

# MARKETING THE MOON



THE SELLING of the APOLLO LUNAR PROGRAM

**DAVID MEERMAN SCOTT** and **RICHARD JUREK**

with a foreword by **CAPTAIN EUGENE A. CERNAN**

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MARKETING  
THE MOON



# MARKETING





## Foreword

*"We were . . . marketing the United States of America"*

By Captain Eugene A. Cernan, USN (ret.)

**T**HE GOAL of the Apollo program was to send a man to the Moon and return him safely to Earth, and do it before the end of the 1960s. Without fully realizing it at the time, we took those first steps to the Moon with the first manned mission of Project Mercury, when Alan Shepard flew his sub-orbital flight on May 5, 1961, becoming the first American in space. It was but three weeks later, on May 25, 1961, that President John F. Kennedy stood before Congress and said, "First, I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to the Earth. No single space project in this period will be more impressive to mankind, or more important for the long-range exploration of space; and none will be so difficult or expensive to accomplish." That sealed what became our goal and commitment leading to the historic landing of Apollo 11.

Along the way, and totally unexpected by us, we astronauts became very visible public figures. This wasn't NASA's initial intent, but they adapted quickly. It was the press, and in turn the public, who declared us "heroes," and from that followed the inevitable responsibility to "market" the space program, both to Congress and to the public that elected it. Even before many of us had flown into space, before we had done anything to deserve such adulation, we became icons of our time. We astronauts, however, were just the tip of the arrow; behind us were hundreds of thousands of men and women—the real heroes of the era—who were the strength behind the bow. Yet, from the moment of liftoff until the time we returned to Earth, the astronauts were, and continue to be, the face of America's space program. It was, in part, a marketing decision that gave the world access through reports in the press and the live audio and television feeds from Houston, the Cape, and from space itself. During the high point of Apollo, the public just couldn't get enough.

Because of the public's desire, we were called upon to share

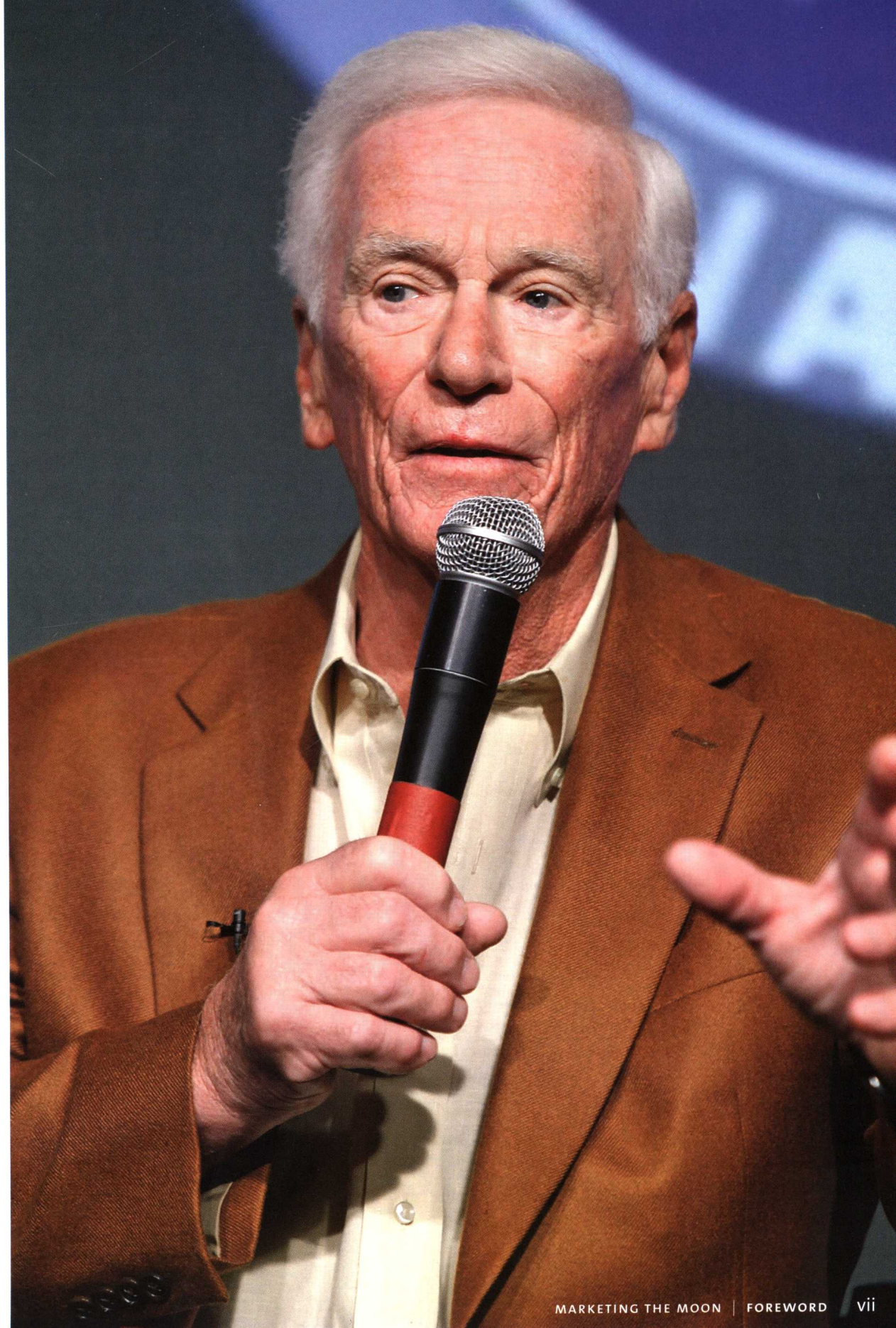


with the nation why we felt what we were doing had value; in fact, people began to demand no less. As a consequence, NASA would send us traveling throughout the country, one at a time, on what was called our “week in the barrel,” public affairs duty, which allowed the others to concentrate on their mission planning and training. In addition, we went on goodwill tours after each of our missions, not only to major cities in the United States, but to world capitals as well.

Thus, the astronauts became the leading edge of one of the biggest marketing efforts in history. We were the voices of a nation marketing the United States of America. We were whatever the people imagined us to be. There were other marketing efforts by NASA and the aerospace contractors, but no matter how intense their efforts were, the astronauts were the ones people wanted to hear and see. A personal association with someone who “had been there” is what everyone wanted. Even now we are asked the same questions we were asked decades ago: “What was it like?” “What did the Earth look like from space?” “Did you feel close to God?” I believed then—and I believe now—that it is our responsibility to give back to the nation that gave us an opportunity to go where no man had gone before. It may be our legacy.

Looking back, I must admit I learned something from those weeks “in the barrel.” If your desire is to bring others into your camp, they must know that you, yourself, believe in what they are hearing; your sincerity and passion must be evident. You must share your ideas with them—not talk at them—if you want to achieve your ultimate goal. To me, *that* is marketing and it was a key part of the U.S. space program that garnered the support of the American people. Unfortunately, as a casualty of this vast success, the support began to fade. What you’re about to read, *Marketing the Moon*, is a story of the challenges and ultimate success of marketing one of the greatest achievements in American—and world—history. ☉

*During twenty years as a Naval Aviator, including thirteen years with NASA, Captain Eugene A. Cernan left his mark on history with three historic missions in space: as the pilot of Gemini 9, the lunar module pilot of Apollo 10, and the commander of Apollo 17. Flying to the Moon not once, but twice, he also holds the distinction of being the second American to walk in space and the last man to have left his footprints on the lunar surface.*









# Introduction

*“Because without public relations . . . we would have been unable to do it.”*

—Wernher von Braun, July 22, 1969

**T**HROUGHOUT THE LAUNCH and the long flight of Apollo 11 to the Moon, Dr. Wernher von Braun, director of NASA's Marshall Spaceflight Center and one of the greatest media stars of the space age, remained uncharacteristically silent. The chief architect of the Apollo Saturn V launch rocket did not participate in briefings and interviews after the successful landing of the lunar module *Eagle*. Neither was there a public word from him after Neil Armstrong and Buzz Aldrin made their historic moonwalk, nor after *Eagle's* liftoff from the lunar surface and rendezvous with Michael Collins in the command module *Columbia*. Von Braun chose to speak to the press only after *Columbia* was well on its way back to Earth.

Finally, at 12:34 p.m., Houston time, on July 22, the world's most renowned rocket scientist addressed the world's journalists. “I would like to thank all of you for all of the fine support you have always given to the program,” von Braun said from the podium at NASA's Manned Spacecraft Center, packed with reporters and camera crews. “Because without public relations and good presentations of these programs to the public, we would have been unable to do it.”<sup>1</sup>

When America made real John F. Kennedy's goal of becoming the first nation to place a man on the Moon before the end of the 1960s, the chief technological architect of that success chose not to address the public directly, but to first thank the assembled press. What von Braun acknowledged in that moment was that, without strong public support abetted by high-profile, enthusiastic public relations, the entire achievement and its funding would have been unthinkable. Von Braun was well aware that possible failure and catastrophe lurked a step away from every success, and that to overcome it would require the forbearance of the press, as congressional and public support might not exist without it. He was hardly the only program official to recognize this reality and hedge his bets accordingly. Between the years 1963 and 1969, America

spent an average of 3.3% of its budget on NASA; from 1965 to 1968, it surpassed 4%. And it was likely more, as Department of Defense expenditures on the program were not part of the official budget line. (The spacecraft recovery efforts alone for each mission involved ships, aircraft, and thousands of Navy and other DoD personnel.) When reservations over the costs were raised by a number of legislators, President Lyndon B. Johnson was quick to reply, “Now, would you rather have us be a second-rate nation or should we spend a little money?”<sup>2</sup> The vast space program expenditures coincided with another costly—and far more controversial—government endeavor, the Vietnam War, and it also coincided with the commencement of the Great Society social programs. Though not without its detractors, the space program enjoyed the highest public approval throughout the 1960s.

APOLLO IS THE LARGEST, and we believe the most important, marketing and public relations case study in history. It's a story that needed to be told but to date had not.

The concepts of marketing and public relations are often used interchangeably, even by those who are involved in the field. There are many definitions of both terms, but simply, “marketing” is a multidisciplinary process by which a company or institution actively promotes, sells, or distributes a product, idea, or service to potential customers. “Public relations,” on the other hand, is a process (an aspect of marketing, in fact), by which a company or an institution tries to encourage broad, public understanding and acceptance of an idea, product, or service among its various potential audiences. In the Apollo program, the marketing was most often handled by the contractors and subcontractors, as they had reason not only to get out the story of their involvement in the program, but also to sell their capabilities on both the national and international stages. The PR responsibilities, while also important to the contractors, remained primarily with the NASA Public Affairs Office, as it was incumbent on them to sustain public and congressional interest in the program. Viewed together, the marketing and PR of Apollo represent a singular and eminently instructive case study for modern-day practitioners.

We are both professional marketers who are also space enthusiasts and collectors of Apollo lunar program material, including items flown to the Moon and used on the missions.

*OPPOSITE: Tickertape parade in New York City, August 13, 1969, following the Apollo 11 mission to the Moon. In the backseat of the first car (a Chrysler Imperial Parade Phaeton, one of only three made) are Neil Armstrong, Edwin “Buzz” Aldrin, and Michael Collins.*

1. Wernher von Braun quoted by Charles K. Siner, Jr., “You and Neil and Buzz—You Made It” in *The Quill*, September 1969.
2. Edward C. Welch, Oral History, pp. 11–12, Lyndon B. Johnson Presidential Library, Austin, Texas.



Over the years we have independently researched the marketing and public relations aspects of the Apollo program and carefully acquired items into our collections, which include hundreds of contractor press materials and NASA documents. We met several times a year at Apollo astronaut gatherings, talking about the intersection of our interests in space and marketing. It was at the 40th anniversary dinner celebrating the Apollo 13 mission, in 2010, with many Apollo astronauts in attendance, including Fred Haise and Jim Lovell of Apollo 13, that the idea for this book was hatched. We knew we were onto something when we shared our ideas with astronauts, NASA officials, contractor employees, and members of the media from the era, all of whom were unabashedly enthusiastic and forthcoming. At a later event, we ran it by Buzz Aldrin, who was wholeheartedly supportive, proceeding immediately to share stories and thoughts on the marketing of space, past, present, and future. He spoke with particular passion about the benefits derived by NASA and the nation from the Apollo 11 public relations world tour that followed his mission. At that moment we knew we had a story that needed to be told.

Our goal for *Marketing the Moon* has been to examine the inner workings and public perceptions of the Apollo lunar program through the lens of practicing PR and marketing professionals. We do not attempt an encyclopedic presentation, but rather an analysis of what was done, and what worked and what did not. We have been driven to the Apollo program not only because of its inherent historical significance, but by the highly unusual nature of how it unfolded through the unprecedented cooperation and teamwork of government, industry, media, and over 400,000 people working together toward the achievement of a common goal. We were drawn to the compelling and sometimes unexpected (and even counterintuitive) stories we heard from people who worked behind the scenes in this often overlooked aspect of the program.

We also wrote *Marketing the Moon* because the critical public relations and marketing of the program have often been mischaracterized. We chose to write it now because the story was not, by and large, part of official government records, and much of the salient information could be gathered only while many of the key participants were still alive and willing to be interviewed and share their personal stories and archives. Much of the material we gathered was acquired directly from

the participants; other pieces were purchased at auction, and still others bought or traded within the small, but dedicated, group of collectors, many of whom are members of the collectSPACE online community. Some of our collections are open to the public via the Internet so others can learn from them.<sup>3</sup>

The materials used in the marketing of Apollo were wide and deep, as hundreds of corporations, academic institutions, and government agencies were involved in highly technical work, which required the promulgation of detailed knowledge and data to an extent that changed forever the roles of journalists and public relations professionals. Terminology, some of it entirely new, and professional roles that were hitherto the exclusive realms of scientists, engineers, and manufacturers, were suddenly part of the public discourse. Thousands of photographs, diagrams and drawings, hundreds of hours of film and television, countless in-person press briefings, and press kits that could run to more than a hundred pages, provided reporters an unprecedented luxury of information. As a result, science and technology reporting became an essential part of journalism. “Covering the space program presented a challenge to us all,” said Walter Cronkite, managing editor of *CBS Evening News*. “There was a great deal we had to learn about the mechanics of space flight and the idiosyncrasies of the physics of moving bodies in the weightlessness and atmosphere-free environment of space.”<sup>4</sup> Every need for information and explanation was anticipated with profuse and well-prepared materials. How this was done and by whom are among this book’s key themes.

Some writers and historians have described how NASA, itself, was a big PR machine that developed the grand marketing scheme, choreographing its every detail. We will show that was not at all the case. James Kauffman’s *Selling Outer Space*<sup>5</sup> and Megan Garber, writing in *The Atlantic*,<sup>6</sup> to name just two, focus relentlessly on the *Life* magazine contracts with the astronauts, but fail to explain NASA’s benign, if naive, motivation for permitting them. While the stories that appeared in *Life* make for a convenient focal point, and are illustrative on a certain level, a more balanced view reveals that no one outlet “controlled” the image of the astronauts.

NASA did not have a massive PR machine that worked to shape the global press image of the astronauts and the pro-

3. [www.apolloartifacts.com](http://www.apolloartifacts.com), [www.jeffersonspacemuseum.com](http://www.jeffersonspacemuseum.com), [www.collectspace.com](http://www.collectspace.com).

4. Walter Cronkite, *A Reporter’s Life*. New York: Ballantine, 1997.

5. James Kauffman, *Selling Outer Space: Kennedy, the Media, and Funding for Project Apollo, 1961–1963*. Tuscaloosa, Ala., 2009.

6. Megan Garber, “Astro Mad Men: NASA’s 1960’s Campaign to Win America’s Heart,” *The Atlantic*, July 31, 2013.



gram. Staffed largely by professional journalists, the NASA Public Affairs Office operated more like a newsroom to rapidly disseminate information to the world press. More than 3,000 reporters covered the Apollo 11 mission from the Cape and Houston, while many thousands around the world worked from home. While NASA had its share of problems with the media during the Apollo 1 fire, or with the military's Cold War habits of secrecy, its Public Affairs Office worked tirelessly from its inception through the Moon landings toward a goal of not "spinning" or "selling" the space program, but reporting it in a remarkably open way, in as close to real-time as the technology of the time allowed.

In NASA at the time of Apollo, every unit and bureau had its own public relations agenda and sense of authority, independent of headquarters, as did many individuals, including some of the dominant figures such as von Braun and, occasionally, a few of the astronauts. The main public affairs groups were severely understaffed, as no one anticipated the public's demand for information and participation. Even the tours that were offered to a demanding public at Houston's Manned Spacecraft Center and the Cape Canaveral launch site, had to be cobbled together by the staff at hand, who were at first shocked by the extent of the public's interest. Eventually, some of the tasks would be given over to a contractor (TWA, the airline, in this case). It should be said, though, that the folksiness of the staff's approach to such problems endeared it all the more to a Cold War America hungry to be in the midst of people they considered true heroes. We show how NASA's Public Affairs staff, operating with a limited budget, made the most of what they had by adopting a "brand journalism" and "content marketing" approach to educate the public through the press and broadcast media, and, especially, to educate reporters and publishers.

Where NASA fell short, the contractors, whose number included many of America's largest corporations, were only too happy to fill in with money, ideas, press releases, printed materials, press souvenirs, and even interviews when the astronauts or NASA staffers were not available. And where that was not sufficient, the media, especially in the form of television news, was happy to oblige, as it saw the space program as its own manifest destiny. Some media outlets went so far as to form consortia, to share the costs of expensive mock-ups and props, and sometimes personnel and travel, such as the pool

reporters who made the long journey to cover the splashdown from a ship halfway around the world.

This greatest technological achievement of the 20th century was also a global event, as an estimated 600 million television viewers watched and listened as *Eagle* landed on the Moon and as the first human footprints marked the lunar surface. The achievement of broadcasting live television from the Moon was nearly as astonishing as landing there. Though the buildup to this moment was long, there can be no denying that the drama was epic and the dangers very great. Within the scientific community, it was understood that nearly every possible scenario required detailed preparation, ranging from anticipating physical mishaps and catastrophes to the remote likelihood that the astronauts might return to Earth carrying dangerous microbes.

On July 20, 1969, workers called in sick, children stayed home from school. Crowds gathered around televisions in department store windows and in parks where giant monitors had been set up. Newspapers and magazines, from local community papers to the ubiquitous American coffee-table staples *Life* and *Time*, along with radio and television news programs, provided unprecedented and sustained coverage to feed the

*Central Park, New York City, July 20, 1969. Tens of thousands gather to watch the moonwalk on screens set up by CBS News.*







TOP: May 18, 1969. Kennedy Space Center's Deputy Director for Administration, Albert Siepert, at left on third row, points out highlights of the Apollo 10 liftoff to King Baudouin and Queen Fabiola of Belgium. Former Vice President Hubert Humphrey, wearing a cap, is seated in the second row, at right.

ABOVE: News reporters at Cape Canaveral launch site covering an early Mercury flight.

voracious interest of their readers and audiences. In the drama of the event, the collective attention of millions of people became as one: focused and sellable. And thousands of organizations, from NASA's contractors to toy makers and film studios, did not miss their chance to tap into the unparalleled global wave of attention to market their products or to tell their story to an extraordinary number of potential customers. In a decade beset by controversy, protest, and strife, the adventure to the Moon was the one direction on which most people could agree, at least for a while.

The corporate marketers were also engaged on two other fronts: the business-to-business sales that might result from a company's involvement with the Apollo project, and selling goods and services to the government itself, notably the Department of Defense. Companies that were major contractors for the Apollo program, such as Boeing and Raytheon, happily talked up their lunar credentials in advertisements placed in publications read by DoD officials, such as *Aviation Week*

& Space Technology. The underlying message: "If we can get America to the Moon before the Soviets, you can trust us to build your next military system." Many contractors presented their favored customers with souvenirs highlighting the company's role in the Apollo program. A father coming home with a small piece of beta cloth given to him by his sales representative from Owens-Corning Corporation, might encounter, "Wow, Dad! You work with people from the space program?" Such experiences are not soon forgotten. Also, the fact that many, if not most, of these contractors were benefitting from the escalation of the Vietnam War, the space program provided them opportunity to present themselves as fostering exploration and American pride, rather than war profiteering. Profit margins on NASA work were very lean, so much so that, during the 1960s and 1970s, many companies involved with aerospace merged and diversified their holdings and activities. (One such company, ITT, long a player in international acquisitions and mergers, acquired Sheraton Hotels and Wonderbread after losing money in aerospace.) After the Vietnam War, this strategy became critical for survival.

THE PUBLIC'S RELATIONSHIP with the space program might have played out differently. NASA's presidential mandate to be an "open program"—unlike the secretive Russian space projects—was resisted by many, especially by those from military backgrounds whose custom was to work in secrecy. The veil that covered weapons development was an aspect of the Cold War that Americans took for granted. At the beginning of America's drive into space, many citizens remained fearful in the wake of so many Soviet "firsts" in space and their perceived implications for missile-driven nuclear warfare. Yet, as the decade progressed, American society was being pushed toward greater openness and self-examination by protests against the Vietnam War, by the civil rights movement, and by counterculture voices such as the Grateful Dead. NASA policy of openness fit well with the public, especially as a counterbalance to the Dr. Strangelove military. Of course, not everything in the space program was open. The Manned Orbiting Laboratory, for example, an Air Force/NASA project, which in recent years was revealed to have been an early "spy in the sky" program, was subject to a deliberate plan of disinformation.

In the end there were enough levelheaded policy makers



who knew that many of the secrets could never be held truly secret for very long, yet to keep the program open to the public still required brave advocacy. NASA Public Affairs chief Julian Scheer, who argued passionately for open communications, became as important to the Apollo program as the first man to walk on the Moon. The first “outsider” to head up NASA PR, Scheer had been handpicked by NASA administrator James Webb to drive change. He was also a journalist and writer, and brought that valuable perspective to the job. Paul Haney, often at odds with Scheer on matters of protocol, fighting against NASA HQ’s control over the public affairs mandate of the field offices, was nonetheless a passionate ally for open communications. It was Haney, in a moment of historic opportunity, who, by speaking directly with President Kennedy, won the pivotal policy victory of allowing the wide availability of mission information to journalists before a launch, rather than after, as was the policy of the military. If not for Scheer, Haney, and other NASA public affairs professionals, the American people would not have experienced the wonder of the lunar missions they paid for, at least not in the way they did. We tell their stories in these pages.

What Buzz Aldrin described as the Moon’s “magnificent desolation” gradually overtook the story and the public’s relationship with it. What began as epic adventure and exploration ultimately gave way to a discussion of geology, as astronaut tours became rock exhibitions. Except for the unplanned “successful failure” of Apollo 13, NASA never again captured the public’s imagination after Apollo 11. What once were major news events quickly became dutiful renditions of technical details, not enough to hold the attention of broadcasters. And without that attention, space is just too expensive to fund. In our analysis, the reason humans have not been to Mars is, essentially, the result of a marketing failure.

This history begs a number of questions: How did NASA sell the space program to the American people and Congress? How did the contractors, vendors, and suppliers communicate their involvement in the program, leveraging their brand’s contributions to keep the global audience focused on the Moon missions? What were its successes? And its failures?

These are the questions at the heart of *Marketing The Moon*, as we trace the story from the golden age of science fiction through the glory days of the Apollo program. And as mar-

keting analysts do with a product whose lifecycle has passed its peak, we also trace the inevitable drop-off in interest and attention after the big goal was achieved with humans walking on the Moon. While there were, no doubt, fascinating and important robotic missions, such as the series of Mars rovers, NASA struggled to find relevance in a world with competing interests, and survives, if barely, like a company caught in an identity and brand crisis, yielding the spotlight some forty years after Apollo to marketing-savvy entrepreneurs such as Richard Branson and Virgin Galactic, Elon Musk and SpaceX, and daredevil Felix Baumgartner of the Red Bull Stratos mission, whose jump from twenty-four miles above the earth’s surface, on October 14, 2012, was witnessed by the largest number of people to watch a live event on the Web. ☉

*The following is a complete list of astronauts who comprised the final flight crews in the Apollo program, as well as some others mentioned in the text. As they are often referred to by their nicknames—as the public has always known them—we offer here a formal list.*

FROM THE MERCURY SEVEN	FROM ASTRONAUT GROUP 3	FROM ASTRONAUT GROUP 5
Virgil I. “Gus” Grissom	Edwin E. “Buzz” Aldrin, Jr.*	Ronald E. “Ron” Evans, Jr.
<i>Liberty Bell 7, Gemini 3, Apollo 1</i>	<i>Gemini 12, Apollo 11</i>	<i>Apollo 17</i>
Walter M. “Wally” Schirra, Jr.	William A. “Bill” Anders	Charles M. “Charlie” Duke, Jr.*
<i>Sigma 7, Gemini 6A, Apollo 7</i>	<i>Apollo 8</i>	<i>Apollo 16</i>
Alan B. “Al” Shepard, Jr.*	Alan L. Bean*	Fred W. Haise, Jr.
<i>Freedom 7, Apollo 14</i>	<i>Apollo 12</i>	<i>Apollo 13</i>
	Eugene A. “Gene” Cernan*	James B. “Jim” Irwin*
FROM ASTRONAUT GROUP 2	<i>Gemini 9A, Apollo 10 and 17</i>	<i>Apollo 15</i>
Neil A. Armstrong*	Roger B. Chaffee	T. Kenneth “Ken” Mattingly
<i>Gemini 8, Apollo 11</i>	<i>Apollo 1</i>	<i>Apollo 16</i>
Frank F. Borman II	Michael Collins	Edgar D. “Ed” Mitchell*
<i>Gemini 7, Apollo 8</i>	<i>Gemini 10, Apollo 11</i>	<i>Apollo 14</i>
Charles “Pete” Conrad, Jr.*	R. Walter “Walt” Cunningham	Stuart A. “Stu” Roosa
<i>Gemini 5 and 11, Apollo 12</i>	<i>Apollo 7</i>	<i>Apollo 14</i>
James A. “Jim” Lovell, Jr.	Donn F. Eisele	John L. “Jack” Swigert, Jr.
<i>Gemini 7 and 12, Apollo 8 and 13</i>	<i>Apollo 7</i>	<i>Apollo 13</i>
James A. “Jim” McDivitt	Richard F. “Dick” Gordon, Jr.	Alfred M. “Al” Worden
<i>Gemini 4, Apollo 9</i>	<i>Gemini 11, Apollo 12</i>	<i>Apollo 15</i>
Thomas P. “Tom” Stafford	Russell L. “Rusty” Schweickart	
<i>Gemini 6A and 9A, Apollo 10</i>	<i>Apollo 9</i>	OTHER ASTRONAUTS MENTIONED
Edmund H. “Ed” White II	David R. “Dave” Scott*	Donald K. “Deke” Slayton
<i>Gemini 4, Apollo 1</i>	<i>Gemini 8, Apollo 9 and 15</i>	<i>Director, Flight Crew Operations</i>
John W. Young*		<i>Apollo-Soyuz Test Project</i>
<i>Gemini 3 and 10, Apollo 10 and 16</i>	FROM ASTRONAUT GROUP 4	Sally Ride
	Harrison H. “Jack” Schmitt*	<i>STS 7 and 41-G</i>
	<i>Apollo 17</i>	

• *Apollo astronauts who walked on the Moon.*



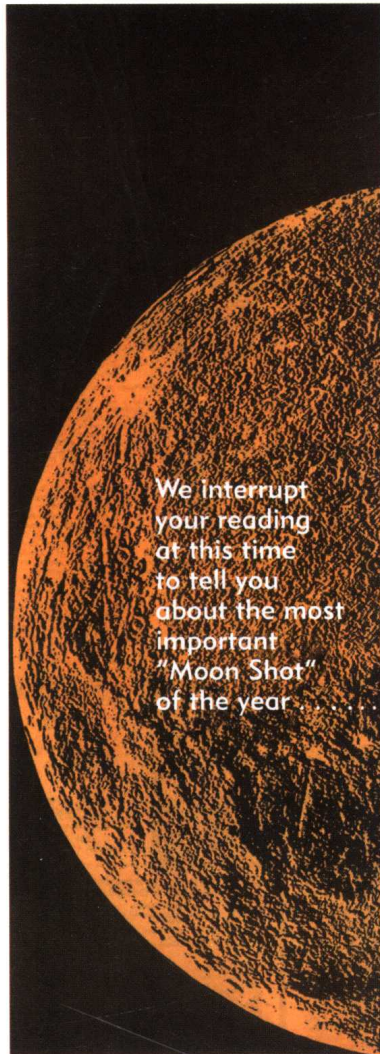


**LUNAR VISIONS AND VISIONARIES.** Clockwise from upper left: Poster for Fritz Lang's 1929 German silent film *Frau im Mond* ("The Woman in the Moon"), on which pioneering rocket science advocates Hermann Oberth and Willy Ley acted as consultants; Jules Verne; a frame from cinema's first Moon landing as depicted in Georges Méliès's 1902 film *Voyage dans la Lune*, loosely based on Verne's novel and recreated in Martin Scorsese's 2011 film *Hugo*; the character played by actress Gerda Maurus in Lang's *Frau im Mond* conducts some lunar cinematography; the binding of an early English language translation of Verne's 1865 novel.





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# A Modern-Day Columbia: Fiction Makes a Giant Leap

"THIS WILL BE OUR LAST TV show," wrote Michael Collins about the final live television transmission to the world from the crew of Apollo 11, broadcast just a few hours before splashdown. It was Wednesday night on the East Coast of the United States, July 23, 1969. After the intense drama and elation over the successful lunar landing and liftoff, the return trip had been almost routine for the crew. Command module pilot Michael Collins, along with moonwalkers Neil Armstrong and Buzz Aldrin, decided to use their final broadcast to send a global message to the world. Unlike the earlier transmissions, on this occasion the crew had at least an hour to contemplate and prepare what they wanted to say.

"Although we didn't want the bloody thing on board in the first place, this time we are going to try and make the goddamn tube work for us," wrote Collins, reflecting on that historic moment. "We [were] using this last opportunity to make our statement."<sup>1</sup> The Apollo 11 mission dominated print, radio, and television news on Sunday, July 20th, and Monday, the 21st, as the major networks presented continuous coverage and newspapers printed special editions and features. By Wednesday evening, however, the networks and newspapers had returned to their regular programming and editorial schedules, with only occasional updates and reflection pieces.<sup>2</sup>

At CBS, veteran newsman Walter Cronkite and former astronaut Wally Schirra were preparing to go on the air shortly after 7:00 P.M. EST to cover the final Apollo 11 broadcast. The network, which had called upon the services of nearly one thousand individuals during the weekend marathon telecast of the lunar landing, was now relying on less than a quarter that number to cover the remainder of the flight.<sup>3</sup>

As millions watched their televisions, they saw the color transmission begin with Neil Armstrong. The camera was focused on the round Apollo 11 mission insignia patch on the breast pocket of Armstrong's flight suit, and the lens remained trained on it as he spoke his introduction.<sup>4</sup> The image was

powerful and deliberate: it depicted an American eagle, spread-winged over the lunar surface, with an olive branch clutched in its talons. It was a clear, symbolic restatement of the message inscribed on the lunar module's plaque: "We came in peace for all mankind." In his last message to the world from space, Neil Armstrong framed their recent achievement and its pledge of peace by alluding to its literary predecessor.

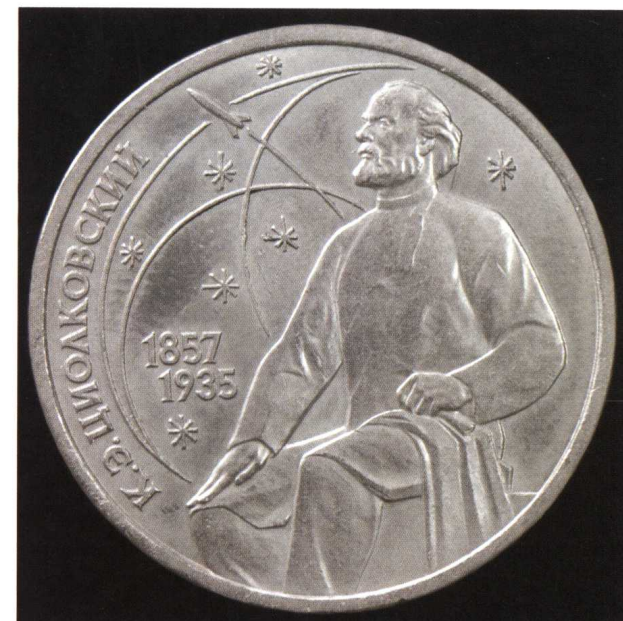
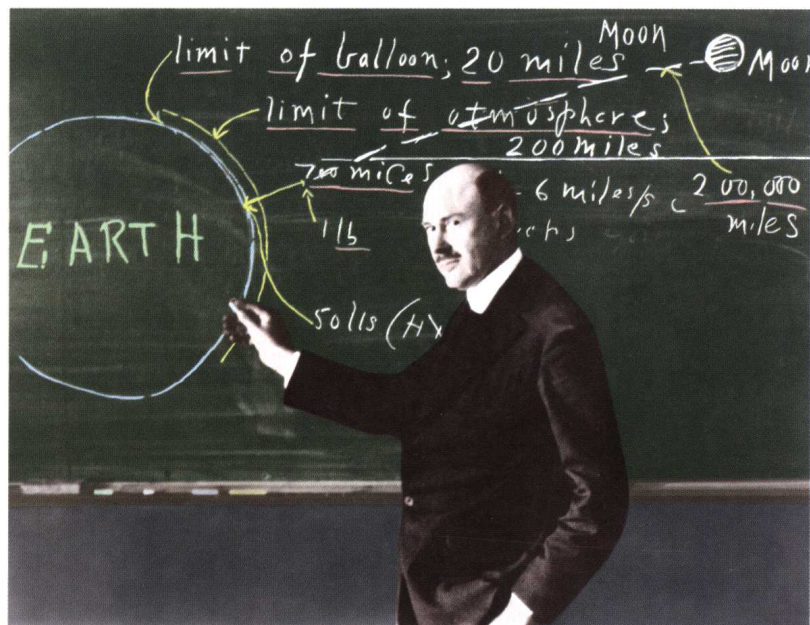
"Good evening. This is the commander of Apollo 11. A hundred years ago, Jules Verne wrote a book about a voyage to the Moon. His spaceship, *Columbia*, took off from Florida and landed in the Pacific Ocean, after completing a trip to the Moon. It seems appropriate to us to share with you some of the reflections of the crew as modern-day *Columbia* completes its rendezvous with the planet Earth and the same Pacific Ocean tomorrow. . . ."<sup>5</sup>

From a public-relations perspective, this was a masterful message coming at the moment when public interest in manned space exploration was at its apex. By linking the flight of Apollo 11 with its famous literary predecessor, Armstrong paid tribute to the power of the human imagination—reminding the world that a seemingly impossible dream can spark curiosity and motivate others to make it a reality.

This was not the first time that Armstrong had referenced Jules Verne. At the July 5, 1969, crew press conference, he unveiled the names of their spacecraft—and explained the rationale behind selecting *Eagle* as the name for the lunar module and *Columbia* for the command module. "*Columbia* was the name Jules Verne picked for a fictional spacecraft which journeyed to the Moon a century ago," Armstrong told them.<sup>6</sup> The press loved the allusion. "Jules Verne Foretold Apollo 11 Flight Some 104 Years Ago" was the title of the article written by the Associated Press's Harry Rosenthal; United Press's H.D. Quigg wrote "Jules Verne's Fictional Lunar Trip Nears Truth." Both appeared in hundreds of newspapers

1. Michael Collins, *Carrying the Fire: An Astronaut's Journey*. New York: Farrar, Straus & Giroux, 1974, p. 430.
2. Other news was capturing the headlines: on Chappaquiddick Island, in Massachusetts, reporters were investigating conflicting accounts of a fatal automobile accident that had occurred during the weekend of the Moon landing, in which Senator Edward Kennedy, the presumed 1972 Democratic presidential front-runner, had been involved.
3. William David Compton, *Where No Man Has Gone Before: A History of Apollo Lunar Exploration Missions*. Collingdale, PA: Diane Publishing Co., 1989, p. 142.
4. Apollo 11 original video footage. NASA, 1969.
5. *Apollo 11: Technical Air-to-Ground Voice Transcription*. NASA: July 1969, p. 588.
6. "Astronauts Meet Press: Moon Trip Draws Near," *The Hutchinson News*, Sunday, July 6, 1969.





THE THREE FATHERS OF MODERN ROCKET SCIENCE. Left to right: The American Robert Goddard photographed at Clark University in 1924. The cover of Hermann Oberth's 1923 book *Die Rakete zu den Planetenräumen* ("By Rocket into Planetary Space"), which the German author self-published after it was rejected for a doctoral dissertation. A Russian ruble coin commemorating Konstantin Tsiolkovsky.

7. Ron Miller, "Spaceflight and Popular Culture" in *Societal Impact of Spaceflight*. NASA, 2007, p. 501.
8. Ibid.
9. Neil McAleer, *Odyssey: The Authorized Biography of Arthur C. Clarke*. London: Victor Gollancz, 1992, p. 179.
10. Verne's influence on Tsiolkovsky, Oberth and Goddard are noted by Howard E. McCurdy, *Space and the American Imagination*, Smithsonian Institution, 1997, pp. 15–16.
11. Unsigned editorial, January 13, 1920.
12. Cited in Michael J. Neufeld, *Von Braun: Dreamer of Space, Engineer of War*. New York: Knopf, 2007, pp. 266–267.

around the country. Reporters seemed to enjoy cataloging the similarities between the actual flight of *Columbia* and the fictional Moon mission of Verne's *Columbiad* of 1865.

"Astronautics is unique among all the sciences because it owes its origins to an art form," wrote astronomical artist Ron Miller in an essay, "Spaceflight and Popular Culture." "Long before engineers and scientists took the possibility of spaceflight seriously, virtually all of its aspects were explored first in art and literature, and long before the scientists themselves were taken seriously, the arts kept the torch of interest burning. . . . No one had considered the actual technological problems of space flight until Jules Verne."<sup>7</sup> Prior to *From the Earth to the Moon*, Miller points out that all tales of space travel had been fantasies of one type or another. After Verne, "the possibility of spaceflight was instantly transformed from the realm of the fantastic . . . for the first time, the problem of space travel had been put on a firm, mathematical and technological basis."<sup>8</sup>

The recognized "founding fathers" of modern rocketry, Robert Goddard in the United States, Hermann Oberth in Germany, and Konstantin Tsiolkovsky in Russia, drew inspiration from fictional tales of interplanetary travel, and even wrote science fiction themselves.<sup>9</sup> "My interest in space travel," Tsiolkovsky wrote, "was first aroused by the famous writer of fantasies Jules Verne. Curiosity was followed by serious thought." Oberth read Verne's lunar voyages so many times

he finally knew them by heart, and Goddard read and re-read *From Earth to the Moon* and wrote comments and corrections in the margins.<sup>10</sup>

It was only after articles about Nazi Germany's V-2 program appeared in the press that rocket technology entered the public's consciousness as a reality. A few years earlier, the *New York Times* had gone so far as to publish an editorial stating there could be no doubt that a rocket operating in the vacuum of outer space was "absurd."<sup>11</sup> But in the wake of the V-2 and the explosion of the atomic bomb, previously existing scientific and technological certainties were open to revision. Perhaps human space travel—even extraterrestrial life—was indeed plausible. It's hardly coincidental that the first widely reported sightings of flying saucers occurred in 1947. This growing awareness of a new and uncertain future is indicated in a 1949 George Gallup poll surveying attitudes about the half-century ahead. Looking ahead to the year 2000, 83% of Americans foresaw a cure for cancer, and 63% thought there would be atomic trains and airplanes.<sup>12</sup> The possibilities seemed unlimited, and the imaginations of everyday Americans were deeply engaged. So were their fears. Some of the first articles published about space during the early days of the Cold War defined it primarily as the location of humanity's next battleground.

Far more often, though, the exploration of outer space was