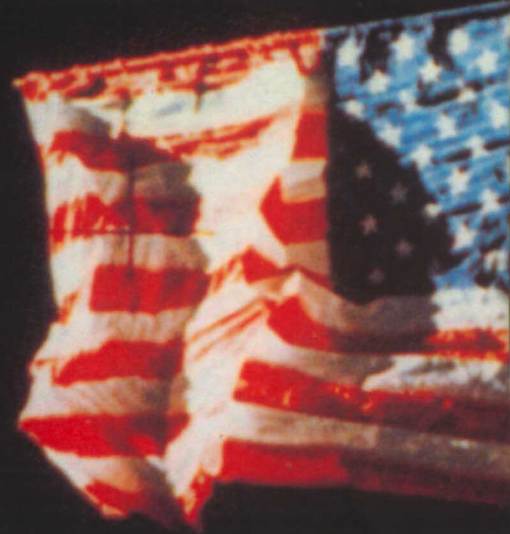


Buzz Aldrin piloted the lunar module "Eagle", in which the first humans landed on the moon on July 20th, 1969. He was the second to step out onto the moon's surface, 20 minutes after Neil Armstrong.



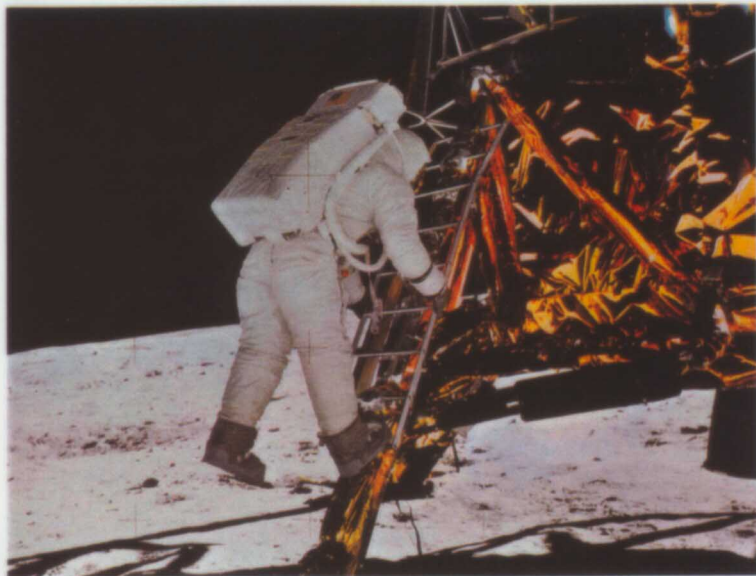
# BMW MAGAZINE

Photos: Cliff Serna, NASA

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**Lunar trio: Neil A. Armstrong, Michael Collins and Buzz Aldrin. Collins remained in the Apollo spaceship while his colleagues went on their moonwalk. Buzz Aldrin's historic step was captured on camera by Neil Armstrong.**



BY HANS SCHILDER

The footprints are still there, for the moon has no wind or rain that might obliterate them. When Neil Armstrong and Buzz Aldrin set foot on the powdery lunar surface on July 20th, 1969, they left their imprints virtually for eternity. Only the minutest dust particles, tiny meteorites from outer space, casually gnaw at the contours of the bootprints, carrying out their slow and solitary work of erosion on the moon's surface. Back on earth, more than 500 million people still recall the day on which that momentous, invisible barrier was crossed. That was how many sat glued to their television screens waiting to witness the small step which was such a giant leap for mankind.

The era of pioneering space voyages and intrepid heroes is long past. What has

remained of the legend of the first landing on the moon? Talking to Buzz Aldrin, the second man on the moon, one still senses the mystique surrounding this legendary astronaut, and a visionary power that has become rare in an age of reusable space shuttles.

Buzz Aldrin was born on January 20th, 1930, at Montclair in the US state of New Jersey. His father was a flying pioneer who studied under the rocket developer Robert Goddard. His mother's maiden name was

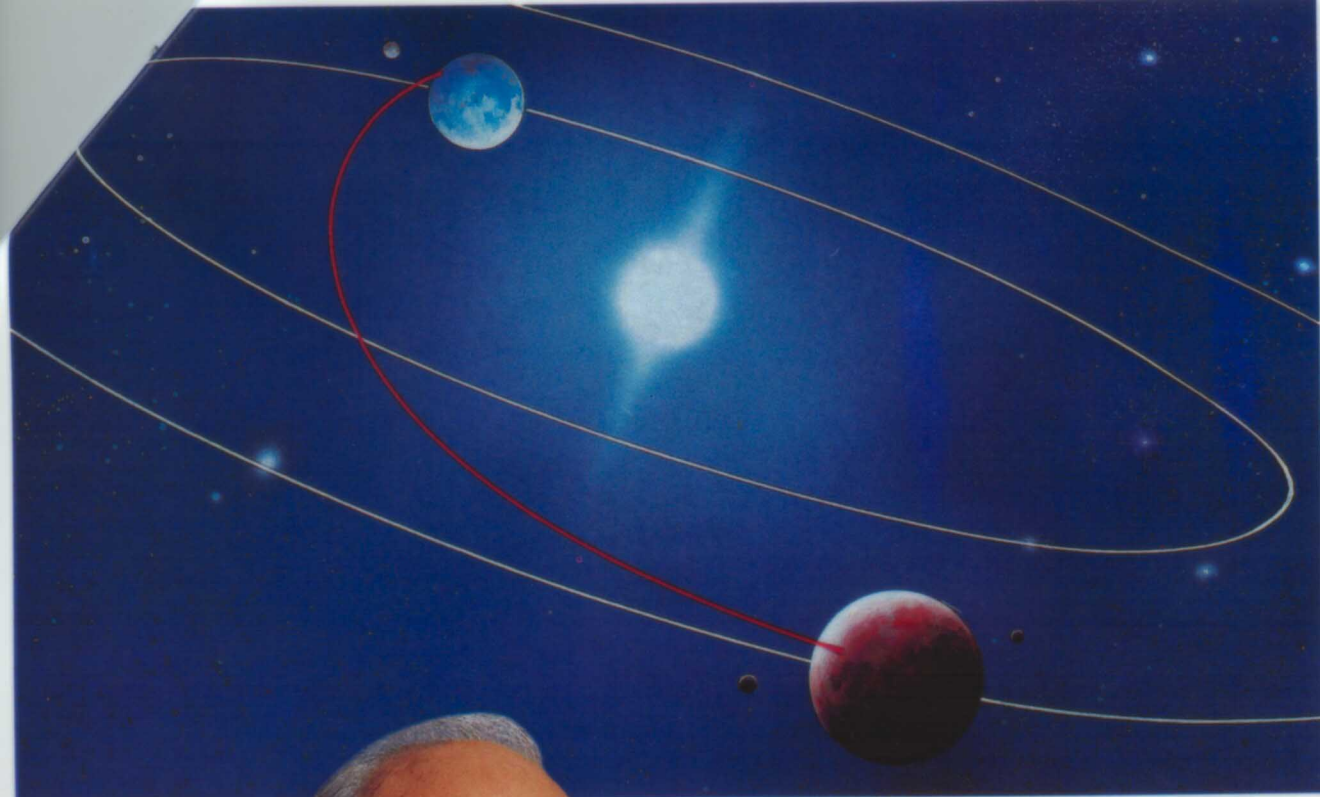
Marion Moon. Life creates its own anecdotes. Discipline was drummed into Buzz Aldrin at the West Point Military Academy, after which he saw active service as a fighter pilot in the Korean War. He went on to study astronautics at the Massachusetts Institute of Technology. In his doctoral thesis he says: "I would love to be one of them." By "them" Aldrin was referring to the seven astronauts in the Mercury programme, the first to be sent into space. The "famous seven" were stick-and-rudder men, test pilots who could manipulate the joystick and rudders so skilfully that they returned even the most exotic flying machines to earth intact. His future companions on the moonshot, Armstrong and Collins, belonged to this crack team. Buzz Aldrin didn't.

Although Aldrin counted as a highly gifted pilot when NASA invited him to become an astronaut in 1963, he was more interested in the technical challenges of space travel, the details and the logistics of complex missions. His doctorate on rendezvous manoeuvres dealt with the docking of spacecraft and the complicated navigational procedures which this involved. In it he had worked out the fundamentals for manned flights to the moon, which earned him the nickname "Dr Rendezvous" among his colleagues. NASA sent him into space in the Gemini 12 capsule to put his theoretical observations to the test. After a successful docking manoeuvre, Aldrin spent a record five-and-a-half hours working in the chilly outdoors of space.


On July 16th, 1969, at the outset of the Apollo 11 mission, he was to be the third man to enter the space capsule atop the gigantic Saturn V rocket at the Cape Kennedy launch pad. "I was there at seven in the morning, carrying my little cooling fan. The sun was slowly rising, the waves were coming in, and there was a mist covering the sea," he recalls. At 9.32 the five engines fired with a deafening roar and lifted the monolithic spacecraft into the sky. During the first nine seconds, more than forty tons of fuel were burnt, creating an incredible thrust of around one-and-a-half million pounds.

"We were privileged to be the eyes and hands of the entire human race," says Aldrin looking back on the moonshot. Later on, when the man who had been prepared in a thousand different ways for this historic journey was completely taken aback by the glory it brought in its wake, he concluded that the moon "makes many

**Astronauts  
who left their  
footprints  
on eternity**



Buzz Aldrin believes that it is possible not only to fly to the red planet (flying time to Mars: 200 to 400 days) but also to colonize it. To approach it in a spaceship would be very difficult because the distance between the earth and Mars fluctuates between 56.2 million and 380 million kilometres, and the respective orbits around the sun vary: the earth takes 365.5 days, Mars 687 days. (Illustration not to scale.)



## "Mars offers far better conditions for human life"

promises but keeps very few". Drink was to help him through a number of personal crises, but that is all a thing of the past. Today Buzz Aldrin is back on circuit and busy promoting space travel as never before.

"Ironically, the view of the earth from the moon persuaded people that we shouldn't be reaching for the stars but caring for suffering humanity," says Aldrin. Yet he still dreams of a future in space. Since 1983 he has been investigating ways of sending people to the moon in reusable space capsules in order to build such things as giant solar ener-

gy farms for the earth. Somewhere at the top of his wish list is collaboration with Russian space experts, but above all he would like to "see us land on Mars one day". He has already worked out an economical mode of transport which would make highly efficient use of the gravity of the planets.

Buzz Aldrin isn't one to wallow in memories, though he is not afraid to look back. His speciality, however, is clearly the future, and he is keen to use his "extraterrestrial" experience to influence the direction it takes. That could prove more difficult than landing on the moon.

*When you fill in your registration form at hotels, what do you put down as your profession?*

**Aldrin:** Astronaut. As far as I'm concerned, once an astronaut, always an astronaut. An astronaut should always be a representative of this profession, even if he's no longer flying.

*Your fellow astronauts call you "Dr Rendezvous" because you did a lot of fundamental research on the docking of spacecraft. What made you, as a student, turn to rendezvous technology at a time when it wasn't taken very seriously and when there were other, more important problems to be solved?*

**Aldrin:** I wasn't happy just to be a pilot, not even in high-performance aircraft. That's why I returned to the classroom after active service in Korea in order to do a diploma at MIT. That worked out so well that I decided to do my doctorate. I wanted to combine my skills as a pilot with those I had gained at MIT. There was a



Illustration: Klaus Burgle

*Launching the space shuttle from the earth's surface requires a vast amount of propellant and correspondingly large and heavy fuel tanks on account of the atmospheric density and gravity of the earth.*

*That is why Buzz Aldrin, like DASA's "Sänger" project, wants the space shuttle to be lifted to a certain height on the back of a jet aircraft and launched from there. This would mean a significant reduction in fuel and weight.*

whole range of possible topics, including re-entry technology – that is, what happens when a space capsule travelling at almost 29,000 kilometres an hour re-enters the earth's atmosphere.

*Do you know in retrospect why the Russians abandoned the space race?*

**Aldrin:** Well, they had two plans. One was based on the Proton rockets and designed to allow a crew to circle the moon. The other was based on a larger rocket that would permit a manned landing. Both these goals were pursued side by side. The crew with the Proton rocket could have been launched in December 1968 before Frank Borman, but for reasons which are still unclear there was never any attempt to send a man into space with a Proton rocket. The second plan was put on ice when Apollo 8 succeeded in circling the moon on its Christmas flight. But if Apollo 9 and 10 hadn't succeeded, the Russians would

have taken off and been the first to land on the moon. One thing's for sure, the Russians were remarkably flexible and able to respond immediately to all our successes.

*Would the race for the moon have gone on if the Russians had beaten the Americans to it?*

**Aldrin:** We would definitely have flown, but the Russians would probably not have gone on. Their landing craft for the moon involved a lot of risks. For example, the astronauts had to go out into space in order

## Future spaceships may be launched from an aircraft fuselage

to transfer to the lunar module. If they had managed this once, I don't think they would have done it again. *(laughs)*

*Do you enjoy driving cars?*

**Aldrin:** Yes, sure. But it isn't that simple. When I'm flying an aircraft, it takes a while before I get to feel comfortable in it. And it's no different with a car. But once I've become accustomed to a car, I get very perfectionist and try to drive as gently and smoothly as I possibly can. I try to drive the car so that I can control it with my fingertips – with great sensitivity. That way I also spot weaknesses in the car, for example if it's leaning to one side. As a result I often keep the garages fairly busy with my sensitivity!

*You've driven Mercedes, Porsche and BMW models. What is it you like about German cars?*

**Aldrin:** I have to admit that it has something to do with prestige, obviously. German cars have a high status. On the other side, I like their handling and reliability. Although German cars are complex structures, they really do what they're designed to do. They represent solid engineering technology.

*Is the styling of a car important to you?*

**Aldrin:** Oh sure. As I said, it's also the impression that counts. And I like it when people admire my car.

*Returning from the road to outer space: Do you think the Americans, Russians, Europeans, and the Japanese, should work together in space?*

**Aldrin:** Of course. And the sooner the better. Let's use those incredibly powerful and reliable large Russian rockets, for example. To develop anything comparable, we would need seven to eight years – provided we had the money. We're in a position to use the large Russian rocket "Energia" today. Let's use it to build a major space station up there.

*Will everything focus on space stations in the future, or will we see people landing on the moon again?*

**Aldrin:** There will probably be astronauts flying to the moon time and again. But we don't need people up there. What are they meant to do? Whatever needs to be done up there can be carried out by robots – extracting raw materials and so on. Mars offers far better conditions for humans, for colonization. I'm just reading a book about red, blue and green Mars, where the climate is adapted. We're familiar with red Mars. Now if we created water and an atmosphere in which you could