



The Right Stuff

Tom Wolfe

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When the book was published the first time in 1979 I was already over ten years in the “space business”, in fact I joined the newly founded German Space Operations Center – GSOC in the year of the Moon landing, in 1969 and of course I have read the book at this time. However, in 2016, 55 years of the first two US “manned” spaceflights I decided to salute this event by reading the book again.

Yet recently I discovered an audiobook version (on cassettes) and decided to listen and to see what the experience would be to digest “the right stuff” after more than half a century in retrospective.

It was like thumbing through an old family scrap book – and somehow I gained an additional dimension because I could see and almost “smell” the flair of the places mentioned in the book which I was able to visit during my career like Edwards, Houston, Huntsville, NASA HQ, Goddard and JPL and of course Cocoa Beach (then “low rent, no red-carpet treatment”) - and I was exposed to the “poker-hollow”- drawl announcements of various pilots flying on domestic airlines during the 1970’s and 1980’s.

The book takes you to the very beginnings, to Pete Conrad, age 22, in 1955 at Navy flight training base at the Jacksonville Florida Air Station – and tells about his first experience with and the use of the Navy regulations “bridge coat” (“O hear us when we lift our prayer for those in peril in the air”) and the daily anguish of the pilot’s wives.

The final goal on the “ziggurat”, the career pyramid as Tom Wolfe calls it, is to get on top-of this exclusive club of test pilots. For Pete Conrad one more step was at Patuxent River Naval Air Station in Maryland, the Navy’s new test-pilot school. It is interesting to learn that the test-pilots motto “pushing the outside of the envelope” has become a household item in the international space community. This motto kind of sums up what the right stuff is all about: manhood and not PR! (except some goodies now and then).

Muroc’s, now Edwards-Airfield’s exclusive reputation – a heaven for test pilots like Chuck Yeager where he achieved breaking the sound barrier with the X-1 on October 14th, 1947 and many other top performances like high altitude and speed records with the X-series aircraft - was a little dented by the USSR putting an 184 pound artificial satellite on a rocket into orbit, called Sputnik (October 4th, 1957). Now the focus shifted to the rocket-people (Little Joe, Atlas, Redstone) and capsule design activities to beat the Soviets in the beginning space race. The Navy’s promising “Dyna-

Soar” (dynamic soaring) program, an X-20 piloted rocket glider which would reach the higher atmosphere regions (around 50 miles) was continued but not with the appropriate emphasis.

With that the focus of the book shifts to the a new species, the astronauts and their selection process, their training in simulators never heard before and becoming competitors to the top-notch test pilots with respect to having or having not “the right stuff” – thus determining their position on the big ziggurat.

After a very critical and painstaking selection process among a substantial group of military test pilots the first astronauts (the original seven) for the US manned Mercury spaceflight program were announced by NASA on April 9th, 1959:

Scott Carpenter, Gordon Cooper, John Glenn, “Gus” Grissom, “Wally” Schirra, Alan Shepard and “Deke” Slayton.

With the growing success of the Soviet space program and the secrecy about their know-how, the unknown chief designer (the big Integral) became an obsessive figure which the USA had to refer in his place. Tom Wolfe describes the styling of the astronauts and the subsequent feeling in the public how the astronauts were becoming the old fashioned, archaic “single combat warriors” to beat the Soviets in space.

While struggling with the project Mercury which first would be tested flying chimpanzees, later astronauts on ballistic flights and then going all the way into orbit, the “big Integral” sent up Korabl Sputnik-4 on March 9th, 1961 and landed it with dummy astronauts and life animals onboard successfully – and the American Mercury rockets still exploded at the Cape.

The final blow came on April 12th, 1961 when the mighty chief Designer sent Yuri Gagarin in Vostok-1 successfully into an orbit around the Earth and brought him down safely near the Soviet village Smelovka.

Compared to Gagarin’s flight Mercury’s publicly announced first flight was disparaged as canon ball or “spam in the can” flight.

Alan Shephard of the “original seven” was peer-selected to take the first suborbital Mercury flight on May 5th, 1961 and everything worked! He became the first US astronaut in (suborbital) space, which gave the US space program a tremendous boost.

Kennedy gained unlimited confidence in NASA and 20 days after Shepard’s flight proclaimed in his historical [speech to the Congress](#): **“I believe this nation should commit itself to achieving the goal, before the decade is out, of landing a man on the moon and returning him safely to the earth”**. NASA was given a \$1.7 billion budget for the coming year and the amazing, unique period of “budget-less financing” began.

Second in line was Gus Grissom in July 1961, who unfortunately lost his capsule “Liberty Bell” after splash-down and the next flight was John Glenn’s, who made the first orbital flight in February 1962. Unforgettable the description of the first sunset he observed after 40 minutes into the flight: “The brilliant light over the earth began to dim. It was like turning down a rheostat. It took five or six minutes. Very slowly the lights were dimming. Then he couldn’t see the sun at all, but there was a tremendous band of orange light that stretched from one side of the horizon to the other, as if the sun were a molten liquid that had emptied into a tube along the horizon. Where there had been a bright blue band before, there was now the orange band; and above it a wider dimmer band of oranges and reds shading off into the blackness of the sky. Then all the reds and oranges disappeared, and he was on the night side of the earth.”

Tom Wolfe describes the developments against the backdrop of the heated political situation in America and the USSR during the Cold War and focuses on the fading attention the fighter test-pilots are getting and the growing (according to the test-pilots undeserved) attention of the astronauts as “heroes” of the nation.

He also zooms into the family backgrounds of the astronauts and describes their professional careers with very much empathy and highlights the situation of the astronaut’s wives, backing them up “on the home front”. Another interesting aspect is the astronaut’s internal conflicts, worries and career considerations and their status within the brotherhood of the “right-stuff” test-flight pilots.

The book ends with Gordon Coopers last Mercury flight scheduled to last 34 hours, 22 orbits to gain experience for long term flights. “Gordos” contribution to the Mercury program was that he had to land **manually**, because the automatic system failed and he did it within 4 miles of the target area, demonstrating that also astronauts could bring their capsule down safely all by themselves.

The final chapter gives tribute to Chuck Yeager’s dramatic attempt to set a new altitude record on December 10th 1963 (he has reached 108,000 feet so far) with the brand new NF-104, which almost claimed his life (I have tried plan B, plan C and plan D – now I have to “punch-out”), terminating the Navy’s dreams of their own “piloted” space program - and we all know the rest of the story.

This might also explain a little why a purely passive, fully automated capsule designed to carry and protect the “specimen” inside finally was transformed into the development of the space shuttle which required a pilot-astronaut to go up in his space-ship and bring her down on a landing strip like a “real” pilot.

Reading the book again after almost half a century is like looking through the wide end of a telescope – everything so far away, yet very clear. The book is beautifully written and characterizes the “single combat warriors” in a fair and friendly, very appropriate way without neglecting the anguish of the astronaut’s wives.

Wolfe even is honoring the contributions of the brave chimpanzees [Sam], HAM and Enos (Gilruth: “If they want more chimpanzee flights we should move NASA to Africa”).

From today’s point of view it is also exiting to know what became of the original seven beyond the horizon of the book and also to compare the Russian situation during the “space race” era: The book “Red Moon Rising” by Matthew Brzezinski (ISBN-10: 0-8050-8147-X) reveals all the secrets of the big “Integral” from the inside Russian point of view and it is also highlight recommended as complementary lecture to see the story unfold from the “other side”.

“The Right Stuff” is brilliantly written and it is a pleasure to read or re-read or listened to it anytime!

