UNIVERSITY OF HOUSTON ORAL HISTORY OF HOUSTON PROJECT
AND
THE AFRICAN AMERICAN PHYSICIANS OF THE 20TH CENTURY HOUSTON PROJECT

Interview with: Dr. Bernard Harris, Jr.
Interviewed by: Timothy O'Brien and Kathleen Brosnan
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Transcribed by: Suzanne Mascola

BH: Bernard Harris. October 27. 10:15. At his office at Vesalius Ventures.

TO: I have gone over your resume and obviously, I don't want to repeat everything so why don't you give us the cliff notes version that you use to inspire these kids in the Harris Foundation Program?

BH: So, to give you the inside scoop about Bernard Harris, I actually was born in Temple, Texas and raised here in Houston until I was 6 or 7 years old. I had a very dramatic thing happen to me at that point. We were living in an area called the Heights, the old Heights which is around Patterson Street. My mom and dad divorced. My mom decided that she needed a new life and she found that life on the Navajo Indian Reservation. She was an educator and accepted a position working with the Native Americans. So, I was around 8 or so. My brother was around 6. My sister, I guess at that point was 14 years old. So, here we were, transplanted from Houston to this new land in New Mexico and Arizona - the largest Native American reservation in the country. A place where there weren't a lot of minorities other than the Native Americans

themselves and it was out there that my idea, my vision about becoming an astronaut started.

I remember very distinctly when the sun would go down at night, I would look up at the heavens and, of course, being out in New Mexico and Arizona, if you've ever been out there - very beautiful skies. And so, there was nothing to obscure the view into space, and I used to wonder what it would be like to travel amongst the stars. That is how the vision, the dream, started. I was also blessed to grow up during a time of the early space program because I got a chance to watch Neal Armstrong and Buzz Aldrin land on the moon. I was really excited, just like every American kid at the time. I wanted to be an astronaut just like them. So, sometimes in life, we have these events happen and we think that it is the end of the world but I found that it has provided me an opportunity to not only get out of the restrictive environment that I was in, because it was a poor area back in those times in Houston to a place where I could now be free to envision my future and I did. What a big future it was and has become.

TO: So, as Dr. Brosnan mentioned, the focus is on medicine, so could you speak specifically and/or generally about being African-American in that field as well as in Houston, when you got back to Houston?

BH: Yes. I lived in New Mexico and Arizona until I was around 15 years old. And we moved back to Texas, to San Antonio, and that is where I finished up high school. My aspirations of becoming an astronaut were what led me down this path but as I looked at what it took to be an astronaut, I needed to major in some type of science field - and I

chose medicine, and the reason I chose medicine was because of an African-American physician, in San Antonio, Texas who inspired me to look into the health professions. His name was Dr. Frank Bryant, a pretty notable guy in the medical field, who let me come to his office, follow him around. He introduced me to medical students at the time and I got inspired. I said wow, do you know what, I think I can put these two dreams, these ideas, together. I knew that where the space program was headed was that we were going to have people living in space and if people were going to live in space, then they would need someone to take care of them. And so, I set out then to become an astronaut physician and, of course, became a physician first. But if it wasn't for Dr. Bryant, I don't think that I would have been a physician because he opened the door. Everybody needs a mentor and he was probably the first identified mentor for me.

TO: And that was when you were in high school?

BH: That was when I was in high school.

TO: Was he your family doctor, was that how you first met him?

BH: Yes, he was our family doctor.

TO: And he showed an interest in your future?

BH: That's right, which is important, you know. Think about this. This is almost . . . I hate to say this . . . over 30 years ago when I was considering what I would do - what would be my profession, what college I would go to, and to have someone that looked like me, at the level that he was in the community, was significant. And so, I saw that - what he had accomplished - and then took the opportunity to then say, you know, how did you do that, to learn how he did it and asked those questions and get exposed to an area that I had never been exposed to before. My family did not have any doctors. My sister eventually became a nurse a few years after that but no doctors in the family. I am the first physician in our family and I think that he played an important role at least in showing me what could be done in health care. So, I use that as my opportunity when I came to college here at the University of Houston, that I arrived the first day knowing that I wanted to go into premed. And I went into premed and, of course, spent 4 years here and then went to medical school, Texas Tech Medical School, and then did my residency at the Mayo Clinic in internal medicine.

TO: So, besides Dr. Bryant, was your mother emphasizing education at home because you said they were divorced? Did she remarry or who at home . . .?

BH: Yes, so, of course, my family influenced me quite a bit. My dad was from Philadelphia, moved back to Philadelphia, but my mom was an educator and so, we had no choice in our family but to believe in education. We saw that as the way up and the way out for us. And so, it has been the main emphasis in our family. I would say I am the third generation to receive college degrees just because we find that it is so important.

TO: I was looking at the Foundation website and the program you have _____ where they go to a science camp, elementary school kids. So, explain how you transfer . . . how important Dr. Bryant was for you to try to get this across to kids. Explain how you set this program up and how you are trying to get it across most efficiently . . .

BH: Yes. We have had the Harris Foundation for about 12 years now and it supports K through 12 education programs. Why? Because we want to get across to the community, this community, the Houston community, the importance of education, but not only just education but education in math and science and also to have an organization that we can go into the community to begin to expose kids to experiences that they may not have had. And probably thirdly, to be mentors. And it is not just me but other professionals we bring into the community to try and inspire kids. You don't necessarily have to be a sports figure, you don't necessarily have to be a rapper in order to be successful in life. And so, that is our whole thrust, is to get at these young people to try to give them elements, what we think are critical elements of success that they may not receive otherwise.

TO: Are there certain people from the community you are pulling that are successful and others . . . ?

BH: You know, I wish I could say that there was one method in which to go after young people to inspire them but there is not. I find that every community though that I

go into, and I just don't speak to the Houston community - I speak around the country; in fact, around the world in different communities, and that if you are going to get at those kids, those students and even adults sometimes in those communities, you have to get in there and find out what are the buttons, what are the issues that they have to deal with and approach them from that standpoint. In my experience, the foundation is the value of education, is showing them how important education is. You know, Booker T. Washington and some of the early African-American leaders show this and stated how valuable education is. And what we then do is not only say, O.K., look what education has done historically for minorities and African-Americans in terms of moving up in the society but there are folks actively in your community that we get engaged in a dialog with them to show them that there are people creating history right now - people that are being successful right now that could act as your mentors, which is the second thing that I mentioned earlier, is that a lot of times, I find in communities the common thing is that these young folks are not exposed to different things. They don't get a chance to go to the libraries. They don't get a chance to go to the museums where they could learn things that they would not normally. We get them out from behind the television and in front of the computer screen and show them, you know, that they can access knowledge in various ways.

I am thinking about when I was in medical school how important this exposure is. My first day in medical school, I remember sitting in class listening to the professor and the professor got up and he was talking to the class in general. I was the only African-American in my class. And he is talking and using what I would consider now sort of normal language words. And I remember, there was one word and I can't remember

exactly what that word was to this day but I didn't know what the definition of it was and I turned to the guy next to me and I said, "What did he say? What does that mean?" When he told me, I felt slightly embarrassed because I realized that I understood that word but I had never heard it before. I understood the meaning of the word but I had never heard it before because I hadn't been exposed. He had grown up in a different environment. He happened to be white and he happened to have a lot more exposure in what I considered the mainstream world than I did. And I realized in that moment how important it was, even for a guy that already finished high school and gone through college and now was in medical school - that there were still elements that I had missed. So, our program tried to fill in the blanks and tried to show kids that it important for you to have knowledge. And guess what? The more knowledge you have, the more opportunities you have to do anything that you want to do in life.

TO: Obviously, you are a successful man in your field . . .

BH: And that is the point. That is the point. Everybody has to approach this problem. First of all, recognize that it is a problem in our communities. Second of all, be willing to spend the time and it is the time and effort, to reach out to young people in whatever way. You know, some people are hard-hitting and they come in with slogans, like Jesse Jackson . . . Al Sharpton. You know, they are activists. Mine is a more subtle way. It is a more personal that, listen, I have been where you were. I grew up poor. I come from a broken home. I got transplanted early on when I was younger. And you add all those things up, plus many other things that we don't have time to talk about, by all accounts, I

should be a failure but I am not. I am successful. Why? What is the key ingredient for me? And that key ingredient is realizing number 1, who I am. Discovering very early what I wanted to do in life which I called the dream and how that dream is synonymous with goals in life, and how that can help you in finding your way in society in order for you to not only be successful on your own right but to contribute to society because if you are not there with your talents and your skills, then we all miss out. There is a missing piece in this equation called society, called humanity, if you are not there and fully participating. And it is amazing, when I talk to young people and we start in elementary schools with our Dare to Dream program here taking that message. And our message to the elementary school is really simple - to achieve, you must believe and conceive your dream. That is our ABCD's in life. So, achieve means, you know, that we want you to achieve if that is what you want in life and we know you do. Everybody is born - they want to have some level of success. You have to believe in yourself, right? And you have to see yourself in the future which is another way of saying dream and the dream, of course, is the goal of that. Now, did I learn all of that or did I know all of that when I was a kid their age? No. What we did is we kind of packaged it and put a nice little bow on it and we presented it to them in a way that they can understand which is setting a goal and thinking about what you want to do when you grow up. When you get to middle school, it is how can I amass the tools in order to accomplish my dream? How do I put it all together? What sort of skills do I need to have in place? And so, we have a summer science camp in which we then focus on what tools do they need which center around the educational piece there. And we hope that by the time they get to high school, that we will have set that foundation, set them on the tracks towards achievement.

Now, let me make this point. Again, I think that every community, even in the city, is different, has to be approached differently. A lot of people have national programs, although we think that our program can go national and the program does go national which it will in 2007 - our summer science camp - we will actually be drawing upon the local expertise highlighting those things that are specifically important to that community in order to attract the kids. We can't have a cookie cutter program that is going to go to Chicago or to the innercity Los Angeles based on the same things that we have here but there are certainly tenants that we want to get across and that is education and exposure, experience.

KB: What year were you born?

BH: 1956.

KB: That early space program was a fascinating time. I went to Catholic school - I was up in the Chicago area and we watched some liftoffs on TV.

BH: They actually let you watch TV?

KB: There was one TV in the whole school and maybe 200 of us jammed in the whole school to watch the landings.

BH: Right, and the kids don't get that anymore because it is commonplace now. It was a couple of years ago that we celebrated 100 years of flight and the things that we accomplished - going from a kite to a shuttle.

KB: Dr. Harris, I wanted to follow up on a few of the things you told about your own story. I was fascinated, in part, about the years you spent on the Navajo Reservation. How many years did your family live there?

BH: Well, about 8 years we lived on the Navajo Reservation.

KB: Did you go to school on the reservation with the Native American children?

BH: I did.

KB: What was one of the biggest lessons you learned from living there?

BH: I am thinking back to the first day of arriving in Greasewood, Arizona, and elementary school and class. I had been introduced to the class. Of course, they were kind of standoffish because it was the first time that they had seen an African-American. This is really in the middle of the Native American reservation, and particularly having an African-American kid with somewhat of an Afro at the time. And so, I remember being on the playground and they would, you know, essentially come around me, came up to me - not necessarily speaking English or speaking in Navajo - looking at me and

my skin and looking at my hair and touching my hair because they had not experienced that before. It took a while for us to kind of get to know each other, as all new kids go through that transition. And so, I learned their language. As they learned to deal with me, I learned their culture. I grew up believe in werewolves, going to rain dances and snake dances and dealing with medicine men and things like that. But I think the most important thing I got out of that whole experience was the connection to the earth, to the spirit of the universe, which was kind of neat. and probably the second thing is the skill of dealing in a multicultural type of environment because not only were there Native Americans - of course, they were the majority there - but we had whites and Hispanics, African-American, Indian teachers, teachers from all over. So, we got a chance to deal with all of these different cultures at a very young age.

KB: And you mentioned that it was when you were out there - the bigness of the sky. And, of course, your encounter with that bigness right at the time that the U.S. space program is being watched. What was it about the U.S. space program when you were a child that intrigued you? What attracted you to it?

BH: It was the fact that we had the audacity as human beings to leave the planet and to do it within a period of time - President Kennedy set that timeline for us - to bring all of the resources that we had in this country to put men into orbit and later on, on the moon. I mean, it was a challenge not only for the United States but it was a mean challenge for the world at that time. And I don't know if you remember where you were in 1969 but I remember watching those first steps and listening and watching on a little black and

white television all of that sort of play out. And when Neal Armstrong and Buzz Aldrin set foot on the moon and said those fabulous words, "One small step for man, one giant leap for mankind," it was a tremendous leap for this little boy named Bernard Harris watching that television to realize in that moment that I wanted to do the same thing.

KB: I think the other image that I remember vividly from that time, I think it was the Apollo 8 mission with Frank Borman at Christmas time which, if I am not mistaken, was the first time we humans had the chance to see the planet earth photographed as a complete entity from outer space which is an image kids today take for granted but do you remember that image and what you thought of it when you saw it?

BH: Yes. They see it all the time, and if I go back to my connection with the Navajo people and this whole concept that the whole universe is one and that we ought to be cognizant of that and our place in it, when you see that photo and see the stars around the earth because we are so used to standing on our planet looking up and seeing the moon and seeing the rest of the heavens, but seeing the earth placed amongst those stars in the heavens, man, that is awesome, you know?

KB: I found it to be both inspiring and humbling at the same time to see it in place of that bigger universe. Did you go to middle school or 7th, 8th grade out there in the West?

BH: Yes. By the time I got to middle school, we had moved from Greasewood, Arizona to a place called Tohatchi, New Mexico.

KB: Ah, the big city!

BH: Well, yes, big city! Went from like 300 to 600, to give you a perspective of how many people were in the community and most of those were students that were brought in to the boarding schools.

KB: And you mentioned that when you talk to the kids who come as part of the summer camps, that you are trying to give them the idea that there are steps people take to realize their dreams. What were some of the things you did as a middle school student that eventually helped you become a doctor and an astronaut?

BH: Well, in middle school, I really set out on my path. I said, O.K., if I am going to go into space . . . you know, I am telling you this in retrospect. The thought processes weren't exactly like this. It probably went more like, hey, we are starting out the rocket club. Hey, rocket club, that is associated with space, I think I'll do that. So, I joined the rocket club and the science club. I focused in my courses in science and biology and eventually chemistry in high school and physics. And I really tried to focus on those because I knew I was going to need them for medicine and then eventually where I had hoped to be at that point, where my dreams lie was working at NASA.

KB: Well, I am assuming things were somewhat the same then as they were when I was in high school - that science isn't always the coolest course to pursue, isn't always the

most popular course. What are you talking about, just pursuing your interests and not worrying about what others are telling you?

BH: I think that is really important. I mentioned earlier about our program called Dare to Dream. It has two main thrusts: the first course is the education piece. The second is teaching young people how to make right choices? So, we do this in conjunction with Harris County Juvenile Probation here in the city and with Communities In Schools (CIS). So, we have counselors and probation officers and astronauts coming in and helping these young people kind of think through the problems, saying, yes, we know that you are dealing with drugs; yes, we know that there are people that are pulling at you trying to get you to do bad things but this is what you should do. And we actually have a curriculum that we go through about right choices, making right choices. We talk about the consequences of wrong choices, and you would be surprised how many young people - kids in elementary school - that have already encountered the probation office, detention center. It is just amazing. It was one of the reasons why we decided to put our program in elementary, our crime prevention program, in the elementary school, so that we can change the mindset.

I remember a parent coming up to me and she was saying, "You know, we've got to brainwash these kids." I said, "Brainwash?" When you talk about brainwashing kids, immediately you kind of get this negative connotation. She said, "Well, they are being brainwashed every day, through the television, through the media and particularly minority kids. There are the stereotypes that are projected upon them and the fact that the African-Americans and minorities that they see as successful are not doing the normal,

what we consider to be the normal jobs out there, that we need as a group, we need to go in there and brainwash these kids to the notion of positive images, to the notion that there are minority physicians and attorneys and teachers and there are people doing good things in politics, in playing active roles in the community and showing them that."

KB: And you were fortunate and realized your dreams. Would all those science courses been of any value if you hadn't become an astronaut?

BH: Would the science courses been of any value? Of course, they would. Of course, they would. Right now, I run a venture capital firm. We invest in medical technology devices. We invest in advanced technologies. Go into any profession, whether it is health care or banking, law, even education and there is a computer, there is a gadget, there is technology involved in it. If you pick up and use your cell phone, of course, that is technology. If you are playing video games, that is technology. The bottom line is that these days, 8 to 9 out of 10 jobs evolve around technology. That technology comes from knowledge in science and mathematics. Is it important? Yes, it is. If I had not become an astronaut, I would be using the science and mathematics in something else. Actually, I am, you know, in medicine and also in the business that I am doing right now.

KB: Sure. I mean, it sounds to me what you are saying is that education not only helps you realize your dreams but it may provide you with dreams you never knew were possible.

BH: Well, let me put it this way: When I ask a young person to think about what they want to do in the future, it is an exercise for them to expand their knowledge, and when you expand your knowledge, as I put it, expand your brain, you expand your knowledge and by expanding your knowledge, you are exposing yourself to things that you never have been exposed to before - you generate new ideas. New ideas lead to other ideas and after a while, you will have this grand dream. After that, anything is possible.

KB: Let me ask you some quick questions about your own education when you began in Houston. Were you in school before your family moved out West?

BH: Yes.

KB: And was the classroom you attended in Houston an integrated classroom or a segregated classroom?

BH: At that time, it was a segregated classroom.

KB: And that would have been around 1961?

BH: Yes.

KB: When you returned to Houston . . . you said you were away for about 8 years, you would have returned maybe around 1970?

BH: When I returned to Texas, it was around 1971. When I returned to Houston, it was in 1974 to come to U of H.

KB: Where did you go to high school? Where were you living then?

BH: In San Antonio. I finished high school in San Antonio, at Sam Houston High School in San Antonio, and it was an integrated school then.

KB: And when you came back to Houston, now granted you were young when you left, when you came back to Houston in 1974 to attend the University of Houston, what changes did you notice in the city? What struck you about it that was different or did it seem the same?

BH: That is kind of hard to say because when I left here, I was 6 years old, right? So, what did I know about the . . . I didn't know much about the city and the inner workings of the city, just my community. When I returned here to Houston, of course, I was in a different community at a time where . . . I believe at that time, the city had now grown pretty large in comparative population. So there were black leaders coming into power. So, I saw that as opposed to, you know, many years earlier. So, that was definitely a change for African Americans.

KB: Why did you choose the University of Houston?

BH: I love Houston. I have been back to Houston now for 20 years after doing my educational journey gauntlet, as I put it, and I like this city. It is vibrant. The city of my undergraduate years in 1974-1978, is different now than it was then. It has become an international city. We have folks from all over the world here. Our economy touches the global economy. I like that. I like the fact that this city is moving forward. One of the reasons we put the investment company, the venture capital firm that I run here in Houston is because of the access to new technologies, medical technologies, you know. The world's largest medical center is here. NASA is here. We have a large IT community. So, there is a great opportunity for growth and personal growth here in the city.

KB: What were race relations like at the University of Houston in the early 1970s? Did students tend to get along well? Was it a time of tumult? What was going on?

BH: Yes, we were fine. The students got along. The University of Houston, it was pretty well integrated and I don't think we had any radical issues that I recall.

KB: And then, you chose to go to medical school. You went to Texas Tech which is in . . .

BH: Lubbock, Texas.

KB: Lubbock, Texas. The Panhandle.

BH: That's right.

KB: That is a slightly different place than Houston.

BH: It is. Yes, slightly smaller, different mindset but, again, it was a great place to get medical training. When I first went to the medical school, it was only 4 years old, which was kind of interesting. Actually, it was 6 years old, let me correct that, because when we graduated, we celebrated the 10th year anniversary of the school which was kind of interesting.

KB: And you mentioned you were the only African-American in your entire class or just in that one classroom?

BH: In the entire class.

KB: How big was your class?

BH: Sixty in that class and we had, at that time, 3 African Americans in the entire medical school.

KB: Wow! So, out of 240 students approximately?

BH: Yes.

KB: Now, did they do the same thing they do in medical school, like in our first day of law school - look to your right and look to your left - one of you three won't be here when all is said and done?

BH: Not exactly. No, actually, they didn't do that in medical school because, you know, the process for applying to medical school is such that we don't lose that many folks. I would say out of our class, maybe we'd lose 2 or 3.

KB: And I am assuming in college, you continued the same preparatory work you had done in high school, focusing on the sciences?

BH: Yes.

KB: What was your major in college?

BH: It was biology.

KB: And were there any advantages you had in college based on the classes you had taken in high school? Were there certain things in high school that served you particularly well in college and then in medical school?

BH: Yes. Well, I think all the sciences courses and math courses. The math was probably the most critical because I had taken calculus 1, I think, in high school which helped me out tremendously when I got to college. And then, the science and chemistry courses helped when I got to biochemistry. I think that is the thing that, you know, if you were a science major, that is probably one of the biggest hurdles - is biochemistry and organic chemistry. If you can get past those, you can do anything!

KB: You know, some students might think, I think I want to be a doctor, and I am taking high school chemistry and it is not interesting to me. What would you tell them to look for in their chemistry classes or in their biology classes to really get them excited about them?

BH: You are really giving me the hard questions! Get them excited about chemistry? Let me answer the question a little bit differently in that no matter what your major is, that there are going to be courses that are going to be challenges for you and I will use physics as an example for me. When I was in college, I took physics. I wasn't that interested in physics. The only reason I took physics was that it was a prerequisite for medical school and I knew that I had to make at least an A or a B and I did it. I did like a lot of students - I learned the information for the test and probably forgot about it. Thirty years later, I enjoy physics. Why? Because it is involved in everything we do and I enjoy actually reading books by Stephen Hawkins and some of the other writers that talk about how physics is integrated into our life. It took me 30 years to realize how

important that one course is in our life in general and the inner workings of the body. You could pick each course that I took in college - biology, chemistry, organic - and you can relate it to real-time elements in life. And if you do that, you can find that. You know, it is all valuable even though we may not think it at the time.

KB: Particularly your history class. What was the toughest thing about medical school? What is the most challenging thing you can remember?

BH: The most challenging thing about medical school was just the volume. It wasn't that the information was hard, it was just that there was so much of it to learn.

KB: And were there any particular challenges you felt that you faced as being the only African-American student in your class? Did that present any particular difficulties?

BH: I think that being an African-American, being the only African-American in the class, you get a little bit more visibility than probably the others. There are the stereotypes that come in that you know are there when people look at you and say well, you know, why is he here? And particularly when I came through medical school, we had the . . .

KB: … in California. It was Bakke.

BH: Bakke, that's right.

KB: We studied that in law school.

BH: That's right. You are the lawyer, you say you know that. So, there was the Bakke case which had to do with affirmative action and quotas for admissions and things like that. And so, when I walked in, you know, people normally assumed that I was there because of the quotas that were in place. You know, every medical school had a mandate to increase its minority participation. And so, I took that as a challenge, of course, to say that yes, I have a right to be here. Not only did I have the grades that qualified equally with everyone who was there but I had the aptitude to make it through medical school despite what was happening in society around me. And so, with me graduating from medical school there at Texas Tech and getting one of the top residencies at the Mayo Clinic in internal medicine, and then going from there to become an astronaut, I think I have proven that I am equal.

KB: Some of our students who are going to hear these tapes are going to want to know what the Mayo Clinic is. Why don't you tell them just a little about the Mayo Clinic and why you chose to go to the frigid north?

BH: The Mayo Clinic is one of the top medical institutions in the world. It was started by the Mayo brothers many years ago who became very well-known in coming up with some of the latest remedies, treatment for different diseases in the world and they did that because they traveled. They traveled around the world. They went over to France and

they went to Britain and they learned from some of the top physicians and scientists from around the world and brought them back to this country. And then, put it into practice and developed an international practice. And so, it is one of the most sought-after residencies in the country.

KB: Even if you have to go to Rochester, Minnesota?

BH: Even if you have to go to Rochester, Minnesota and brave the cold.

KB: What is internal medicine and why did you choose that as your specialty?

BH: I chose internal medicine because it involved learning about the entirety of the body, and I wanted to focus on general health care and primary care.

KB: What is the process to becoming an astronaut? I really don't even know how one goes about applying to NASA. What is it you do?

BH: Well, in order to become an astronaut, there is a requirement, basic requirement, and that is a masters in some type of hard science.

KB: Or a higher degree?

BH: Well, a higher degree. You can put it that way.

KB: The equivalent of a masters or something higher like M.D. or a Ph.D.?

BH: So, in order to be an astronaut, the minimum is a master's degree but really, in order to be competitive, you need to have at least a Ph.D. or an M.D. degree for mission specialists. There are two types of astronauts. There is the pilot astronaut and the mission specialist. The mission specialist focuses on the science and actually conducting the science when we are in space. And then, you go through about 1 year or 2 of basic training. We learn how to fly jets and shuttle survival training. Most of the time, we sit in classes learning all sorts of things like geology, orbital mechanics, engineering and medicine, for that matter. And then, you are selected for a mission and then for every mission, you train 1 to 2 years, in some cases, if it is the international flight, you can be 3 to 4 years because of the complexity of the mission and all the experiments that get done.

KB: How many missions did you go on?

BH: I flew on two missions.

KB: And what years did you fly on those missions?

BH: 1993 was the first one and then 1995. Both of those missions were international missions. You asked me a question earlier about the impact of growing up on the Navajo Reservation. I mentioned to you the fact of dealing with different cultures. And so, it

became very easy for me to go over and to live in Germany to train for my first mission, and then to do the same thing over in Russia for my second mission because I had learned how to deal with the cultural diversity early on in my childhood. So, it just became natural.

KB: So, students should embrace their cultural diversity.

BH: Well, not only embrace their cultural diversity here in Houston, it needs to be embraced but we need to look outside of Houston. We are dealing with the world now. We are dealing with international and multinational corporations. And so, we have to have that mindset.

KB: I know you are short on time and so, not to give the longer explanation but can you briefly tell the students what you did as a specialist when you were in space?

BH: When I was in space, I served in a couple of capacities, as a mission specialist doing the science on board. I also served as the payload commander which meant that I was in charge of the laboratory when we were in orbit in one of our missions and was the crew medical officer which meant I got to take care of the crew when they were sick.

KB: What is the best thing about being in space?

BH: I think having the opportunity to walk in space which I did on my second flight. I got a chance to open up the hatch and to float out. And get on the end of the robotic arm, lift up above the payload bay about 30 feet where I had this fantastic view of the shuttle down below with my crew on the inside waving at me and then waving at them. And behind them, of course, was the earth and, of course, we are going around the earth at 18,000 miles an hour, going around the world every 90 minutes. Behind this earth that I could see in totality was this vast universe of the stars. It was just incredible. It gave you a real sense of feeling awfully small when you are there. But also large. Large from the standpoint that the fact that I was standing on that arm looking at that view came from when I was a little boy looking at the heavens from the earth thinking about, dreaming about being an astronaut. And that underscores how powerful dreams are.

KB: Thank you so much.