

# SPACE EXPLORATION: A HIGHER VISION

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Remarks by  
Vice President Hubert H. Humphrey  
at the Collier Trophy  
presentation ceremony.

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These remarks were made by Vice President Hubert H. Humphrey in Washington, D. C., at the presentation of the Collier Trophy to Mr. Lawrence A. Hyland, Vice President and General Manager of the Hughes Aircraft Company, for the Surveyor program. The Surveyor spacecraft series yielded a wealth of photos and engineering and scientific data in support of selection of a manned Apollo landing site on the moon.

Mr. Hyland represented teams from the Hughes Aircraft Company, General Dynamics Corporation and Jet Propulsion Laboratory which were largely responsible for the Surveyor program.

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*"Our investment in space exploration is related to our national security and our national well-being. It is related to our common defense and our general welfare. It is related to the subject of excellence in performance, education, industry, and human behavior."*

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*"Our space program is one of the wisest investments this country has ever made. The techniques to put a man on the moon are exactly the techniques that we are going to need to clean up our cities. I refer to the management techniques that are involved, the coordination of government, business, the scientist, and the engineer. We are not going to make these cities over just by a speech, and we are not going to do it either just because somebody wants to put a hundred billion dollars into it. It takes more than money to do anything. It requires knowledge and planning. It requires the technology and the ability to get things done."*

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*"Our space program is a splendid challenge and it is a noble mission — one whose practical benefits for today are exceeded only by the promise of tomorrow. So I urge every American to support the future development of our space program. Don't come in second in a two-man race, because you are last."*

## SPACE EXPLORATION: A HIGHER VISION

By Hubert H. Humphrey  
*Vice President of the United States*

Why are Americans committed to reaching the moon and beyond? I think this is a most appropriate question to ask at this time when there are so many discussions and arguments over whether or not we are properly using our resources. This is not an easy question to answer. But I do think that it is a matter that deserves our most careful consideration and our most prudent judgment.

Why are we committed to reaching the moon and beyond when there is so much to do right here on earth?

Is it to enhance our national prestige? Just to make ourselves feel a little better?

Is it to satisfy our curiosity because the moon, like Mt. Everest, is there?

These factors have something to do with it. There isn't any doubt about that. We are a curious people, and I hope we always will be filled with inquisitiveness and curiosity. I hope that we always have a sense of pride, and that we have a love of nation that drives us to want to have national prestige.

A spirit of adventure and the urge to be first have a lot to do with the magnificent personal performances that are at the root of our successes in space. It is always good to be first in whatever you try to do, particularly when it comes to science and technology and other areas of human performance.

We have decided to commit our resources to venture into space for one primary reason: We believe that this mission to the far-out will produce many down-to-earth benefits for all men, and benefits not only for today but benefits for the future. It is my belief that the nation that is first in science and technology has a chance to be the first to overcome some of the perplexing problems that have beset mankind since the beginning of civilization.

The unknown potential of space alone would be enough to require an investment of energy and brain power and funds into its exploration. I happen to think that maybe one of these days we will get civilized enough on this earth to have our contests, not on the battlefield, but rather in the field of adventure in space and the exploration of the universe. It might very well be that space offers us the chance for peace.

We also knew when we began this great effort that the people who don't explore today find themselves without the ingredients of progress for tomorrow. This great economy of ours today is not the product of accident. The so-called technological gap, even between ourselves and other developed nations, is not just good luck on our part or bad luck on theirs. The investment that this nation has made, both public and private, in men and materials in the fields of science and technology, and particularly in all of the related fields that surround our space exploration, has contributed immensely to our technological and scientific successes. I would hate to think of what would be happening to our schools of science, technology, and engineering were it not for these investments that have been made.

Our investment in space exploration is related to our national security and our national well-being. It is related to our common defense and our general welfare. It is related to the subject of excellence in performance, education, industry and human behavior.

It has begun to produce meaningful and practical benefits right here on earth. Because some men will need to walk on the moon tomorrow, other men are able to walk on the earth today. Our work in the field of space exploration has made it possible for many who are handicapped physically to live a better life. For example, from the equipment that we have already designed for moving across the moon's surface, we have developed a walking chair for limless and otherwise disabled persons. There is more human power ready to be put to work, productive power ready to be put to work amongst our handicapped than anyone could possibly fathom or imagine.

There is an adapted version of the miniaturized television camera developed for use in space capsules. It can be swallowed by patients to help doctors diagnose suspected ulcers and other physical disturbances. What a remarkable

advance! How do you judge the value of a life? If that one miniature television unit could save a life, who wants to put a price tag on it? The tiny electronic devices that are attached to each astronaut in flight in order to measure his blood pressure, metabolism and temperature can do the very same thing for patients in hospitals enabling one nurse manning a control board continuously to monitor the condition of more than a hundred patients. If we could apply that one principle to modern medicine and modern hospital care, we would save the cost of the entire space program because the cost of hospital and medical care is skyrocketing. The need of manpower in our healing arts is one of the pressing needs of the nation, and we are now beginning to learn something about how to give the best medical care without waste of manpower. This will enable us to have better manpower controls, equipment and diagnosis for prompt treatment. Much of this has come out of our work in space.

Those are just a few of the examples of the practical applications of space research to the very down-to-earth human problems of health. And space research has vastly expanded our capabilities in navigation, communication, and meteorology. I am also chairman of the Council on Marine Sciences, and I know there is a close interrelationship between oceanography and space research.

Space research has given us new products and processes in such fields as agriculture, photography, metallurgy, and oceanography. When I think of the earth resources satellite program, with its sensing devices, I realize that we can save hundreds of millions of dollars in crops by detecting diseases in plants. We will be able to detect underground supplies of water and only recently from a high flying airplane a gold mine was discovered. We have just begun to scratch the surface.

In the space program, we have developed all kinds of things that are even more down-to-earth. We have even developed new paints and coverings and new smoking pipes. We have developed new chemicals, plastics, and metal alloys, and many products and applications in the field of electronics.

There are those who say that we are wasting our money in the space program. Our space program is one of the widest investments this country has ever made. The techniques to put a man on the moon are exactly the techniques that we are going to need to clean up our cities.

I refer to the management techniques that are involved, the coordination of government, business, the scientist, and the engineer. We are not going to make these cities over just by a speech, and we are not going to do it either just because somebody wants to put a hundred billion dollars into it. It takes more than money to do anything. It requires knowledge and planning. It requires the technology and the ability to get things done.

There is no checkbook answer to the problems of America. There are some human answers, and the systems analysis approach that we've used in our space and aeronautics programs in the Department of Defense, National Aeronautics and Space Administration, and other agencies. This is the approach that the modern city of America is going to need if it is going to become a livable, social institution. So maybe we've been pioneering in space only to save ourselves on earth. As a matter of fact, maybe the nation that puts a man on the moon is the nation that will put man on his feet first right here on earth.

We might have made some of these advances without ever landing a Surveyor on the moon or without ever probing out in space. We might have and we might not have. At least there are some people that say we would — if we had thought to try — but we didn't try until we got going on this great adventure into the unknown. Much of the progress comes unforeseen, and its achievement depends heavily on the broader objectives a nation set for itself. I think a certain extravagance of objectives — a will to push back the frontiers of the unknown — is the test of a free and vital society. It's the test of a nation that intends to meet the challenges of tomorrow with a running start.

Our space program is a splendid challenge and it is a noble mission — one whose practical benefits for today are exceeded only by the promise of tomorrow. So I urge every American to support the future development of our space program. Don't come in second in a two-man race, because you are last. Support this effort. I am proud to do so and I shall do it with pride and with vigor, and intend to carry the message of space accomplishment now and tomorrow.

The heavens are made for man, just as surely as the earth is, and if a man is going to have his feet on solid ground, he has to have his eyes on a higher vision in space and indeed even into eternity.

**AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA, INC.**  
1725 De Sales Street, N.W., Washington, D.C., 20036

REMARKS

VICE PRESIDENT HUBERT HUMPHREY

COLLIER TROPHY PRESENTATION

SMITHSONIAN INSTITUTION

OCTOBER 19, 1966

Mr Myers

Mr Snyder  
Mr Webb

Dillon Ripley

Mr Sweeney  
Dr Welch

Pete Conrad

51st Robert

It is difficult to appreciate the speed of history these days until we come to the Smithsonian and find that Gemini 4 already resides here.

It seems only yesterday that I was congratulating James McDivitt and Edward White for their 98-hour flight in this spacecraft.

I can think of no more fitting choice for this distinguished award than Project Gemini and all those who made it such a success.

Gemini capsules manned with astronauts have so far spent 875 hours in space.

It was the first spacecraft to rendezvous with another spacecraft, and the first spacecraft to dock with another spacecraft.



Both such major experiments have been achieved again and again with great skill.

Four Gemini astronauts have left their capsules and walked in space for a total of 5 hours and 56 minutes.

These and many other Gemini successes comprise truly a remarkable record which is today being <sup>honored</sup> ~~awarded~~ by the Collier Trophy judges.

With us are some of the men who made all of this possible: The men of the National Aeronautics and Space Administration team who brought Gemini from an idea to the heights of unbelievable success. <sup>and</sup> There is James Webb, whose managerial <sup>great</sup> leadership made such a contribution.

I know that we all wish that Dr. Dryden could be here to see Gemini honored, for this award is also a monument to his leadership, his magnificent record as a scientist and government administrator, <sup>and to his memory</sup>

↳ Mrs. Dryden, we all salute you for your devotion and your courage.

↳ I notice that Collier Trophy judges in their wisdom have awarded this trophy to the entire government-industry team that made Gemini possible. I applaud their decision. Also with us today are the men of industry who produced the capsule, the launch vehicle, the tracking system, and all of the other essential components necessary for the success of such a difficult and complex project.

↳ In addition, there are the leaders of the Department of Defense organizations which rendered such valuable support from the beginning of the program through each recovery of the Gemini astronauts and capsule.

↳ Though our major concern was with the astronauts from the time they were shot aloft by their Titan II launch vehicle . . . hurtled through space and then returned for a suspenseful recovery



at sea, we cannot forget that there were literally thousands of  
man/years spent by hundreds of thousands of people here on earth  
to make Gemini a success.

Here also as honored guests at this presentation are  
representatives of that group that makes us all proud to be  
Americans -- the Gemini astronauts. They have proved that man  
can adapt himself to new environments and perform with valor  
and intelligence.

In talking about Gemini 4 and its astronauts, I cannot help  
but take note of the flying machine suspended above me. It was  
also flown by a man of <sup>faith</sup> courage and intelligence, Colonel Charles  
Lindbergh, almost 40 years ago. It took Colonel Lindbergh  
approximately 33 and 1/2 hours to fly the "Spirit of St. Louis" from  
New York to Paris, while a Gemini spacecraft in the proper orbit  
would pass these two points in about 13 minutes.

*smaller than Wright - Kitty Hawk, Sept 1903  
110 yards - 12 seconds  
first manned heavier than aircraft flight*

As the future continues to become the present, men will traverse the heavens in increasing numbers and with increasing effectiveness, and we shall be in the vanguard.

And now on behalf of President Johnson, who has been one of the chief architects and supporters of the national space program, and on behalf of all Americans, it gives me great honor to present the Collier Trophy to the Gemini team.

To James E. Webb - Administrator of NASA  
#####  
and the late Mr. Hugh Dryden  
who was at his death the Deputy Administrator of NASA  
"representing all of the Gemini program  
Teams which significantly advance  
human experience in space flight"

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Mrs. Dryden, we all salute you for your devotion and your courage and the inspiration you gave to your distinguished husband.

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In addition, there are the leaders of the Department of Defense organizations which rendered such valuable support from the beginning of the program through each recovery of the Gemini astronauts.

On behalf of a proud nation, I salute all of you.

This great team, combining government and industry, has done much to improve the standards of performance in our country. One of the most outstanding contributions that the space program has made besides expanding man's knowledge of the universe is to require all of us to do better than we had planned to do. Space research, development, and exploration have put a high premium upon skill, teamwork, and excellence.

Though our major concern was with the astronauts from the time they were shot aloft by their Titan II launch vehicle - hurtled through space and then returned for a suspenseful recovery at sea - we cannot forget that there were literally thousands of man-years spent by hundreds of thousands of people here on earth to make Gemini a success.

Here also as honored guests at this presentation are representatives of a group who make us all proud to be Americans -- the Gemini astronauts. They have proved that man can adapt himself to new environments and perform with valor and intelligence under the most demanding circumstances.

In talking about Gemini 4 and its astronauts, I cannot help but take note of the flying machine suspended above me. It was also flown by a man of courage and intelligence, Colonel Charles Lindbergh, almost 40 years ago. It took Colonel Lindbergh approximately 33 and 1/2 hours to fly the "Spirit of St. Louis" from New York to Paris, while a Gemini spacecraft in the proper orbit would pass these two points in about 13 minutes.

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And now on behalf of President Johnson, who has been one of the chief architects and supporters of the national space program, and on behalf of all Americans, it gives me great pleasure to present the Collier Trophy to the Gemini team, which has so significantly advanced human experience in space flight.

I do so by presenting it to James Webb, the Administrator of NASA. I do so in the memory of the late Dr. Hugh Dryden, who at the time of his death was Deputy Administrator of NASA. I congratulate each and every one of you. I want particularly to express to you, Mrs. Dryden, our profound appreciation for all that your beloved husband did to strengthen his country.



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