FIFTH ANNIVERSARY OF MAN'S FIRST LANDING ON THE MOON

SMITHSONIAN INSTITUTION, NATIONAL AIR AND SPACE MUSEUM

Washington, D.C.

May 20, 1974
PROCEEDINGS

DR. BROOKS: Distinguished guests, ladies and gentlemen:

I'm Robert Brooks, the Under Secretary of the Smithsonian Institution.

I know I speak for all of us here in welcoming Neil Armstrong, Mike Collins and Buzz Aldrin, and past and present officials of the National Aeronautics and Space Administration here at the Smithsonian on the occasion of the fifth anniversary of man's first landing on the Moon.

Perhaps some of the millions of people around the world who watched that epochal Apollo-II mission on television are pausing with us today to assess in some measure the significance of that historic event.

What is it's significance here at the Smithsonian? First, and quite simply, a lot of it is here, and we are proud to have it. The command modules of Apollo-II and its predecessors and its successors, the lunar module and others soon to be housed in the magnificent new National Air and Space Museum which is rising up on your right.

I was particularly pleased, however, to see that we have just put on view effigies of the three astronauts, standing like Cortez or Magellan in their intricate armor in the great hall of the castle of the Smithsonian.

If there is just a suggestion when you look at
those effigies of Charlie Brown in his snowsuit, that is as it should be, because the artifacts, we think, are meaningless unless we are reminded as well of the people within them, of the human ingenuity, the determination, and the idiosyncrasy that went into their making and use.

Over the years the Smithsonian has had a part, too, in the human achievements of scientific exploration of air and of space. It began not far from this spot where you're sitting during the Civil War, when Thaddeus Lowe, with encouragement of the Smithsonian Institution, demonstrated a balloon ascent for President Lincoln.

In 1896 Samuel P. Langley, the third Secretary, achieved successful unmanned flight of an aircraft for one-half mile along the Potomac River. Shortly thereafter, the Smithsonian received a request for information about aeronautics from a young bicycle maker in Dayton, Ohio. His name was Wilbur Wright. I'm glad to say that we were able to respond.

In the twenties, the Smithsonian supported and published the rocket studies of the great pioneer, Robert Goddard, and received a different response. We got a telegram from Mary Pickford's press agent suggesting that America's sweetheart should send the first message to the Moon. I don't know how we responded to that.

More recently, the Smithsonian Astrophysical
Observatory and the Air and Space Museum have both participated in much of the research based upon our new ability to send and recover instruments and observations beyond the limits of the earth's atmosphere.

At the Smithsonian, then, we have always tried, by collecting, by study, by exhibition and by participation, to assess the achievements of history and to make it as clear as we could that these were, above all, the achievements of the human spirit, of men and women standing upon the shoulders of those who went before.

So it is with particular pleasure that we invite those people who are responsible for the great achievement of the lunar flight five years ago today, in space and on the ground, to share with us their reflections on that event.

Before introducing the speakers I should like to recognize our distinguished other guests on the platform. First of all, on my extreme left in the front row Dr. David Challinor, Assistant Secretary for Science of the Smithsonian.

On my extreme right in the second row, Mrs. Challinor.

On my extreme right in the front row, Dr. Robert Seamans, former Deputy Administrator of NASA and Secretary of the Air Force, and now President of the National Academy
of Engineering.

Mrs. Robert Seamans is also with us, and my wife, Mrs. Brooks.

Our first speaker will be Dr. Thomas O. Paine, who has had a long and distinguished career in industry and in government. After receiving his undergraduate degree from Brown University, and his doctorate from Stanford, Tom Paine rose through the ranks of General Electric and became a vice president in 1963.

In 1968 he became James Webb's deputy at NASA, and shortly thereafter was appointed Administrator. This is the position that he held during the Apollo-11 mission.

Dr. Paine returned to industry in 1970 and is presently a senior vice president of the General Electric Company. We're glad to welcome Doctor and Mrs. Paine with us on the platform today. Dr. Paine.

(Applause.)

DR. PAINE: Thank you.

It's a great pleasure to be here and have this opportunity for a reunion after five years with many of the people who made this event possible.

It seems that it must have been a very short time ago, as I look around me and talk to the people who are assembled here today, that this event took place. It hardly seems five years that people were pausing all around the world
to watch the first few faltering footsteps on the Moon.

I think that this afternoon looking back on it, we're still too close to it to understand fully the significance. But a few things are becoming clear.

On the technical level Apollo demonstrated the enormous power of modern systems engineering to make rapid strides across a wide variety of disciplines to achieve a bold national objective.

On the institutional level, Apollo demonstrated the effectiveness of our free society in organizing government, university, industry teams to work together harmoniously to achieve clear goals, articulated by national leaders.

One must pay tribute here to the administrative genius of Jim Webb, who can't be with us today, but whose understanding grasp of space-age management built the remarkable capability in management which was responsible greatly for NASA's achievements.

On the personal level, of course, Apollo furnished an inspiring example of courageous, competent men, willing to undertake the most demanding missions to explore the unknown.

On the geopolitical level, Apollo's convincing demonstration of America's continuing impressive technical leadership provided an essential stabilizing force in international relations.
On the domestic front, Apollo set new standards of program performance, which set an example that raised the hopes and expectations of our citizens in many other endeavors.

In the economic sphere, Apollo sparked a host of product and process innovations that continue even to this day to add to our economy, both here and in our international trade.

But beyond all of these significant, short-range considerations, to my mind, lies the real fundamental significance of Apollo. For the first time mankind has been given a vision of the thin biosphere that surrounds our beautiful blue planet, earth, which, as we now know, is the fragile home of all the life that so far has been detected in our solar system.

And for the first time, terrestrial life that evolves here on this planet over billions of years, has reached out to touch another world.

To me, this is the true significance of Apollo. The human intellect triumphing over time and space has pioneered a route in our generation by which terrestrial life will surely in centuries to come enliven other worlds.

I believe that men will always remember this as the great spiritual legacy of Apollo, and indeed, of our generation, which reached out into the heavens.

Thank you.

(Applause.)
DR. BROOKS: Thank you, Dr. Paine.

Our next speaker, Dr. George Low, has seen the space program grow from its very earliest beginnings. Educated in aeronautical engineering at Rensselaer Polytechnic Institute, Dr. Low joined NASA -- or NACA, as it was then known -- in 1949. He worked in a number of installations, including Langley, Virginia, Cleveland, Ohio and Washington.

At the time of the Apollo-11 landing, Dr. Low was the Manager of the Apollo Spacecraft Program in Houston, Texas. He is now Deputy Administrator of NASA, a position he has held since 1969.

We're pleased to welcome Dr. and Mrs. Low to our platform.

Dr. Low.

(Applause.)

DR. LOW: About two hours and three minutes from now the hands of the clock will stand at 4:18. That is the exact time that Apollo-11 landed on the Moon five years ago.

For the first time in history, man had reached another world. It was the beginning of the future.

To the 400,000 Americans who had been dedicated to doing the impossible, it was a moment of tremendous engineering and scientific achievement. To the 500 million people around the world who watched the drama of Apollo-11 unfold on television, it was a height of human adventure and
exploration.

But today, looking back at the events of July 20, 1969, from the perspective of just a few short years of history, it is clear that Apollo was and is much more than that.

To me, Apollo is the symbol of hope for the future of mankind. I say this even while here on earth we face serious problems -- super problems -- having to do with the environment and natural resources and energy; even while there are some who would predict that we may soon plunge into a new and terrible dark age of a ravaged environment and depleted resources.

But I can say this, because the men and women of Apollo demonstrated that mankind can cope to achieve what at first appears to be impossible, that we can solve tomorrow's super problems, that we can succeed in spite of what may appear to be insurmountable obstacles.

Apollo was at the forefront of the thrust to a new and better world, and so is NASA today. NASA is still pushing beyond the frontiers of science and technology, and we do this peacefully, openly, and for the benefit of all.

True, our major thrust is in the exploration of space. We've put men on the Moon, and spaceships around Mars. We have extended our reach to Mercury and Venus, and glimpsed the mysteries of the distant world of Jupiter.
But the same technology that has made these feats possible has enhanced measurably the quality and the security of life on our own planet.

Weather satellites warn us of storms. Communications satellites have pushed back the barriers of ignorance. Resource monitoring spaceships watch our farm lands, help us to locate vital minerals, and keep a watchful eye on the advances of pollution.

Many of the discoveries and innovations our efforts have produced have found their way into medicine, into electronics, and into products and services of all kinds.

The views brought back by our astronauts of our tiny planet, floating like a blue oasis in a void, have stirred our spiritual belief, while making us aware of our cosmic heritage. And with the coming joint space venture with our Russians neighbors can be counted, we can lay firm claim to the easing of world tensions.

However, we must now look to the future. With the help of American industry and universities, we are moving toward new and even more exciting adventures in space; adventures that will ultimately lead to practical application.

Ahead lies a Viking landing on Mars. Within a few years, shuttle orbiters will add a new dimension to earth studies, by carrying teams of scientists and engineers to and from space on a regular basis.
Beyond lies a construction of huge orbiting space stations with men and women scientists of all nations working together in harmony for a common purpose. They will investigate the earth, the moon, the sun, the stars and the universe. They will experiment with applications of weightlessness for medicine and manufacturing processes.

Some day we will establish scientific outposts on the moon, and even tap its mineral resources.

And in the not-too-distant future, astronauts may well tread on the surface of Mars and the glaciers of the moons of Jupiter in search of extraterrestrial life.

It is not inconceivable, also, that one day we may even be able to listen to other civilizations in the distant reaches of our galaxy to tap our cosmic heritage, just as we have tapped the wisdom and the experience of the earliest civilizations of earth.

In the final analysis, the ability to move outward in space, to colonize other worlds in our solar system, and to communicate with other intelligent beings, may represent the fundamental factor in the survival of humanity. The future did begin with Apollo.

Thank you.

(Applause.)

DR. BROOKS: Thank you very much, Dr. Low.

We are happy also to welcome Dr. and Mrs. Fletcher,
who is our next speaker here with us today.

Dr. James Fletcher is a native of New Jersey, was educated at Columbia and at the California Institute of Technology. He received his PhD in California in 1948.

Next followed an impressive procession of research and teaching positions at Harvard, Princeton, Cal Tech and UCLA.

Dr. Fletcher then tried his hand most successfully in the business world and filled a variety of responsible corporate positions with such companies as Hughes Aircraft, Raymo Wooldridge, Aerojet General, and Space Electronics of which he was both organizer and president.

Dr. Fletcher then returned to the campus, this time as president of the University of Utah, a position which he occupied from 1964 until he came to Washington in 1971 in the position which he now holds as administrator of the National Aeronautics and Space Administration.

Dr. Fletcher?

(Applause.)

DR. FLETCHER: Thank you Dr. Brooks, and thank you also for the beautiful day that we have, sitting here relaxed, calm, and reflecting about five years ago.

Needless to say, none of us were here in this place five years ago. Those 400,000 people that Dr. Low was talking about were mostly glued to consoles watching meters.
very tense along with our three friends, Mike and Neil and Buzz, who were busy 250,000 miles away trying to make their spacecraft work. And the rest of us were spread out all over the world, one place or another, probably watching our TV, and hoping, hoping, hoping, that it would work.

And I remember a remark, something like this, when it really did land, and Neil made the famous expression about the Eagle having landed, I think I said something like this: "Well, they really did it, didn't they." And it was a big sigh of relief.

But most of us find time is quite scarce for serious reflection about the fate and future of mankind as we busy ourselves like we did five years ago, with the concerns of the day. Most of our lives are not spent facing the momentous questions of the age. Everyday problems occupy most of our time and thoughts.

So it is appropriate that we use an occasion such as this to meditate about the meaning of historical events that have touched our lives and to determine what we can learn from them.

Like other great milestones in history, Apollo stands out dominantly against the background of ordinary events. This one magnificent achievement clearly overshadows and stands out as a memorable event of our era.

Important historical events are those that affect
many people over a long period of time. These are the hallmarks of mankind's progress.

Clearly, Apollo qualifies by that or any other definition of a truly historic occasion.

When the Eagle landed at Tranquility, man burst the bonds that for millions of years tied humanity to this small and fragile planet that Dr. Low described.

There is little likelihood that the epic accomplishments of Apollo will be lost in the pages of history. There is, however, a very real danger that our own generation may too soon forget that progress has a price which society must be willing to pay.

Today, for example, we face a number of crises; energy, pollution, urban congestion, crime, inflation, and you could go on and on. All of these problems affect us in a very direct, immediate and personal way and properly rank high on our list of priorities.

But in establishing national priorities we must be mindful that no matter how pressing the demand, or how acute the crises of its time, every progressive society to remain strong, must commit a portion of its resources for programs to advance human knowledge and progress.

Universities, research programs, scientific investigation, all require a commitment that at the time seem difficult to support when weighed against the needs of the day.
And in every age there have been critics of programs that
have no immediate payout, or do not address directly the
immediate and the urgent problems of the times.

The space program is such a program. The dollars
that we spend on space research and exploration produce no
instant supply of food for the hungry, no shelter for the
homeless, no clothing for the ragged. Spinoffs from space
technology have helped in innumerable ways to improve everyday
life for thousands of people. But NASA programs provide no
quick readymade solutions to the major ills that afflict
mankind. Yet, in the long run, the benefits of our program
may return many times over, the cost of the initial investment

In fact, when our descendents look back on it,
the first man landing on the moon most certainly will be
considered the outstanding event of the 20th Century, and
probably more. July 20, 1969 may be remembered in the future
as the day man ended an era of one-planet civilization, and
began a new age as traveler and colonizer of the universe.

In times past, decisions to embark on great
undertakings were made for people by royalty or their
religious leaders. It is still the responsibility of leaders
to feed or to point the way. But in a democratic society, the
final decision rests ultimately with the people themselves.
They must voluntarily choose to make the sacrifices needed to
assure progress.
This choice was made by our republic year after year, until that day was reached five years ago and men, our men, made the first steps off our planet and into the solar system.

Most Americans continue to have a strong commitment to the future, and are willing to spend a portion of this country's bountiful resources on a better tomorrow for all the world's people.

Despite current difficulties and gloomy prophesies by well-meaning, but short-sighted critics, our nation and the rest of humankind will make more of these steps into the vast but exciting reaches of our solar system.

Thank you.

(Applause.)

DR. BROOKS: Thank you Dr. Fletcher.

Now we pass from the men who organized, the men who planned, to the men who are out there.

The first astronaut I would like to introduce, Col. Edwin E. Aldrin, who is here with his wife. Buzz Aldrin was educated at West Point and at the Massachusetts Institute of Technology where he was awarded the Doctor of Science degree in 1963.

Col. Aldrin had a distinguished career in the U.S. Air Force, including a tour as a fighter pilot in Korea, and later director of the Air Force Test Pilot School.
Col. Aldrin's first space flight was in 1966, aboard Gemini 12, during which he set an endurance record as a space walker.

Col. Aldrin then became an expert in lunar mission planning, and was assigned as lunar module pilot for the historic flight of Apollo 11.

Col. Aldrin?

(Applause.)

COL. ALDRIN: Friends of Apollo, as I mentioned the other day down at the Cape, you can tell the difference between college professor, a museum curator, and a freewheeling rancher from Los Angeles, by the shade of the suits that they wear. But I am afraid that today Dr. Fletcher, with his jacket, has completely outdone us all.

(Laughter.)

(Applause.)

I hate to be a nitpicker about seconds, but it seems to me that we landed at 4:17:32 instead of 4:18, and if it had been 4:18, I am afraid we would have run out of gas.

Far be it from me to compete with the distinguished gentlemen who have preceded me in discussing the philosophy and significance of Apollo. As I do look back over the past five years, I am reminded of an evening discussion that I had with a rather senior space industry person on the West Coast, and as we reminisced, I finally asked him, what do you think are
the two most important parts of the Apollo program that will not be remembered by the American public or the world?

Now this took him back a little bit because usually he is answering the question the other way, what are the most important things that will be remembered.

He thought for a while and he said, well, I guess people may not appreciate the great teamwork between government and industry, military services.

And I said, no, I think we will remember that. That is well recorded, the great management embodied in the organization of NASA.

And he said, well perhaps the fact that we did it in a peaceful way, and we did it out in front so that everybody could see, so all the nations of the world could see our successes and failures.

And I said, no, I think that is also well recorded. People will remember that.

Well, he was pretty well stumped.

So I said, when we first started thinking about going to the moon, we really didn't know how to get there. Some people thought we should build a rocket bigger than the Saturn 5, the Nova, and go there directly and land the spacecraft, and then return.

Other people said, no, we should use the Saturn 5 and build it together in earth orbit.
There was an enterprising engineer at Langley Research Center, who said, no, I think there is a better way to do it. He did his calculations on the back of an envelope and convinced those who were his immediate seniors. It was a long, uphill fight for John Hubalt, who many of you will never remember as the one that pointed the way to lunar orbit rendezvous.

And I said that is one major part of Apollo which will not be remembered.

He said, well, okay. What is your second one?

And I said, could you imagine back in the early '60s, Mr. Webb going in to see the President and saying, Mr. President, here is the way we are going to go to the moon.

We are going to build a Saturn 5, and to test out its components, we are going to build a smaller rocket, the Saturn 1, and we will fly it about 20 times. And then we will put a spacecraft on top of it with three crewmen, and they will orbit the earth for seven days.

And in the meantime, we will have flown this big rocket twice.

And then, Mr. President, we are going to take that same spacecraft, and put three people on top of that rocket that has never flown with men on it, and we are going to send it to the moon.
That is the way we did it.

I am sure if Mr. Webb had tried to go in and convince the President, he would have been kicked out of his office. But I believe that the men here responsible for those kind of decisions, gained us very valuable months, which enabled us to meet the deadline of landing within the '60s.

The three of us, I am sure, as we look back on things, feel quite proud of the significance of the symbols that we chose. And it took us many long hours in the evening to choose the Eagle as our emblem, carrying the olive branch to the moon, the olive branch of peace, and the call signs of Eagle and Columbia.

If there were any regrets that I think we might have, it would be that instead of bringing back the helmets, perhaps we should have brought back the boots that we wore on the surface, so that Mike could display them in the Smithsonian.

Those footprints that are up there on the moon are a living monument that will last for ages and ages to come.

The three of us, and many others that were part of the space program, are now planting our footsteps in widely diverse ways. For some it has been easier than others. Our lives have changed tremendously.

The moon and the surface have changed. And I trust that future historians will look back and say that the
earth and the lives of its inhabitants have changed, changed
in a way that only the ingenuity of Americans could have
brought about.

We need not apologize to any of the space program's
critics, but we should stand proud when we remember the events
that led up to July 20th, 1969.

Thank you.

(Applause.)

DR. BROOKS: Thank you, Buzz Aldrin.

It would be presumptuous of me, I think, to welcome
Mike Collins and Mrs. Collins here, because this is their
turf. They belong here. They have come to roost, and this
is his museum that we are looking at.

Mike Collins was born in Rome, educated at St. Albars
School here in Washington, and at the U.S. Military Academy.
He was an Air Force test pilot at Edwards Air Force Base at
the time of his selection to the Astronaut Corps in 1963.

Mr. Collins flew aboard the three-day Gemini 10
flight, and became the nation's third space walker, prior to
his assignment to the Apollo program. He was the Apollo 11
command module pilot and orbited the moon while his compatriots
walked upon it.

After Apollo 11 he left NASA, became Assistant
Secretary of State for Public Affairs, served there until
1971, when he joined us as director of the National Air and
Space Museum of the Smithsonian Institution.

Mike?

(Applause.)

MR. COLLINS: Thank you very much, Dr. Brooks.

And thank all of you for coming. I can't imagine a better place for this ceremony than here on the Mall, in the shadow of the Capitol. It is also one of my favorite places, and as Dr. Brooks told you, I do spend a lot of time here; a great deal of it in one of the old red buildings to your right rear, the 1879 Arts and Industries Building.

And every time I walk in there, or practically every time, I am startled by the size of the original Wright Brothers airplane suspended almost directly above the Apollo 11 command module, which carried us to the moon and back.

The remarkable part, I think, is that only 66 years separated these two events, an indication of the incredibly swift pace of technology in this century.

Today I look back on what happened five years ago with a great deal of pride, and still a trace of disbelief. But more important, I think, is where will we be five years from now, or, indeed, 66 years from now.

Clearly, the mood of the country has shifted from the exuberance of the '60s, to a more introspective attitude, causing us all to examine our own planet in a way that is more critical than we have ever examined it before. And I
think that the space program is being, and will be extremely helpful in this examination; for the ability to orbit the earth once each 90 minutes is a most powerful tool, a tool for measuring the ravages caused by over a millenium of human carelessness. And such a complete survey is the first step in the process of repair.

Therefore, I expect the next five years will see a burgeoning of the productive use of earth satellites for the benefit of all of us surface crawlers here.

But 66 years from now, I certainly hope that this new building going up over there, the new National Air and Space Museum, which incidentally will be open to the public for the Bicentennial on the 4th of July, '76.

I certainly hope this new building will be chock full of the products, the byproducts of our exploration. I hope that the museum will contain spacecraft that have taken men to the surface of Mars and back to Earth again, just as this one behind you contains the Apollo 11 spacecraft.

I don't think that is an unreasonable expectation, and as a matter of fact, I think that long before 66 years have gone by, man will have clearly documented the existence of extraterrestrial life, and I hope that our new building here will contain samples of that life as well as the machines that discovered it. I don't think that is unreasonable.

I am looking forward keenly to that kind of a
future, anyway, a future which will see NASA in the forefront
of exploration, and the Smithsonian documenting and displaying
each step along the pathway to the stars.

Thank you.

(Applause.)

DR. BROOKS: Thank you very much, Mike.

VOICE: A ubiquitous commercial says, you only go
around once in life.

Hardly.

You go around and around. Some say more in this
city than in others; go physically round and round. Once
a day around the earth's axis, and once a year around the sun,
like a giant carousel with horses named Earth and Jupiter, and
Mars and Lunar. 70 turns or so for a lifetime ticket.

When that lifetime ride is begun, we can't get
off, and many people say that neither should you switch horses
when the merry-go-round is in motion. Never change horses in
midstream. Why get on another horse when you don't even
have your own well trained yet?

Well, we answer, we know our horse has shin splints,
and we suspect it may have a bowed tendon. So, perhaps if
we were just able to go over to the next horse over on this
merry-go-round, we would be able to observe and diagnose our
own horse better.

And from the next horse beyond that, we would get a
superlative view of the rest of the carousel. Spectacular sights of the carnival surroundings.

Well, today, we celebrate the completion of five trips around the sun; five turns of the carousel since we first had someone trade horses.

We say it really was an experience, we really did get a new view. We really know our horse better.

We do think that by and by everybody will be doing it, but not everybody completely believes the horse traders. They suspect that these travelers may be just like many others, less interested in the voyage than the telling about it. And if they are like most travelers, they talk about past and future; where they have been, and where they are going, depending on which they think will be most impressive to the listener.

The human, after all, is a slave to his own self satisfaction. Some find that satisfaction in the acquisition of material things and they are scorned by those who do not. Others find their satisfaction in experiences or telling about them. Still others find their satisfaction in proclaiming that they are not like the other two. They are slave to neither material things, nor to emotion.

But, in reality, they are slaves to the existence of both. Many observers think of the scientists or the technologists as completely bound to physical things, and
sharply separated from the arts, the world of perception and emotion.

But that is an imperfect view, for all, the physicist, the astronaut, the painter, and musicians are all attracted to their rainbow's end by the emotion of wonder.

Albert Einstein said, "The fairest thing we can experience, is the mysterious. It is the fundamental emotion which stands, the cradle of true art and true science."

In the limited ride on the carousel provided by our creator, and in the larger sense our existence is completely dependent, not on ourselves, but on our fellow man.

Our physical surroundings, the burdens we bear, the smiles that uplift us, are the product of our fellow man. And everything we leave behind, the products of our individual lifetimes, are received by our fellow man for better or for worse, stones from which he will build tomorrow's foundations.

I don't know how the legacy of Apollo will be judged, but those of us involved have certainly received self satisfaction enough for anyone. And I, for one, am happy that I had the opportunity to play a part.

Thank you. It is nice to see so many friends here.

(Applause.)

DR. BROOKS: Ladies and gentlemen, with gratitude, with, I think, some sense of contemplation of this event as well as celebration, that concludes our ceremonies.
I would like to thank our speakers, our guests, and thank you for coming; until the next ride on the carousel.

(Applause.)

(End of tape.)