

"Contemporary Art -"
Freedom of choice

REMARKS

VICE PRESIDENT HUBERT HUMPHREY

SAN FERNANDO VALLEY STATE COLLEGE

CALIFORNIA

SEPTEMBER 26, 1966

President Prator
Dr. Russell
Cong. Jim Corman

At Gov. Anderson

Charles Jackson

22nd dist

Mr Hart

Built in 1958

Refuge from darkness

It is a pleasure to be away from Washington -- where we are constantly lectured to by professors, both inside and outside government -- and to be here, where I can visit with my fellow students.

- Population explosion
Educ. explosion!

There has been a great deal said lately about the lack of challenge in our times... about how the old frontiers are all conquered.

When I hear these things I wonder which world it is they're talking about.

We live in times today even more challenging than "The Age of Discoveries" centuries ago, when the world was opening to the daring seafarers of Europe ~~Spain and England~~.

So much to talk about -

~~the~~ ^{we} can recall reading of those voyages -- made in tiny ships only a little less cramped than our spacecraft -- ~~when~~ I was a boy. And I remember my keen regret that everything had been discovered...that never again would man set foot for the first time on a new land.

But as the earth has closed in on us, the universe is opening up.

↳ In a few short years, man will set foot on the moon.

Space
Here in California you hardly need to be told that we are in the space age. - of all R+D contracts - over 1/3 to Calif!

↳ It is an everyday reality in your lives, and a major one.

↳ This state plays a bigger role in the space industry than any other. And I know, Congressman Corman, that this

④ } Congressional District stands among the highest in the country in dollar volume of space contracts from the Govt.

At this stage of the space adventure, only a few superbly-trained individuals, the astronauts, have had the opportunity to venture out into space - just as only a few Europeans ^{in the 16th century} were privileged to discover and explore new worlds.

and of course
is it
worthwhile
There are those, even if they are diminishing in number, who question whether our space effort is worthwhile -- just as there were doubtless some who, when Columbus returned, muttered: "Was this trip really necessary?"

I could say that man is bound to explore space, just as he was bound to climb Mount Everest -- because it is there.

It is the kind of challenge which, if we knew we were capable of rising to it and did not, we should feel ourselves less than worthy of the age in which we live.

I could point out, too, that we are just in the beginning days of this great adventure -- that we cannot really predict what it will bring forth in the future, anymore than Columbus could have foreseen all the consequences of his voyage.

Dividends
However, even setting these considerations aside, we see dividends our space effort is already yielding right here on earth.

↳ We see the new high-performance materials and the incredibly compact electronic devices which have been developed for our spaceships, but are being built into many articles of everyday use. AND MORE ARE COMING

↳ We see new methods and techniques, such as: the accelerated use of oxygen in steelmaking.. new coatings for the temperature control of buildings... filters for detergents, and many others. AND MORE ARE COMING

↳ We see better medical instrumentation -- resulting from electronic innovations for spacecraft -- already being applied in clinics and hospitals. It should soon be possible, for instance, to monitor continuously and in detail the condition of hundreds of patients from a single central location, just as the well-being of our astronauts is monitored from earth. AND MORE ARE COMING

↳ Already, some of our unmanned satellites are at work ~~for~~ improving global communication and weather forecasting, and increasing the accuracy of navigation. AND MORE ARE COMING

↳ ^{+ Public Officials} When I see what a high proportion of college faculty members are, at any given moment, airborne to some conference or other, I am inclined to agree with the man who remarked that improvements in transportation do not cut down traveling time, but merely increase the area over which people have to travel.

↳ With satellite communications, we can reverse this strenuous trend. Businessmen, scientists, and scholars can confer with one another without leaving their offices or laboratories.

↳ But our space program has brought us far more than improved materials and processes.

↳ I think we must admit that the first Sputnik gave us a " good swift kick in our complacency concerning the quality of American education.

Upgrading

↳ Since Sputnik I there have been tremendous improvements in our entire educational system -- of which the new mathematics and the new physics are only examples. -- ~~Examples~~

↳ NASA, for instance, has taken concrete steps to improve education in subjects related to space. It has assisted over 200 colleges and universities throughout the country with grants for facilities or research projects, and often for both.

↳ In California alone, over 250 persons at eight universities are studying today under NASA's Ph.D. assistance program.

↳ But these efforts are only secondary if you put them beside the general awareness in our country, since Sputnik, that all our education -- from top-to-bottom, in social studies and languages as much as in technical subjects -- needed re-examination and re-evaluation. curricula, methods

↳ In the last three years alone, we have more than doubled our federal investments in education. Educ

Fed aid - was investment

Teaching Methods

Revolution in Educ

↳ And I doubt that there is a school system remaining in America which has not undergone a revolution, ~~major or minor~~, since Sputnik I.

↳ Sputnik hurt our national pride. It jarred us loose from our comfortable doze. And it began to get us moving, I might add, even before the Presidential election of 1960.

↳ The space age has placed a premium on knowledge and education. It has also forced us to adopt higher standards throughout all our society.

↳ It has demanded new techniques in large-scale management and new methods for assuring absolute reliability in product performance. *Upgraded Performance of U.S. Industry*

↳ Above all, it has caused us to develop systems analysis and engineering -- the technique of bringing to a sharp focus, on a single problem, the combined resources of many different scientific disciplines.

This system now being used on other problems of citizens

↳ It has required biologists to work and think with physicists, chemists with mathematicians, and astronomers with geologists.

↳ The rich resources of human skills and insights -- and the new and sophisticated techniques of mobilizing them for the solution of problems -- can and are being applied to unravel some of the difficulties and complexities of modern life -- from air pollution to the information explosion.

and ↳ Since California is the leading state in the space age, it is no surprise that California has made better use of these new approaches than any other state.

↳ Governor Brown, and the aerospace industries, working together, have shown creative imagination in meeting challenges in city planning, in urban and rural transportation, in pollution control, in records management, and public health and safety.

↳ What has begun here -- ~~and it really is still in the~~
beginning stages -- is already being studied by other states
 and regions facing the same problems.

*If we can spend
 billions to put
 man on moon --
 put man on the
 desert on earth*

↳ The systems approach is here to stay.

But there is an earthly benefit of the space program

which may in time overshadow all the other benefits.

↳ Our space effort contributes greatly to the most
 compelling necessity of our times -- the establishment of
 enduring peace.

Peace

↳ In the narrow, preventive sense, it helps to deter
aggression by adding to our national strength and security.

↳ It gives support to our ground forces in terms of
improved communications, more reliable weather information,
and more accurate navigation and mapping.

↳ It gives us more adequate forewarning of potential or
 actual danger.

↳ It can provide ~~more~~ observation
 to monitor an arms control
 Agreement.

It Can be Eyes in the Sky!
Sensors to Detect Atomic Blast

↳ It will also give us the capability -- which we trust we will not need to use -- to neutralize threatening or hostile spacecraft.

↳ In a far broader and more positive sense, it inspires confidence in our friends and allies and respect from our adversaries.

↳ It is a continuing demonstration of the strength and vitality of our society and economy -- of our high performance in science, technology, management and production. And it shows in practice the meaning of a truly open society such as ours.

↳ Our space programs and activities have been carried out under the eyes of the entire world. ↳ The contrast, for example, between the veil of secrecy drawn over Soviet ^{space} landings and the world-wide TV coverage of the Gemini splashdowns could hardly be more striking.

↳ I believe, too, that space exploration may in time have a profound effect upon how we look at the life of mankind here on earth.

↳ It will put all our concerns into a wider and more wholesome perspective.

↳ Ever since Copernicus, we have realized that our earth is a mere speck in an immense universe. But while we have known this intellectually and theoretically, most of us have not really taken it to heart, not really felt it in the marrow of our bones.

↳ As the full significance of that fact is brought home to us by the actual exploration of space -- as we begin to comprehend that the earth itself is a kind of manned spaceship hurtling through the infinity of space -- it will seem increasingly absurd that we have not better organized the life of the human family.

↳ Our experience in space can be a powerful stimulus to all of us, wherever we live, to move towards a world of law, a world without war.

↳ And we may find also in the space effort that "moral equivalent of war" for which philosophers have been searching over many centuries.

↳ Like war, it stretches our human capabilities to the utmost. It demands all that we possess of ingenuity, determination, persistence, and intelligence -- and, on the part of our gallant astronauts, the highest degree of courage and resourcefulness in the face of danger.

↳ Space activities -- even competition in space -- can be a substitute for aggression, a bridge for mutual understanding and the identification of common interests with other nations, and a major tool of arms control and disarmament. — *yes the*

(X) } *quarters of peace!*
But, With all the *we* exciting happenings in space, it is sometimes hard to realize how new this whole venture is.

It was less than 10 years ago that we put our first spacecraft into orbit, and now we have launched more than 400.

↳ It was only 5 years ago that we put our first astronaut into space -- and then just for a 15-minute hop. — sub orbital!

↳ As of today, our astronauts have flown 1804 man-hours in orbit.

↳ This is more than three times the man-hours of the Soviet cosmonauts.

What of the future in space? I will not set any timetable, but I do see these achievements in the future:

- Improved methods of propulsion, using nuclear as well as chemical energy;
- The development of winged spacecraft capable of re-entry into the atmosphere and landing on earth;
- The establishment of manned earth-orbiting stations, capable of a wide variety of functions and missions;
- The building of stations on the surface of the moon, and exploration of it;
- Unmanned probes throughout the solar system, to be followed by manned expeditions to the nearer planets.

↳ These are not mere idle dreams -- but goals we will achieve.

It used to be said that the sky was the only limit to human aspiration and achievement. Now -- thanks to man's ingenuity and spirit of adventure -- we are bursting through into the infinity of space.

And as we look toward that infinity, we are inevitably reminded of St. Augustine's words:

"Man looks about the universe in awe at its wonders -- and forgets that he himself is the greatest wonder of all."

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