

ORAL HISTORY TRANSCRIPT

ROBERT T. MCCALL

INTERVIEWED BY REBECCA WRIGHT

PHOENIX (PARADISE VALLEY), ARIZONA – 28 MARCH 2000

WRIGHT: Today is March 28, 2000. This oral history is being conducted with Robert McCall in Phoenix, Arizona, for the Johnson Space Center Oral History Project. Interviewer is Rebecca Wright, assisted by Carol Butler and Sandra Johnson.

Thank you again for visiting with us today and for allowing us in your home.

MCCALL: Oh, I'm delighted that you're here. I'll have a chance to talk about my favorite subject.

WRIGHT: Well, we're delighted to be here. You've had such a successful career sharing your many artistic talents with people throughout the world. Much of your art work focuses on space and your cosmic views. Could you share with us how you first became interested in space, and how that interest led you to do so many of these nice works?

MCCALL: I would be happy to. Well, I've been interested in the universe from the time I was a small boy, because my parents bought me a little telescope, you know, the kind that truly telescopes into itself. Just an inexpensive, almost a toy, not quite. But I was able to look at the Moon and I saw the craters on the Moon for the first time. Now, we're talking about a ten-year-old boy that was made aware of the incredible universe that surrounded us, and I understood it almost as though it was something that was probably exaggerated, not really true, that those points of light in the night sky were enormous worlds much larger than our own world, bigger than our own sun, but other suns out there in the distance, and that the

Moon was this great distance from us, but an enormous sphere orbiting planet Earth. It was unbelievable and it continues to be unbelievable. The universe, to me, is the incredible and great inspiration.

So at a very early age I became really fascinated with the universe, astronomy. I went out to the observatory at Ohio State University. I grew up in Columbus, Ohio. Ohio State University was the major big school, continues to be, I think, the third maybe largest university in America. So it was an important impact, had an impact on my life. I went out to the observatory's small but still a large telescope with the typical astronomical observatory kind of structure, and I saw the Moon. Then I saw Saturn and its rings. And truly, I was just absolutely astonished. That, I think, was sort of the beginning, along with other little things that occurred, but that stimulated me, it motivated me, to know more about this mysterious world that surrounds our planet.

I love talking about those years, because they were magical years, as I think those early years are in all our lives. We are just beginning to explore the world around us, and we're astonished at everything we see. I love looking at a little baby or a very young child. That is everything, everywhere it turns its eyes, there's wonder in their expressions.

So it's that kind of wonderment that intrigued me as a very young boy, and continues to. One of the remarkable things that seems to me, as I look back on a long, fairly long life, and kind of revel in it, because it was a continuation of experiences and marvels. Today, with the exploding technology that is growing at a greater rate than it ever has, we are living in a revolution that is awesome, and it's driven by technology and new information that we are learning about the world in which we live. So that intrigue with the universe and with everything about our lives and the world, I still find very stimulating.

But back to this time when I was a very young boy. I was interested in the universe, and it motivated me to want to learn more about it. Then I discovered I was talented, or inspired, to draw. So that I had a special ability, it seemed, because I loved drawing, I did a

lot of it, so that I became better and better. That's how you perfect a skill you know; you just do it. If you are inspired to do it, as I was, then you become good.

So I would make drawings of those things that excited me, so I made drawings of the Moon. I made drawings of telescopes, because the telescope itself as an instrument was, to me, very fascinating. And things that I wanted I would draw a picture of. Now, I'm talking about young teenage years, thirteen, fourteen, fifteen. I remember wanting a pair of ice skates very, very passionately, as a thirteen-year-old boy, and I drew pictures of ice skates. Somehow I got them that way, and I finally got a real pair, too. I grew up in Ohio where there was a lot of ice on the lakes and the ponds in the wintertime, and ice skating was something that we all did.

But this passion for science and technology has always pervaded the work that I wanted to do, so that the paintings that I do have to do with that kind of thing. Gosh, I look around and I see almost exclusively in every painting, along with the sky and the landscape, which is all part of this universe, you see, and is the backdrop for so much of my technological painting of vehicles and astronauts and exploration, it's all part of a continuing effort to somehow communicate my passion for these things to other people.

Artists do want to communicate. I think that's why they draw the pictures that they do; it's a form of communication. I know that I have artist friends who are not very articulate, who are wonderful artists, and they express themselves almost exclusively in the paintings that they make. They can be very powerful tools for expressing ideas.

WRIGHT: What were some of the first steps that you took as a young boy to move toward a career that you could express your passion the way that you wanted to?

MCCALL: It was just, the steps that I took, I went to art school. Even as a young teenager, there was a Saturday morning class available at the Columbus Fine Art Museum for young

people, and I enrolled in that class. My parents saw to it, because my mother, in particular, was very conscious of my talent, as it was in those days, just beginning to bud and just beginning to grow, but she saw the need and the desire to foster it and she did. So I went to art class.

Then I know all through high school art was a major interest of mine, all kinds of art, even the history of art. So that I knew that instead of going to college, I wanted to go to art school. I knew I wanted to be an artist above anything else, and it continues to be my major thrust and interest, creating pictures on a blank sheet of paper, creating some kind of an image that meant something to me or to those who view it. That becomes a desire that is very demanding. I have a compulsion to do that and I continue to. I've often described it this way, that it's my highest highs, emotional rewards come from a new painting that is successful, that I'm pleased with. Now, I'm not always pleased, and often I'm discouraged and disappointed and I feel that I've failed in achieving what I'm after in a particular artistic effort. But, nonetheless, it's always there as a challenge, and I'm always eager to do it again and again and again and forever and ever and ever, never ending.

WRIGHT: You began after art school, your first step was, though, not to an actual artist job, is that correct?

MCCALL: That's right. But even in art school, I got a job. At seventeen, yes, right out of high school, I had my first job as an artist for a sign shop in Columbus, Ohio. So that every evening after the regular art school day, which lasted until about three in the afternoon, I would take the streetcar in Columbus to North High Street to a little shop where I was the artist. I was called "the artist" by the other people that worked there, and I was the only artist. I did any requirement at all that required the hand of an artist—pictures, portraits. I know we did a lot of truck posters and a lot of car cards for streetcars, that as you went along

in the streetcar there were these cards that you could, you know, advertising. I did a lot of those. Whatever the requirement was, I would make a picture of it for this silkscreen sign shop that printed these posters. That was a very big break to get that kind of responsibility, and it was a responsibility that I really felt very heavily, but wanted. So I got my first job that way.

Then it just went from one other—then I worked for a small advertising agency after I left art. I won a scholarship, did I mention that? To the Columbus College of Art and Design. I'll interject this, too. I just received an honorary doctorate from that very College of Art and Design, which has grown in size. It's one of the major art schools for especially commercial art in the country, in Columbus. So I was invited back to receive a doctorate and also give the commencement address two years ago, and that was a special thrill.

I went to art school and worked at the sign shop at night, and even in those days my special interest was aviation, airplanes, which easily is translated into spacecraft as opposed to aircraft. So when the space program started to grow, then it was a natural transition of my greatest energies, because the exploration of space, astronauts as opposed to jet pilots, who continue to thrill me, too, and excite me, became the focus of a lot of my attention as an artist.

That's how, in the earliest days of the space program back in the fifties, I was positioned to move right in there and be as much a part of it as an artist could be in those days, and I have continued that interest in the space program.

WRIGHT: How did that first start? How did you first get involved with NASA?

MCCALL: Well, as an illustrator, because of these interests of mine, I first worked in Columbus, Ohio, as I mentioned, with the sign shop and then with an advertising agency. Because of my talents, they employed me. Then I felt that I had to go to a bigger city, and I

moved when I was nineteen, just a few years, a couple years later. I only went to art school two years, because those were the two years that I received the scholarship.

Then I went to Chicago to work with a magazine called *Popular Aviation*, which also was a publisher of pulp magazines, astounding science fiction and wonder stories. So here I was in a place in Chicago, a publisher, a major publisher, too. They also published other magazines. *Popular Photography* was one of them. Still published today. Ziff Davis Publishing Company. We're talking now 1939. The war is just beginning to build in a way that looked like we are going to be involved. It was before Pearl Harbor.

I worked for *Aviation Magazine* that also published science fiction. You can see how that influenced the whole future of my life, because I'm still doing fantasy, sort of science fiction stuff, but also hard science kind of things, like I've done for NASA.

So I always felt also very, very successful, even when I was making 30 cents an hour in Columbus, the sign shop, which is exactly what I made. In those days it was 15 dollars a week, or 20 dollars, if I worked real hard and worked on weekends, and it would build up. It's curious how those feelings of achievement are important to any young person, I think, however simple they may be at the time, or looking back on it. I always felt well paid, but I was always striving for more.

But I worked for these people, went to Chicago, and then I enlisted in the Army Air Force, because I loved aviation and I wanted to be involved. I wanted to be a pilot. I wasn't a pilot. I was qualified, or designated, a bombardier and I went through flight training, did some flying, but specifically a bombardier navigator in big bombers, and loved it. Fascinating. Wonderful. Loved every second of it. Being up in the nose of those big, huge aircraft. [Laughter] It's fun to even recall, and still an artist, made lots of drawings and sketches, took a lot of photographs.

Now I'm nineteen, twenty, twenty-one, and twenty-two, I'm twenty-three during those early years of the war. In '44, I graduated as a bombardier, but in the meantime I was

training and loving that. But always art was my big special ability that I continued to practice, even when I had little time to do it, because I was involved in training and so forth.

WRIGHT: When your time was finished with the Air Corps, did you go back to Chicago or did you move on?

MCCALL: Yes. I met Louise. We've been married now fifty-five years. She was nineteen. She was at the University of New Mexico studying art, majoring in art. I was an instructor. I was made an instructor when I graduated from Kirtland Field [Kirtland Air Force Base, New Mexico] as a bombardier, second lieutenant. I was held on as an instructor and met Louise at a little social. Actually, it was a blind date, but it was a social thing. That was very significant, because we both really kind of knew that this was an important moment when we met. We were married a year later in '45.

Then the bomb was dropped on Hiroshima [Japan], and that meant the war came to a quick conclusion. We had been married for just a period of some months when that happened and, of course, we were very pleased, because that meant our whole lives would change. We'd be going elsewhere. Turned out to be Chicago where I had enlisted, and I had a job waiting in an art studio. So we started our married life there.

But even in those years, aviation was my special skill. I painted aircraft with a certain kind of intensity that made the work appealing to advertisers who had need for a talent that was specially skilled in painting those kinds of subjects.

Then we decided that New York had to be the next step, because that's the focus and the place where so much great publishing is done, and the major magazines. *Life* magazine had influenced me a great deal. I think it first started publishing in 1937. I remember those first issues. It was a weekly, of course, and it covered the war and all aspects of it so thoroughly, as it then later covered the story of our first seven astronauts, if you will recall.

So I wanted to work for *Life*, and we moved to New York so that I could be close to those big publishers, and I did work for *Life*. Seems to me I have seen it work, this thing of visualizing goals and thinking about them, and working toward making them become reality. I've seen it in my own life happen over and over again. So that I've gotten to the point when I focus on a desire for some new thing to occur, I even discuss it with my wife and she said, "Don't do that. You're going to be too busy. You're going to make it happen." [Laughter] It's kind of a magic that does seem to work.

But we went to New York. Then we also, of course, had two children along the way. I talked to [my daughter] Katherine, she's in California, of course, but she's a great girl.

But now I am bouncing around a lot, aren't I. [Laughter]

WRIGHT: That's fine.

MCCALL: I'm all over the lot.

WRIGHT: No, that's fine. We were talking about New York and you wanted to go to work with *Life*, because they had all of the wonderful stories and coverage of the astronauts.

MCCALL: Yes.

WRIGHT: How did you become involved with that aspect? Did *Life* give you that chance?

MCCALL: Yes. It's just this great desire and then making it happen. *Life* didn't come looking for me; I went looking for them and made many visits there to the art directors and showed my portfolio many times before I finally got an assignment. Then I was established rather quickly as one of their artists and I did a lot of work for them for ten years, more than

that, most of it having to do with military, aviation, space in particular. I did two covers, did a lot of interior paintings, big spreads, important articles and so forth.

I did some work for *Saturday Evening Post*, too, when it was a weekly publication, and *Collier's* and lots of magazines. A lot of work for *Popular Science*, which is still published. A lot of covers for them, cover art that had to do with those special skills that I have as an illustrator and rendering and painting.

WRIGHT: I know one of the ones you did for *Popular Science* is an illustration of the Crawler.

MCCALL: Yes.

WRIGHT: We have a copy of that at the office. How were you asked to do that? Was that based on work that you had already done for NASA, or was that part of the beginning days where you were allowed into those areas that you could see?

MCCALL: How did that happen? And was that *Popular Science* or was it *Life*? The Crawler with the Saturn rocket on it?

WRIGHT: Yes, it was an illustration.

MCCALL: Yes, an illustration. Yes. I did one of those for *Life* magazine. It was a spread in *Life* magazine, yes. Well, that was one of a number of many spreads that I did, "spreads" meaning—you know what a spread is, of course.

WRIGHT: Yes.

MCCALL: That was always the sort of space I desired because it made a greater impact, a big spread and full-color painting. Those paintings, of course, all remain my property. That's why I have that one up there and others. That particular painting, however, is a part of—oh, I donated or I put it—oh, I gave it to NASA. NASA owns that, or it did, and now it may be part of the collection that is at the [National] Air and Space Museum. I'm not sure.

But anyway, I remember being asked to do that and several other paintings. I was so amazed at the size of that Crawler. And then I wanted to get out to Cape Canaveral [Florida, now Kennedy Space Center]. I wanted to see it. But I was invited. You asked the question about how did it start with the NASA direct involvement, and that happened when I was invited to participate in the NASA Art Program, which is a continuing art program, as you must know. Artists from all over the country have been invited through the years, decades now, to witness a space event, a launch, or a recovery at sea, maybe, or whatever. They're invited and then they make paintings as a result of that experience, and sketches, maybe, on the spot.

I was one of those actually at the very first. I was one of the first handful of artists that included some significant artists, like, do you know the name Peter Hurd?

WRIGHT: Yes.

MCCALL: Peter Hurd was one of them. Jamie Wyeth was one of them. Lester Cook, who was the curator at the National Gallery in Washington, D.C., was the director of this new art program, in the sense that he advised NASA as to who might be good to invite to have these experiences, then paint the paintings that then became the collection. Much of which is in Washington, [DC] but a lot of it is at the Cape, at Cape Kennedy. You've been to the museum there?

WRIGHT: Yes.

MCCALL: So that's when that all started, and I think it was 1963 that it started. That first group included Peter Hurd, I think [Robert] Rauschenberg was in that first group and subsequent ones, subsequent invitations. When I had that opportunity, that was exactly what I wanted, and it gave me an entree into close association with the sort of thing that I loved painting, and made my work all the more valuable to *Life* magazine and *Popular Science* and all of my clients, to have that experience, that first-hand experience and to meet people, to go to mission control.

I remember those early days, those first few times at mission control meeting George [W. S.] Abbey, who at that time was an assistant to Chris [Christopher C.] Kraft [Jr.], and Bob [Robert R.] Gilruth. George, he's a remarkable guy. He is really an unusual man. He is very quiet, very taciturn, very undemonstrative—I think these are words that come to my mind—in an alarming way. Alarming in that it's just, he's not animated. He doesn't get excited. You know this. Have you talked to him? Do you know George?

WRIGHT: I've been around him for a brief time.

MCCALL: It's almost amusing, but he's such a sweet man, and I have had such a fabulous rapport with him all these years, and still have, and had dinner with him just a couple weeks ago. He did so much for me. He seemed to sense—he was sensitive to this guy that would come in, sometimes all by himself, to do something at the Johnson Space Center [Houston, Texas]. I'd be self-conscious and kind of uncomfortable, but very fascinated with everything around me and wanted to see it, and wanted to be tactful and not too aggressive in my wishes and wants. But he would always give me a call at a time when I was in the hotel room

thinking, "Oh, gosh, now tomorrow I'm going to be meeting people I've never met before, and I'm going to be wanting to do things." I felt that I was just in the way. I'm an artist and I'm just—you know. But George always took me in hand. He would invite me to some kind of a social gathering that evening, and I would be elated at the fact.

Then he was the one that initiated my—he told some of the astronauts as they planned their missions, especially the Shuttle missions, that, "Bob is a artist and he'll be happy to design a mission emblem for you," and I did this. Of course, always as a gift. I mean, it was not a commercial desire, it was a desire to be involved. So to design a mission emblem for one of these missions to the Moon. By the way, there it is, right up there. That was the mission emblem that went to the last lunar landing.

Gene [Eugene A.] Cernan became a good friend. I've made many friends that way, designing those mission emblems, and designing them with the goal to absolutely please these guys. That was my goal, to make a beautiful thing, but please them, make it contain the symbolism that would describe their mission, and at the same time do something that I would regard as a beautiful little work of art.

WRIGHT: Was that after discussions with them, or did you do research as well?

MCCALL: Oh, yes, I did research, but I also had discussions with them. In that case I made many sketches. I'd like to own them all, but I think I gave them all to Gene as the commander. I would always then present the final work with my signature and well wishes, and then they would frame them and so forth. I know Gene has the one that I did for him and others have them. But that was a special work of love, you know, to just be a part of that. And then to have Gene come back from that mission to the Moon and present me with that [McCall gestures to a memento], which was on the Moon, and the flag itself, photographs of

themselves on the Moon and with that mission emblem, that was a special kick and a special thrill.

So the friends that I've made, the associations that I've been privileged to have with these people that have made history of a sort that is unique in the history of adventure and exploration. I think the landing on the Moon may be the most significant, certainly the most unique moment in the history of exploration.

WRIGHT: Where were you while that mission was under way?

MCCALL: I was home in Chappaqua watching the television. I've seen so many launches and landings and stuff. Was I there when it was launched that last—I was present when the first lunar landing—yes, Apollo 11, I was at the Cape, I saw that launch occur. Then I've been present at the—oh, the first launch of the Shuttle, too, with John [W.] Young and Bob [Robert L.] Crippen. I was present at the launch at the Cape, and then I flew out to Edwards [Air Force Base, Edwards, California] and I met Susie, his wife. I was with Susie and her girlfriends, and so was my wife, the days preceding the launch. But I was in the suit-up room when the guys were suiting up for that first Shuttle launch, and subsequent ones.

Well, I've just been involved in so many of these events. You're talking to people who were not only present, but flew the missions. But as an artist, observing the drama of the preparation and the eventual launch, and then in the case of the Shuttle, the landings at Edwards, to be part of all of that and making pictures, paintings that dramatized them, that was, I think, a very, very special engagement in all of that.

WRIGHT: Now, you were there for a different reason. Did you feel as an outsider, or did the people that were with you in that room, did they welcome you in?

MCCALL: Yes, they did. The days, the times, the hours, that I spent in mission control, and I had a lot of entree and freedom, after a while they became aware of me, I became acquainted with the individuals, so that, yes, I felt very comfortable, but it takes time to establish that kind of a comfort level.

So what I was describing earlier was in the earliest days when all on my own, because these invitations from NASA to artists were kind of spread around among the artists that wanted to do it, but my passion was so great, I wanted to do it every time. I wanted to be—so that when I wasn't invited, I would simply pay my own way. But I had the entree so that I was able to do what I wanted to do, but under the auspices of no one in particular, not even *Life* magazine. So I just did it.

But to answer your question, of course I was very comfortable, and I got very well acquainted with people like George Abbey, of course. Then Chris Kraft was also very, very comfortable to be with, because he seemed to understand what I was doing and seemed to appreciate maybe the need for that kind of recording of the events.

As I have told you, there were other artists, a whole list of them, and some very, very talented and very famous, who were engaged in this sort of thing, too, but not to the extent that I was. I don't think there was any artist that has ever been part of that program that approached it with the level of interest and the commitment that I had, because my commitment was not just for a few months, or a couple of times, or three or four times, it was a lifetime. It was a commitment that was so intense that I was content to make this my work for the rest of my career, and in many ways I have done that. I have done other things, too, and many other things, like big boats. [Laughter] But it was what I wanted to do. I wanted to be part of this history-making story, that is a story that is so fantastic, I think. Continues to be, absolutely.

Those people that I talk to that say, "Well, the space program has kind of disappeared." You know, the man on the street is often even unaware, they're not reading or

noticing what I read and hear in the press. It's all there if they know where to look. But there is that impression that our space program has diminished. Of course, it has from the intensity of the high point of it during the lunar landings, but it's still the great, great frontier that will continue to be explored, and I'm so optimistic about it all.

We're moving into space, humanity. I talk to young kids often, and with schools around here, and I tell them that there going to be those among them that, if they want, they can have a career in space and they will be going into space. They will be astronauts and that sort of thing.

WRIGHT: So much of your art work for space-related areas has features of optimism to it. You seem to always have that look, that it's not stopping, it's moving into the future. Is that something that's very vital that you want to accomplish in that vision?

MCCALL: Oh, yes. I think the future is so filled with opportunity and wonder. Well, it's that feeling that I have of the sublime nature of the universe that I express in my paintings. It's a subconscious way. I mean, I don't think I want this—I do know this, that I want space to be appealing, and when I paint it, because I'm convinced that there are places out there where the colors are light and wonderful, as opposed to black and frightening, that I want it to be appealing. I want the paintings that I do to be beautiful and appealing and seductive, even, if possible, as opposed to too realistically frightening, because I believe it. I believe that there are places.

I know that some of the astronauts, I know Ed [Edward H.] White [II], when he was, I think, our first man who actually left the spacecraft on an umbilical cord. Of course, he was tragically killed in that fire [Apollo 1]. But I knew him, met him after that experience that he had, where he was so euphoric from the experience of being out in space in that limitless environment where there's no up or down and you can see for infinity in every direction and

look down on planet Earth and see this magnificent panorama of visual beauty. It's all just so glorious.

I deal with that positive aspect of it all. That's why I don't think—I haven't painted the tragedy of the explosion. I was right here painting when I heard it on the radio first. Then I went in and turned on the television set. When that *Challenger* exploded, and it was, gee, it was such a shocking, awful thing. But those things are going to occur regularly in the future, just as aircraft crash regularly. We're going to have our tragedies and our setbacks, but you go on. That's inevitable. But I've not painted it, because although it's a dramatic event, and it was a spectacular show in the sense that the television captured all of that explosion.

WRIGHT: I guess that's another added part to your association with NASA and its community, that as you grow to know them, you learn a lot about them, but you also become very close to them as friends and individuals.

MCCALL: Yes.

WRIGHT: So that loss was not only a loss to the nation, but one as a personal as well.

MCCALL: Oh, yes. When I painted the mural in Building 2 at Johnson Space Center, I met Judy [Judith A.] Resnick, and she was one of the new girl, women, astronauts. I must admit, being from the older generation, I thought, "Women astronauts? I don't know about that." [Laughter] Then I met Collins, Eileen [M.] Collins. She was here with her crew. We had a party for her when they were here for the Fiesta Bowl events. I told her, I said, my golly, she is so feminine in every way and rather petite. I have pictures that were taken that evening, and her crew members were towering above her. I said, "Eileen, come on now, did you

really command that monster craft and the crew that sailed into space?" Of course, she had, and I knew that. She's just amazing. So I'm convinced now that women can do just about anything men can do. [Laughter]

But Judy Resnick, I had breakfast with her a couple of times, because she would come by and I would be working on the mural. I would usually get in there about 7:30 or 8:00 and I would work. I would break and have breakfast. So she joined me a couple of times, and I got to know her. So I painted her in that mural. Are you aware of that?

WRIGHT: Yes. Well, I just happened to be over in that auditorium not too long ago and was able to stand there and just absorb it once again.

MCCALL: Yes. I had her name on her suit. Did you ever hear this story?

WRIGHT: No.

MCCALL: Well, this is an interesting story that should be recorded. I put her name on the spacesuit, and I made it as close a likeness as I possibly could. I got a call one day after this had been done. I also made John Young as the central figure. His name is on his, and he had not flown yet, but he had been designated the pilot of the first Shuttle mission. Bob Crippen had also been designated. But I made that central figure John Young. Then I designed his mission emblem, too, by the way, which I had on his spacesuit. But when I put Judy Resnick in there I got a call from headquarters, Building 1, who was it—who was the man that—I think he's retired now, but Phil—Stall. Harold [S.] Stall. Harold?

WRIGHT: Yes.

MCCALL: Harold Stall. I'm quite certain it was Harold. Maybe it was Chris Kraft. I'm sorry, I'm a little confused as to which one it was, but it came from headquarters. I was told, "You know, Bob we're having a little problem here. Identifying that female astronaut as Judy is bothering some of the other brand-new women astronauts." [Laughter] I should have realized that this could happen and made it an anonymous female astronaut. Anyway, the feeling, "Here we're all brand-new, and Judy's been picked out to be on this mural," so there was some displeasure expressed, and Harold suggested that maybe I ought to change that, take the name off, which I did, or I garbled it. I made it so that you can't read it. There is a name there, but only impressionistic. And also changed her features just a little bit. Well, I didn't much. The hair is the same. But it is Judy, and to me it will always be Judy.

In retrospect, it's too bad that it still doesn't have her name on it, because, of course, she died, so she's significant for that reason. But she was such a beautiful girl. She was. A very handsome woman, bright. I was going to paint a woman there, so why not Judy? So that's that story.

There's another story that I should tell you that has to do with the same kind of thing when I was painting the big mural at the Smithsonian [Institution] in Washington, [DC]. Have you seen that mural? I had the mission emblem that I had designed for Gene Cernan and his crew. I thought, well, I'm painting this giant astronaut in this mural, and I'm very proud that I designed that mission emblem, so I'm going to paint that mission emblem on it, and I did. It was fully painted. Then I got a call from Collins, Mike [Michael] Collins, who was the Director of the Air and Space Museum at the time that I was doing the mural. Did you know that?

WRIGHT: No.

MCCALL: Well, that's something that's important to know. He had made the Director of the Air and Space Museum before it was even started, and so he achieved a very remarkable record of seeing that building constructed, designed, constructed and built, and on time and under budget. He was so proud of that. And that takes some doing in Washington, [DC].

But in any event, he called me into his office, or maybe he came down and talked to me, and said, "Bob, don't you think it would be better if we didn't put that mission emblem on? Because then he's no longer a symbolic astronaut that represents all of the astronauts that went to the Moon." But it's specifically Gene Cernan. Has to be, because he has the red stripes on his suit which indicate the commander, and on his legs. To put that mission emblem on it identifies it as that specific mission. So I then changed the mission emblem to an anonymous one that never existed, but looked like a mission emblem. So that's another little detail that historically at some point might be of interest to some people.

By the way, I acknowledged these logical criticisms or suggestions right away. I mean, it was clear to me, even to me. It was kind of a selfish idea of mine to put that on there, because I had designed it and was proud of it. Even with Judy, expect as I say, in retrospect, it would have been nice if her name was still there. By the way, those opportunities of doing that mural in Houston—you know Chuck [Charles A.] Biggs?

WRIGHT: Yes.

MCCALL: Chuck is a good friend, and I saw him for the first time in a number of years at that event for John Young. Chuck was the one that really initiated my doing the mural at the Johnson Space Center, because we met and were having lunch, or cup of coffee or something, at Edwards during one of the landing events, landing of the Shuttle. Let's see, is this time working out? I think it is. Yes. And I probably said it, that I'd love to do something for the Johnson Space Center.

I had already done a mural at Dryden Flight Research Center [Rosamond, California] where the landing occurs. I have two big paintings there. I don't know whether you're aware of them, but one was done in 1977, and the last one was done in 1998, finished in '98, I think. For the fiftieth anniversary of the Dryden Flight Research Center, they commissioned me to do a painting. It's not really a mural, because I did it here in my studio, but it's just a big, very big painting, about eight by twelve feet, something like that. It hangs in one of their new buildings.

So those are two places where I have murals specifically designed for—I mean, there are two additional murals that are at a NASA facility. NASA Dryden. Then also at the Langley Research Center, which is another NASA research facility in Virginia. At Hampton, Virginia, they have a new space museum, and I was commissioned to do a mural there, or a very big painting, which has to do with the history of the Langley Research Center. That's another place where I have an important painting, big painting. This recording will identify those two additional places, and there are others, too, that I probably could come up with, but there have been a lot of them through the years.

WRIGHT: Well, the one, of course, that I've seen more than the rest will be the one at Johnson Space Center.

McCALL: Sure.

WRIGHT: It wasn't done recently, but yet when you stand there and look at it, it takes you through the history and into the future.

McCALL: Yes.

WRIGHT: Can you share with us your thoughts when you were putting that whole mural together, what you were thinking and what you wanted to tell the viewers?

MCCALL: Oh, yes. By the way, all of my murals, every one of them, have been done with no direction. In other words, they said, "we'd like you to do something," and then I did it. I made designs and miniatures that I then submitted and said, "What do you think? I think this is what we should do," and almost without exception, without any changes at all, I have done what I wanted to do, which is really nice.

But in that case, I wanted to tell the story of our space program, our manned space program, pretty much from the beginning. So that imagery really carries us from the earliest launches, and they're only small indications, but they're in there, the story of our manned space program from the Mercury spacecraft to the Gemini and then Apollo and then finally Shuttle, and then looking into the future with some fantastic space stations orbiting that are really just dreams of a future that might be.

So I made a lot of small sketches first for myself, just arriving at what I wanted to do. Who was I working with? I think Chuck, Chuck Biggs. I wonder, did Chris have any—I think he saw the sketches that I made and okayed them, and not with me present or anything, but I probably presented them to Chuck, who was sort of in charge of my project. Neat guy. I've liked him. I've known him for so many years, long before I ever worked on anything directly for NASA. When I was working for some of my *Life* projects, I've made contact with him.

Lou [Louis A.] Parker. Now, of course, I think he's still—is he still there?

WRIGHT: I don't know.

MCCALL: Do you know the name?

WRIGHT: Yes, I know the name, but I don't know if he's still there.

MCCALL: Time does go, doesn't it? Flies. I talked to Lou as recently as maybe a couple years ago. He was still there. He may still be.

Anyway, it has been an involvement that has certainly affected my whole career in a very positive way, wonderful way. It has influenced profoundly what I have done and what I am continuing to do. It's proved something to me, that is that humanity, humankind, is capable of almost anything, given the imperative and the need to make it happen. We do awesome things.

WRIGHT: Well, that's kind of how we felt when we saw your work at the Smithsonian. You turn around and you're just there gazing at it and you become part of this larger picture of what can happen, what has happened and what will happen. Did you undertake that massive project by yourself, or did you have helpers helping you put that together?

MCCALL: No, I did it all myself.

WRIGHT: We were visiting about your mural at the Smithsonian, and that it is so awesome when you take a look at it. Could you share with us how that unfolded, as well?

MCCALL: Yes. I received as—well, I had expressed my desire to do something for that building. Again, a word to young people working at a career, especially artists, but anybody, a writer: you've got to go out and make it happen. You don't sit back and wait for it to happen. And I was always pretty good at this, always fairly aggressive in the sense that I would go to where I thought I'd like to work or to clients.

So I went to, let's see, the Smithsonian, Fred Durant was a man who was involved with the Smithsonian, a major part of history, he's long since retired. He's still alive, wonderful guy. For a short time he was Acting Director of the Air and Space Museum. I became acquainted with him at the old Smithsonian Space Museum. There was a museum, it's one of those red brick buildings, and that's where he had his office. I told him I'd love to do something. He was aware of my work through *Life* magazine and in other ways. So he must have mentioned to Mike Collins.

Mike Collins then called me and said, "We'd like to talk to you about doing a mural for the new Air and Space Museum." I was thrilled, flew to Washington, [DC] talked to Mike, came back here, made sketches, a number of full-color miniature ideas for the space that they had already identified for me. The building was in place at this time, but it had not opened to the public yet. I made sketches and they chose the one. I did three in particular that they evaluated, and liked one in particular best, which was fine. I liked all of them. So that's the one that finally became the mural in the Air and Space Museum.

I'd never done a mural. I had done some big paintings, but I had never done a mural on a wall. So I did research on that, a lot of research about how do you paint murals. I visited Thomas Hart Benton. Do you know that name? Thomas Hart Benton was a very well-known American artist during the war, and very influential. There have been some wonderful books published on his work. So among great American painters, fine artists, not commercial artists like I really still am. He painted the mural in the Capitol Building in the capital of what state? I can't come up with it, but he also painted the mural in the Truman Library for President [Harold S.] Truman. I had a book that had just been published on this man's work.

Since he had done a lot of murals, I called his home in Independence, Missouri. That's it. Capital of Missouri. I wanted to come and see him, talk to him. So I made the arrangement. He at that time was eighty-five years old, still working and working on a

painting that I later saw in the Hirshhorn Gallery, which is next to the Air and Space Museum in Washington [DC]. But this was a man that I admired enormously, loved what he did, and he was a great American artist. So I visited him, talked to him, showed him what I had in mind, and he gave me some counsel and advice, which was very valuable. He had painted his mural in acrylic on canvas that had been mounted on the wall. I decided to do it the same way, and did.

So then I moved to Washington with Louise. Louise and I moved to Washington. Both of our girls were in college at that time, so they were away. We rented this house for eight months, and I made the painting. I did the master study here in my studio. The master study, which is still a pretty big painting, a segment of it is about eight feet high. That master study was then shipped to Washington, and then we moved to Washington, had one of the neatest times of our lives, because we rented a house in Georgetown, a fabulous house, fully furnished with some wonderful antiques. It was a four-story walk-up in a portion of Georgetown that a lot of very famous people lived. [Henry A.] Kissinger lived within a block of where we were. Handsome homes, and we lived there for eight months.

I painted the mural, worked on it every day. I did every stroke, every bit of it. Had the canvas mounted on the wall by professionals at hanging fabric and had those same people apply the gesso coating, the white paint, but then I had everything in place to work with.

I then, with the master study as my guide, proceeded to start painting it. I started with the sun, which is in the vertical section, up sort of high off the floor, maybe thirty feet up, forty feet, and started painting it. In that period of time, eight months, completed it. It was such an incredible experience, because it went so well and a lot easier than I anticipated, probably because I had researched it so carefully and was so meticulous about how I developed it and made the drawing and preparation for it and followed all the proper rules. So it went well and is still my great pride, because it's effective, it's a good work of art, and a lot of people see it. And I like the fact that it's likely to be there for a very long time.

WRIGHT: Well, it certainly is spectacular in what it features but, of course, its size. Then for NASA you've done things very small. You've done the stamps.

MCCALL: Yes. Oh, I've done a lot of stamps, too.

WRIGHT: Yes. Tell us how that happened?

MCCALL: That happened about the time that—I was called by the U.S. Postal Service. Oh, no, I know. A member of the Society of Illustrators. As a matter of fact, I was inducted into their Hall of Fame, which I'm very proud of. About eight years ago that happened at a wonderful ceremony in Manhattan [New York].

But there was an illustrator there who had done a lot of stamps, a famous illustrator, Steven Dohannas [phonetic]. You probably don't know him, but he did a lot of covers like Norman Rockwell for *The Saturday Evening Post* and other publications. But he was older than I, and he had worked for the U.S. Postal Service Stamp Committee. He asked me, because I did a lot of space subjects for *Life* and so forth, he asked me if I'd design a stamp for the U.S. Postal Service. I said I'd be happy to, and I did. That was the start. This was in 1970.

The first stamp that I did was canceled on the Moon by David [R.] Scott, Apollo 15. That was a remarkable thing to not only do it, but have it canceled on the Moon in front of a worldwide audience, because we watched it. I watched it from mission control as it was really happening in real time.

Then there were a total of—I think it's now twenty, because I did a couple of others that weren't space oriented, I'm not sure, but it was twenty, I think twenty-three or four commemorative first-class postage stamps for the U.S. Postal Service, a whole string of

them. I haven't done any since 1991, probably won't do any more, because there are other artists that are coming in doing that.

Yes, from a huge mural to these tiny little stamps that require original art that's maybe only this big, four-by-five inches is a big enough thing because they still reduce them. The first stamp that I did, the one that was canceled on the Moon, the original art for it was about this big, because I'm used to painting big pictures and like painting everything large. Then they said, "Bob, you know, you'll get better reproduction if you don't make it so big, so there isn't that much to lose. You don't lose all that detail." So since then I have done smaller ones.

But that's another facet of my career that I'm proud of and pleased with. So in those stamps I've commemorated satellite, missions to Mars and the Viking missions. Well, many other space projects, including our landing on the Moon.

WRIGHT: Do you have a favorite of those?

MCCALL: Of those stamps?

WRIGHT: Of the stamps.

MCCALL: I think it's the Apollo-Soyuz [Test Project], because it's the biggest, and I collaborated with, or at least an artist in Moscow designed one and his stamp was a double stamp, my stamp was a double stamp. That is, they can be pulled apart and you've got two stamps, but the picture can transcend the separation part. I think that may be. I think it's a very—well, maybe also the benefiting humankind stamp, which is eight stamps that are all associated and connected that form a single picture, but also, when separated, each separated

piece is a complete picture, too. That may be my favorite. It's very colorful. And I won some kind of an award for that among stamp collectors.

So the stamps, the mission emblems, the involvement with the movie industry, which it came about through my involvement with NASA. My work with [Stanley] Kubrick in London was another facet of my career that was especially enjoyable and challenging and significant, in that it was for a film that has since become a classic, *2001: A Space Odyssey*. It was a good experience.

WRIGHT: He saw your work in *Life*? Is that how your connection began?

MCCALL: Exactly, yes. Kubrick had clipped some of my stuff from *Life* magazine as kind of a reference. He worked in London, and until he died, he worked there, and did all of his work there. Have you seen *Eyes Wide Shut*, by the way?

WRIGHT: No, I have not.

MCCALL: Have you [addressing Butler and Johnson]? It was kind of weird, wasn't it? Kind of weird. I had to see it, and we only saw it recently. We rented it, actually. It has the meticulous cinematography and composition and color and wonderful stuff, but it's still very slow-paced, like *2001*. When I saw it for the first time at the premier in Manhattan, and Kubrick was there, and Arthur Clarke and a lot of other people, people walked out at the intermission. Actually, a lot of people left at intermission, which was an embarrassment to anybody that was—it was an embarrassment to us, because Kubrick was there and we were feeling for him. But it was so slow-paced. That was part of it, but then it grows on you.

Even *Eyes Wide Shut*, we're thinking about it more than we do most pictures that we watch, and we've talked about it at breakfast. So there's some deep thinking there and

symbolism. I would urge people to see it, but not to expect a fast-paced thing. There's a lot of nudity, but it isn't pornographic in any sense. Aspects of it are very beautiful, but I can see why it didn't stay long, and that most people did not consider it very good.

So that's an aside that really has little to do, except that *2001* was a space thing.

WRIGHT: Was that a surprise for you to get a call from Mr. Kubrick?

MCCALL: I didn't get it from Kubrick; I got it from MGM [Metro-Goldwyn-Mayer Inc.]. I had my studio in Manhattan at the time. This was in 1967. They said that Kubrick had mentioned me and would like to talk to me, and so would I like to go to London? Practically overnight. I said, "I'd love to." So I flew to London and spent like one day, and then flew back, which tore my heart out because I wanted to spend some time there.

But I met him, and we talked, and he wanted me there. I then immediately made arrangements, and Louise and I and our younger daughter flew there and spent four months. And I did the paintings that were used in promoting the film that now belong to the Smithsonian Air and Space Museum. MGM presented them to them.

So, let's see. What else?

WRIGHT: Now, of course, that was the piece of the future that you were depicting. But in the early days that you worked with NASA, a lot of what you did, or the beginnings of what you did, were very technical. Can you share some of the moments that you there? Where were you when, with respect to those people that were actually doing the work? Were you near them or did you have to stay a certain path away from them in order to get their work done?

MCCALL: Well, I'll tell you. One particular period of time that was especially enjoyable and interesting was when the Apollo-Soyuz astronauts were training there, the cosmonauts, the

crew, were present and they were going through classes. I was invited to attend some of these classes with the astronauts, the guys that were going to fly it—Deke [Donald K.] Slayton, Tom [Thomas P.] Stafford, and another wonderful guy. There were three in the entire crew.

WRIGHT: Vance [D.] Brand.

MCCALL: Vance Brand. Yes. Who now lives near Dryden and works at Dryden. I've seen him there fairly recently. The astronauts Alexei [A.] Leonov and [Valeriy N.] Kubasov were training and going to lectures, and I went with them. I also made sketches as they sat and watched schematics or films, or were being instructed on how the mechanism where they would dock together worked. So I just followed them around and was part of that and felt welcome, and that was a great chance to be rubbing shoulders with these guys that were going to make history, and who did. That was one time.

Some of those are in my—have you seen my other books? I have two other books.

WRIGHT: No, I haven't.

MCCALL: I see that you've got one, and I'm glad that you've got that. The first book that I did was with Isaac Asimov. You know that name?

WRIGHT: Yes.

MCCALL: Isaac was somebody that I had met in Manhattan and had come to know. I asked him if he'd write the book. Not being a writer, I needed somebody to write a text, and, of course, somebody of that stature was very important. I got Buzz [Edwin E.] Aldrin to write

the foreword to that very book. It was published in, I think, 1971 or '72. It's called *Our World In Space* by Robert McCall and Isaac Asimov. Since it was my concept and idea, and even though Isaac was the big name on the cover, my name comes first. I remember talking to him about that. He wrote about it in one of his subsequent books, the fact that we had lunch one time, and I said, "Now, Isaac, you're the author of this book, of course, but it's still my idea, and all these paintings are already in existence, and they will form the body of this work, and the reason for its publication."

He said, "Yes, you deserve to be mentioned first."

So that was kind of—because he, of course, is a huge name in authorship of stories that have to do with science and science fiction and science fact and a lot of other stuff, too. Incredible man.

Then my second book was written by Ben Bova. Do you know that name?

WRIGHT: I know the name, yes.

MCCALL: Ben wrote my second book, and that book is entitled *A Vision of The Future: The Art of Robert McCall* by Ben Bova. It has some of those drawings that I made when the cosmonauts were present and where I first met Alexi Leonov, who is a colorful personality. Have you interviewed him?

WRIGHT: No, I have not.

MCCALL: Yes. But he is one great personality in the history of all of this, and one that our astronauts have come to know probably better than any of the other cosmonauts.

WRIGHT: About ten years after Apollo-Soyuz Test Project, you entered into a project with a space artist of the Soviet Union.

MCCALL: Yes.

WRIGHT: Can you tell us how that developed and what difficulties that you might have had to endure to get that work done?

MCCALL: Yes. That was a neat thing that evolved. That, by the way, was fostered by Fred Durant, the man that I had mentioned earlier, who worked at the Air and Space Museum and for a short time was the Acting Director of the Smithsonian Air and Space Museum. Fred has been a long-time friend of mine. I talked to him fairly recently on the phone. He must be approaching ninety now. He's an old guy, but with a great love and passion for the things that we're talking about. But he knew, and had met, in his many travels and experience in Russia, Andre Sokolov, who was sort of my counterpart in a sense, in the Soviet Union. He started out as an artist painting aircraft, their aircraft, of course. Then when their space program started—he's younger than I am by probably ten to twelve years. He had been documenting their space program in the way that I had been doing the same here. He also was acquainted with the cosmonauts and was a good friend of Alexi Leonov.

Fred Durant met him, and it occurred to Fred, wouldn't it be neat if Bob McCall and Andrei Sokolov could make a painting together, whatever kind of painting that they might want that would have to do with the two space programs. He mentioned it to me, mentioned it to Andrei.

Then in 1984, I was on my first visit to the Soviet Union, and I met Andrei, a neat guy, a huge man, six-foot-three or four and just huge hands and just a big head, and just monster in every way, the last person you would expect to be doing delicate detail in a

painting, but he was capable of it, and he did it beautifully. I met him. It was also kind of adventuresome and romantic, in the sense that it was a foreign, exotic foreign country, and we were in his apartment one night, and there were many other people gathered around that were a part of our group, and we talked about this idea. There was somebody videotaping it, so there's some video that I have a copy of it, of us sitting under a kind of a red lamp in the corner of his apartment, and other people, and we were discussing what this painting should be.

We determined that the painting should be beautiful. It should be aesthetically appealing. The better aesthetically, the finer work of art it could be the better, of course. We're always striving for that, and sometimes we come close and sometimes we don't. But it should also tell a story, and it should be a positive story. Again, a lot of this came from me. I mean, I wanted it to be appealing. I didn't want it to be frightening. So I wanted it to have an optimistic aspect, and he agreed totally.

So we started making sketches. But then that was '84. It was '85, '86, '87 before we met again to talk about it. Then he came over here one time on a trip that made it possible for us to talk a little further about it. So about four years after, about 1988, we finally started saying, "Okay, let's do it."

This was to enhance our two nations' collaboration and involvement in space, just in the subtle way that a painting might, you know. We did not want a sponsor. We didn't want any corporation saying, "We'll sponsor this and pay all the expenses and maybe even pay you guys." We didn't strive for that. We wanted total independence, and so we did. We made a painting and it had to be fairly large. I would like it to have been much bigger, but it had to be one that we could transport back and forth so we could say it was painted in Moscow in his studio and in my studio.

So we devised the notion of having it in three sections. It was a triptych. The overall dimensions are about seven-by-twelve feet, something like that, but four-foot sections, with a

seam down the center. I had my framer mount canvas and then rigidly lock it together so it was one piece of canvas, but with a seam here and here, that would allow, by loosening some screws to take it apart, put it together, crate it, and ship it, which is what they did, what we did.

But we worked on it here, started it here, and worked for about, oh, eight or ten days and got a lot done. Then he had to go back to his life. Then there was a time that elapsed and then I shipped it in the box to Moscow. Then I made a trip over there. Actually, on that occasion I took Louise for the first time. She didn't want to go to Moscow. It didn't appeal to her. She's glad she went now, of course. But we did that.

Finished it in—well, pretty much finished it in Moscow. Then because we were fearful that we couldn't get a work of art out of Russia, still Soviet Union, and there were a lot of limits and restrictions, so we demounted it from the stretchers and I carried it back like a carpet, like a rug, and it was a canvas about that big a roll and whatever the height was. I think it was maybe—it was just six feet high. Anyway, it was a fairly easy thing then to go through customs with and call it a carpet. We got through. Oh, I remember sweating that out, because they are so rigid, and who knows what might have happened. They might have refused letting it go if they discovered it was painting, even though we said we did it. Anyway, we got it out.

Then I had it re-stretched and then I finished it here. What had to be finished, I finished. So it was a joint effort. It's been in a lot of shows and it's traveling right now. It's been traveling for about three years, four. It was a great, great idea. It was fun to do and novel, and it was a successful painting. It's in the book, as you know.

WRIGHT: Yes.

MCCALL: That was neat.

WRIGHT: Your counterpart was able to see the finished product as well?

MCCALL: It's never been to Russia since. He wanted to get it over there, but there were no funds to do it. It would have had to have been crated again, taken apart. By this time I had a special frame made for it, big heavy frame. Does that frame come apart, too? Anyway, it's never been to Russia. He would love to have had it there, and it was up to him to do it. I was afraid if it went to Russia—I didn't encourage it, because if it went to Russia, it would never, ever get back here. I just knew I'd never see it again. And it's an important part of my collection.

So I paid him. I bought his half of it, and I paid a significant amount of money to him, more than he probably ever would hope to get, but I felt that it had a certain value and that I had to do that, and I did, and he was delighted. So it now is my property and part of my collection, but with a great story behind it.

WRIGHT: Such a historic partnership, especially in that time frame in our relationship with Russia.

MCCALL: Yes.

WRIGHT: We do have a new relationship with Russia. In fact, the nineties was spent as part of the Shuttle-Mir program with NASA. Have you had any chance to be involved with that, illustrating that as well?

MCCALL: Well, I designed the mission emblem for Hoot [Robert L.] Gibson. Are you aware of that?

WRIGHT: No, I didn't know that.

MCCALL: Oh, well, you must know that. That was so great and, of course, I like Hoot, he's a hoot. He's a neat guy. He asked me to design the mission emblem for him, so I did. I enjoyed researching that. He sent me lots of information on Mir and how the docking would occur and the positioning of the spacecraft. I have copies of it around.

Let me tell you how I visualize this. Now, this was the first—I think his was the first docking with Mir of the Shuttle. So I imagined in my mind what a sight that would be, to be in the cockpit of the Shuttle and you're moving in on the Mir. The Mir is a spectacular sight.

MCCALL: You've seen those fabulous photographs of it. Well, what a thing that is, it's just so cluttered with stuff. So visually it's a fantastic object with all these wings sticking out, these solar panels, and there seems to be no organization to it. There is, of course. But in some of the views it's really such a fascinating thing. They had to approach it in just the right way, just the right attitude and approach slowly and so forth.

But the thing that thrilled me was the notion of what it must be like for Hoot sitting in the cockpit with his pilot and seeing it for the first time. Maybe first you see a light blinking off in the distance. Then it begins to take shape and form, and then as you approach it, it becomes bigger and bigger. Then you have to orient just right to dock flawlessly.

So in my mission emblem design, I show the Mir and I show the Shuttle in just the right position, and they're on either side of an elliptical mission emblem. So I did do that.

I had painted the Mir, too, on a few occasions, in paintings. Of course, I've painted it in the thing that Andrei Sokolov and I did together. Of course, our own Space Station I have painted.

Let's see. Now, the last thing I've done that is directly related to our program is this series of eight paintings that I did for the *New York Times*, and they're around. That has to do with the next century in space. This century that we're in now, what do we anticipate? The author that wrote the story that I collaborated with, Timothy Ferris, brilliant writer. One of his most recent books, which is quite successful, is called *The Whole Shebang*. Isn't that great? Of course, he's talking about the whole universe. The universe, the whole shebang. Wonderful way to describe it. Just a touch of whimsy that makes it less formidable as the subject to contemplate. He has that kind of humor, but a serious scientist, a professor from Stanford University, an astronomer and a cosmologist and a brilliant, brilliant guy.

But, anyway, I made these paintings and that's one of them. Melting through Europa, the ice cap on Europa, the one over there on the left. That's an unmanned satellite that has settled down on this mantle of ice that we are convinced that form the surface of Europa, which is one of the satellites of Jupiter. The orange is Jupiter.

Then I should mention this, something that is very important. The Challenger Learning Centers that are proliferating around the country. Jean [June] Scobee, the widow of Dick [Francis R.] Scobee, the commander of the *Challenger*, who is a very good friend of ours, and we have come to know her very, very well, she started, along with the surviving members of the Shuttle disaster families, the Challenger Learning Center Enterprise. It's been very successful. We're building one here. You didn't know that?

WRIGHT: Yes, somebody mentioned to us that they're building one in Phoenix.

MCCALL: Just to give you an idea of the size of it, this is just some of the steel work. It's under construction right now. It's a large facility that will house this Challenger Learning Center. This is circular, this section here. You can't quite tell it from these photographs, but it will house this mural. This is a model of a mural that I've designed, which tells the story of

the universe from the Big Bang to the present, into the future. Our landing on the Moon and our eventual landing a man on Mars and so forth.

When this building is completed, which will be probably July of this year, and it will go into operation in the fall, the next school year, training or teaching young people about space, science. They'll fly missions, that kind of thing. Like Space Camp. Adjacent to it will be the McCall Museum of Space Art. This is important, because it will house my collection, all of the stuff that you see here, plus a lot more that's on tour. So the whole history of our space program, as seen by an artist who started documenting these events in the late fifties. My first visit at Cape Canaveral was in 1957, I think, or eight. So I've been at it a long time and have this great wealth of graphic material and paintings that will go in the McCall Museum. It will seek to inspire not just the scientific, what is it, the left side of the brain or the right side of the brain that deals with the science aspects, but also the aesthetics, the art part of it all. So that we won't be neglecting that. It's often neglected in schools, you know. Art is the first thing that suffers when the budgets are reduced and that sort of thing.

WRIGHT: Because your art does depict so much, I guess the expectations for the future, but on the other end it also has so many of the technical details, your museum will be able to offer both to people. Will they be able to see your work as an historic depiction of the history of NASA?

McCALL: Yes.

WRIGHT: When you were doing those first drawings, how important was it to you to learn as much as you could so that those sketches could be used for historical value?

MCCALL: It was important. It was more important maybe than it is now. No, it's still important, but I paint with greater freedom. That's something that commercial artists kind of have to fight. Because I was trained as an illustrator. Illustrators put in the detail, because their clients want it. They want to see every nut and bolt. Yet great art often is not concerned with all the details. It's the impression. It's the symbolism, and a lot of other more esoteric aspects of art that are more important. It's the emotional impact of the final result, not so much the little details that could even get in the way of the emotional power and impact. But, yes, detail was important. Being authentic, being accurate, but still, as an artist, now recognizing that you can tell the story with even greater success, often when you are not too limited or too constrained by including every detail. You're following that, aren't you? Because it's very, very easily understood and obviously in writing. Some the greatest writers don't put all the words in that they could. As a matter of fact, you can be too descriptive, maybe. So it's the same thing.

WRIGHT: You were there when NASA was an infant and have depicted its growth through all these decades.

MCCALL: Yes.

WRIGHT: How have you had to adapt to the change in technology that NASA has undergone? That very—I use the word very loosely—simple drawing of those first rockets, but yet now things are a little more complex.

MCCALL: Oh, yes.

WRIGHT: Tell us about how you've had to make those changes as well.

MCCALL: I think because of this great fascination that I have for technology, I welcome it all and I'm eager to hear the news of a new breakthrough, of a new way of doing things, a new design for a spacecraft that just astonishes us all because it's different. For example, that was done for the *New York Times* also. You're just looking at a transparency, of course. The original art is on canvas and is more effective. But that is a bioengineered vehicle. Imagine a vehicle designed that would grow. We would grow it somehow, somewhere, maybe grown in space, but also including in its growth places for habitation. So the lights on the interior suggest maybe a whole city, a complex of rooms, and an environment that can house maybe hundreds of people for long-distant missions to deep space. Real science fiction, but based—this is an idea of NASA; it's not mine. It's a dream that is still far out and may never be realized, but it's that kind of dreaming that results in astonishing things.

But talk about different. That's so different from the Mercury spacecraft, or the Gemini, or Skylab, or our Space Station, and so that takes a leap of thought to even imagine such a thing. The possibilities of the future are what really motivate a lot of my enthusiasm for all of what I do. The possibilities are so limitless and so kind of wonderful.

I've just recently become involved with the computer, too, and its potential. I'm using it a lot in these—well, this sketch, for example, was a little pastel sketch that I put in the flatbed scanner and then printed it out on my printer. It's terrific. I just love the color, and I can adjust it, and I can put stars in, and I can put lights in and do all of that and a lot more that I can't do, because I don't know how, but I know it can be done. That is very stimulating.

So as we continue to progress and evolve as a space-faring intelligence, because I'm talking about the whole world, the whole Earth, not just America, we're going to be revealing and experiencing things that we can't even imagine, can't even dream about.

WRIGHT: Looking at your space art, many times, speaking of lights, they seem to have an illuminating aspect to them. Is there a spiritual or an emotional feeling that you're trying to depict there for people to see?

MCCALL: Yes, I think so. I think so. There again, it's not a deliberate thing; it just emerges. There it is in my paintings. When it does, it's just a—but, yes, because we all give a lot of thought to what is controlling all of this. It's so magical and so wondrous that there has to be a power, a guiding force. The force is a wonderful way to describe it. I'm a Christian, but I'm an agnostic, too, I think. Christian as far as my disciplines are concerned, and I'm very involved with my church, because we designed that the chapel. Are you aware of that?

WRIGHT: Yes.

MCCALL: That was another—by the way, it is second only to my mural at the Smithsonian as far as my feeling of accomplishment. That cycloramic, because it's a circle, it's octagonal, you're surrounded by this glass, this faceted colored glass, that really is depicting the universe as best I could do it in that very cumbersome medium of chunks of glass. But it's the universe.

We have entertained astronauts here in my studio and talked to them at the chapel now for ten years. The Fiesta Bowl Committee invite the astronauts to be part of the festivities, a celebration of our Fiesta Bowl event. As part of that, from the very beginning that we have, we meaning Louise and I and the Fiesta Bowl Committee, have put a visit to our chapel and then to this home as part of that. That's been our pleasure, and it's worked so well, we feel.

By the way, we're building a whole new major building program, and I'm going to do some more glass in there. It's not typical imagery, as you can tell from the picture in the book. It's not typical religious imagery. It's the universe.

Oh, and when they're sitting there, I think they relate to it, and certainly individuals do. June Scobee has a star in that glass that she considers her star and it's Dick. And other astronauts have done the same thing with that imagery. So that pleases us, and it's an effective and wonderful thing.

WRIGHT: Your visions of space are visions, but yet you've had an opportunity to talk to those who have traveled there. Do their thoughts and their perceptions and observations help you get a better feel for what's there?

MCCALL: Oh, absolutely. Glad you touched on that, because, yes, I've talked to Gene Cernan in particular, because he wore that mission emblem that I designed, and when he returned, I know talking to him about his experience was of great value to me. I can remember one moonlit night looking up at the Moon, and he was able to identify a particular grayed area of the Moon which was the vicinity in which he landed. That is just mind-blowing, isn't it? It's just, did that really happen? I've talked at some length with Gene about that kind of thing, but others, too.

Al [Alan L.] Bean is another good friend and artist now. Gosh, doing some wonderful things. I remember he used to come visit me, he did on several occasions. He'd fly out in his T-38, land at Luke Air Force Base [Phoenix, Arizona]. I'd pick him up, and then we'd come to this studio and we would spend the day. Then I'd take him back out there, and he'd fly off back to Houston. This was when he was still, of course, an active astronaut. He just wanted to know what I did more because he was anticipating the time when he would

become an artist. He was a very talented guy that was very interested in art, had been for a long time. But we became well acquainted.

But that spiritual aspect, I think, pervades my work, and should, and probably is more significant in the minds of—I haven't talked to a lot of them about this, but I'm sure it is part of their lives, too. Certain ones, as you know, became religiously motivated. Who was the one that died recently, several years ago, who had the high frontier—no, not the high frontier, but—

BUTLER: Jim [James B.] Irwin.

MCCALL: Jim Irwin, yes.

BUTLER: High Flight Foundation.

MCCALL: High Flight, yes. He's been here in my home with his wife. But he was inspired, I think, by his experience. I guess there's some others, too, but those in particular.

WRIGHT: Is that a trip that you would have liken to take somehow?

MCCALL: Oh, yes. Yes. Oh, this is something that was a possibility at one time, the possibility that I might be one of the first artists in space. At the time that Dick Scobee was—not Dick Scobee. Truly. Richard [H.] Truly. Dick Truly, he was given the job of researching the individuals that might be invited by NASA to fly a mission in the Shuttle like Christa McAuliffe was, and others were then contemplated that would follow, and I was among those that were seriously considered.

I remember one night Susie Young was here and she was telling me, "Well, Bob, did you know that you were on that short list with Walter [L.] Cronkite and John Denver?" And there were a few others. Now, I don't know, I never had any official word from NASA, but I heard from several sources of that sort that I was—well, I'm not surprised, because Dick Truly asked me to write a letter, more than a letter, but write what I thought should be the criteria for selecting individuals to fly on the Shuttle, because he needed some outside opinions on how that should be done and who it might be. I gave him my thoughts, and I concluded my note to him, or my letter, with a paragraph suggesting that I be seriously considered.

This was a couple of years before Christa was chosen and before it really went into effect. I remember so vividly thinking, wow, that's scary. What if I really were invited? But it didn't take long. I mean, like a day or so, before I realized, well, if that did happen, and at that moment I thought that it was a real possibility, at some point I might get a telephone call or a letter saying, "Bob, you have been selected, now we'd like to explore that possibility," I knew that there would be no way to reject it. It's an offer I couldn't possibly refuse. And I would not have, had I been qualified and if that had happened.

So that answers your question. I would love to have had that opportunity. So many of us will in the coming decades, because more and more people will be experiencing that kind of trip and, indeed, careers in space, I'm sure.

WRIGHT: You had a first-hand look through the last forty years of the training involved and the concepts that turned into reality, and you would have had a chance to see it in action.

McCALL: Yes.

WRIGHT: Did you let your imagination go? Did you visualize you being in that spacecraft ready to go?

MCCALL: Oh, yes, I did. I did visualize that. But talking about visualizing, when I make a painting of a space scene, I visualize myself in that environment and in that picture. The more successfully I can visualize myself as part of that drama that is taking place in the painting that I'm making, the more successful that painting is likely to be.

So as an artist, I am in that enviable position of being able to fly over the rings of Saturn and view that incredible sight. I can land on Mars. I can travel over the canyons of Mars that are so spectacular. We know that major rift that is 3,000 miles long and ten miles or fifteen miles deep and that great volcano on Mars which is, it's not active, of course, but the mountain is much higher than Mt. Everest or any mountain on Earth. I can be there and see it if I'm painting it, and I try to do that, not really consciously, but as I get involved I really am visualizing my presence there.

WRIGHT: Earlier in our discussion you mentioned that artists want to communicate. If you had to tell a person what you were trying to communicate in words through your art, how would you describe? What are you trying to communicate with your space art to those who see it?

MCCALL: I am trying to make people aware of the absolute glory and magic. "Magic" is a word that seems appropriate, because it's so mysterious. To give them a sense of the marvel of the universe and that we know so little about it, but the little that we know is inspirational and marvelous. I'm surprised at educated people who'd never contemplate or think about such things that really don't enjoy the thrill that I enjoy just contemplating, thinking of the limitlessness, the infinity of space and time. The past is as fascinating as the future, and just

as mysterious. The possibilities to be aware, to communicate a sense of the wonderful possibilities, and, I guess, the glory, the sublime nature of it all is what thrills me basically and fundamentally and in a wonderful way.

WRIGHT: It's been such an adventure with you being involved with all of this. Was there ever a difficult time during the last forty years that you were trying to illustrate something specific regarding NASA and its program that you had a problem with?

MCCALL: I've talked about visualizing goals and making them become reality, because I've done that repeatedly and seen it happen successfully, but there have been a lot of visualizations that have never materialized, too. But one of my goals that has not come to pass is another great painting in Washington, D.C. I would love to have the opportunity to create a work for our capital, the nation's capital. There are some great paintings, great historic paintings in the Rotunda that were painted a hundred years ago by Trumble, was the name of one of the painters who painted quite a few. Then an Italian painted the frieze up under the dome and also many other paintings in the Capitol.

I have been there. I have made the overtures. I have talked to the architect of the Capitol, who no longer has that job, because this was twelve or fifteen years ago that I talked with him. I made a special trip to Washington just to talk to him. He had a great deal of power. He's not the architect in the sense that he designed the Capitol, but he was the man in place who was responsible for all the things that happened in the Capitol. Actually, when they enlarged the west wing, he was instrumental in that. A man of power. Of course, there are committees, too, that make decisions about what goes in the Capitol.

So it became such an impossible maze of hurdles to cross, with no promise of success at the end of the effort, that I finally did give up, not totally, because right now I'm saying there's nothing I would love more than to have a chance to do a major work of art that

documents or celebrates and dramatizes this great achievement of landing on the Moon and of exploring space.

Now, there is one painting in the Capitol of an astronaut on the Moon, and I think he has a flag and that was done and it's relatively small. Have you seen it?

WRIGHT: Yes.

MCCALL: It's relatively small, and it's among a lot of other images, and it's actually painted on the wall. It's not in a frame. By the way, that was done at the time I was painting the mural at the Air and Space Museum. Because the artist who was doing a lot of decorating in the halls of the Capitol Building, I can't come up with his name at the moment, but I came to know him, I met him. He was in the process of doing a lot of work, and he was elderly at the time and finally died, and I don't know who then took over that work. But it was work that I was not interested in doing, historic costume figures of the periods of history that needed that kind of thing. But there is a big painting by Howard Chandler Christy. Do you know that name?

WRIGHT: No.

MCCALL: It's a historic event that is depicted in a big, big canvas. I would like to do a big painting, not a mural necessarily, but just a big painting that would glorify that achievement again. Like in the Space Museum, only approached differently and better and all of those things.

WRIGHT: Well, it's a piece of history, and that's definitely what you feel when you walk into the Capitol.

MCCALL: Yes. For a while Senator Swingle [phonetic]—that name probably doesn't mean anything to you, but he was an older man who had been a politician and who was a marvelous guy in charge of the history of the Capitol. He met with me and we walked around to find a place where I could paint this. So there was a time when I was encouraged to think that this could happen. I kept trying to make it happen, but it never did. So you talk about the disappointments, not a great one, but one.

I have never been devastated by disappointments of the sort that I think you're asking about, because there's always something else that takes its place that I can put my effort into and my dreams into. I wanted this to be one of the biggest murals in the country. We were at one time very serious, the top people in Scottsdale were talking about the Scottsdale Space Science Center. That is my idea of what that entity might be, that center painting. That's a very special locale in Scottsdale [Arizona]. That did not come to pass. But on a much smaller scale, and less tremendous in so many ways, but still very satisfying, it's going to happen now in the Challenger Learning Center.

WRIGHT: Will you give us a tour of it?

MCCALL: Sure.

WRIGHT: Can we walk through?

MCCALL: Well, these are the architect's drawings. This is the Rotunda. This is the tour of the universe. It starts with the beginning and this is, of course, just a photograph of the actual painting, which is elsewhere. It's in one of my shows that's traveling. But this I created for

the Scottsdale Space Science Center that was never built and never will be built, but for a while it looked like it was a sure thing. It was disappointing to have that not happen.

Here I've labeled the segments of the evolution of especially planet Earth. This is the Big Bang. This whole thing is depicted on three tracks: the central track, separated by this black line, and this upper track with other imagery. Now, this is the Big Bang, the moment of creation, and evolving from that is the universe, another part of the mystery of it all from a primordial atom, everything occurs instantaneously. Boom! There's a universe. Billions of miles in every direction, filled with all kind of cosmic events and objects.

So we're concentrating on planet Earth, and here's the Earth emerges, and here it is the primordial Earth with fire and all kinds of things occurring. Then it settles down and life is born, primitive life, single cells separating and becoming more and more complex. Then here's the prehistoric creatures occur and the oceans, the ancient oceans where first life emerged and became more and more complex. Then the age of the dinosaurs, which was terminated by, we think, a giant meteor that struck Earth and wiped out the life of that time. Then the dawn of humankind. Then the rise of civilizations and air and space achievement. The lunar landing has a significant role in this story that I'm telling because, again, that was what I regard as a pivotal, incredible moment in the history of humankind.

Then cities of the future, the promise of the future. Then colonizing the space frontier, and the landing on Mars, which will take place in due course, but certainly it will. Then the journey to the stars, where we reach out beyond our own planetary system.

Then I end with the endless epic, a caption that simply suggests that this is a journey that is endless, and humanity may cease to exist in some distant time in the future, and that's okay, because there will be other life. My sense is that life is abundant and teeming in the universe. It's out there. Not UFOs [unidentified flying objects], not the visitations that we have seen. I don't give them any credence. But life is abundant in the universe, I'm convinced. It's just too marvelous not to be abundant.

WRIGHT: We know you as Bob McCall, the space artist, but you're also a historian, anthropologist and astronomer, as well. All of those pieces of information work inside you to create these images. Does one overpower the other, or do you find that they all balance themselves out when you're trying to create on canvas what you're seeing?

MCCALL: Nice question. I think they tend to balance out and focus on a piece of canvas. I try to bring all of those excitements to bear in the paintings that I do, because it seems to me the most productive way of communicating for me. It's the way that I can best—or a combination of words and pictures.

WRIGHT: Kind of reminds us of our own technology as you watch NASA grow up from the Mercury to the International Space Station, all that knowledge that you've been able to absorb helps develop what you're developing for the future as well and when we look through those. So it's quite a combination of brain space up there that you're able to mesh through.

MCCALL: Yes. It's interesting how different we all are, isn't it?

WRIGHT: And how we see things.

MCCALL: Yes.

WRIGHT: One of the things that Gene [Eugene F.] Kranz told us was that you were able to evoke the emotions of the people who had worked in the space program and possibly because you were able to get to know them so well.

MCCALL: Yes. See, I admired them so enormously, and it comes across. It has to. I don't even care what kind of people they are, but they're engaged in an enterprise that is so worthy and so important and so historic, that I can't help but admire and respect and even relish what they're doing. And they're all, all the guys that were engaged in that marvelous enterprise, which continues, of course—I don't want to talk like it's in the past, because that's what's happening right now. It's just, it's what delights me.

You were going to say something?

WRIGHT: I'm going to take advantage of where your location is. You had pointed earlier to the patch that had gone to the Moon with Gene Cernan. Could you explain a little more about what you have hanging here and how that patch came alive?

MCCALL: Yes. Oh, yes. This patch is significant because it's the first one that I designed. It's the first one I had an opportunity to design and I was delighted to have—and George Abbey was very significant in this happening. Well, he threw me into the association with these fellows. So Gene asked me to do this, and he had some ideas which I attempted to integrate into this design. But I made a lot of sketches, and I mentioned this earlier, which he now owns, by the way. At one time, he didn't seem to have a sense of their significance even to himself. He said, "Gee, I've got these, Bob, what can I do with them? Do you want them?" And I said, "Yes." Because by that time, this was years later, I realized the value of those to me, but he never brought it up again. I said, "Oh, yes, are you sure you don't want them?" I think he changed his mind and he does want them.

But, in any event, we explored a lot of things. Jack [Harrison H.] Schmitt was the geologist astronaut on that mission, and he thought Stonehenge would be a wonderful image

to include, one of the first civilizations, as we know civilizations, would be an interesting symbol. So I designed some with Stonehenge as the graphic imagery.

Then I remember flying to Houston to show the sketches, and we went into a projection room and I projected a lot of these slides of the sketches that had made, and we discussed them. None of them seemed to be what the guys were after. The other was Ron [Ronald E.] Evans, the other member of that crew. Ron Evans, Jack Schmitt and Gene Cernan. Ron became a good friend of mine and he lived here and was a member of our church, as a matter of fact. His wife still is, and he died, as you may know. He died unexpectedly and tragic—not tragically, he died in his sleep, but, anyway.

So anyway, we then finally decided that—I made some sketches using Apollo. The great Belvedere Apollo, which is in the Vatican Museum in Rome, I had seen that sculpture. Apollo, of course, was a very appropriate name and piece of sculpture. So the Apollo Belvedere profile is part of this imagery. The American eagle, a very modern contemporary line depicting the American eagle. The three stars in the wing of the eagle represent the three crew members, the astronauts that flew this mission. Then the Moon is partly occulted, or covered, by the wing of the eagle, suggesting that the Moon now has been conquered, or accomplished the successful landing on the Moon. The Apollo Belvedere and the eagle are moving in the direction of deep space with here's a spiral nebula and another one that represent the greater challenges that lay out in deep space, following our achievement of landing on the Moon. So that's kind of the imagery with the names of the astronauts below and Apollo 17.

Now, the four stripes, also. Red stripes are significant, and somehow I can't remember—they are symbolic of the fourth—it wouldn't be the fourth mission. I'm not sure.

WRIGHT: That's okay. While we're up and mobile, are there other things in your studio that you would like for us to have some special information from you? I notice your stamps over here.

MCCALL: Oh, yes, those are my stamps. Here are some that maybe I should talk about this. Yes, let me do that. There's a photograph here, too, that might be interesting. Here is a picture of Ron Evans, Bob McCall, and Gene Cernan in my studio, taken right here about nineteen seventy—I don't know, '71 or '72. That mission is Apollo 17, I've forgotten the date of it, but it was before that mission, because I've got sketches and we're talking about those sketches.

But now, above, in this frame are three envelopes that show the sequence of experiences that I had in real time. The little watercolor sketches are of the launch site with the big lights on the launch site for Apollo. Would that be—which Apollo was that? Wait a minute. April '81. Oh, it's the Shuttle. Yes, it's the Shuttle. Oh, it's the first Shuttle. The first Shuttle mission, yes, with John Young and Bob Crippen. I was in the stands at the press site. I made that little watercolor. Then as morning dawned and the launch moment occurred, I am waiting for it, I've done some of the painting, but I haven't painted in the Shuttle itself as it rises, but, otherwise, I've finished this. Actually, there are contrails in the sky that are the contrails of the observing aircraft that are watching this moment arrive.

When the launch occurred, it was so tense, I mean, you're so excited, by the time the countdown reaches zero, you've been anticipating it and, in this case, I was there from early—when it was still dark, to the moment of launch. My hand is shaking, and I'm as excited as anybody could be, and I'm painting that last bit into the painting.

Then I flew out to Edwards for the landing. Here we are at Edwards, California, and the Shuttle is landing and the T-38's on either side of it bringing it in, you know. Fascinating.

WRIGHT: Did you think about the early Saturn, or the early Mercury and Gemini flights, as you were watching the Shuttle? Did those thoughts or visions of those early days come back to you at that time at all, or was this just a new exciting era?

MCCALL: I think I was so absorbed with the moment that I was not thinking of anything else but. But I've considered all of that at other times, how the progress is just moving forward all the time.

This is a recent painting that I did for Honeywell [Corporation] that is complete fantasy, in the sense that this is Camelback Mountain, which we see right out from our veranda. They have a big plant out here, their space development plant. So this is within our reach. This suggests orbital activity sometime in the distant future when so many things will be occurring. Look, we've got even stuff like that, little planes taking off and then I've brought the Moon up pretty close. That's all just kind of a fantasy thing that I did for them.

WRIGHT: This must be one of your latest works of Captain Young.

MCCALL: Oh, no. This is a slide. Oh, yes.

WRIGHT: For the recipient part. I recognized this from the Johnson Space Center mural.

MCCALL: Yes. This is a print that I made on my computer and I put this lettering in. I made another one that I had framed in a similar fashion that shows John with his mission emblem, which is this one which I designed. I made both and had them both framed. Then my wife and I evaluated them, and I said, "Now, which is the best one to present to John at this forthcoming event?" We both agreed that the other one was a little better. So I just have this now.

But this is Judy [Resnik] and I had her name there. I designed this emblem for her particular class. It still remains. But I did all of this on my own, in his likeness. No one had seen—the sketch that I had presented and had been okayed was just an anonymous astronaut, but I thought, gosh, John is going to fly this mission. I know him. He's getting ready for it. He's worthy if ever there was a guy.

WRIGHT: He's done so much, yes.

MCCALL: The most experienced space commander in the world. How about that.

WRIGHT: That's right.

MCCALL: So I made it John. Got pictures of him. This is Grissom. Gus' wife visited me when I was painting this, and also [Alan B.] Shepard's [Jr.] wife, when I was painting the mural. One day I saw these women down there and they introduced themselves.

WRIGHT: Your family's very well extended, isn't it, because not only do you know just the everyday participants of the space program, you've gotten to know their families as well.

MCCALL: Yes. Some of them I have, yes. Yes, I feel very privileged that way.

What else can I—of course, I've got plenty of stuff I could pull out if there ever was a need. I want to show you, though, a copy of that other book just so you know. There's my first book, the one with Isaac Asimov.

WRIGHT: What an accomplishment, just doing a book, but then yet getting to do it with him.

MCCALL: Yes. Let's see, here, this is the Japanese version of *Vision of The Future: The Art of Robert McCall*, by Ben Bova. This is quite a—now, of course, this is all Japanese. The American version is the same size and everything.

WRIGHT: Easier to read. [Laughter]

MCCALL: A lot easier to read. I wanted to show you the sketches that—oh, wait a minute. I was talking to Nancy Conrad this morning. Pete [Charles P.] Conrad [Jr.], who was just killed, as you know, this is a painting that I'm shipping to her. This is Pete and this is Dr. [Joseph P.] Kerwin. They went out to loosen this solar panel that had been jammed.

WRIGHT: I'll show that to the camera if we can. Will you explain that?

MCCALL: Sure.

WRIGHT: Watch your step there. I'm sure they will gladly add that to their collection of things for them.

MCCALL: Oh, yes. Yes. I sold this to Pete many years ago, the painting, but I had an exhibition in progress.

This is a painting that I did. Actually, it was for *Popular Science* magazine. But I made it large and it's a good piece of work. I sold it to Pete, Pete Conrad, many years ago. But then I had it in an exhibition, so he couldn't pick it up right away, and then he never did. He had paid me a small portion of the cost of it. It wasn't until I met Nancy recently, within the last year, that I said, "Listen, he paid me some money, and I'm going to give it back to you. I don't really want to sell the painting," but then she wanted it very badly. So based on

our original agreement, I decided, well, she should have it. So now I'll be sending it to her. Just returned with these other paintings. So that's the story of that.

WRIGHT: So many visitors go to the Smithsonian and see your mural and, of course, people can find your art books, but do you have a favorite painting that if you could pick that you would want people to see in person, do you have one in specific?

MCCALL: I think it's the mural.

WRIGHT: The mural itself?

MCCALL: In Washington [DC]. It's the biggest.

WRIGHT: It certainly says so much.

MCCALL: This is a significant drawing that I made at the Johnson Space Center. Pete Conrad had returned. Let's see. What happened? They were determining how to handle the—Skylab had been launched and jammed, and they were trying to work out a way of protecting it from the sun. That's why they had spread that parasol kind of thing. I've forgotten some of the details of that particular sketch. But these are sketches that were made in real time from the Johnson Space Center.

This is from launch control at Kennedy, in that big building that overlooks the launch site. This is from the Johnson Space Center live at mission control. I'm looking at the big screen that shows the—I forget which astronaut this is, who actually dropped a feather and a little hammer.

WRIGHT: Dave Scott.

MCCALL: They hit the ground at the same time, you know. These are other sketches that were made.

WRIGHT: That was another piece of information that Mr. Kranz actually told us, is that he had to be careful, because when you were in the room, he tended to want to watch you instead of do his job. [Laughter]

MCCALL: Oh, really. [Laughter]

WRIGHT: But don't tell him I told you he said that. They said he was fascinated you being able to take what was happening so quickly and putting it down on paper. So I know that he enjoyed very much working on the Mission Operations Directorate patch with you.

MCCALL: Yes. He was very, very instrumental in that. He was the one that asked me to do it, but also the one who really did most of the design. I just brought it together and in a way that could be reproduced nicely. Great fun recalling all of that.

WRIGHT: So where do you think your work's going to take you next now?

MCCALL: Well, the next interesting project for me is, of course, this mural, which is going to be—I'm not going to be painting this, see, this will be enlarged digitally and printed on canvas. I've seen samples. I know what it will be, and it will be very effective.

WRIGHT: So will this be the first time that your work's been produced like that?

MCCALL: Yes.

WRIGHT: That's exciting.

MCCALL: Yes. Then it will be mounted on the wall, so my project really is to just to supervise the event. It'll be done in California, and then it'll be brought here and mounted in the new Challenger Learning Center. So that's that, and this painting here, and the hope for the new things that are happening. I've got another book that I'm working to have published. I still don't have a publisher for it, but I'm optimistic.

WRIGHT: I think that's definitely a message that you give in all of the works that you do.

MCCALL: Let's see. There must be something else that I can talk about. I mean, clearly there are so many incidents that I could go on and on, but I have to be kind of reminded of them. Well, we've got lots of time.

WRIGHT: We're doing fine. I was going to see, if you want, we could take a break for just a minute.

MCCALL: Let's do.

WRIGHT: I can ask Sandra and Carol if they have some things to ask you as well, and give you a chance to collect your thoughts and see what else you would like to add.

MCCALL: Sure. Yes.

WRIGHT: Would you like to do that for just a minute?

MCCALL: I heard the President [John F. Kennedy Jr.] when he made that memorable historic speech, where he said that we would send men to the Moon and return them safely. I was on a trip, and we were in Colorado, with my wife and my two daughters, and I heard those words on the radio of the car. I remember thinking, what an astonishing and impossible task he has set for us, because it didn't seem, end of this decade, because the timing was a crucial factor there, he actually gave us a deadline, and then to think that we could actually meet that deadline seemed utterly impossible to me. I had been actively following the space program and was engaged to a certain degree for ten years. Well, not ten years before he said that, but a number of years. That was a vision that he no doubt had a lot of counsel and advice from advisors that gave him the courage to make that statement. He had to know that there was the possibility, even though it was an outside and a very ambitious goal, and an outside possibility.

Anyway, then my involvement with the space program seemed to become more and more intense as the years unfolded. Then *Life* magazine was continuing to cover the training astronauts. I remember meeting Al Shepard. I was part of a team of two guys that were sent to Houston to interview Shepard. I was an artist, so I wasn't the one asking the questions, but we did have lunch together with the journalist that I was traveling with, whose name escapes me now, but I remember being very, very impressed. I also met John [H.] Glenn [Jr.] at that time. These were people that were great heroes, in my view.

But following that evolution of the space program as it approached this witching hour of the end of the 1960s was fascinating to observe. I made quite a few trips to the Cape, saw the Vanguard before it attempted the launch of the first little satellite. It was a very intense time and a very exciting one for me, as it was for many others.

Then my great wish, when the day was chosen that the actual launch of the Apollo to the Moon, Apollo 11, I was present when that launch occurred at the Cape, and I can remember thinking what an enormously risky effort this was. We didn't know what the surface of the Moon would be like. There were some speculations that it was covered with dust from the many impacts of meteors that had caused the craters, and that it could well be three or four feet thick, deep, dust.

I made a painting of an astronaut up to here in dust with the spacecraft and its legs, the lunar lander, embedded in dust up to four, five, six feet, just speculating on what might occur, what we might find when we make the landing. So that was an uncertainty that we had to find the answer to by making the trip, and we did.

So I guess, yes, it was an exciting time, and one that I remember unfolding through the decade from the time the President made that announcement. And then to have it go off so flawlessly, we were all just so surprised at that, that it just went almost perfectly, and then to have the men return.

One time, actually, I think it was Apollo 11, I was in mission control and I was making sketches from the big television monitor in real time, you know, with just a short lapse of about three to four to five seconds from the moment that it happened on the Moon to the time we received it and saw it on the television. There was that lapse because of the distance.

I made a sketch of the ascent stage of the lander when the astronauts blasted off of the Moon to return to orbit and rendezvous with the command module. The sketch that I made, which was done in real time, real fast, fast sketch, Chris Kraft came by and looked at it and said, "Bob, you know"—gosh, what was it? He made some kind of a comment of an error in the way I viewed it. He said, "Let me play that back for you."

So he told the right guys, who had recorded all this. I had seen it in real time, and I saw this blast of fire from the base of the ascent stage, and I had depicted it in a certain way

that he thought was not correct. He said, "Now, watch very closely and we'll replay this, and we'll replay it in slow motion," and he did. And I felt real special that the director of the center was aware enough of this artist milling around and making these drawings, and cared enough to make this point. So he played it back and I could see that he was correct and that I had made an error. So I made some changes.

And then he had a copy of that. Was it a copy or was it the original? I'm not sure. I think maybe it was the original. In any event, he had it, and he had it framed in his home. There was a flood in Houston, heavy rains and flooding. His house was caught in that flood, and the sketch was damaged, just a portion of it. He sent it to me and asked me if I would touch it up, which I did. I made reference to that when I saw him just a week ago or so. Of course, he remembers that very well.

I also painted Chris, Robert Gilruth, George Abbey, Chuck Biggs, several other people in the mural. Are you aware of that?

WRIGHT: No.

MCCALL: They're standing in the mission control area, the lower left of this big mural, and I had them actually come up in every, well, almost every case, but I didn't have Gilruth. I probably had a photograph of Chris. But I had Abbey and Chuck and several other people actually come up and sit on a stool as I painted this mural in Building 2. So their likenesses are in the mural. There are others. There may be ten whose likenesses are there, along with Judy Resnick.

WRIGHT: Can you share with us how it feels to walk into a building, and maybe even someone's home, that has some of your artwork? For years you've been giving to the world your talents, and people have your books, and they have traded your stamps, and they've

collected your patches, and they have artwork hanging, but how does it feel to walk up to something or somebody that has that and to know that they are looking at your art and appreciating what you've been able to do?

MCCALL: It's great. It's a good feeling. It really is. From time to time, some artist, particularly artists, will say that my work had influenced them in some rather important way, made them decide to become artists. There were some young artists that visited me when I was painting the mural at the Johnson Space Center, and who I invited up on the scaffold with me, and we sat and talked. They were teenagers, maybe eighteen-, nineteen-year-old kids, and a couple of them I still hear from, one in particular, who is now into digital art, but very, very talented and very good. He has this studio in Clear Lake [Texas] and he works for the space community there as an artist.

But it's a good feeling to go to the Smithsonian and look up there and see that mural and see a lot of people around and know that it's viewed by all of these people through the months and years. It's a fabulous feeling.

WRIGHT: We mentioned that art communicates, that as an artist you like to communicate. Do you feel art teaches as well?

MCCALL: Of course. Oh, I sure do. In past centuries, art was the means of making political statements and all kinds of educational informative statements by leaders. Napoleon [Bonaparte] used art in a big way to glorify his time. Some of the great art that I admire most is by artists that were painting for Napoleon, on his payroll, in a sense.

Jacques [Jacques-Louis] David, do you know that name? Was one who was a very prolific painter in the Napoleonic era. The Louvre Museum has many of his great works.

But art, through the centuries, has been a very, very powerful medium and important in recording history.

Now, of course, with cameras and photography, the photograph is everywhere. The cameras are used to document our space program. But the art program that NASA established, following the pattern of the Air Force Art Program, and I was involved in that for many years, and traveled around the world and many, many wonderful places as a guest of the Air Force, doing much the same thing, visiting, experiencing the Air Force and its activities around the world, and then coming back and making paintings that then became part of that program, which most of it is housed in the Pentagon and the Air Force Academy and other places.

WRIGHT: Did some of those paintings lead you to have some of your work done for another movie? I believe *Tora! Tora! Tora!*, some of that was done for that?

MCCALL: Oh, yes. Yes, I did a great deal of work for *Life* and indeed one of my—actually, my very first commission for *Life* was to make paintings illustrating a new historical documentary work of literature by Walter Lord. It was entitled *The Day of Infamy*, and it was the story of the attack on Pearl Harbor. I made, I think like fifteen or sixteen paintings that were reproduced in *Life* magazine about the attack on Pearl Harbor and the events leading up to it and then the actual attack and so forth.

It was this series that caught the eye of the art directors at *Life* magazine when they invited me then to do—no, it's the reverse, caught the eye of the people at 20th Century Fox to invite me to do the work for *Tora! Tora! Tora!*, the movie. I did a lot of paintings. Went to Japan to watch the filming and then to Hawaii where I watched further filming of that motion picture.

WRIGHT: That was certainly a depiction of what had truly happened, but then another movie work that you did was another futuristic. You worked on some *Star Trek* artwork, as well. That must have been a little fun of being something so futuristic.

MCCALL: Yes. That's true. I worked on the first *Star Trek* motion picture, the first feature film. Robert Weiss, unexpectedly, was the director. You know Weiss who did *The Sound of Music* and many other great films. So he was the director of that film. I did, oh, a bunch of paintings, and many of which are part of my collection that are all pure fantasy, pure science fiction, but fun to do.

Then I worked with Doug Trumble. You probably don't know that name, but Doug did one feature film, *Silent Running* was the title of it, science fiction film. It's a cult film now that people really interested in science fiction—have you seen it?

WRIGHT: Yes.

MCCALL: How about that. Well, Doug Trumble, who worked with Kubrick in London, and I met him for the first time, and at that time he was only, I think, like twenty-three or four years old, just a very young man, but given a lot of responsibility by Kubrick to develop some of the special effects. I met Doug and we became dear friends, and I worked with him from time through the years and fairly recently. Well, back about 1995 or '96 was my last involvement with him. He was working on a film, Ray Bradbury was part of it and Buzz Aldrin. We had Buzz here, Ray and Doug. *City of the Stars* was the title of the film, which would have been an animated film, animated from my artwork. It's another one of those disappointments that never happened, but had an auspicious start. We were all excited. Doug made the arrangements, and we all gathered here in my studio and talked about it. Ray Bradbury then wrote a script, but it never found a studio or a big sponsor.

WRIGHT: Looking back, and especially looking in your studio, in the midst of all your paints and brushes and easels, I notice that your telescope is here, and it was the one instrument that kind of took you to where you are today, or the first instrument.

MCCALL: That's right, yes.

WRIGHT: Looking back, when you were a small boy in Columbus, would you have ever thought that looking through that telescope would have brought you so close to where you are today?

MCCALL: No way. No way. But I know my dream, and my prayer at night, as a little boy was, "Dear God, I want to be a great illustrator." It was definitely illustration was my goal. I don't think I—a "top artist," that was the expression. At that time in my life it was top artist, meant that I would be one of the top artists that I was familiar with when I opened *The Saturday Evening Post* or *Life* magazine somewhat later. But that really was my greatest dream and desire, and it did kind of start with the telescope.

Then it was the microscope, too. My parents got me a microscope. I tell that story, I have to because it was significant also. It gave me another view into the universe, only it's the other way, into the microcosm. So I had when I was sixteen, was it sixteen? Or fifteen, a second-hand medical microscope. I remember it cost 75 dollars, which was an enormous amount of money in that time for my parents. I had to just wage a campaign for months before I got them to relent and let me get this microscope from one of the local scientific laboratory supply houses, second-hand. Beautiful, though. Wooden case. Pulled this magnificent thing out, peered into that magic lens, and looked at insects and the detail of insects, and their eyes, and pollen from any blossom, each different from the next. Oh, and

microscopic organisms from stagnant water. You'd put hay into a cup of water and let it sort of rot over a period of just a week, and paramecium and other little tiny creatures swimming around. God, that was incredible. So it was those things that just set me off on a journey that still is fascinating and wonderful.

WRIGHT: As we close our session today, we think about all the hope and the expectations that you include in your space art. What hopes do you have for the NASA program in the next few years? What would you like to be painting ten or fifteen years from now that depicts the realism of what's happening?

MCCALL: I think my goal is to see us land a man on Mars, and I have no doubt this will happen. It just is going to take time, and the time schedule or frame is unknown. We can guess, maybe twenty years from now, maybe thirty. We could do it in ten easily if we had to, if there was the imperative or the need. I know we're going to do that.

I think at some time in the future, and by future I don't mean just the next century, but maybe the next millennium, humankind will make some kind of contact, if we're blessed to continue to progress, and if we're not abruptly terminated or stopped because of conflict on Earth. But if all goes reasonably well, I think we will make contact with extraterrestrial intelligence in some way or at least prove its existence via some of the great telescopes.

Dan [Daniel S.] Goldin has been here a couple of times. When he comes to town, at least the last time he was here, he gave me a call. He said, "I don't want to go out to Honeywell again. I've got some time to kill. Can we get together?" So he comes over here and we chat about the things that fascinate us. I like him because he's inspirational. I like the words that he puts together in his lectures. He talks with a vision, and he's able to describe that vision, I think.

In any event, it's just a real—I'm losing my track here.

WRIGHT: Talking about the telescopes.

MCCALL: Oh, yes, the telescopes. Well, he knows that there are techniques for building, not a single telescope or mirror, but many, or at least maybe five or eight or ten or whatever, and separated by maybe a mile, maybe ten miles, but scattered around, so that, in effect, you've got a lens that big. So that is something that is a real possibility to develop that kind of telescope.

But right here in Arizona, and I'm on the Astronomy Board of Arizona Astronomy, associated with the University of Arizona down in Tucson, we are building, as we speak, on Mt. Graham, a binocular telescope, two mirrors. The first mirror is in the process of being ground now, almost thirty feet in diameter, and there will be two of those. They will, we are absolutely certain, will resolve a planet around some of our nearest stars. So we will actually be able to, for the first time, actually see the planet and not just surmise that it's there because of the perturbations of its mother star and we know that the gravitation forces hint that there is an orbiting planet.

So this will be operational in 2003. The structure that houses these two is sixty feet high. It's a huge thing. I've got pictures and lots of material on it right here. But I'm excited about this new telescope. It's called the large binocular telescope, LBT, they refer to it as, and so that's exciting. That has come from that juvenile interest in astronomy that motivated me in a lot of ways.

So your question was?

WRIGHT: For the hopes of the NASA program in the future, things that you think you might be painting.

MCCALL: Yes. The thing that's exciting is that our NASA program is suffering from low budget and that kind of thing, but these things fluctuate and change. Right now it's not getting the kind of support that it needs. But, nonetheless, it's doing things that are remarkable and significant. The coming years, there is every reason to hope that conditions will alter in ways that will enhance the budget, that maybe there will be a breakthrough of some kind. Maybe there will be a space program that somehow lights the fires of imagination and excitement of the American people that would support more funding. These things will happen. It will fluctuate.

So my wish for NASA is that we can continue to expand our energies. These things are inevitable, I think. Great new discoveries will be made regularly, and more and more people will be engaged in the space adventure, and it will continue to grow and expand and become more and more a part of all our lives, as we see our loved ones, children, wives, husbands, moving out into space, for one reason or another, working, exploring. It's all going to happen. I'm very optimistic about all that.

WRIGHT: Do you believe that space artists, like yourself, could have an impact on the future of NASA?

MCCALL: I hope so.

WRIGHT: Is there a message that you can tell the public through your work?

MCCALL: Yes, I hope that I can do that, and I hope that I am, I hope. I hope. I want to. I think I have to some degree.

WRIGHT: I think you have.

McCALL: I think others have to tell me. I can't—

WRIGHT: Well, I think you have, and I think from the time that you looked in that telescope that you saw great things, and those great things are now for us to see on your canvases. So we appreciate that and we certainly appreciate the time that you've given to us today.

McCALL: Well, I've loved this opportunity, Rebecca. It's been a privilege, and I just hope that I've said some things here of value, and that maybe there will be another opportunity somewhere along the line to add to what I've said.

WRIGHT: Absolutely.

McCALL: I think what you're doing is important and good. I congratulate George Abbey for having initiated it. I think that's correct, isn't it?

WRIGHT: That is correct. It's his vision.

McCALL: Yes.

WRIGHT: To be able to bring this history alive and that people can share their experiences and their thoughts, so that others in future generations can have that view.

McCALL: Yes.

WRIGHT: So we thank you for participating.

MCCALL: Thank you.

[End of Interview]