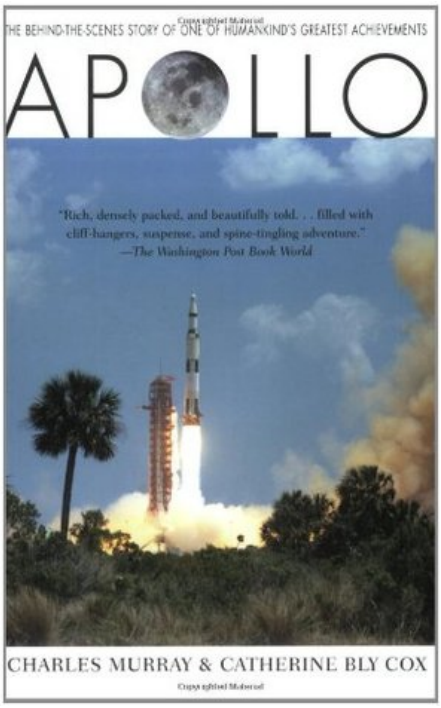

Apollo: The Race To The Moon

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Out of print for fifteen years, this is the classic account of how the United States got to the moon. It is a book for those who were part of Apollo and want to recapture the experience and for those of a new generation who want to know how it was done. It is an opinon shared by many Apollo veterans. Republished in 2004 with a new Foreword by the authors.

Apollo: The Race To The Moon Details

Date	:	Published September 1st 2004 by South Mountain Books (first published January 1st 1989)
ISBN	:	9780976000808
Author	:	Charles Murray , Catherine Bly Cox
Format	:	Paperback 512 pages
Genre	:	History, Space, Nonfiction, Science

From Reader Review Apollo: The Race To The Moon for online ebook

Stephen Taylor says

Incredibly Intimate Portrayal of American Heroes

I'm absolutely amazed at the quality of the book! So sad to have reached the end of a powerful portrayal of the many heroes of the Apollo program. This is a powerhouse overview with deep dives into the many personalities who made this crazy endeavor our reality. Hat's off to all involved!

Alison says

Utterly fascinating. This book combines the truly awesome (in the real sense of that word) accomplishments of the Apollo missions with the personal stories that add a human element to one of humanity's greatest achievements. Highly, highly recommended.

Steve Sarrica says

Murray and Cox's "Apollo: The Race to the Moon" is a collection of stories about the people in flight operations and leadership that made humanity's first visits to another celestial body reality. It is not a by-the-numbers history of each any every flight, rather, it is a collection of stories and anecdotes about the overall effort woven into a compelling, quick narrative. The people, their interactions, the management, the processes, the politics and their interplay are related with interest and care. Mission Control — really MOCR, SPAN, MER, and the back rooms — are discussed in detail. Coverage of struggles in Saturn V and CSM development (the LM is touched upon) and Apollo flights 7 to 13 is provided, as is AS-204, later renamed Apollo 1. Later flights aren't covered in detail because of the authors' and many of their subject's view that the "classical" Apollo program ended with Apollo 13. An excellent book, well worth both the serious space enthusiast's and casual reader's time. Combined with Chaikin's more formal history, "A Man on the Moon" and HBO's, "From the Earth to the Moon" and you have a good lay-person's primer on the Apollo program. Throw in the book and movie "The Right Stuff" and Ron Howard's "Apollo 13" and you're well on your way to your space geek degree.

H. Honsinger says

This book is, by far, my favorite book about the early days of America's space program and about the Apollo missions. Unlike most books which are largely narrative of the missions and that focus on the launches, landings, and activities of the astronauts, this book focuses on the development of the launch vehicles, spacecraft, and mission management systems that took the astronauts to the moon. It immerses the reader in three cultures: one formed around the captured German rocket engineers who designed the immense Saturn V launch vehicle; one formed around the perfectionist aircraft designers from the N.A.C.A.'s Langley Aeronautical Center who designed the spacecraft; and one that branched off from the second group that

became Mission Control.

If you ask Apollo insiders which book to read about what they did, this is the book they recommend. It is funny and tragic, action-packed and intellectually engaging, about the technology and about the people. I have read this book at least fifteen times and still come back to it at least once a year. Even now, as I write my third military science fiction novel, it is beside my desk. If you have the slightest interest in space exploration, or if you have read a dozen other books on the subject, you should read this book. I cannot praise it highly enough.

Dave says

I have a growing collection of books about the Apollo program. Apollo, The Race To The Moon, by Murray and Cox, is very much unlike the others. It focuses on the cast of thousands who brought the program to life, instead of on the more famously well-known astronauts. Names like Armstrong, Aldrin and Lovell barely make cameo appearances, while others like Kranz and Kraft run throughout the book. Getting to know them and watching them do something they truly loved is the point here. Not so much getting to the moon, but their commitment to doing it.

There are a few names here that will be familiar to you if you grew up in the Space Age: Werner von Braun is probably the one nearly anyone would remember. But even though I was one of those astronaut wanna-bes who took for granted that I'd land a job some day as a rocket pilot, or at least a moon bus driver, there were quite a few names I hadn't known before that were staggeringly significant to the space program. How could I have ever considered myself a science geek and not known and loved engineers with names like Rocco Petrone and Mad Don Arabian? I hang my head in shame to think of it.

Murray and Cox spent three years interviewing them, and put together this refreshingly personal history, instead of the geek-o-rama you often get when you crack open a book about the space program. Not that this wasn't a long pleasure cruise on the Empress Of The Nerds. Reading about engineers building the biggest rocket ever and shooting it into space was a geek trip that took me back to my younger days, when I looked up to these professional ubernerds as heroes worthy of worship.

My only disappointment was that, after interviewing more than 150 people over a period of three years, all Murry and Cox could write was one slim volume, when they could have easily gone on and on until it was a boxed set big enough to make Stephen King's gape in awe. If only I could run across that on the used book shelves at Saint Vinnie's.

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victoria.p says

Interesting and informative history of the Apollo program via the engineers and flight controllers and mission control people.

Aaron Arnold says

What a superb history. After finishing it, I found that it did several things that I liked. First of all, it stayed

true to its title and concentrates tightly on the Apollo Program only, tracing its journey from the creation of NASA in the late-50s post-Sputnik panic to the splashdown of Apollo 17. Secondly, it focused on the engineers who designed and guided the Apollo rather than either the astronauts who flew it or the politicians who oversaw it - this was a side of the story I'd never heard about before and ended up being fascinated by. Thirdly, it was told mainly through interviews, which both gave it an extremely strong and skillfully-conveyed narrative, and grounded it concretely in actual facts and events, making it much more powerful than a book told only through archival research or secondary sources.

What I took away from it is a strong sense of heroism, which is a much-abused word, but seems like the only appropriate one for the group of men who where given an impossible job and ended up doing it almost perfectly in a dizzyingly short amount of time. A mere decade after the creation of NASA, the US space program went from a collection of exploding rockets and second-place finishes to placing human beings on the moon, something that even to a hardened science fiction fan like me still doesn't quite seem real and gets only more incredible after reading the litany of technical challenges that had to be overcome to do it. As The Onion memorably put it, "Holy Shit, Man Lands On Fucking Moon" - these guys did that!

However, just as interested as I was by the technical difficulties - engines larger than any before, guidance systems more precise, mechanical systems more complex - I was also captivated by the way that the men themselves talked about the organizations they worked for and how they were run, the ways in which their managers channeled and refined their energies into this superhuman endeavor. In a sense, the only real secret to building a good organization, be it a large corporation, a public agency, or a small team, is recruiting the right people and then managing them appropriately. This trick is so difficult than an entire sub-sector of the publishing industry is devoted to it, but check out the advice Charles Murray gave in an interview on the 20th anniversary of the book's publishing to someone who wanted to duplicate the feats of the Apollo Program: "Disband NASA. Bulldoze all the centers. Identify a couple of hundred guys at Marshall who are obsessed with rockets and keep them. Choose forty-five people from Langley and Lewis - half of them space nuts, and half of them people whose supervisors want to get rid of them. Give them a mission and a lot of money and stand back."

To see the paradoxical combination of freewheeling engineering creativity and serious detail-oriented procedural adherence is very illuminating, and I'm sure this era of NASA will be a staple of business books for decades to come, both in its allowance for creativity and initiative and in its ability to deal with crises like the Apollo 1 fire or the explosion in Apollo 13's oxygen tank. Maybe it's simply impossible for that combination of attributes to be sustained forever, in the same way that every society or company or group of people seems to have a golden age that lasts for a brief time and then can never be recaptured. Certainly the era of moribund bureaucracy that NASA is currently trapped in seems like a cruel parody of the time period in this book, where people set about turning fantasy into reality with a sense of purpose, determination, and even joy. In that same interview, Murray has another thought-provoking, fairly pessimistic comment about the limits of efforts to replicate projects like this: "Apollo, like the Manhattan Project, proved that humans are capable of extraordinary feats in unbelievably short periods of time, but only if five conditions are met: The people doing the work have to have a concrete goal. They must have a sense of urgency - because of a specific calendar deadline in the case of Apollo, or beating the Germans in the case of the Manhattan Project. The concrete goal has to be technological, not social (we just don't know how to change human behavior on a large scale). The people paying for the work must be willing to spend lavishly. And, most importantly, the people paying for the work must get the hell out of the way of the people doing the work."

I'm not certain that he's completely right about the social aspect of the goal (despite their slow pace and often high costs, initiatives like anti-racism, the war on poverty, increased access to health care, gay rights, or feminism have achieved astonishing things in what seems like a very short time in world-historical terms),

but it's worth pondering that bit about standing back and letting engineers design their dreams without interference from the world around them, even as everyone acknowledges the many fruits of the space race. Is that the way we want to run our big national priorities, the moon projects of the future (even Kennedy had to be convinced that space was really a priority, and Johnson was all along the bigger visionary)? Well, as Joe Shea, one of the most important managers in the program recalls, the question is "You really want to go there?" Sometimes you have to trust in people, and trust in the project you've set for them. The cost-effectiveness of going to the moon has always been under debate, and the story told here won't necessarily change your opinion either way, but if you want to know how it was done and who did it, you can't find a better history.

Brian Page says

APOLLO: The Race to the Moon" is widely regarded as one of the best accounts of the Apollo program. It's a reputation that is well deserved. No single volume is ever going to do justice to the moon program but this history by Murray and Cox is masterful. The focus of their history is on the engineers who designed and ran the program. For those who have read many of the other outstanding accounts, this *APOLLO* fills in a number of gaps. So no matter which other accounts you have read, add this to your reading.

Daniel Villines says

I cannot help but believe that there are better books out there about the Apollo Program. There must be books that are well written and well organized, and present the path and the people that made the moon landing possible. *Apollo* makes this attempt, but it falls short.

While reading *Apollo* it felt like Murray and Cox realized that they tried to accomplish too much and then tried to save what they had already done. The result is an informative book, that also leaves many questions unanswered and topics undiscussed. For instance, the Gemini flights that played an integral part in the development of the Apollo program are hardly mentioned. Another example, is the seemingly abrupt closing of the book after covering Apollo 13 as if nothing of interest happened in the time spanning the five Apollo flights that followed.

The book's organization also hinders a smooth presentation of its contents. It frequently flips between biographies of the main characters and the chronology of the program such that both timeline and characters become obscured. In hindsight, reading this book while keeping notes of names, organizational structures, and timelines would have helped to keep the characters and events in their proper place.

Overall, *Apollo* imparts detailed information about the Apollo Program and some of the people that made the program possible. However, I think the enjoyment of what this book has to offer is proportional to the degree of in-depth knowledge that the reader already has about the program before the first word is ever read.

Carl Nelson says

"Apollo" is the story of how a nation went from having limited space flight capability to landing a man on the lunar surface within the space of a decade, and the people who made that happen. The narrative

concentrates on the stories of NASA administrators, engineers, flight controllers, and technicians, with a supporting cast of Presidents, astronauts, and contractors. Rather than telling the story of the astronauts (as many Apollo program histories do quite well), "Apollo" describes who designed and built Apollo and planned how the hardware would be used to fulfill Kennedy's charge of placing a man on the moon and returning him safely within the decade of the 1960s.

Portions of "Apollo" read like engineering case studies. Lucid explanations of scientific and engineering topics add tremendous value to "Apollo," and the descriptions of problems encountered (especially the F-1 engine's combustion instability with its functional but unsatisfactory resolution and the mysterious error codes from Apollo 11's lunar lander guidance computer) are easily understandable. As an engineer, I was fascinated by the contrast in philosophy between the German conservatism of the Marshall rocket designers, the iterative flight testing approach of former N.A.C.A. engineers, and the "all-up" approach of the ICBM systems engineers.

What is as impressive as the engineering accomplishment of Apollo--probably the greatest engineering feat of human history--is the story of how procedures for getting to the moon developed. The flight controllers' mission planning, rule design process, and precepts for risk evaluation, as well as the "flight controller cool" in dealing with events like the lightning strike to the Apollo 12 C.S.M., is one of the most fascinating parts of "Apollo." I am as in awe of the preparation and expertise of the flight controllers as I am of the designs of the engineers.

For all that, "Apollo" is never dry, and never loses sight of the human element. The personalities and backgrounds of major administrators, engineers, and technicians are described, and their anecdotes and quotations bring them to life. At times when the narrative could become overwrought--especially the fire on Apollo 1 and the stress and ultimate exultation during the Apollo 13 crisis--the authors choose an authoritative, factual tone that highlights emotions more than a maudlin recounting would. "Apollo" is ultimately a book about thousands of people sharing a common goal, and I found myself devouring it because the people of Apollo were so compelling.

I cannot read "Apollo" without reflecting how we left the moon 25 days before my birth and have not returned since. Contrast between the great things accomplished in a single decade of manned space flight and the slow pace of progress in the nearly four decades afterwards is inescapable. Reading "Apollo" and its description of the maturation of the lunar program gives hope that we have not lost this capability but merely placed it on a shelf. May we soon continue in the footsteps of Max Faget, Caldwell Johnson, Jim Webb, Joe Shea, Chris Kraft, George Mueller, Gene Kranz, Scott Simpkinson, George Low, Joe Kinzler, Gus Grissom, Neil Armstrong, Jim Lovell, and the countless others who led us to the moon and back.

Chris says

One of the best things I've read in a long time, if not overall. Chronicles the folks of NASA and its early iterations (Space Task Group, Marshall, etc.) that are not portrayed by square-jawed matinee idols; engineers, systems analysts, drafters and designers - the people responsible for getting those incomprehensible flying machines off the ground and, in some cases, managing the bonkers task of mid-flight trouble shooting.

In an era of knee-jerk doubt and cynicism from most people towards most topics, it can be psychically rejuvenating to read something that, with great lucidity, champions intelligence and a no-fuss, impossibly

comprehensive work ethic.

Seth McClure says

Excellent history with a focus on the engineering and managerial side of the Apollo program. Extremely well written. Goes a long way toward answering the question that may now be on many people's minds: "Just how the h*** did we ever pull that off?" Also answers the shop-worn, "If we can send a man to the moon, how come we can't X?" We have been looking in the wrong direction—it is a management problem not a technical one.

Interesting that it was written by "that" Charles Murray. I believe I'll read "Hidden Figures" next to assuage my conscience.

Just A. Bean says

Very well written and enjoyable. Though it doesn't have room to be comprehensive, it gives good coverage to the program design that led up to Apollo with special attention to Mission Control. It's full of interesting and often funny stories, and weaves the technical challenges in very well. Doesn't cover the later missions basically at all. It also doesn't cover the astronauts, so pairs well with *Man on the Moon.*

Would read again.

Trey Palmer says

A great overview of the behind the scenes expertise that made the moon landing happen. The spirit and the confident enthusiasm of the dedicated and consumed people responsible for this monumental effort is absolutely awe inspiring. My father worked at the Cape from the early days of the Mercury program and I grew up a witness to most of the manned launches, but this book reignited my memory, my excitement and my sense of pride regarding this amazing accomplishment.

Martin Ferguson says

This is a very engaging book that covers the entire Apollo program from John Kennedy’s challenge to put an astronaut on the moon before the end of the sixties, right through to the natural end of the program in the early 1970s. What made it interesting for me was the focus on the research and development as well as the managerial aspects of dealing with a burgeoning organisation that required the highest levels of statistical accuracy and quality control.
