

Walking in the black vacuum, looking at the blue-white planet Earth more than two hundred miles below, would be a reverie for many children around the world. This dream became a reality for Dr. Bernard A. Harris Jr. on February 9, 1995 during Black History Month, when he glided out the gate of the space shuttle Discovery. This wonderful accomplishment made him the first African-American to walk in space. Actually, he flew on the space shuttle twice in the nineties. Dr. Harris' story is the epiphany of the American dream, an amazing upward socio-economical mobility.

Dr. Bernard Anthony Harris, Jr. M.D., M.B.A., F.A.C.P was born on June 26, 1956 in Temple, Texas. He grew up on the Navajo Nation during his formative years. Dr. Harris left the reserve later with his family and graduated from Sam Houston High School in San Antonio, Texas, in 1974, where he was actively involved in science fairs, book clubs and other academic activities. He obtained a B.S. degree in biology from University of Houston in 1978, and got his Doctorate of medicine (MD) degree from Texas Tech University Health Sciences Center School of Medicine in 1982. Dr. Harris did his residency in internal medicine at the Mayo Clinic in 1985. He later received a Master of Business Administration (MBA) from the University of Houston Clear Lake. The physician did a National Research Council Fellowship in Endocrinology at NASA's Ames Research Center in 1987.

In addition, Dr. Bernard Harris trained as a flight surgeon at the Aerospace School of Medicine at Brooks Air Force Base in San Antonio in 1988 and received a Master's Degree in biomedical science (MMS) from The University of Texas Medical Branch at Galveston in 1996.

After completing his fellowship at NASA Ames, Dr. Harris enrolled in NASA's Johnson Space

Center as a clinical scientist and flight surgeon, where he conducted clinical investigations of space adaptation and established countermeasures for extended duration space flight.

As mentioned, Dr. Harris journeyed into space twice. On his second mission he was the Payload Commander on STS-63 (2 February 1995 – 11 February 1995), the first flight of the new joint Russian-American Space Program. Mission highlights included the first rendezvous (but not docking) with the Russian space station Mir, and retrieval of the Spartan 204 satellite. During the aforementioned flight, Dr. Harris became the first African-American to walk in space – noteworthily it was also on this flight that Eileen Collins became the first female Shuttle pilot. On this mission, Dr. Harris flew 198 hours and 29 minutes in space, completed 129 orbits, and traveled over 2.9 million miles in total.

Dr. Harris left NASA in April 1996 and has pursued research. He occupied the position of Vice President of SPACEHAB, Inc., an innovative space commercialization company, where he conducted the company's space science business. He was also Vice President of Business Development for Space Media, Inc., an Informatics company, where he created an international space education programme for students and developed an e-commerce initiative that is now part of the United Nations education program.

In addition to his experience as a medical doctor and <u>astronaut</u>, Dr. Bernard Harris is the author and co-author of several scientific publications. He is the CEO and managing partner of Vesalius Ventures, a venture capital firm that focuses on new to mid-stage healthcare technologies and companies. Moreover, the physician has several faculty appointments, including Associate Professor in Internal Medicine at the University of Texas Medical Branch and Assistant Professor at Baylor College of Medicine. Hence, Dr. Harris is a philanthropist and a bold man who likes challenges. He won't sit on his laurels or won't stay in comfort zones. He served as the chief medical officer and payload commander, not to mention conducting a spacewalk.

Dr. Harris is a member of several professional, academic and service organizations: the American College of Physicians, Honor Society of Phi Kappa Phi, and Kappa Alpha Psi Fraternity, among others. He is a board member of the Boys and Girls Club of Houston, National Math and Science Initiative, Medical Informatics, Technology and Applications Center, Houston Technology Center, and the National Space Biomedical Research Institute, Board of Scientific Counselors. Furthermore, Dr. Harris was a Senior Consultant for the NASA Aerospace Safety Panel, a Member of the NASA Biological and Physical Sciences Committee, the Council for the National Institute Health/National Institute for Deafness, Texas Tech University Board of Regents, Texas Higher Education Coalition, Texas Commission on a

Representative Student Body and Communications Disorders and the Committee for the National Academies Institute of Medicine.

Dr. Harris has been recognized many times by NASA and other organizations for his professional and academic achievements. In 1996, he received an honorary doctorate from the Morehouse College School of Medicine. He was granted after other honorary doctorates from Stonybrook University, New Jersey Institute of Technology, and the University of Houston. Moreover, he has earned a NASA Space flight medal, a NASA Award of Merit, a fellow of the American College of Physicians and the 2000 Horatio Alger Award. He was inducted into the Horatio Alger Association of Distinguished Americans. In 2005, the North East Independent School District of San Antonio, Texas named a middle school -- then under construction -- after Dr. Harris. The Bernard Harris Middle School opened August 14, 2006 with a capacity of 1500 students.



In his autobiography, Dream Walker: A Journey of Achievement and Inspiration, Dr. Harris

narrates his formative years on the Navajo Nation (where his mother was teaching) into outer space and back to complete his earthly mission of planting seeds of self-empowerment and self-determination in today's youth.

The autobiography doesn't focus solely on Dr. Harris' accomplishments, it goes beyond that. Hence, it is a GPS for anyone interested in learning about life as an <u>astronaut</u> and the process of becoming one. The physician and former astronaut shares wisdom and stories from his moving life that will inspire readers to take steps toward achieving their dreams and goals.

Thus, Dr. Harris' book is also interesting because the author shares valuable information in many realms: medicine, space travel and entrepreneurship. Readers will also find humor in the autobiography. Prominent people such as Dr. BENJAMIN S. CARSON, SR., MD endorsed Dr. Harris' book. Dream Walker, was named a 2010 "Editor's Pick" by *Jet Magazine*. The book was part of our top 20 for fall 2012:

Top 20 Books

.

Dream Walker should be translated into several languages: French, Spanish, etc. Dr. Harris has been featured in *GQ Magazine*, *USA Today*, and *The Houston Chronicle*. He also appeared several shows as an expert: CNN's "American Morning," NPR's "Tell Me More," "The Gayle King Show," "Fox & Friends", "The Tom Joyner Morning Show", etc. In 2008, Dr. Bernard Harris was featured in Microsoft's "I'm a P.C." ad campaign.

Overall, Dr. Bernard Harris has 37 years of experience in research, management and hardware/product development. Throughout his career, Dr. Harris, managed multimillion-dollar programs for the government and served as a senior manager for private corporations. On February 9, 1995, he became the first African American to perform an extra-vehicular activity (spacewalk). He was also the first African-American man to go in space as one of NASA's research teams and he was involved in the building of the space rovers.

Dr. Harris was chosen by NASA in January 1990 and became an astronaut in July 1991. He qualified for assignment as a mission specialist on future Space Shuttle flight crews. He occupied the position of the crew representative for Shuttle Software in the Astronaut Office Operations Development Branch. Dr. Bernard Harris was the mission specialist on STS-55, Spacelab D-2, in August 1991. He logged on board Columbia for ten days, (26 April 1993 – 6 May 1993); on the mission the Shuttle reached one year of total flight time. Dr. Harris was

among the payload crew of Spacelab D-2, conducting a variety of research in physical and life sciences. During this mission, he flew over 239 hours and 4,164,183 miles in space.

Dr. Harris was at NASA for ten years, where he was in charge of research into musculoskeletal physiology and disuse osteoporosis. Later, as Head of the Exercise Countermeasure Project, he conducted clinical investigations of space adaptation and invented in-flight medical devices to extend Astronaut stays in space. A veteran astronaut for over nineteen years, he flew for more than 438 hours and traveled over 7.2 million miles in space.

More recently, in 2009, Dr. Bernard Harris was Vice-President of the American Telemedicine Association, he became the President of this Association in 2011, serving for a one-year term that ended in 2012.

In 2010, Dr. Harris was part of the Dream Tour, visiting over 30 schools across the U.S. It is important to mention that the physician empowers more than 15, 000 students annually. He is currently the CEO of Vesalius Ventures.

Dr. Harris wears many hats: a physician, an astronaut, an entrepreneur, a sought-after spokesperson (for instance, he gave a powerful keynote speech at the Exxon Mobil Texas State Science and Engineering Fair among many others) and an author. Dr. Harris is also a qualified licensed private pilot and certified scuba diver. In addition, he had a cameo appearance in the "Men in Black" music video, from the movie that featured the actor/rapper Will Smith and Tommy Lee Jones.

On a more personal level, Dr. Harris lives in Texas. He married Sandra Fay Lewis. They have an adult daughter. The physician enjoys flying, sailing, skiing, running, scuba diving, art and music. His mother, Mrs. Gussie H. Burgess, and his stepfather, Mr. Joe Roye Burgess, live in San Antonio, Texas. His father, Mr. Bernard A. Harris, Sr., resides in Philadelphia, Pennsylvania.

Here, Dr. Harris speaks candidly about his journey, the process of becoming a physician and an astronaut, among other things. He was very generous with his time and I was impressed to discover how unassuming he is despite all his accomplishments. Dr. Harris hopes that his path will especially inspire our young readers around the world to achieve their own dreams. The

interview was conducted last fall from Canada and it is Dr. Harris' first Canadian exclusive interview.



PATRICIA TURNIER LL.M TALKS TO DR. HARRIS MD:

P.T. Share with our readers what inspired you to become a physician and astronaut. What made you think it was possible, seeing that you grew up during segregation? In other words, what made you believe in the American concept of meritocracy during an era when there were few prominent African-Americans because of the Jim Crow system compared to now?

Dr. H. That is a great question! I was one of these kids fascinated with science. I was not negatively easily influenced by people who do not value education. I always knew education is highly important and I surrounded myself as much as possible with peers who had the same mindset. I also refused to believe that the odds were against me.

In addition, as a child I loved science fiction so I was naturally drawn to space programs. When I looked to space programs, one of the people who inspired me was Neil Armstrong (a humble man who gave few interviews and didn't want to be deified) and Buzz Aldrin in 1969 (July 20) -- on the Apollo 11 mission -- when they descended to the lunar surface. 600 million people in forty-three countries watched these astronauts. They left Earth on July 16th 1969 with Michael Collins. I was 13-years old at that time and I was fascinated to see human beings leave our planet to go to the moon on my black and white television. I loved the quote of the late Armstrong: "That's one small step for man, one giant leap for mankind". I was fascinated by the plaque left by Armstrong with these words: "We came in peace for all mankind". That was a sparkling moment for me, which kept me going. However, you are correct; it was surprising to aspire to this dream when in the same era and on the same television I saw what was happening to my people in Alabama (and elsewhere in the nation) with the Jim Crow system. So, here we are in a world where we become observers of something which was never done before, and on the other hand we were dealing with basic civil rights issues. For a young Black kid who looks at his television and decides that he will follow in the footsteps of these White

astronauts could appear to be an impossible dream but I always had faith, and when you truly have spirituality, many things become attainable. The motto of my foundation is "Dreamer ... Nothing is impossible, if you believe in your dreams." I have to add also that after I set my goal to become an astronaut at a very early age, with rare exceptions, I kept my dream a secret. I didn't want anyone to discourage me and tell me I couldn't do it.

- P.T. This was very smart and really mature. In addition, I always believe that nobody should shatter the dream of a kid by telling him/her he/she will not be able to accomplish his/her wishes because nobody can predict his/her future and he/she has his/her whole life ahead.
- **Dr. H.** Definitely! When I decided to tell my mother that this is what I wanted to do, I got all sorts of support from her and other members of my family. They let me know that I could become whatever I wanted to be as long as I was willing to work really hard for it. This was the only licence I needed to have to pursue my goals.

When I was in high school, I was befriended by our family physician, Dr. Frank Bryant (in San Antonio, Texas) who happened to be an African-American. I saw the life that he had as a medical doctor. I also combined that with my nature to want to help people. When I did research about the NASA, I found out they had physicians who work in their space programs. This is how I put two and two together: being a physician first and eventually I would travel in space.

Dr. Joseph Peter Kerwin was the first American physician in the seventies to go into space. He flew on board the Skylab mission for 28 days. There are beautiful pictures of him in space examining one of the crew members. It was really cool to see this during my youth.

- P.T. I thought you were the first American male physician to go into space.
- **Dr. H.** No, what I accomplished first is to be the first physician who did telemedicine in space and who conducted a telemedicine conference up there. When I was in space, as the crew's medical officer and mission specialist, my job was to ensure the health of the team and to lead scientific investigations.

To go back to my youth, I went to University of Houston and after to Texas Tech University Health Sciences Center. I later did my residency at the Mayo clinic. That gave me the foundation to then enter NASA. In this regard, in 1986 I was accepted into a program at the NASA Ames Research Center in California. I did a fellowship in oncology studying bone loss which happens to astronauts. I developed an expertise in that area. A year and a half later, I moved from that NASA center to Johnson Space Center here in Houston in 1987. I started to do more research about human survival in space flight. At that time, we were travelling in the shuttle and we were getting ready for the international space station. In addition, we were doing rides to the Russian space station. So, this is how I ended up at NASA.

I would like to add that living on the Navajo reservation definitely inspired me also to go into space. I believe that it is a wonderful place to be for inspiration during your youth because it is a high desert which means that where we lived in Arizona, we had beautiful sky with stars at night with no light pollution which blocked the view of the galaxy. So, I would sit there as a child and look at heaven while imagining what it would be like to travel to see the stars.

- P.T. Share with us what was going on in your mind at age 13 when you were among the 1 billion people to watch on television the Apollo 11's landing on July 20, 1969. You touched on this earlier, but please elaborate.
- **Dr. H.** That was a very exciting time for everyone. It was amazing to see a human being, Neil Armstrong, taking that first step. I felt like many people around the world to go outside and look up to see the moon. It was incredible to realize that human beings were up there. It was fascinating. Many people wanted to be American heroes like those astronauts of the early days. I was no different from other American kids. In fact, all the children around the world wanted to be astronauts at that time because of that event.
- P.T. You penned in your book that there are no flawless missions. You probably also met many naysayers reminding you about this, including the Challenger disaster in 1986. What was your secret to not be influenced by them and to find the courage to accomplish your goal to go on a Space mission?
- **Dr. H.** I believe that when you have a dream or a goal that you really want to accomplish, it will come to fruition when this desire in your head goes to your heart. I truly think that when you have what it takes to realise your dream, nobody will be able to convince you otherwise. A lot of people believed in the past that it would not be possible to go to the moon. My stepfather was

one of them. When I came back from space after my first mission and I gave him a hug, my first question was to ask him: "Well, what do you think?" [Laughs out loud]. He responded: "I guess that I have to believe it now"[laughs]. The Wright brothers are definitely among the people could not allow themselves to be deterred by dream killers to accomplish their goals. Naysayers didn't think during their era that it was possible to create a plane which could fly like the more recent naysayers didn't believe human beings could go to the moon.

P.T. You spent an important part of your childhood on an Indian reservation, specifically the Navajo Nation that you describe as the Promised Land. Can you talk about the impact this population had on your character and your life? What are the most important Native values you cherish? In addition, tell us what it meant to you to bring their flag with you during your Space mission.

Dr. H. I spent several years that I call formative years growing up in the Navajo Nation. It was a rich environment. It was a different setting for an African-American kid to grow up in and it allowed me to be involved in the Native-American community. I also had the opportunity to meet people from other cultures and all walks of life: Hispanics, Latinos, Whites, etc. This experience helped me gain the ability to interact with people from diverse backgrounds. It was definitely worthwhile for me until my adulthood. This rich experience will always stay with me. Being among Natives expanded my spirituality because it is an integral part of their lives. They believe in mother earth, the love of humanity, the spirit world, etc. I picked up a lot of these beliefs while I lived there. It was really wonderful. For me, it was totally natural to take their flag to the space. Astronauts are allowed to take items with them into space to honor people or institutions they have been involved with. So, I wanted to pay homage to the Navajo Nation. In this regard, I requested their national flag. It was wonderful to do that for them.



