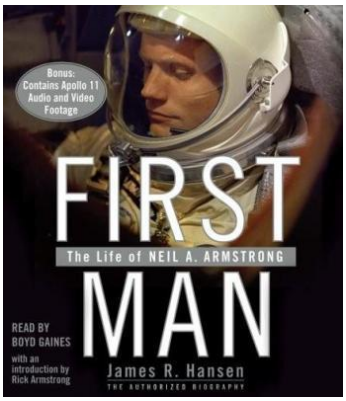

First Man: The Life of Neil Armstrong

Abridged Audiobook

Written By: James R. Hansen
Narrated By: Boyd Gaines
Publisher: Simon & Schuster
Date: October 2005
Duration: 7 hours 4 minutes
Including Apollo 11 Video and Audio Footage

Why read (or rather listen to) a book which was written 46 years after the occurrence of the first Moon landing and which has been analyzed and described from all angles in detail in the past years?
I had two reasons, one personal and one "professional":

As a young engineer, on 2:56 UTC July 21, 1969 when Neil Armstrong set his foot onto the Moon I was sitting in a 707 over the Atlantic ocean flying from Munich to Washington D.C. to participate in a compatibility test for the first German research satellite AZUR at the Goddard Spaceflight Center – when the flight captain came on the intercom and said: "The Apollo crew has left the Eagle and is on the ground" – we passengers applauded and cheered enthusiastically and a round of champagne was served.

The "professional" reason is the "lingering" discussion about going to Mars with an astronaut crew and to bring them back safely. I was curious to find any clues in the biography of Neil Armstrong about the public support, the difficulties of such a mission and the psychology of the astronauts, relying on the author taking the developments of human spaceflight during those 46 years into account.

Listening to the book was a pleasant surprise: the audiobook starts at the very beginning with the recording of Kennedy's historical Moon-speech at the Rice University in 1962, which still is exciting and carries a lot of enthusiasm and memories in it.

The author James Hansen describes Neil's career in detail with all the known highlights and downsides, his interest in airplanes, his "longing for the Moon" at the age of 16, his call up for the Navy in 1949, training and participation in the Korean war and his X-15 high speed test flights at Edwards, reaching 2700,500 feet (63.2 km) in 1960-62 and Neil's selection for the second NASA astronaut group, the class of 1962.

The book also elaborates on the much discussed issues of who would be the "first out on the Moon", the first words and the missing "a" in Neil's "A small step for man,..", his quotation of "Moon landing is in the soul of mankind" and his emotional observation that "Earth is so small" out of the cis-lunar orbit.

The beauty of the audiobook is that the important original NASA sound clips between crew and ground control, important welcome speeches and press conferences are inserted at the appropriate places, so the "original" feeling is recreated – for me, having listened to many of the events in real-time on TV it was like an excursion into my own past. Having worked for the German space operations center until retirement I was delighted to hear that also the astronauts had to fill out a travel expenses report ("Dienstreiseabrechnung"). As the whole trip from Houston to Florida, to the Moon, back to Houston via the Pacific Ocean and Hawaii including overnight stays was performed by government furnished transport and accommodation Neil Armstrong received $33.31 travel expenses for the whole round trip.

Some of the important scientific results are mentioned also, among others the very successful laser ranging reflector experiment (LLR) which was used not only as an unbeatable argument that the Moon landing could not be staged by Hollywood, but it was also used to test Einstein's theory of relativity:

"LLR results are consistent with the expectations of Einstein's general theory of relativity," says James Williams, a scientist with the Jet Propulsion Laboratory, Pasadena, California "It is remarkable that general relativity has survived a century of testing and that the Equivalence Principle is intact after four centuries of scrutiny. However, each new significant improvement in accuracy represents unknown territory, and that's the reason for future testing." (Quotation from "Lunar laser ranging: 40 years of high-level science").

Asked about the significance of human spaceflight, Armstrong offered during a life TV interview from Apollo 11 midway to the Moon that it would be "above all a symbol of the insatiable curiosity of all mankind to explore the unknown" and in Life magazine: "Earth is a spacecraft – as an astronaut you know that you have to use your resources wisely".
Asked about future Mars flights Armstrong suggested that "we know how to do it, it is not a matter of time whether we do it but when".

After the successful flight of Apollo 11 and all the celebrations over – which were compulsory exercises for Armstrong - he returned to his engineering vocation – but still stayed in touch with NASA.
In 1985 Armstrong participated in a study, initiated by Ronald Reagan to develop an "aggressive" new space agenda: the resulting proposal was to establish first a Moon base by 2006 and afterwards plan to land astronauts on Mars around 2015.

Now, time has proven that we are still far away from those goals (current NASA planning targets the 2030 – 2050 timeframe for a Mars landing with astronauts).

The question I tried to answer was: what was different between nowadays and then? If one looks at the three major "ingredients" of such a big project like public support, technical capabilities (budget) and astronauts my analysis, based Armstrong's biography and historical facts would be:

The public support for a human Mars mission is currently not very enthusiastic, there is the missing competition of two (or more) nations for political and technical leadership, the cost are very high and hard to control and the national budgets have other priorities. Elon Musk might have a small advantage here, however I think he can't do it without NASA either. For the Apollo program public support was crucial and unusually high.

With respect to the technical capabilities I think it really could be done, however the decisive item is the budget – the worldwide problems the planet Earth is facing (…use your resources wisely) may suggest that the money is spent better to "fix" the problems on Earth. The only way would be to internationally team up for such a mission.

Now the impressive part about Armstrong's biography is a nowadays underestimated aspect: the role of the crew and their families. After having read the book it looks like the mission could not have been successful without this particular crew. NASA painstakingly selected the right crew and with Neil Armstrong as the commander had the "right staff". I think it would be very hard to recruit a similar crew (or even managing it). Such a crew would have to face even more severe circumstances like an international crew composition, international partners, longer flight durations, longer and more complex chains of communication and distributed responsibility, much heavier stress on the astronaut's families and the always looming sudden stop of the entire project if something really went wrong.

Conclusion: The Apollo program and its success was due to an unique set of circumstances which in the near future will not be likely to happen again. Armstrong's suggestion to first establish a Moon base to "learn the grips" and then try to fly to Mars is very meaningful but none of the current plans is pursuing this approach.

Armstrong's "First Man" biography is a compact history book which conserves the flavor of the time with its original voice clips and definitely is very inspirational for the space flight generations to come.
I liked it very much – if you haven't read it yet, you should try the audio-version!

December 2015, Joachim J. Kehr, Editor SpaceOps News for the Journal of Space Operations & Communicator