artist that doesn't fly as an astronaut. You do too many right brain things as an astronaut and they think you're weird, because unless you understand the right brain way of thinking it does seem weird. Seems weird to a left brain person.

So I began to think about that, doing that. They wanted me to stay and run this, do that, until John Young had flown [STS-1] so I did that. I said, "That's what I'll do. I'll concentrate on being an astronaut, helping our new astronauts." That was my way of thinking. I tried to minimize using NASA assets, because that's me. In fact, the reason I finally told George Abbey—he called me in and he said, "You haven't been flying the T-38s lately."

I said, "That's true, George." I wasn't planning to tell him this. "I'm planning to leave here in several weeks, and I didn't want to use the gas money." Didn't seem right to me. He said to me, "Where are you going?" It really shocked him, because he knew I liked being an

astronaut. He was sitting in his chair, and he sat up. "What are you going to do? Where are you going to go?"

I said, "I'm going to be an artist." He went back like this and if he hadn't had the window behind him, he would have gone over backwards. He banged into the window. His first comment, "Can you earn a living at that?" That was his first comment. I said, "I don't know, but if I can't I'm going to go to work at Jack in the Box [fast food restaurant] so I'll have my energy. And then I'll learn to do it."

He didn't think it was a particularly good idea, because I'm sure he had me scheduled to do other things, but you have to live your dream even if other people think it's screwed up. About half the astronauts thought it was a midlife crisis or something. The other half, the ones that were more right brain, thought it was a pretty good idea. Joe [Joseph P.] Kerwin, who's a pretty right brain kind of guy, a doctor, he thought it was a good idea. Some others did. Others that knew me well knew that I wasn't having a midlife crisis. I had a plan. They all love it now. When I had this exhibition in Washington [DC] on the 40th anniversary [of the Apollo 11 moon landing] on July 20th, they all came and they all looked and saw themselves.

That [painting] right there that you looked at, that's Pete [Conrad] and me. What I did near the end [of Apollo 12] is, I threw that foil up. It had been foil wrapped around that antenna over there when I deployed it, so I took it and I said, "I'm going to throw this up in the air, Pete, because see, you can throw foil in a vacuum as far as you can throw a rock," which you couldn't do here [on Earth]. Pete said, "Wait a minute." He was over there loading tools and he turned around, that's why his hand is up. The Sun is in his eye, and he wants to see where that foil is going. I'd thrown it underhanded, which is the only way you could do it, you can't do this [gestures overhand] in a space suit. There goes the foil, and I can remember it going up and up

and up, higher than an NFL [National Football League] football player can kick. It just kept going up and up, not as fast as the football, but high and slow. Tumbling, flashing in the light. Then finally Pete said, "Let's get back to work." So I went back to work, because I was out there getting an experiment.

The title of that painting is "Fun Is Wherever You Can Find It." Those are the kind of stories that I tell. That's what these things are all about, is telling stories that aren't in the history books, aren't in the NASA history, that are about humans and what humans do. People will do these things when they go back to the Moon someday. When they go to Mars they'll do these sort of things, because that's what humans like to do. That was my thinking, but I did stay there and help as best I could.

ROSS-NAZZAL: How did the women change the office once they came in? Did they have any sort of impact, do you think?

BEAN: Oh, I think they did. They changed attitudes. Probably not as many as strongly as me, because I was interacting with them and I have less "my way or the highway" kind of attitude. I don't have that attitude at all. I just have "this is how I see it." One of my favorite memories was one day someone [one of the women astronauts] came in. They said, "I've been appointed to talk with you about something."

I said, "Okay, sit down and talk."

"The women have asked me to talk to you about our onboard hygiene kit."

I said, "Well, okay." I was real proud of it, because when we invented it and created it we had had them in mind, so I thought we had—I felt good. We had a reason for everything there that we thought satisfied their needs.

She said, "The women don't like boxer shorts. We want panties."

I thought, "I wonder why we didn't think of that." To us, it seemed okay that women had boxer shorts just like we did. So I said, "Okay, we'll do that. You tell me what kind of panties to get. We'll do it."

"We don't like the Mennen underarm deodorant."

I still laugh when I think about it, because we thought we had done everything we possibly could to make them feel welcome. But it shows how you can't do some things. Because we had meetings about it. It's funny, we didn't include any women.

ROSS-NAZZAL: I was going to ask if you had.

BEAN: "I'm sure we men can figure this out." That was it. They wanted tampons, I think we'd given them pads. She had several items, five or six, which we immediately adopted, but it was funny to me that we men thought we could figure this out. We could empathize enough, because we had our attitudes on right, but we just didn't have whatever else goes with the attitude.

I don't make many moves without talking with my wife, because it's frequently a different point of view.

That's one thing about the women. Among the six there were some that were better than others as being astronauts, because just among six astronauts they're not all equally good. Some of them work hard, some of them skate as much as they can.

Some astronauts, like Ken Mattingly, work all the time. He was a great astronaut. Maybe he wasn't the smartest one—he might have been, I'm not judging that—I'm just saying he would pull ahead of all these others because he was working a lot more than they were. The same way with the women. Some of them worked hard. Of course when I would observe them it would be different than some other guy or maybe George Abbey, so just my opinion.

I've always been proud. None of these people got killed, none of them did anything strange. They got killed in the *Challenger* [1986 STS 51-L accident]. Dick [Francis R.] Scobee I thought was one of the very best astronauts there, man or woman. In fact when I had a job to do that was difficult and I didn't have time to explain it, I would give it to Dick Scobee. I'd say, "Look, Dick, we need this. Do whatever you think is right and then tell me what you did," because I knew he was as smart as I was or smarter. He would make a better decision or at least as good as mine, so I never worried about it. He'd just come by maybe in two or three weeks and he'd say, "I did this and this." I never remember ever thinking anything but, "Boy, that's smart, I'm glad he did that." Then some others you couldn't do that.

One of the women—I won't mention who—you could give her a job and then you could just forget it, because she wasn't going to do it. It was never going to happen. It never happened in a million years. I think the reason she didn't, was she understood the politics of the situation. She was busy working on George Abbey, so she was saying to herself, "If I get a plus from George Abbey that'd be worth ten negatives from Al Bean, so I think I'll put my effort over there." People know different things and they see things different ways. I just didn't give her jobs, so it was kind of a plus for her in a way.

ROSS-NAZZAL: One of the things I was thinking about was the role of the mission specialist and the payload specialist. Did you have any role in helping to shape what those jobs would entail?

BEAN: Yes. I tried to do it, I'm not saying this worked either. I said, "Somehow we've got to make the mission specialists"—not payload specialists, I didn't have anything to do with that—"somehow they've got to be responsible. We can't let them ride in the backseat and just have no real role, and then expect them to have a really important role in the Shuttle which they've got to have to make the Shuttle work. They've got to learn to do checklists better. They've got to do a lot of things."

So we analyzed what they needed to do in the Shuttle, because they were going to ride the middle seat with the checklist. And we came up with the idea, with their help—they probably aren't even doing this anymore, this was more of an effort to try to figure out how to do it—they would have to ride in the backseat and have an instrument check every year. Just like the guy that flew it, except an instructor would fly it, and they would have to tell him everything to do. "Do this, turn to that heading, now is the time to descend, slow to"—do everything except flying it.

We instituted that. We also made it so that when a mission specialist flew with you—whether they really did it or not I don't know, because that's one of the things you like about being a pilot, you can do what you want. Pilots like to do their own thing. They like to fly by themselves, they don't want anybody riding with them. They can do what they want, they don't have to be as careful. That's the mentality of a pilot, I never met one the other way. I probably have and didn't know it.

But when they would fly with a mission specialist, supposedly the mission specialist would do everything. File the flight plan, would tell them what to do after takeoff, tell them all that. My guess is what really happened is when you'd go cross-country the first leg he would do it and the second leg the pilot would do it and the third leg—something like that seems fair. That was the idea. I don't know whether mission specialists have to take annual flight checks now. Do they, do you know?

ROSS-NAZZAL: I think they do, yes, I think they're required.

BEAN: They need to. They need to be responsible flying, because otherwise you don't develop those skills and you don't develop the authority. Okay, if they're going to be good mission specialists and be responsible in the Shuttle, they're going to have to learn it somewhere. In the simulators, in the airplanes. So that was our idea. We tried to implement something. We knew it probably wasn't perfect. One little run-in I had with George Abbey—we were talking about some of these things. I said, "I've got Jim [James F.] Buchli," who I had a lot of confidence in, good work. A guy that got things done. I wanted him to write the book on this. I said, "You go back and work with your mission specialists and write the book on this. If you don't like some of the ideas we've got, come talk. We'll talk and make a book that everybody likes."

When I told George Abbey about this, he didn't like it. He didn't want them doing it, not because it wasn't a good idea, but he wanted some other people to do it. I said, "We can do that if you want, George, but they don't know this as well as these guys." This is my learning phase. So we brought them into the team and they did it that way. Ever after that with George when I'd

see something like that come up, before it happened I would say, "How do you think we ought to do this, George?"

You find out people are different. When they're your boss, it's a good idea to understand them and try to fit in or leave. You got a choice.

ROSS-NAZZAL: Did George Abbey come up with the idea? Or who came up with that idea of the astronaut candidate?

BEAN: I don't know. I would say that if he said he did, he probably did, because it would be something that he or Chris Kraft or a higher level would think about more than we would.

ROSS-NAZZAL: What did the old-timers think about that idea? Coming in and being a candidate and having to go through all these—

BEAN: I think we probably were all busy and thought it was okay. I thought it was okay, but I didn't poll anybody. And I've forgotten, so maybe I didn't even feel that way that long ago. You see, that's the problem with thinking back this far. You now think like you wish you'd thought back then. A lot of times that's not the way you really thought, but you think you did. You could take a lie detector test and you would pass it easily, because you think it, but if you somehow went back—I read an autobiography by Charlton Heston [film actor] once, who kept a diary. He said you don't know what you thought even a few years ago unless you keep a diary. He says, "I'm always surprised by what I wrote in it even four, five years later that I know now that I didn't think that." I've learned that this is true.

ROSS-NAZZAL: You talked a little bit about the women coming in. What about the minorities who were included in the class?

BEAN: First of all, they were all men, so it seemed like we could turn them into astronauts easier than women. We felt we could turn minority astronauts into "real" astronauts faster than women into real astronauts. What I noticed about minorities that were successful—these were successful minorities—is when you interacted with them, they never seemed to think of themselves as a minority. Where other minorities that weren't so successful thought of themselves as minorities a lot. So I think somehow that worked, that's a good way.

I've read a lot of books that minorities have written over the years, both now and in the past. This has nothing to do with space, but we cannot imagine the hurt that they felt their whole life that they really are not able to get over. Every single book I've read by a minority, maybe 30, [in] different fields, they spend quite a bit of time in the book discussing the hurt they received as a child and as a youngster and as an adult. Maybe you would say, I would say, "You got to get over that." But they don't get over it. These, the ones I'm talking about, they seemed to not bring it up. I don't think they're over it now because of this.

I didn't see any of that in any of the minorities. I think maybe that's one way to be very successful as a minority is, at least to the rest of the world, don't think of yourself as black, don't think of yourself as Hispanic or Oriental, don't think of that. You can think about it all you want when you're home, but when you're thinking about it at work, be able to change roles. Don't even notice, I never noticed. I didn't notice the difference, really.

I ran into our Administrator now, Charlie [Charles F.] Bolden [Jr., African-American astronaut] one afternoon coming out of that restaurant that Frankie Camera owns, Villa Capri. I see him, I look at him and I say to him, "Wow, you got a great tan, Charlie, where you been?" I didn't remember him being black. I don't know what he thought, he probably thought I was doing something strange. This was 15 years ago. He probably still remembers it, because I remember it. And I remember thinking, "Is Charlie Bolden black?" as I walked along going to my car. I wasn't sure. I remembered his name. I didn't—you see, it didn't dawn on me. If he remembered that incident he probably thought I was pulling his chain when I never even thought about it one way or the other.

That's what I think works, so I didn't see anything like that. Now among the group I didn't see it among them in the minorities—or among the women either. I thought they all got along great. The people that weren't in their group, the older astronauts, you'd have to ask them, because you didn't see them interact at all.

ROSS-NAZZAL: Did you do any sort of preparation before the women came and the minorities came?

BEAN: No, never did. We thought we could empathize. And we were smart enough to know this was the future. It'd be like me saying a bad word on TV, nobody has to tell me that. If I'm too dumb to know that, I shouldn't even be on there. I meant to mention one thing about the candidates which I thought was interesting. We went to a lot of places, that I told you some about. We were always taking military buses.

I don't remember one single time someone being late of that group. We would be supposed to leave at 8:00. When 8:00 was there, everybody was aboard and we left. We never once waited even a minute. We would have, but we never did. Everybody was doing what they were supposed to be doing. Everybody was at the right place when they were supposed to be there. You can't get two artists to be at the right place when they're supposed to be there, so it's a different mentality.

ROSS-NAZZAL: Were you training for a specific Shuttle mission at the time?

BEAN: No, I wasn't assigned. I don't remember who was assigned at that time.

ROSS-NAZZAL: I found in the *Roundup* [JSC publication], there's a photo of you and Nichelle Nichols from "Star Trek" [television series] and it said you were creating this short film to advertise for new astronaut candidates. Can you tell us about that?

BEAN: Oh, we did. I don't remember a thing about it. If you hadn't told me and you said, "Have you met Nichelle Nichols?" I would have said, "Yeah, I've met her once or twice." I would never remember working with her. See, that's what happens.

I do remember that I went up to "The Oprah Show" [hosted by Oprah G. Winfrey] with [M.] Rhea Seddon. One of my favorites. Rhea Seddon and I we were on "Oprah" announcing the new candidates, the next group. She talked with us and talked with Rhea. It was good. I don't remember anything about it other than Oprah was very nice. Very nice to her, very nice to me, very nice afterwards. Just real real smart. When our segment was over, that was the last on

the show. Then they pulled back a wall or something, and here was a whole new audience and everything. She was going to do the next day's show. They were all prepped. We watched her. She walked in there, then she did it. Everything went as planned, just like this.

When TV people come here quite often, they have to stop in the middle to reload the tape. Or they've got to do something or other, move the light. Wasn't any of that at Oprah's show. She ran it, ran it real-time. It'd be time for a commercial, she would say, "We need to go to a commercial now." Then she'd stand there, and she'd read notes and things like that. Maybe say a few words, but not much. Pretty quiet. The audience was quiet. We didn't say anything. Then she would do just like she does coming on, so she ran the whole show just straight through. She didn't do anything else.

I thought, "You know, she's got a team here that works. I'll bet you if you don't do it, or you hand her the wrong note, you're not around there very much." Because there wasn't any of that. There were no mistakes. There was no, "Gee, I've got the wrong card," which happens all the time on other things. There's not only the fact she has all this personality and the feel for what people want, she runs a good ship or has people that do. It was amazing. Amazing experience just to watch her, how she did all this. It was good.

ROSS-NAZZAL: The only other thought I had is if you want to talk about the next class, the 1980 class. Were there any lessons you learned with the '78 class that you applied to training and chaperoning of the next 19?

BEAN: Who was in charge of that? Who was training?

ROSS-NAZZAL: Dave [David C.] Leestma had told us that he remembers you being in charge of the class.

BEAN: I think it probably is true. In fact some of the stories I told you may have been with the second class too. Some of what I told you if it was general probably applied to both. I'll tell you one of the things I don't know if they do now. One of the things we did, I felt, that was very helpful to new astronauts was bring in old astronauts and have them talk about their mission. We did that for sure on both of those, because I remember people coming in and liking to talk with them. It's not the people that were here, but others. We got Neil [A. Armstrong] to come for both. I can remember him shaking everybody's hands, because he knew everybody wanted to shake his hand. Where most of the other people didn't do that at all, because people didn't really care one way or the other.

He wouldn't tell you too much, because he's not the kind of guy that tells you very much. It's just him. He was that way before he flew and he's that way now, and he didn't change personalities at all. He doesn't empathize with you. He's a nice person and you couldn't get a nicer person, but he doesn't work at empathizing with you. It's not something he thinks about. His presentations were great, but he wouldn't say much about how he felt flying the first mission or anything like that. He does better now but he still can't do it because it's not what he's thinking about. Who else was in that class?

ROSS-NAZZAL: Claude Nicollier, I think he was one of the ESA astronauts.

BEAN: Yes, I know Claude. Yes I did, I knew all of them, I guess I'd just forgotten. I put them into one class. If you had said Claude I would say, "Yeah, I would think he was in the first class." There you go. Can't trust what old guys say.

WRIGHT: Probably had times where it all ran together anyway.

BEAN: It does, particularly when you don't think about it very much anymore. I don't, I try to be an artist now. When I went for my exercise this morning I thought about this [paintings], I didn't think about that. When you leave I'm going to be painting and putting up paintings, so you see?

I've had a lot of success in my life. Most of it is just being able to figure out what I'm supposed to do and focus on it and not do too many other things. I don't multitask at all, I don't believe in multitasking. I'm going to do this as well as I can. These paintings, these are as good as I can make them. I'll never be able to go back and say, "You know, I could have painted that better," because I couldn't. That's it. That's as good as I was at the time. Sometimes I worry that I'm not as good as that anymore, because you peak at different things, so who knows?

WRIGHT: Well, we look forward to seeing more of your paintings.

ROSS-NAZZAL: Thank you.

BEAN: I've enjoyed this.

[End of interview]