news release

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HUMPHREY ISSUES SCIENCE-TECHNOLOGY STATEMENT,
HITS POLITICAL GAP HUNTING OF NIXON

San Jose, California, and Washington, D. C., October 25,--Vice President Hubert H. Humphrey today released a broad policy statement on science and technology.

Entitled "Science to Serve a Nation," Humphrey drew on his Senate and Vice Presidential experience of 20 years to discuss his concept of the technological Presidency in which virtually every decision faces "the abyss or the threshold of new technological developments."

"If there is a single theme which runs throughout the message" Humphrey stated, "it is that we must learn to utilize our scientific resources and opportunities with wisdom so that they will truly be servants of our social purposes ... we must be masters, not slaves to our technology -- to the bomb, to the computer, to automation."

The Vice President describes research and technology's role in national security as "our first line of defense against the unexpected." He said that military research and development has permitted "cheat proof" nuclear treaties and charged that Richard Nixon's stalling of Senate ratification of the non-proliferation treaty as "a monumental disservice to the security of the United States -- and of the entire world."

In discussing our space program, the Vice President said:

"Contrary to the ... political 'gap hunting' of my opponent, we are today first in space." The Vice President serves as

Chairman of the National Aeronautics and Space Council.

In addition to discussing our role in space and in marine sciences -- a field in which Humphrey, as Chairman of the National Marine Science Council, is expert and has played a dominant policy role in this Administration -- the Vice President emphasized the "people oriented" domestic problems in which he believes science must play a more dominant role -- crime control, hunger, health care including mental illness, chronic diseases and problems of the aging, urban problems including transportation, a liveable environment, modern teaching materials, technological assistance to underdeveloped nations, and more sophisticated arms control and inspection measures.

The Vice President stated: "We must support science and technology because a great nation must now and in the future be at the cutting edge of discovery to remain great, to stimulate business, to challenge its best minds, to plumb and probe and prove."

Specific proposals included:

-- establishment of a set of multi-disciplinary, technological institutes on urban sciences, transportation and environmental management;

-- doubling of ocean related activities over four years;

-- strengthening universities in every section of the country;

-- more funds for basic research; substantially greater support for the National Science Foundation -- including support for behavioural sciences; and the institution of new contract and grant programs in other civilian mission-oriented agencies.

-- Strengthening presidential science advisory apparatus by (a) give consideration to combining the Office of Science and Technology with the Space and Marine Science Councils; (b) broadening the President's Science Advisory Committee to emphasize the

increased role of technology and of social sciences; and (c) upgrading the Federal Council for Science and Technology by having the Vice President serve as Chairman of this policy planning body.

In conclusion, the Vice President stated:

"Science has many promises to keep -- in terms of meeting our social ills that are themselves often consequences of a technological age. Unless we build bridges of understanding so as to combine technology and the demands of society, they will be empty or broken promises.

"As President, I intend to build those bridges. I intend to keep these promises.

Read a release this morning.

- SCIENCE TO SERVE A NATION -

Sat AMs 5:00 p.m.

By

Hubert H. Humphrey

October 25, 1968

This message is addressed to our Nation's one million scientists and engineers. But it is also addressed to the other 100 million voters who are not scientists but whose lives are enhanced -- and threatened -- by technological progress. It is addressed to those who are stimulated by discoveries of science and those who are overwhelmed by the rapidity of change it produces. It is especially addressed to our youth, who will witness even more wonders and be obliged to deal with even more complex problems and who should be concerned about science and technology being used to develop the kind of humane society we all seek.

Science and technology are now a fundamental part of every American's life -- this statement is directed to three principal questions:

First, our Nation's stake in science;

Second, the demands on your next President in coping with a technological age; and

Third, some explicit actions I would take as President to help make science work for man.

Our Technological Age

Science has been good for this country. It is an essential driving force to our expanding economy, generating the highest living standard anywhere. It has contributed to our status as a world power. It provides us with ways and means to transform our concerns about improving the human condition into programs of action.

Let me be specific.

Science and engineering have placed within reach of all men freedom from superstitution and tyranny; freedom from hunger and the toil of simply raising food. They have offered man a longer life, free of disability and disease; uncapped the genie of peacetime nuclear power; sparked exploration of unplumbed depths of the ocean and the farthest reaches of outer space. Science and technology made it possible for our

private business to be the most productive in the world, and for our Government -- which is the people's business -- to meet its responsibilities. We should not forget that military threats to our cherished freedom and democratic way of life were met successfully by an arsenal stocked by science and technology.

The contributions from science and technology are now so commonplace that we take them for granted. We forget the miracles of heart transplants, miniaturized color TV receiving broadcasts of the Olympics relayed by satellite, supersonic transport, life saving drugs, synthetic fibers, extracting cheap fresh water from the ocean.

U. S. Leadership in Science

When I talk about science and this Nation, I can radiate some pride in these accomplishments. Moreover, American excellence in science and technology sets world standards. Since 1960, American scientists have won more than 40% of the Nobel Prizes in Science and Medicine. Another one was announced last week. The "technology gap" widely discussed abroad is paced by our engineering innovation and keen industrial management.

Contrary to the nervous speculations of some, and the political "gap hunting" of my opponent, the United States is today first in space. Success of APOLLO 7 dramatizes those achievements. Let me also recall that:

First. To date the United States has put 250 more spacecraft in earth orbit or in outer space than has the Soviet Union.

Second. We have led the way in many years of operational capability with meteorological satellites, communication satellites, and navigation satellites.

Third. We have had about twice as many manned flights, more than five times as many manned hours in space and 36 times as many hours of extravehicular activity as the Soviets whom the Republicans claim are in the lead.

Fourth. We clearly lead in the collection of scientific information from space and in the dissemination of that information for the advancement of human knowledge and the use of mankind.

Much of our strength in research and development derives from support by the Kennedy-Johnson-Humphrey Administrations. Despite extravagent claims by my Republican opponent as to interest in science during his years in office, the facts show that since 1961 Federal investment in research and development across the board has considerably more than doubled and our annual investment in basic research and graduate training has increased four-fold. More talented science and engineering students received financial help this year from the Federal Government than in all eight years of the last Republican Administration combined.

The Federal Government has been obliged to assume a major responsibility for funding research and development in this country, in fact, three-fourths of the total. We do so, because of the benefits anticipated from this investment and because the Federal Government is the major consumer of new discoveries. We do so because a great nation must now and in the future be at the cutting edge of discovery to remain great; to stimulate business; to challenge its best minds; to plumb and probe and prove.

This is not science for its own sake. This is science to serve a nation.

Science and Democracy

It should be no surprise that science and technology flourish in our land. First, science and the scientific method are strongly compatible with our democratic ideals and institutions. Second, they are another expression of our heritage of the frontier, our spirit of curiosity and discovery -- of meeting and mastering the unknown natural wilderness.

The scientific method is itself the method of a pluralistic society. Each individual scientist is challenged to study and to explain the world around him -- searching for better understanding, skeptical of dogma and of old truths. In a democracy, Government would not dare dictate "first principles" to its scientists -- a restraint we have seen in other times, and exerted by other governments in our own time.

In America, each scientist has an equal opportunity to contribute. Nature -- although stubborn in yielding up her secrets -- knows no favorites, either by race, by religion, or by culture.

Our early statesmen -- Washington, Adams, Jefferson, Madison and Franklin -- saw and understood the mutually re-enforcing benefits of science and democratic Government. In their vision, they recognized how science and technology expanded the dimensions of freedom -- provided new options for each individual -- widening choices as to where he would live, at what he would work, when he would travel, the extent of his education, and the opportunities to enjoy the fruits of his labors and of others.

John Kennedy, one month before he died, said this to the National Academy of Sciences:

> "In the last hundred years science has emerged from a peripheral concern of Government to an active partner. The instrumentalities devised in recent times have given this partnership continuity and force. The question in all our minds today is how science can best continue its service to the Nation, to the people, to the world, in the years to come."

I think that is still the question.

Unwanted Effects

But here we have a nagging paradox. While the power of scientific discovery has been employed for positive social purposes, we have not done nearly well enough. We must also be frank in recognizing that science is a blight as well as a blessing to society:

We have developed the potential of nuclear weapons to destroy the entire human race, at one stroke, perhaps forever;

We have displaced some of our citizens from their jobs by automation;

We have mismanaged our natural environment and permitted pollution of our air, our streams and our landscapes;

We have an implosion of rural migration to cities unprepared to absorb urban concentration. We have created traffic jams; unsightly cities; noise and frustration at all the mechanical gadgets that stop working at the most embarrassing moments.

Looking ahead, we face the abyss or the threshhold of new developments -- genetic manipulation; home broadcast satellites; sonic booms; artificial organs. All will challenge our social and ethical values.

I could go on and on. But most important, I believe that these adverse effects of science and technology are not reasons to abandon the search for knowledge or its application. They are reasons to recognize that science and technology are in themselves knowledge and skill. They are intrinsically neither good nor bad.

The applications of science and technology do not depend on scientists alone. In fact, the most challenging and most awesome applications depend upon decisions by our political leaders -- by the President and Members of Congress.

They have to choose not only what is technologically feasible, but also what is socially desirable.

Turning Science to National Purposes

How then do we master science instead of being its slave -- to the bomb, to the computer, to automation?

I believe science and technology must be servants of our social purpose. Conflicts between science and society -- a breakdown in understanding between scientists and political leaders and humanists -- will limit these prospects and deprive us of the full promise of a technical age. Bringing new ideas into the mainstream of public affairs and then mobilizing the necessary capital, manpower and leadership is not easy. It seldom happens spontaneously. Providing a hospitable climate where scientific creativity and technological innovation may thrive must be done with care. And creating institutions that bring science and engineering effectively into every aspect of our society -- like the merging of any two scientific disciplines -- requires an understanding of both science and society.

Defense and Disarmament

Our Nation, of course, has a vital stake in the science and technology of defense and disarmament. Support of science and technology by our defense agencies has been an essential ingredient in preserving our national security. It must be continued.

In the field of national security, I view research and technology as our first line of defense against the unexpected.

At the same time, our military research and development has permitted us to move toward "cheat proof" international treaties such as the limited nuclear test ban treaty signed in 1963 and the one now pending to halt the proliferation of nuclear weapons to nations not now having them.

In this connection let me say that through patient effort over five years, our country has developed and negotiated this treaty which has now been signed by over 80 nations. I cannot stress too strongly the monumental disservice to the security of the United States -- and of the entire world -- which Richard Nixon has performed by stalling its ratification by the U. S. Senate.

If I am President on January 20, 1969, I will urge the Senate to consent immediately to the ratification of the nuclear non-proliferation treaty.

Social Purposes

When we talk about science in this Nation, however, we must especially consider our current agenda for the Nation's future -- to meet today's problems boldly and effectively to keep them from subtracting from the great promise of our land.

What are the problems to which we must put science to work? We must apply science and engineering -- as we are doing to challenges of weapons development, atomic energy and space -- to problems of slums, pollution, housing, human behavior. We must utilize social sciences as well as natural sciences:

-- to prevent and control crime;

-- to increase the world food supply and meet both the hunger

economic policy has been shared by the Government's in-house laboratories as much as by universities and contractors. Fuller understanding of these measures would help all involved to take steps toward improved effectiveness of the entire enterprise. Of particular conern are the difficulties in communication between science and society. I urge our scientists and their professional organizations to help combine the vitality of our academic institutions and our industry with all facets of American life:

-- to participate in solving our Nation's urgent problems in order that science will work for society; to come to grips with the great domestic challenges rip-tiding across our land;

-- to communicate scientific discoveries and insights to the public;

-- to anticipate hazardous consequences of science and technology, and provide early warning;

-- and to help the public and the Congress understand the effects of science and technological change.

Science and the Presidency

With science such a vital force in our future, and with applications being so largely dependent on Government policy, it should be clear that the next President of the United States:

-- must understand the potency of science and its social and economic implications for good and for ill;

-- must recognize the need for anticipating effects long before they occur;

-- must find ways of bridging the many cultures of our pluralistic America, to bring science and technology smoothly into juxtaposition with our social concerns and to explain science to our citizens;

-- must comprehend the importance of nurturing science and innovation, of fostering education and training of scientists and engineers, and strengthening the Nation's laboratories;

-- must make hard choices as to priorities because in science the number of attractive possibilities will always exceed available funds;

-- must be able to explain the importance of this investment to the Congress, and further enlist the help of the Congress which has been instrumental, and often a leader in developing our present capabilities;

-- must be able to manage the Federal Government's internal scientific affairs that involve $17 billion dollars annually, a substantial fraction of the controllable part of our budget, and we must coordinate programs in dozens of different agencies which have such a high technical content that almost half of the professional staff employed by the Government are scientists, engineers, or physicians;

-- finally, the President must be able to pick men who can help him in dealing with science and engineering in a technological age -- as his personal advisors, as senior officers in every agency of the Federal Government whose mission is influenced by science and engineering.

A President must seek out the best scientific and engineering talent he can find for his team -- and he must be an experienced judge of that talent.

You may have read that I have assembled a bi-partisan list of science advisers and supporters.

In the past few weeks, more than 150 of the Nation's most distinguished leaders came to support my candidacy. They include eleven Nobel laureates and 76 members of the National Academy of Sciences and the National Academy of Engineering. They include former

Kennedy and Johnson, former Rockefeller supporters, and a former science adviser to President Eisenhower.

Thousands more have joined.

Let me contrast this broad-based interest on the part of eminent scientists and engineers, concerned with the Nation's overall stake in science, with my opponent's selections. No other candidate has received this broad-based support from the scientific and engineering committees. My Republican opponent has drawn his advisers largely from the ranks of persons identified with the nuclear arms race and military applications of science.

Qualifications for A President

What is my personal record in the area of science and public policy?

First -- while I was in the United States Senate:

In the early 1950's I helped support creation of the National Science Foundation.

I introduced and fought for legislation that led to the National Defense Education Act. I held hearings on questions of Federal management of science even before we were awakened to the role of science by the Soviet space surprise in 1957. I urged that we exchange scientific knowledge promptly and effectively so as to assure prompt application and prevent duplication.

I foresaw the potency of weapons of mass destruction and the need for their limitation, and introduced legislation for a new Arms Control Disarmament Agency.

I challenge my Republican opponent to compare his record in the Congress with this one.

In recent years, the Congress has given the Vice President a statutory role to help make science policy and to serve as an "assistant Presient" in managing the Government's scientific establishment.

The Congress made the Vice President Chairman of both the National Council on Marine Resources and Engineering Development and of the National Aeronautics and Space Council. These two bodies have been established at cabinet rank, to help the President formulate goals and milestones, establish priorities and be sure that a Governmentwide approach is taken to problems that increasingly involve a range of different agencies.

Some Accomplishments

These have not been simply honorary positions. I am proud that in its two years of life, the Marine Sciences Council has met 14 times and I have presided at 12 of those meetings. Under my leadership it has formulated a long list of recommendations to the President, some 27 of which have been adopted in the last two years, and now become elements of our policy. These include the following:

-- To meet the War on Hunger; A Food-from-the-Sea program has been undertaken to accelerate technology for extracting fish protein concentrate;

-- To improve our comprehension of the sea; an International Decade of Ocean Exploration to engage cooperative efforts of many nations;

-- The Sea Grant legislation was made a cornerstone to building manpower to meet needs of the Seventies;

-- To insure safety of life and property at sea; contingency plans were instituted to meet potential disasters from massive oil spillage;

-- To prevent neo-colonial races among nations of the world; steps were taken to develop international laws that would preserve traditional freedom of the seas, create incentives for private investment in development of marine resources and recognize the legitimate interests of all nations in benefits from the deep ocean floor beyond national sovereignty;

-- To meet conflicts in use of the coastal zone where people and the sea meet, groundwork was laid for both quality standards in our bays and estuaries and for local coastal

authorities responsible for land management in the public interest;

--- As a further step toward world order, proposals were offered in the councils of the United Nations in attempts to limit the arms race by prohibiting emplacement of nuclear weapons on the seabed of the deep ocean.

In just this one area, we are putting science to work to meet problems of our society -- some indeed created by science. Like it or not, we live in a technological age. The question before the Nation as it chooses a President, therefore, is how perceptive, how proven by experience, how disciplined by involvement will he be in turning science to serve our Nation's highest goals and aspirations. The next President must find ways of maintaining the momentum of our scientific enterprise, of fostering the effervescent spirit of discovery that characterizes the personality of our Nation. He must make wise decisions that will harness the positive and supress the negative aspects of new discoveries, tools and techniques.

Steps for Action

I think the country has a right to know what each man would do in these circumstances. My immediate actions would be:

First and foremost, I shall seek ways and means to meet the social and economic problems that concern all our citizens.

These are all national priorities; they should also be our priorities for science.

With these goals -- we need ways and means to bring together those who understand the problems and those with capabilities to effect a remedy.

New approaches will be needed -- I will propose to the Congress that a set of multi-disciplinary, technological institutes be established in urban sciences, transportation and environmental management -- so that science and engineering can be imaginatively and humanely applied. We have found this technique to be highly successful in the case of our National Institutes of Health. Industries, such as the Bell Telephone System, have found this approach similarly effective. The Government

must utilize its own great scientific laboratories to meet changing needs and provide a readiness to meet the unexpected. It must continue to encourage our industrial sector to apply its high technology and systems management capabilities to meet massive and complex urban problems now out of the range of marketplace economics. It must also encourage small business out of whose ranks much of our new technology has come.

Second, our space program has come under attack from two opposing directions. Our aerospace industry is understandably concerned about recent budget cut-backs in the program. On the other hand, those who are legitimately concerned about the human problems affecting the quality of life -- poverty, slums, housing, hunger -- believe we are spending too much.

No thinking, feeling person can fail to be moved by either side. To solve the dilemma will require of the next President great experience and knowledge, tough minded and well balanced judgment.

As President, I would not favor a "shutdown of the space program." I believe the program must be continued. Going to the moon itself was not the only important aspect of the program. It was the drive to stimulate vitally needed technology, to create competence in boosters, in spacecraft, in guidance, in extravehicular activities, and in the many other major features of space flight and space travel. It has produced such benefits as microminiaturization valuable to military and industrial applications alike.

I do not think it is necessary to repeat that kind of exercise, as valuable as it was. Rather, I believe a more general goal is desirable. We should continue with research and development in the field of propulsion both chemical and nuclear. We must direct our efforts toward decreasing the cost of space flight so that we may do more of it and do it more efficiently.

Among the various projects that we should look forward to would be the development of Earth-orbiting stations with a variety of functions and missions: to detect crop diseases, to assess water resources, to serve as platforms for astronomical observatories many times more potent than earth mounted telescopes.

As we develop our capability, we will want to know more about the planets, more about the solar system in which we live.

We are just at the beginning of major capability in the field of communications and weather prediction, and perhaps weather control. These are just some of the things that we should be stressing as funds are available and opportunities permit.

In the area of marine science, I will not dwell here on my detailed program for utilizing the oceans. Elsewhere I will set out at length my proposals for developing our marine resources. Elsewhere, too, I have developed a comprehensive program to insure "A Living Environment in the 70's." I have discussed the problem of saving our shorelines, of cleaning up our polluted streams and rivers. I have talked about the potentials for exploring the seas, and for farming them. We look forward to:

-- a growth in offshore, industrial development of food, fuel and minerals;

-- a growth in world maritime trade;

-- a growth in ocean-related sports and recreation;

-- a growth in our efforts to utilize coastal regions and to restore our water and coastline that have been degraded by man and nature.

-- And, a growth in exploration of our planet, in our scientific study of the sea and its processes that affect weather and climate.

To me, the question is not <u>whether</u> we will do these things. We must. The questions are <u>how</u> and <u>how soon</u>.

<u>I recommend that we double our ocean related activities over the next four years</u> to develop the technical capabilities for exploration and to begin to develop marine resources.

Partnership with Non-Federal Interests

The effective use of our science and technology is by no means exclusively a Federal affair. In fact, the full development of this Nation's technological enterprises requires a vital partnership with non-Federal interests.

American private enterprise invests substantial sums in the development of all our technologies. The States have rights and responsibilities in many activities. Our universities and private research laboratories are key sources of basic knowledge and manpower needed by all participants.

Our academic institutions produce much of this new knowledge. Moreover, these institutions are the source of well trained minds which are among the Nation's most precious assets. I am committed to strengthening colleges and universities in every section of the country, by direct and stable Federal support, not only because of the services they perform for the Federal Government, but also because these resources are essential for economic, cultural, and intellectual growth in every community. Such support, however, must maintain the integrity and independence of these institutions so that they are free to set their individual goals.

I would, as a matter of high priority, recommend a growing level of funding in support of our basic research and manpower capabilities that would assure continued U. S. leadership. Especially I would seek substantial increases in the funding and the role of the National Science Foundation well beyond that visualized heretofor -- including support for behavioral sciences as well as the natural sciences and engineering. I would institute new contract and grant programs in other civilian mission-oriented agencies to utilize talent wherever it may be found.

Our research and development should grow in rough proportion to our GNP.

And while we should seek more intensely means to utilize science in the public interest, we must be courageous in defending support of basic research even if immediate payoff is not assured.

between science and Government -- to preserve our freedom, improve our material standard of living, enhance the humane quality of American society to gain the promise of a technological age.

Conclusion

The Federal Government has the prime responsibility to foster science and technology to meet our Nation's needs. The Government must provide opportunities for the creative minds of our individual scientists and engineers, the vitality of our academic institutions and industrial sector to bring science and technology into the mainstream of American life.

Recognizing these responsibilities, I am confident that we can preserve our freedom and improve our material standard of living and enhance the humane quality of American society to gain the promise of a technological age.

We can match our technical prowess with wisdom.

Science has many promises to keep -- in terms of meeting our social ills that are themselves often consequences of a technological age. Unless we build new bridges of understanding, the nation may fail to realize the potency of science to contribute to economic growth through innovation and discovery.

As President, I intend to build those bridges. I intend to keep these promises.

Although I believe the Federal Government must provide leadership to this enterprise, by no means should it carry the full burden. Private industry has utilized science and technology to meet its many challenges in the competition of the marketplace. The costs of research and development have increased so much that I will explore whether special incentives should be provided to encourage industrial investments and assure prompt dissemination to businesses - large and small - of results from research paid for by public funds.

Science Management

Because of the increasing number of issues at a Presidential level involving science and engineering, I would greatly strengthen the White House advisory apparatus. I would improve the technological approaches by blending science with engineering, economics, public administration and law.

At present, we have three policy planning councils in the President's office providing advice:the Office of Science and Technology, the Marine Science and Space Councils. I would give serious consideration to combining these three statutory bodies to gain a greater effect of their policy-level directors and the strength of a combined multi-disciplinary staff. I would propose to upgrade the Federal Council for Science and Technology by having the Vice President serve as Chairman of this policy planning body. The Director of the Office of Science and Technology would be asked to attend every meeting of the Cabinet and National Security Council to be sure that considerations of science and technology are brought into every issue.

I would also continue the President's Science Advisory Committee, but with a broadened membership to emphasize the increased role of technology and of the social sciences.

Most important, I would seek a means to bring ideas into Government from all of our professions and professional societies and work with them to help communicate scientific discoveries and insights to the public; to anticipate effects of technological change and the possible hazardous consequences of a mismanaged environment.

By this means, we can extend the long, fruitful relationship between science and Government -- to preserve our freedom, improve our material standard of living, enhance the humane quality of American society to gain the promise of a technological age.

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REMARKS OF VICE PRESIDENT HUMPHREY
SYMPOSIUM WITH MEMBERS OF
CALIFORNIA SCIENTISTS, ENGINEERS,
AND EDUCATORS FOR HUMPHREY-MUSKIE
SAN JOSE, CALIFORNIA
OCTOBER 25, 1968

QUESTION: The great rate of technological and economic change and the increase of human expectations associated with these changes have posed great problems for the nation as well as exciting challenges. In recent years science and technology have become much, much more important in our national security and our progress and our well being. We scientists, doctors, engineers, meeting here with the Vice President are concerned about this. How do we marshal the vast resources of science and technology to tackle problems of great moment in our society? How can we relat the nation's research and development programs and its talents for national goals for education, peace, security, environment and pollution, natural resources, exploration of space and the oceans, public safety, transportation and justice?

We are here to discuss this, these problems, with the Vice President.

VICE PRESIDENT HUMPHREY: Dr. Drell, when I listen to you put the menu out, so to speak, of what you have to discuss, I think it tells us there is an intimate relationship, there is an intimate relationship or should be between the man in public life, politics, and the scientist, because we have something in common if we sometimes pretend we don't, and it is really the survival of mankind, and this obviously cannot be accomplished by just political measures. It involves the interrelationships of the technology and the science of man's mind along with his capacity to work out matters in human relations, who want to see science not as our master but as our servant, and we want to see technology not to be able to grab us, so to speak, in its hands and remake us but rather that we be able to use technology for the making of a better society.

I wanted this little discussion with you and your colleagues in California, because I suppose this state is unique in our nation in terms of the number of leaders in the field of science and technology, particularly in the areas of space research and in medicine.

You have large numbers of Nobel Prize winners, you are very active in the field of marine sciences. There are great studies going on here on our urban crisis, the systems approach is being developed here and in your universities, the interdisciplinary activity for the many different departments and compartments are brought together to work on a central problem.

I have released a statement which you gentlemen know of; it is called Science To Serve a Nation. This is a result of the task force with which I have been working. It is also the result, may I say, of some thoughts that I have had over many years. I started my dialog with some of you men 25 years ago, and in my own university of Minnesota, where I was priviledged to both attend and teach, I have had a very continuing interest in the whole area of the relationship of science to the political process.

Now, the presidency has something to do with your work, I might add. It is how we organize the activities and the instruments of government that will in some way, at least, and I think in a very significant way, affect the development of science and technology throughout our nation.

We don't want a science program that is a government science program per se, but we see a role of partnership here, and I do believe that the time is now at hand for the whole area of science and technology to be -- how is best to put it -- to upgrade it in the governmental structure. It is scattered very generally

through the government. We have the office of the President's science adviser, the Office of Science and Technology. We have our Space Council in NASA, and we have our Oceanographic Council. We have science in every department of government, but I do believe that the next president of the United States must really give a good hard look at the structural organization of the science and research activities of the Federal Government.

One final word on it.

I think that the role of the university with the government also must come into very critical examination, just how much involvement should we have and what are the guidelines that we need to abide by, and I don't think those guidelines can be set by the government alone. I think they ought to be set in cooperation with responsi-le members of the university administration and the university faculty so that we don't get into some of the difficulties that we have had in recent days, because those difficulties tend to anger some members of Congress who, in turn, turn on science itself, and we start to lose some of the advantages we ought to have.

Now, those are a few of my reflections out here. By the way, I notice that we have got some smog around here that is a challenge to every scientist and engineer, but we are under an olive tree, and that is quite symbolic. I am glad that we can discuss science and technology in the spirit of peace, becamse many times people equate much of what we are doing in science today with weapons, weapons systems, and they equate much of what we do with space, with just spectaculars even though I must say those spectaculars really are spectaculars such as the Apollo 7. They don't see the relationship to the scientist, and government's science role to our civilian life, to our every day life, people that want to live in peace and live in harmony and I am going to ask you men to talk now how you can help me in your respective disciplines, how to affect the human environment, how we can live a better life.

question: Mr. Vice President, before we enter into the question of science and government, I would like to raise one issue that has entered into the campaign, that of national security. Several of us who have been very close to the defense problems, especially Dr. MacDonald and myself , we were very disturbed by the statement that Mr. Nixon made claiming that there exists a security gap. This is totally false, in our judgment. We strongly endorse the statement you made this morning denying the existence of this gap. We feel Mr. Nixon's statement is a serious disservice to the nation, to the cause of peace, to the dedication and the efforts of many wise and dedicated civilian and military people who have developed and guided this policy through American industry with its very advanced technology which is the largest policy to be put into effect.

VICE PRESIDENT HUMPHREY: Well, I had to speak out this morning on Mr. Nixon's statement because I thought it was misleading, and I don't know where he received his information, because, as you know, I did not divulge information that is of high classification, I mean it is information that is available if you do the research on it for the general public, you men can get it in your respective lines of endeavor.

I think that we ought to reassure the American people that we have a very good system of national security. I think we ought to reassure the American people that merely to add more weapons to what is already an adequate stockpile of weapons doesn't give you any more security. We don't need to get into a race to see whether or not we can build more bombs just to have more bombs. The task of a political officer working with you men of science is to try to arrive at that point for the -- for what we have for security is adequate and sufficient to protect ourselves and not

to get into the idea that we just add more on and more on and more on because we have more resources to do it.

QUESTION: It is a case, Mr. Vice President, where you can destroy the Soviet Union and they can destroy us. We can do it ten times over.

VICE PRESIDENT HUMPHREY: Exactly right.

QUESTION: And that is a situation that should be avoided, and we should try to recognize, it seems to me, that we have a very great danger hanging over the whole population of the world, namely the atomic bomb war, and I am particularly glad for the efforts that you have made in this direction to try to get an understanding with the Soviet Union and others nations of the world on it.

I would just like to compliment you on the work that you have been doing.

QUESTION: We all know you were the father of the Atmospheric Test Ban Treaty and the Disarmament and Arms Control Agency to take further steps --

VICE PRESIDENT HUMPHREY: We have tried, gentlemen, and some of you have been very active in this through science, to develop systems and mechanisms that make some of these treaties that we negotiate checkpr-of, so to speak. I mean you take Project Vela is surely one we can -- there are many different projects that we have where we have sought ways and means through reconnaissance, through electronics, through magnetic systems, through many ways that you men have developed so that when we negotiate a treaty on arms control or like in the Nuclear Test Ban Treaty, we don't have to rely on the other fellow's good word. We can rely upon true scientific evaluation and calculation, and again it only shows that the same scientist that can develop a weapons system can develop an equally effective system to check on a weapons system.

I mention this because I have long put my heart into arms control and the reductio of arms,and generally when you talk about this somebody says, "Well, he is going to give away our strength. He is going to seaken" --

QUESTION: He is going to give away the secrets.

VICE PRESIDENT HUMPHREY: Or give away the secrets.

Frankly, many of the secrets are not so secret but more importantly if we develop systems of inspection, systems of at least of evaluation and of inspection, we can get more security out of what we have as a security system with, at least cost, and we have got to think in terms of the conservation of our human resources and of our material resources.

My opponent in this election, Mr. Nixon, has talked about me being the most expensive president that this country will have, and yet when he made this statement in terms of the military, he didn't put any pricetag on it at all, and I will just lay it out here to you, when he started talking about new sophisticated weapons systems such as are on the drawing boards today, you men know it, we are talking about hundreds of billions of dollars. We are going to have to make up our mind, the next president is going to have to make some judgments as to whether we proceed with such systems making long-term commitments or whether we try some way to try to negotiate a mutually agreeable, well, a mutual agreement that will safeguard our country's security and, at the same time, that it can be properly inspected.

Thank you for your comment on it.

Now let's get back to that living environment.

QUESTION: Mr. Vice President, what I liked about your statement particularly is that you want to strike a reasonable balance in distributing this money. The country can afford to spend only so much on science, technology, research and development, and you

want to spend an adequate amount on making sure that our national defense is assured. At the same time you want to spend something also on pure science to widen our understanding of the world around us, to invest in future developments and future inventions, and you also want to spend some on applying technology to serve the needs of our people. I know our students, some of them want to work on national defense, many of them want to work on true science, to find out what the world is made of and how it functions. A number of them are very anxious though to find ways of applying the results of science and the technological means that we are developing to problems they see around us so we can breathe clean air, so we can have clean water, so we can have a place to live for everybody in this country, and we have to mobilize their enthusiasm, and I think your statement shows that you understand we have to do that.

VICE PRESIDENT HUMPHREY: Can I just pick up what we were saying before we started to get on this broadcast, that the government's policy is so vital to the scientific community because if itis a stop and go policy it is filled with spurts and jerks and putting brakes on, you really lose, when you do you lose resources, you lose manpower, and you lose continuity, and we have got to somehow or another arrive at a way of having at least a line of funding that has some reliability, otherwise you cannot organize your proper projects and your departments and your research programs.

Now, we have gone throu-h a little of this lately. The Congress has severely cut some of the research programs, and I want to emphasize with you the importance of basic research. The average citizen is interested primarily in applied research because he wants to get the application right away on how to add it to your automobile, to your home, whatever it is, but I think I am in the presence, as I know I am here, of men who are doing what we call the fundamental or basic research, which is just knowledge for the sake of knowledge, primarily to get the underpinnings that give you the offspring of the kind of research that we think of most of the time. We have got to find a way to properly fund that.

Now, we have depended on the National Science Foundation to do some of it. I was an author of that bill, but I saw the Congress cut the heart out of those funds. We depend on the Department of Defense somewhat, but I think what we ought to say here is that the public ought to know that when you skimp on basic research, you ultimately skimp on all science and technology, because it is basic research which is the foundation that you men build on. Now that is how we political animals see these things so I want you to know what my view of it was, and I guess some of you have known it before.

QUESTION: Mr. Vice President, I think it is a lot more fun to talk about people keeping people alive than killing.

VICE PRESIDENT HUMPHREY: Yes, sir.

QUESTION: I have been practicing medicine 50 years during the most exciting 50 years in the whole history of medicine. We have seen enormous changes which have occurred; one of which you have been intensely interested in has bee the enormous increase of old codgers. The number of people in my age group is getting enormous, and it is going to do more now.

There are two things that have happened in my lifetime that have completely changed the aspect of being old for the better. One is the social security legislation which the Republicans fought tooth and nail in the days the Democrats put it over. This has given a most enormous change in the attitude of old people who know they are not going to be beggars any more, and I meet and see hundreds of these; that is my life nowadays, taking care of old

people very largely, and the social security has made a great difference.

I was interested to see your opponent in the campaign, who was opposed to social security in the early days of his campaign, and the Republican prototypes fol-ow him around saying me too, only more of it. That is a new slant.

The other great piece of social legislation has been Medicare. It will go down in history as one of the great pieces of legislation. There are three great pieces of social legislation: freeing the slaves, social security, and Medicare.

Now, Medicare has done more than anybody realizes for the happiness of the sick old people. Old people are sick four times as much as young people. Now the curse of that is removed. And let me tell you, sir, the difference in attitude of these old people with the protection of Medicare is enormous. We have added a great deal to the happiness of old people by Medicare. It has relieved them of their great worry which is "What am I going to do when I am sick."

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: And now it has taken care of that.

Now, we believe we are looking forward to the problem that we will have shortly 20 million people over 65. A lot of things need to be done. On this housing we talked four years ago, you and I --

VICE PREISENT HUMPHREY: That is right.

QUESTION: -- about housing for the elderly and you were very interested in that. Then there is occupation for them. They have a great contribution to make to their country and the other thing curiously enough is recreation. Now these areas I think we can be taking up next. Social Security and Medicare have been of tremendous importance, and you have made the first Medicare bill, as I remember. We proposed it when I was on the Truman Health Commission, and you immediately took it up and put a bill in Congress just at that time.

VICE PRESIDENT HUMPHREY: That is the name.

QUESTION: You put the first bill in --

VICE PRESIDENT HUMPHREY: That is right.

QUESTION: -- that we devised in the old Truman Health Commission, and we have now seen half of our recommendations are now law and are respectable in our old age.

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: But these other things,with a great mass of older people, we mustn t neglect. They are going to live a long while. There is some good reason for believing that most people will average over 100 years in age over the next two decades, and I think government has a proper role to play in that, and I think that you are to be congratulated for the part you have played in social security legislation, and supporting it at all times and particularly for the dramatic success of Medicare which I think would never have existed without you and in my lifetime has changed the aspect of old people's lives more than anyone would think.

VICE PRESIDENT HUMPHREY: Thank you, Doctor.

QUESTION: Could I second that, sir.

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: All of my colleagues in biology are dramatically concerned with the desperate world population -- food, environment crises, we tried very hard to find out whether Mr. Nixon had any stand on this or any other stand on it and had been dreadfully disappointed with his response. I want to congratulate you on the response you gave to our group. You touched all of the bases and all of us are really right with you.

Today in the world today you cannot have as a president of

the United States someone who for instance thinks "Agriculture is now divorced from the land." He essentially refuses to face the problems which you have been facing and which I should say Senator Muskie has been facing so very effectively over the past decades, and I think it will be a disaster to have that stop now that you are talking about in the support of this area which is so desperately important.

VICE PRESIDENT HUMPHREY: And our country must give leadership in this. We have many examples through which we can do it, through our bilateral diplomatic relationships, and through our foundations for which our country is famous, through our private foundations, through the U.N. and its related organizations and through our multilateral foreign aid operations.

There are so many ways that we can work on this whole subject of population control and agriculture, in other words, the adequacy of food with population, and relationship of population to the economic and social factors of our time.

I don't know all the answers. I think the point that we need to know is that you have to have a receptive mind to this, and a willingness to face up to it, because if there is any one problem that really staggers the world today, it is this so-called population explosion, and it is the failure of really some of our leadership to relate food, living resources to the numbers of human beings that are here on this earth, and we, in the United States, are very generous with our money, but we ought to maybe be a litle more generous with our ideas and be willing to do a little adventuring here and suffer some of the consequences, I want to warn you.

QUESTION: I know.

QUESTION: Mr. Vice President, it seems to me that probably the condition of our cities is the most urgent and dramatic domestic problem today, and I know that you have been very active in housing and renewal, model cities legislation virtually since the first time you went to Washington. But I wonder whether you don't really believe that we have now reached the stage where we can eliminate slums, the conditions that cause the burning of cities, within the next decade.

VICE PRESIDENT HUMPHREY: Well, I think it isn't a matter of whether we think we can. I think it is a matter that we have to. Dr. Conant, I remember his famous study on the cities, and he called it the social dynamite or something like that, or the social explosion. He said there was three -- there were factors there that were going to result in an explosion. Now the explosion happens and we say, "Gee, why did they do that?"

Now we know that there are factors. They are social developments and social inequities in our urban centers that make the urban environment unlivable, really you cannot live as a human being in that environment.

I saw where the vice presidential nominee of the Republican Party said, "When you have seen one slum, you have seen them all." Really what he should have said, "When you have seen one slum, you have seen one too many," because we really ought not to have slums in this country, and we have the technology and we have the resources. We have the manpower, and we have the land. It isn't as if this is a little area where we all are crowded together. We have all that it takes except we haven't pulled it together. I don't know how best to put it, but we never would have had Apollo 7 and what it has done had we not pulled together a whole series of areasof science and technology, many different disciplies, and we phased them in with management and with finance and the university and the government and the propulsion systems and life sciences and the medical profession, and everybody that you could

In other words,, if you would jam all 200 million three of the five boroughs -- I just left New York, and I think they have been trying to do it.

QUESTION: That is right.

VICE--PRESIDENT HUMPHREY: Because the city is very filled with people, and it becomes a very difficult city to govern.

QUESTION: I think, Mr. Vice-President ---it is a curious think. I lived in Denmark 45 years ago for a year, and I bicycled all over the city, and there was no slum in Copenhagen.

VICE-PRESIDENT HUMPHREY: Well, that is --

QUESTION: That is 45 years ago. And I visited the city recently and there are no slums in Copenhagen. That is, somebody knows how to avoid slums.

VICE-PRESIDENT HUMPHREY: Maybe we ought to find the secret.

QUESTION: It seems to me that this problem is a complex one, as you said. It does involve training in the universities for an urban extension program like we had in agriculture many years ago, in the agricultural extension program --- but it also involves private business.

If weare going to build 30 million homes to meet our new housing needs to replace those slums -- it is going to be a much more complex game of local government -- and the private industry and the scientific community-and the government working together -- and yet to date our model cities program seems not to have given local government the power it needs or the resources or money or manpower necessary to deal effectively with these problems and the human beings who are there.

VICE-PRESIDENT HUMPHREY: Yet the model cities legislation which, by the way, was introduced by Senator Muskie, and he handled it on the floor of the Senate -- he came from the State of Maine that has no large major city, and yet he was willing to take that difficult task on. And you know it was a hard project. That model cities legislation provides not only for the physical renewal of a city, but also for the social or the human renewal of the city. It is the framework around which I think we could do a great deal. It has been poorly funded -- let's face it -- number one. It takes a lot of doing.

Secondly, I don't think we have yet developed the kind of real partnership role that we need with the private economy and the governmental structure.

Thirdly, the federal government is like -- well, it's like sort of an over-loving mother -- it wants to manage so much out in the local levels.

I was once a mayor, and I used to fight the federal government, you know, about how they wanted to regulate this. I suppose I get a different point of view when I get around to Washington.

All during my Senate life I have been doing it.

I think we have to be willing to take some chances on experimental work at the local level, because I don't think you can build America with all of its variety of cultural patterns out of a sort of set of standards of the national departments of governme nt. I think you have got to be willing to recognize that if you are going to clean up the slums --- I don't think there you are really talking about cleaning them up -- you are talking about rebuilding areas so that the slums really no longer exist.

If you are willing to do that, you are going to have to give local authorities a good deal more authority, and they will make some mistakes, and there will be some investigations and heads will roll. And I think that is the price we are going to have to pay.

QUESTION: Mr. Vice-President, let's look at one of the good things we have done. We have accomplished just this ---- and that is the National Institutes of Health. It has been the

think of was brought to bear upon how you are going to put that Apollo capsule in orbit for 11 days and have men live there in a controlled environment and be brought back to earth safely.

It seems to me that a country that can put a man on the moon, and that is what we are going to do, to use a cliche, ought to be able to help put a man on his feet.

You know, here on earth we have developed an environment in which we have living conditions, and I have proposed a whole new city. I think we ought to start to build some new cities, by the way.

QUESTION: You and I are the Minnesota experimental --

VICE PRESIDENT HUMPHREY: That is right. I am glad that you -- I didn't want to be too parochial, but Bill House and others were involved in this, and we, you and I, we have been working on it. I think we have to be willing to take some risks and have some risk capital to work on these experimental cities. Most of our cities today are old. Most of them are totally unrelated to what the modern needs are. Take, for example, our railroad systems going through cities. To change the location of tracks in the cities it is easier, may I say, to change the rotation of the solar system.

(Laughter.)

I tried for years.

QUESTION: As a piece of real estate.

VICE PRESIDENT HUMPHREY: Yes. But we have cities today that become almost unmanageable because of the political problems, jurisdictional problems, because of the aggravation of intensified, intensive population settlement. Somebody told me the other day here that if you -- you could put all 200 million Americans in three of the five boroughs of New York City if those three boroughs had the same degree of population density as Harlem.

most magnificent incubator of scientists in the health field that man has ever developed. And it is precisely what you are talking about in the cities. It has involved the universities, private individuals, private industry and even doctors at the professional level are involved in the National Institutes of Health.

The product has been enormous just in terms of dollars.

Curiously it would have cost more to bury the people that didn't die as a result of the discoveries of the National Institutes of health that they spent on research.

People don't know about this.

Between 1954 and 1964 the doctor is burying these people at more cost than we spent in research.

The NIH has done precisely what you and Muskie suggested.

It has involved local government, private institutions, its relationship to universities- has been magnificent. And I think while we are deploring everything, we might point with pride occasionally--to some of the good things we have done, and the National Institutes of H-ealth is a magnificent accomplishment largely under guidance of people like you.

VICE-PRESIDENT HUMPHREY: Well, I saw my--- this little doodad fell off here -- but let me just say a word about it. I want us to be as willing to dare and to take a chance in the field of the humanities and the social sciences or in the areas of human relations as we are in the field of medical -- medical relationships.

Take, for example, you have doctors that do the heart transplants. We didn't have Dr. Shumway come here with us today as we mentioned. And if it doesn't work, you don't read an article, an editorial that says we ought to get rid of all doctors because it didn't work.

But I have a fellow that tries to do something with the city and something goes wrong, and they say a boondogler, he wastes its money.

I think we are going to need these national institutes on urban life, in which we pull together the resources, giving it the kind of economy that you are talking about --- that you had in the National Institutes of Health.

We know-the NIH works. We know what it has done for medicine. We know what it has meant to the whole, to all the healing arts.

Now, if we are going to meet our urban crises, we are going to have to do very much the same thing, and we are going to have to get more than the Department of Housing and Urban Development. W-e are going to have to have a kind of an offspring from that Department, like the NIH is an offspring of your U.S. Public Health Service, but it has its own autonomy, its own identity. So I will be depending on you when I get into W-ashington.

QUESTION: I was going to mention another program in which there are great opportunities and probably also certain dangers. It is a program that I know you, Mr. Vice-Prewident, have been deeply interested in -- the whole question of the exploration of the oceans. I had the privilege of working with you a little bit in this area and I have always come aw-ay deeply-impressed not only by the fact that you are interested in the subject, but you have also gotten into some of the technical details. Y-ou start talking like a scientist in a real way.

VICE-PRESIDENT HUMPHREY: Superficially-.

QUESTION: Oh, you may say so, really, but it is quite remarkable. Can you tell us a little bit about how you view our country's involvement in the ocean in the coming years?

VICE PRESIDENT HUMPHREY: Well, we just, for the first time, as you have indicated, pulled together now in the government, in our, what we call, our Marine Sciences Council, Marine Sciences Engineering Development Council, the facilities of the government for proper priorities as we see those priorities in the field of marine sciences or oceanography. I think we are just on the threshold of many things, food from the sea, of course, I mean fish, protein concentrate is one of the things that we finally got clear. We tried for years to get the Food and Drug Administration plus some outside forces that were dubious about it to come to recognize that fish protein concentrated a roel to play and it may be a vital role in the whole subject of nutrition worldwide.

Obviously there are great resources of wealth, mineral wealth and fuel in the bed of the ocean. Surely in the matter of international cooperation, the seabed, the ocean floor itself, offers a wonderful opportunity for international cooperation, just as we have been able to do and ought to be able to do much more than in space.

Then there is the whole matter of the modernization of our fishing industry that is involved, and once again the relationship between the space program and the oceanographic program. We find the acquanaut and the astronaut not being very far part except one has been at the bottom of the sea and the other is in the infinity of space.

QUESTION: We are probably near the end, and I would like to say --

QUESTION: We scientists, especially those of us who work on pure science, find that we have faith. We go through many failures and discouragements and yet can we rely upon our experience and what we learn from other people that something, somehow come out of it. One of my colleagues discovered the basic theory of solids 40 years ago this year, and now out of his theories and other people's work have come things like transistors for the heart pacemakers, transistor radios and of course many others added to it. We see a long haul if we can have faith this will help the country and help solve our problems. We are pleased that you are a man of faith who believes that things can be done.

QUESTION: Mr. Vice President, I would hate to see our discussion close without somebody speaking of the young people. As a professor in Berkeley, I have seen the growing disaffection of many of our students, I think largely because they are motivated by the desire to do something, to improve the quality of life in the U.S., but they don't know what to do.

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: And the things they have tried seem to them ineffective. I think if they were given an opportunity to develop technical skills and apply them to national goals like those that you defined in your science statement --

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: -- we would see a regrowth of interest in the students to work hard at the university in order to do something good for their country later.

The idea of an Interdisciplinary Institute devoted to cleaning up the air or to impriving life in the cities appeals to them while you can't generate much enthusiasm for making faster automobiles or better weapons systems.

I think, as you indicated, these programs can extend also to social sciences.

VICE PRESIDENT HUMPHREY: Yes.

QUESTION: I have more contact with the physicists and the biologists and the engineers, but the frustration is in fact greatest among social scientists,and I think their skills are going

to be needed very much in the interdisciplinary program. They need leadership from the government.

VICE PRESIDENT HUMPHREY: Well, one of the things we tried to say in this statement that you referred to was that I would propose this type of interdisciplinary institute in environmental controls and urban matters and transportation so that we can put the example of the NIH into these areas where our lives really are involved. NIH takes care of our physical and mental health, and very well, and it has done extraordinarily well at it, but how to get back and forth to a job without dying of frustration in the meantime, how to breathe fresh air and have it and what can we do about it, what are we going to do about the actual living conditions in our cities, I agree with you this is where we ought to bring young people in, and I think we have got to somehow or another get the message that your government, that their government, their young people's government cares about these things, that it isn't just that we are putting out defense contracts, even though that is important, that it isn't just that we are trying to build a high speed transport system just because we are trying to build it, we have to get them involved in what they are trying to do is to make an America in which they and their children can have a much more meaningful life, and surely we still need to know a lot more about human relations, race relations, et cetera. The behavior of the -- the whole subject of the behavioral sciences is just something we barely touched. I got interested in this a few years ago just out of some contacts with a few men that came to talk to me. We held a few hearings on it, we got some interest in the government and were able to get a little research money. Now we are going to try to open up these vistas, these vistas of thought for young people. I think you are right. I think we need to get them involved. They think the only involvement they need is the political involvement. Really it is the social involvement that we are talking about. It is being part of the action.

QUESTION: The students and the professionals are really anxious to work hard, but what they have to see what you are proposing is contracts from the government for that kind of work, and that is what this kind of institution can provide.

VICE PRESIDENT HUMPHREY: Can I say in candor that we have to be able to tell you that we don't have a clear view of all that we need to do. We are really at a stage now where many minds must be brought together to try to formulate what we want to do. We just know enough about the problem to know that we must find some answers, and I wouldn't want to try to talk to a group of highly trained and intellectual men and say that, "Look, make me president and I have got this all worked out." I haven't got it all worked out at all. I don't mean to say that. What I mean to say is I have a willingness to try to work it out and a recognition that we must be able to work it out.

QUESTION: That is right.

VICE PRESIDENT HUMPHREY: And I think we can. We -- I know we can.

QUESTION: Mr. Vice President, thank you very much for this opportunity to discuss with you problems that are of the greatest concern to us in watching the energies of our professions and building bridges to the problems of the future.

VICE PRESIDENT HUMPHREY: I am very grateful to you. Thank you very much.

REMARKS

VICE PRESIDENT HUBERT H. HUMPHREY

SCIENCE SYMPOSIUM

SAN JOSE, CALIFORNIA

October 25, 1968

If there is anyone present who wonders what scientists and politicians have in common -- the answer is the survival of man and the quality of his life.

I am delighted to continue -- here in California, one of the cradles of American science and technology -- a dialogue with scientists which I began 25 years ago and have continued to my great satisfaction throughout my public life.

Our purpose this hour is not for me to make a speech. I am here to listen, and to react to the discussion and questions of this distinguished panel of scientists, engineers, social scientists and scholars.

I am taking this opportunity, however, to release my broad policy statement on science and technology, which I call "SCIENCE TO SERVE A NATION." Let me say just a word or two about this message, and then I will turn to Dr. Sidney Drell to introduce our guests.

If there is a single theme which runs throughout my message, it is that we must learn to utilize our scientific resources and opportunities with wisdom so that they will truly be servants of our social purposes.

We must be masters, not slaves to our technology -- to the bomb, to the computer, to automation.

The fruits of our science have been sweet, indeed: In national security, it has been our first line of defense against the unexpected. It has also permitted "cheat proof" nuclear treaties -- a fact Mr. Nixon obviously does not understand.

And, contrary to the political "gap hunting" of my Republican opponent, we are today first in space. I document that in my message.

Two years ago, the Congress gave the Vice President broad duties in the field of coordinating and developing our programs in oceanography

and marine sciences -- activities which are conducted in scores of government agencies and bureaus. We have made great progress in this area and, with understanding and leadership, our marine programs of the seventies can rival our space program for glamour -- and very likely surpass it in providing direct benefits for people.

In my message, I make a number of recommendations to strengthen our present programs, to apply science and technology with greater wisdom and energy to the critical domestic problems of our day, to expand the ability of government, industry and the universities to perform research and development, and to enable the President to utilize science and scientific advice.

Most of the decisions of the next President will involve a mature understanding of the potential of science for good and for ill. The question before the Nation as it chooses a President, therefore, is how perceptive, how proven by experience, how disciplined by involvement will he be in turning science to serve our Nation's highest goals and aspirations.

Looking ahead, we face the abyss or the threshhold of new developments -- genetic manipulation, home broadcast satellites, sonic booms, artificial organs. All will challenge our social and ethical values.

We must support science and technology because a great nation must be at the cutting edge of discovery to remain great, to stimulate business, to challenge its best minds, to plumb and probe and prove.

In sum, Science has many promises to keep -- in terms of meeting our social ills -- that are themselves often consequences of a technological age. Unless we build bridges of understanding between science and humanity -- so as to apply technology to the demands of society -- they will be empty or broken promises.

As President, I intend to build those bridges. I intend to keep those promises.

And now, Dr. Drell, I'll turn this symposium over to you.

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Minnesota
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