country where the free enterprise system simply doesn't reach. It simply isn't working to provide jobs and opportunity. Disproportionately, these areas in urban and rural America are highly populated by racial minorities, but not entirely. To make this initiative work, I believe the government must become a better partner for people in places in urban and rural America that are caught in a cycle of poverty. And I believe we have to find ways to get the private sector to assume their rightful role as a driver of economic growth.

It has always amazed me that we have given incentives to our business people to help to develop poor economies in other parts of the world, our neighbors in the Caribbean, our neighbors in other parts of the world—I have supported this when not subject to their own abuses—but we ignore the biggest source of economic growth available to the American economy, the poor economies isolated within the United States of America. (Applause.)

There are those who say, well, even if we made the jobs available, people wouldn't work. They haven't tried. Most of the people in disadvantaged communities work today, and most of them who don't work have a very strong desire to do so. In central Harlem, 14 people apply for every single minimum-wage job opening. Think how many more would apply if there were good jobs with a good future. Our job has to connect disadvantaged people and disadvantaged communities to economic opportunity, so that everybody who wants to work can do so.

We've been working at this through our empowerment zones and community development banks, through the initiatives of Secretary Cisneros of the Housing and Urban Development Department and many other things that we have tried to do to put capital where it is needed. And now I have asked Vice President Gore to develop a proposal to use our contracting to support businesses that locate themselves in these distressed areas or hire a large percentage of their workers from these areas—not to substitute for what we're doing in affirmative action, but to supplement it, to go beyond it, to do something that will help to deal with the economic crisis of America. We want to make our procurement system more responsive to people in these areas who need help.

My fellow Americans, affirmative action has to be made consistent with our highest ideals of personal responsibility and merit, and our urgent need to find common ground, and to prepare all Americans to compete in the global economy of the next century.

Today, I am directing all our agencies to comply with the Supreme Court's Adarand decision, and also to apply the four standards of fairness to all our affirmative action programs that I have already articulated: No quotas in theory or practice; no illegal discrimination of any kind, including reverse discrimination; no preference for people who are not qualified for any job or other opportunity; and as soon as a program has succeeded, it must be retired. Any program that doesn't meet these four principles must be eliminated or reformed to meet them.

But let me be clear: Affirmative action has been good for America. (Applause.)

Affirmative action has not always been perfect, and affirmative action should not go on forever. It should be changed now to take care of those things that are wrong, and it should be retired when its job is done. I am resolved that that day will come. But the evidence suggests, indeed, screams that that day has not come.

The job of ending discrimination in this country is not over. That should not be surprising. We had slavery for centuries before the passage of the 13th, 14th and 15 Amendments. We waited another hundred years for the civil rights legislation. Women have had the vote less than a hundred years. We have always had difficulty with these things, as most societies do. But we are making more progress than many people.

Based on the evidence, the job is not done. So here is what I think we should do. We should reaffirm the principle of affirmative action and fix the practices. We should have a simple slogan: Mend it, but don't end it. (Applause.)

Let me ask all Americans, whether they agree or disagree with what I have said today, to see this issue in the larger context of our times. President Lincoln said, we cannot escape our history. We cannot escape our future, either. And that future must be one in which every American has the chance to live up to his or her God-given capacities.

The new technology, the instant communications, the explosion of global commerce have created enormous opportunities and enormous anxieties for Americans. In the last two and a half years, we have seen seven million new jobs, more millionaires and new businesses than ever before, high corporate profits, and a booming stock market. Yet, most Americans are working harder for the same or lower pay. And they feel more insecurity about their jobs, their retirement, their health care, and their children's education. Too many of our children are clearly exposed to poverty and welfare, violence and drugs.

These are the great challenges for our whole country on the homefront at the dawn of the 21st century. We've got to find the wisdom and the will to create family-wage jobs for all the people who want to work; to open the door of college to all Americans; to strengthen families and reduce the awful problems to which our children are exposed; to move poor Americans from welfare to work.

This is the work of our administration—to give the people the tools they need to make the most of their own lives, to give families and communities the tools they need to solve their own problems. But let us not forget affirmative action didn't cause these problems. It won't solve them. And getting rid of affirmative action certainly won't solve them.

If properly done, affirmative action can help us come together, go forward and grow together. It is in our moral, legal and practical interest to see that every person can make the most of his life. In the fight for the future, we need all hands on deck and some of those hands still need a helping hand.

In our national community, we're all different, we're all the same. We want liberty and freedom. We want the embrace of family and community. We want to make the most of our own lives and we're determined to give our children a better one. Today there are voices of division who would say forget all that. Don't you dare. Remember we're still closing the gap between our founders' ideals and our reality. But every step along the way has made us richer, stronger and better. And the best is yet to come.

Thank you very much. And God bless you.

FIFTY YEARS OF THE ENDLESS FRONTIER

Mr. BINGAMAN. Mr. President, 50 years ago today the Truman White House released ''Science—The Endless Frontier,'' the document that set the course for this country's postwar science and technology policy and that has continuing relevance today, five decades later.

This seminal report was written by Vannevar Bush, Director of the Office of Scientific Research and Development, who had headed up the wartime mobilization of our Nation's scientific and technological resources to defeat our Axis foes. It was written in response to a series of four questions which had been posed to Dr. Bush by President Roosevelt in a letter dated November 17, 1944.

As the Bush report was being released, President Truman was at the Potsdam conference with Churchill and Stalin. Three days earlier in the New Mexico desert, the United States had detonated the first atomic bomb—the Trinity test, although that would remain secret to all but a few leaders and the Potsdam principals until the Hiroshima bombing on August 6.

The research effort which Dr. Bush, a Republican I might add, had headed during the war was the greatest scientific and technological mobilization the world had ever seen. It had included not just the Manhattan Project, but major efforts and great successes in weapons technologies, such as radars, fighter aircraft, bomber aircraft, and code breaking, and in what we call today dual-use technologies, such as the first electronic computer, aircraft engines, medical technologies, and communications technologies.

President Roosevelt had asked Bush four questions:

First: What can be done, consistent with military security, and with the prior approval of military authorities, to make known to the world as soon as possible the contributions which have been made during our war effort to scientific knowledge?

The diffusion of such knowledge should help us stimulate new enterprises, provide jobs for returning servicemen and other workers, and make possible great strides for the improvement of the national well-being.

Second: With particular reference to the war of science against disease, what can be done now to organize a program for continuing in the future, the work which has been done in medicine and related sciences?

The fact that the annual deaths in this country from one or two diseases alone are far in excess of the total number of lives lost by us in battle during this war should make us conscious of the duty we owe future generations.

Third: What can the Government do now and in the future to aid research activities by public and private organizations? The proper roles of public and of private research, and their interrelation, should be carefully considered.

Fourth: Can an effective program be proposed for discovering and developing scientific talent in American youth so that the continuing future of scientific research in this country may be assured on a level comparable to what has been done during the war?

President Roosevelt added:

New frontiers of the mind are before us, and if they are pioneered with the same vision, boldness, and drive with which we have waged this war we can create a fuller and more fruitful employment and a fuller and more fruitful life.

Vannevar Bush worked with four advisory committees over the next 7 months to respond to the President's

tasking. Unfortunately, Roosevelt had passed away before he could receive this far-seeing report, which fully endorsed his vision of a new and endless frontier of science in the national interest. Instead it was Truman who met with Bush on June 14, 1945, and approved the release of the report. And it was Truman who would oversee the establishment of the National Science Foundation 5 years later after a long congressional debate and the implementation of the report's other recommendations.

What did the report say and why is it still relevant? Mr. President, until the Bush report, we had no national policy for science. Bush argued that this must end. ''In this war,'' he wrote, ''it has become clear beyond all doubt that scientific research is absolutely essential to national security.'' But he went beyond the national security justification for governmental support of research:

> More and better scientific research is essential to the achievement of our goal of full employment . . . Progress in combating disease depends upon an expanding body of scientific knowledge.

Bush saw the Government's role in supporting science and technology as filling needs where the public interest was great, but the private sector would not meet these needs adequately. He wrote:

> There are areas of science in which the public interest is acute but which are likely to be cultivated inadequately if left without more support than will come from private sources. These areas—such as research on military problems, agriculture, housing, public health, certain medical research, and research involving expensive capital facilities beyond the capacity of private institutions—should be advanced by active Government support. To date, with the exception of the intensive war research conducted by the Office of Scientific Research and Development, such support has been meager and intermittent. For reasons presented in this report we are entering a period when science needs and deserves increased support from public funds.

It is striking to me in rereading ''Science—The Endless Frontier,'' how soundly Bush and his colleagues addressed almost every aspect of science and technology policy—from the Tax Code to patent policy to science education to the structure of the postwar science and technology infrastructure in Government. Bush's report put the United States on a course of sustaining preeminence in science and technology for the past 50 years, a course that enjoyed bipartisan support for most of those five decades.

What have our scientists and engineers accomplished with the resources the taxpayers gave them over the past five decades? They won the cold war, put men on the moon, revolutionized medicine, invented computers, pioneered electronics and semiconductor devices, and invented a myriad of new materials that have fundamentally changed our lives.

This is just as Bush predicted half a century ago. Bush had the wisdom to know that new scientific and technological fields would emerge that he could not yet imagine: semiconductor electronics, molecular biology, and materials science to name just three. Bush had the vision to see that Federal investments in science and technology could transform our lives and contribute to our health, standard of living and security.

For the past half century, the Federal Government has acted on Bush's vision to foster a science and technology enterprise in this country second to none. It is not an accident that American industries from aerospace to agriculture to pharmaceuticals, in which the Federal Government has made substantial research investments, enjoy world leadership. It is a direct result of the vision of Vannevar Bush, who we remember today as one of the giants of the post-war generation. I ask unanimous consent that the first 12 pages of Bush's report, including Roosevelt's letter and Bush's response to Truman, be printed in the RECORD at the conclusion of my remarks. Any Member who would like a copy of the complete report, which runs 196 pages with appendices, should contact my office.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See Exhibit 1)

Mr. BINGAMAN. Unfortunately, Mr. President, the bipartisan consensus on our science and technology policy is now fracturing as we seek to balance the Federal budget. The Republican budget resolution passed at the end of June proposes to slash the Federal research investment across government. By the year 2002, the Federal Government will be spending about $28.5 billion for civilian research and development, down a third from today's investment in real terms.

These figures come from estimates made by the American Association for the Advancement of Science. I ask unanimous consent that an article from the July 3 issue of New Technology Week entitled ''GOP Balanced Budget Plan Seen Crippling R&D'' together with an accompanying table be printed in the RECORD at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See Exhibit 2)

Mr. BINGAMAN. Federal investments in civilian research as a percentage of our economy and as a percentage of overall Federal spending will be lower in 2002 than at any time in 40 years or more. Our national R&D investment, public and private, will be dipping below 2 percent of gross domestic product (GDP) while almost every other industrialized nation seeks to match the Japanese and German R&D investment levels of almost 3 percent of GDP.

Will this matter? In the short term, perhaps not, other than to the thousands of scientists and engineers who will be displaced. According to a recent White House report, our previous investments have given us a substantial lead in many critical technologies. In the longer term, undoubtedly it will matter. That same report concluded that both the Japanese and Europeans are catching up in many areas and new nations will challenge in the future.

In 1899 Charles Duell, Director of the U.S. Patent Office, proposed to close up shop because ''everything that can be invented, has been invented.'' Luckily, we did not follow such Luddite advice as we prepared for the 20th century. Nor should we today as we prepare for the challenges of the 21st century and seek to maintain this Nation's place as the pioneer leading the family of nations in the exploration of the endless scientific frontier.

The scientific and technological frontier really is still endless. Bush, not Duell, had it right. Scientific revolutions are still only beginning in molecular biology, materials science, and electronics and have not yet begun in areas yet to be discovered. For the past half century the Federal Government has been an excellent steward of the taxpayers' money in this area. Not every project has been a success, nor should they have been. But the payoff to our economy and our security and our well-being—the areas Roosevelt queried Bush about—has been worth many times the investment.

Some in Congress argue for more than decimating our Federal research enterprise on the grounds that civilian applied research spending constitutes ''corporate welfare'' or ''industrial policy.'' This is fundamentally wrong, for reasons that President Bush first outlined in his speech to the American Electronics Association in February 1990 and which he reiterated throughout the rest of his Presidency. I will not go into a long discussion of that today. But I will note that a Republican pollster has concluded that the American people do not agree with the priority assigned Federal research spending in the Republican budget.

I refer to a report in the same July 3 issue of New Technology Week entitled ''Public Surprises Pollsters, Backs Federal R&D.'' I ask unanimous consent that it also be printed in the RECORD at the conclusion of my remarks.

The PRESIDING OFFICER. Without objection, it is so ordered.

(See Exhibit 3)

Mr. BINGAMAN. According to this article, Steve Wagner of Luntz Research & Strategic Service, said: ''We went looking for things that didn't pan out. We went looking for the degree to which government investment in R&D was seen as corporate welfare, and we didn't find it. We went looking for the degree to which concerns about the deficit cast such a pall over everything that R&D should take a disproportionate or even proportionate cut, and they told us ''no.'' It's fair to say that I was surprised by the extent of support.''

Wagner went on to say: ''People are very pragmatic.'' He encapsulated the

public's message as: ''Jobs are a priority, finding a cure for AIDS is a priority, and if it takes the Government to do it, the Government should do it.'' And he adds: ''If they think government involvement will make the situation better, people will not hesitate to say that's a legitimate function of Government.''

Wagner and his fellow pollster Neil Newhouse of Public Opinion Strategies conclude that there is a preference in the public mind for public-private R&D partnerships. Their advice for their House Republican clients reads: ''Neither the Government nor private industry is completely trusted to make these (research) investment decisions. The Government remains the agency of the common interest. Private business is seen as more efficient, more disciplined, but also self-interested. These perceptions cannot be changed in the short run, but they can be used: Let the private sector say what is feasible, which technologies offer the promise of payoff, and let the Government say what is in the national interest to develop. A partnership of both entities looking over each other's shoulder will likely be most satisfying to the voters.''

When I read this, I thought the pollsters were giving a pretty good description of SEMATECH, the Technology Reinvestment Project, the Advanced Technology Program, the Environmental Technology Initiative, and the many other partnerships which Presidents Reagan, Bush, and Clinton have fostered over the past decade.

Vannevar Bush did not use focus groups and pollsters to figure out the direction of post-war science and technology policy. But without their benefit, he captured the public sentiment both then and today. He saw the need for partnership, for industry to do what it did well in the pursuit of profit and for Government to fill needs that industry would not in the public interest, needs in areas ranging from military research to medical research to applied research in housing, agriculture and other areas designed to generate jobs.

I hope that my Republican colleagues will take the advice of their pollsters. Speaker GINGRICH told the American people on David Brinkley's Sunday morning news broadcast on June 11 that he was worried about the degree to which research budgets were scheduled to be cut. He said: ''Yes, I am sufficiently worried that I met with Congressman WALKER, the chairman of the House Science Committee, and with various subcommittee chairmen of the House Appropriations Committee who have science, and asked them to maximize the money that goes into research and development, because I am very concerned that we're going to cut too deeply into science.''

Mr. President, recognition of a problem is perhaps the first step to a solution. I have yet to see research and development spared in the budget process in the House appropriations subcommittees, far from it. But perhaps with the help of rereading Science—The Endless Frontier, this generation of politicians will find the resources for Federal R&D investments which our grandchildren will need for their security, their prosperity, and their well-being.

President Clinton and Vice President GORE stand in the long line of American leaders dating from Roosevelt, Truman, and Vannevar Bush who have supported an American science and technology enterprise second to none in the public interest. The Republican budget resolution stands outside that tradition. The sooner Speaker GINGRICH and his Republican colleagues can return to bipartisanship on these vital investments in our Nation's future, the less the damage will be.

Mr. President, I hope that will be soon. I yield the floor.

SCIENCE—THE ENDLESS FRONTIER

LETTER OF TRANSMITTAL

OFFICE OF SCIENTIFIC RESEARCH AND DEVELOPMENT,
Washington, DC, July 5, 1945.

DEAR MR. PRESIDENT: In a letter dated November 17, 1944, President Roosevelt requested my recommendation on the following points:

(1) What can be done, consistent with military security, and with the prior approval of the military authorities, to make known to the world as soon as possible the contributions which have been made during our war effort to scientific knowledge?

(2) With particular reference to the war of science against disease, what can be done now to organize a program for continuing in the future the work which has been done in medicine and related sciences?

(3) What can the Government do now and in the future to aid research activities by public and private organizations?

(4) Can an effective program be proposed for discovering and developing scientific talent in American youth so that the continuing future of scientific research in this country may be assured on a level comparable to what has been done during the war?

It is clear from President Roosevelt's letter that in speaking of science he had in mind the natural sciences, including biology and medicine, and I have so interpreted his questions. Progress in other fields, such as the social sciences and the humanities, is likewise important; but the program for science presented in my report warrants immediate attention.

In seeking answers to President Roosevelt's questions I have had the assistance of distinguished committees specially qualified to advise in respect to these subjects. The committees have given these matters the serious attention they deserve; indeed, they have regarded this as an opportunity to participate in shaping the policy of the country with reference to scientific research. They have had many meetings and have submitted formal reports. I have been in close touch with the work of the committees and with their members throughout. I have examined all of the data they assembled and the suggestions they submitted on the points raised in President Roosevelt's letter.

Although the report which I submit herewith is my own, the facts, conclusions, and recommendations are based on the findings of the committees which have studied these questions. Since my report is necessarily brief, I am including as appendices the full reports of the committees.

A single mechanism for implementing the recommendations of the several committees is essential. In proposing such a mechanism I have departed somewhat from the specific recommendations of the committees, but I have since been assured that the plan I am proposing is fully acceptable to the committee members.

The pioneer spirit is still vigorous within this Nation. Science offers a largely unexplored hinterland for the pioneer who has the tools for his task. The rewards of such exploration both for the Nation and the individual are great. Scientific progress is one essential key to our security as a nation, to our better health, to more jobs, to a higher standard of living, and to our cultural progress.

Respectfully yours,

V. BUSH,
Director.

THE PRESIDENT OF THE UNITED STATES,
The White House,
Washington, D.C.

PRESIDENT ROOSEVELT'S LETTER

THE WHITE HOUSE,
Washington, DC, November 17, 1944.

DEAR DR. BUSH: The Office of Scientific Research and Development, of which you are the Director, represents a unique experiment of team-work and cooperation in coordinating scientific research and in applying existing scientific knowledge to the solution of the technical problems paramount in war. Its work has been conducted in the utmost secrecy and carried on without public recognition of any kind; but its tangible results can be found in the communiques coming in from the battlefronts all over the world. Some day the full story of its achievements can be told.

There is, however, no reason why the lessons to be found in this experiment cannot be profitably employed in times of peace. The information, the techniques, and the research experience developed by the Office of Scientific Research and Development and by the thousands of scientists in the universities and in private industry, should be used in the days of peace ahead for the improvement of the national health, the creation of new enterprises bringing new jobs, and the betterment of the national standard of living.

It is with that objective in mind that I would like to have your recommendations on the following four major points:

First: What can be done, consistent with military security, and with the prior approval of the military authorities, to make known to the world as soon as possible the contributions which have been made during our war effort to scientific knowledge?

The diffusion of such knowledge should help us stimulate new enterprises, provide jobs for our returning servicemen and other workers, and make possible great strides for the improvement of the national well-being.

Second: With particular reference to the war of science against disease, what can be done now to organize a program for continuing in the future the work which has been done in medicine and related science?

The fact that the annual deaths in this country from one or two diseases alone are far in excess of the total number of lives lost by us in battle during this war should make us conscious of the duty we owe future generations.

Third: What can the Government do now and in the future to aid research activities by public and private organizations? The proper roles of public and of private research, and their interrelation, should be carefully considered.

Fourth: Can an effective program be proposed for discovering and developing scientific talent in American youth so that the

continuing future of scientific research in this country may be assured on a level comparable to what has been done during the war?

New frontiers of the mind are before us, and if they are pioneered with the same vision, boldness, and drive with which we have waged this war we can create a fuller and more fruitful employment and a fuller and more fruitful life.

I hope that, after such consultation as you may deem advisable with your associates and others, you can let me have your considered judgment on these matters as soon as convenient—reporting on each when you are ready, rather than waiting for completion of your studies in all.

Very sincerely yours,

FRANKLIN D. ROOSEVELT.

DR. VANNEVAR BUSH,
Office of Scientific Research and Development, Washington, D.C.

SUMMARY OF THE REPORT

Scientific progress is essential

Progress in the war against disease depends upon a flow of new scientific knowledge. New products, new industries, and more jobs require continuous additions to knowledge of the laws of nature, and the application of that knowledge to practical purpose. Similarly, our defense against aggression demands new knowledge so that we can develop new and improved weapons. The essential, new knowledge can be obtained only through basic scientific research.

Science can be effective in the national welfare only as a member of a team, whether the conditions be peace or war. But without scientific progress no amount of achievement in other directions can insure our health, prosperity, and security as a nation in the modern world.

For the war against disease

We have taken great strides in the war against disease. The death rate for all diseases in the Army, including overseas forces, has been reduced from 14.1 per thousand in the last war to 0.6 per thousand in this war. In the last 40 years life expectancy has increased from 49 to 65 years, largely as a consequence of the reduction in the death rates of infants and children. But we are far from the goal. The annual deaths from one or two diseases far exceed the total number of American lives lost in battle during this year. A large fraction of these deaths in our civilian population cut short the useful lives of our citizens. Approximately 7,000,000 persons in the United States are mentally ill and their care costs the public over $175,000,000 a year. Clearly much illness remains for which adequate means of prevention and cure are not yet known.

The responsibility for basic research in medicine and the underlying sciences, so essential to progress in the war against disease, falls primarily upon the medical schools and universities. Yet we find that the traditional sources of support for medical research in the medical schools and universities, largely endowment income, foundation grants, and private donations, are diminishing and there is no immediate prospect of a change in this trend. Meanwhile, the cost of medical research has been rising. If we are to maintain the progress in medicine which has marked the last 25 years, the Government should extend financial support to basic medical research in the medical schools and in universities.

For our national security

The bitter and dangerous battle against the U-boat was a battle of scientific techniques—and our margin of success was dangerously small. The new eyes which radar has supplied can sometime be blinded by new scientific developments. V–2 was countered only by capture of the launching sites.

We cannot again rely on our allies to hold off the enemy while we struggle to catch up. There must be more—and more adequate—military research in peacetime. It is essential that the civilian scientists continue in peacetime some portion of those contributions to national security which they have made so effectively during the war. This can best be done through a civilian-controlled organization with close liaison with the Army and Navy, but with funds direct from Congress, and the clear power to initiate military research which will supplement and strengthen that carried on directly under the control of the Army and Navy.

And for the public welfare

One of our hopes is that after the war there will be full employment. To reach that goal the full creative and productive energies of the American people must be released. To create more jobs we must make new and better and cheaper products. We want plenty of new, vigorous enterprises. But new products and processes are not born full-grown. They are founded on new principles and new conceptions which in turn result from basic scientific research. Basic scientific research is scientific capital. Moreover, we cannot any longer depend upon Europe as a major source of this scientific capital. Clearly, more and better scientific research is one essential to the achievement of our goal of full employment.

How do we increase this scientific capital? First, we must have plenty of men and women trained in science, for upon them depends both the creation of new knowledge and its application to practical purposes. Second, we must strengthen the centers of basic research which are principally the colleges, universities, and research institutes. These institutions provide the environment which is most conducive to the creation of new scientific knowledge and least under pressure for immediate, tangible results. With some notable exceptions, most research in industry and in Government involves application of existing scientific knowledge to practical problems. It is only the colleges, universities, and a few research institutes that devote most of their research efforts to expanding the frontiers of knowledge.

Expenditures for scientific research by industry and Government increased from $140,000,000 in 1930 to $309,000,000 in 1940. Those for the colleges and universities increased from $20,000,000 to $31,000,000, while those for research institutes declined from $5,200,000 to $4,500,000 during the same period. If the colleges, universities, and research institutes are to meet the rapidly increasing demands of industry and Government for new scientific knowledge, their basic research should be strengthened by use of public funds.

For science to serve as a powerful factor in our national welfare, applied research both in Government and in industry must be vigorous. To improve the quality of scientific research within the Government, steps should be taken to modify the procedures for recruiting, classifying, and compensating scientific personnel in order to reduce the present handicap of governmental scientific bureaus in competing with industry and the universities for top-grade scientific talent. To provide coordination of the common scientific activities of these governmental agencies as to policies and budgets, a permanent Science Advisory Board should be created to advise the executive and legislative branches of Government on these matters.

The most important ways in which the Government can promote industrial research are to increase the flow of new scientific knowledge through support of basic research, and to aid in the development of scientific talent. In addition, the Government should provide suitable incentives to industry to conduct research (a) by clarification of present uncertainties in the Internal Revenue Code in regard to the deductibility of research and development expenditures as current charges against net income, and (b) by strengthening the patent system so as to eliminate uncertainties which now bear heavily on small industries and so as to prevent abuses which reflect discredit upon a basically sound system. In addition, ways should be found to cause the benefits of basic research to reach industries which do not now utilize new scientific knowledge.

We must renew our scientific talent

The responsibility for the creation of new scientific knowledge—and for most of its application—rests on that small body of men and women who understand the fundamental laws of nature and are skilled in the techniques of scientific research. We shall have rapid or slow advance on any scientific frontier depending on the number of highly qualified and trained scientists exploring it.

The deficit of science and technology students who, but for the war, would have received bachelor's degrees is about 150,000. It is estimated that the deficit of those obtaining advanced degrees in these fields will amount in 1955 to about 17,000—for it takes at least 6 years from college entry to achieve a doctor's degree or its equivalent in science or engineering. The real ceiling on our productivity of new scientific knowledge and its application in the war against disease, and the development of new products and new industries, is the number of trained scientists available.

The training of a scientist is a long and expensive process. Studies clearly show that there are talented individuals in every part of the population, but with few exceptions, those without the means of buying higher education go without it. If ability, and not the circumstance of family fortune, determines who shall receive higher education in science, then we shall be assured of constantly improving quality at every level of scientific activity. The Government should provide a reasonable number of undergraduate scholarships and graduate fellowships in order to develop scientific talent in scholarships and graduate fellowships in order to develop scientific talent in American youth. The plans should be designed to attract into science only that proportion of youthful talent appropriate to the needs of science in relation to the other needs of the Nation for high abilities.

Including those in uniform

The most immediate prospect of making up the deficit in scientific personnel is to develop the scientific talent in the generation now in uniform. Even if we should start now to train the current crop of high-school graduates none would complete graduate studies before 1951. The Armed Services should comb their records for men who, prior to or during the war, have given evidence of talent for science, and make prompt arrangements, consistent with current discharge plans, for ordering those who remain in uniform, as soon as militarily possible, to duty at institutions here and overseas where they can continue their scientific education. Moreover, the Services should see that those who study overseas have the benefit of the latest scientific information resulting from research during the war.

The lid must be lifted

While most of the war research has involved the application of existing scientific

knowledge to the problems of war, rather than basic research, there has been accumulated a vast amount of information relating to the application of science to particular problems. Much of this can be used by industry. It is also needed for teaching in the colleges and universities here and in the Armed Forces Institutes overseas. Some of this information must remain secret, but most of it should be made public as soon as there is ground for belief that the enemy will not be able to turn it against us in this war. To select that portion which should be made public, to coordinate its release, and definitely to encourage its publication, a Board composed of Army, Navy, and civilian scientific members should be promptly established.

A program for action

The Government should accept new responsibilities for promoting the flow of new scientific knowledge and the development of scientific talent in our youth. These responsibilities are the proper concern of the Government, for they vitally affect our health, our jobs, and our national security. It is in keeping also with basic United States policy that the Government should foster the opening of new frontiers and this is the modern way to do it. For many years the Government has wisely supported research in the agricultural colleges and the benefits have been great. The time has come when such support should be extended to other fields.

The effective discharge of these new responsibilities will require the full attention of some over-all agency devoted to that purpose. There is not now in the permanent governmental structure receiving its funds from Congress an agency adapted to supplementing the support of basic research in the colleges, universities, and research institutes, both in medicine and the natural sciences, adapted to supporting research on new weapons for both Services, or adapted to administering a program of science scholarships and fellowships.

Therefore I recommend that a new agency for these purposes be established. Such an agency should be composed of persons of broad interest and experience, having an understanding of the peculiarities of scientific research and scientific education. It should have stability of funds so that long-range programs may be undertaken. It should recognize that freedom of inquiry must be preserved and should leave internal control of policy, personnel, and the method and scope of research to the institutions in which it is carried on. It should be fully responsible to the President and through him to the Congress for its program.

Early action on these recommendations is imperative if this Nation is to meet the challenge of science in the crucial years ahead. On the wisdom with which we bring science to bear in the war against disease, in the creation of new industries, and in the strengthening of our Armed Forces depends in large measure our future as a nation.

INTRODUCTION

Scientific progress is essential

We all know how much the new drug, penicillin, has meant to our grievously wounded men on the grim battlefronts of this war—the countless lives it has saved—the incalculable suffering which its use has prevented. Science and the great practical genius of this Nation made this achievement possible.

Some of us know the vital role which radar has played in bringing the Allied Nations to victory over Nazi Germany and in driving the Japanese steadily back from their island bastions. Again it was painstaking scientific research over many years that made radar possible.

What we often forget are the millions of pay envelopes on a peacetime Saturday night which are filled because new products and new industries have provided jobs for countless Americans. Science made that possible, too.

In 1939 millions of people were employed in industries which did not even exist at the close of the last war—radio, air conditioning, rayon and other synthetic fibers, and plastics are examples of the products of these industries. But these things do not mark the end of progress—they are but the beginning if we make full use of our scientific resources. New manufacturing industries can be started and many older industries greatly strengthened and expanded if we continue to study nature's laws and apply new knowledge to practical purposes.

Great advances in agriculture are also based upon scientific research. Plants which are more resistant to disease and are adapted to short growing seasons, the prevention and cure of livestock diseases, the control of our insect enemies, better fertilizers, and improved agricultural practices, all stem from painstaking scientific research.

Advances in science when put to practical use mean more jobs, higher wages, shorter hours, more abundant crops, more leisure for recreation, for study, for learning how to live without the deadening drudgery which has been the burden of the common man for ages past. Advances in science will also bring higher standards of living, will lead to the prevention or cure of diseases, will promote conservation of our limited national resources, and will assure means of defense against aggression. But to achieve these objectives—to secure a high level of employment, to maintain a position of world leadership—the flow of new scientific knowledge must be both continuous and substantial.

Our population increased from 75 million to 130 million between 1900 and 1940. In some countries comparable increases have been accompanied by famine. In this country the increase has been accompanied by more abundant food supply, better living, more leisure, longer life, and better health. This is, largely, the product of three factors—the free play of initiative of a vigorous people under democracy, the heritage of great natural wealth, and the advance of science and its application.

Science, by itself, provides no panacea for individual, social, and economic ills. It can be effective in the national welfare only as a member of a team, whether the conditions be peace or war. But without scientific progress no amount of achievement in other directions can ensure our health, prosperity, and security as a nation in the modern world.

Science is a proper concern of government

It has been basic United States policy that Government should foster the opening of new frontiers. It opened the seas to clipper ships and furnished land for pioneers. Although these frontiers have more or less disappeared, the frontier of science remains. It is in keeping with the American tradition—one which has made the United States great—that new frontiers shall be made accessible for development by all American citizens.

Moreover, since health, well-being, and security are proper concerns of Government, scientific progress is, and must be, of vital interest to Government. Without scientific progress the national health would deteriorate; without scientific progress we could not hope for improvement in our standard of living or for an increased number of jobs for our citizens; and without scientific progress we could not have maintained our liberties against tyranny.

Government relations to science—past and future

From early days the Government has taken an active interest in scientific matters. During the nineteenth century the Coast And Geodetic Survey, the Naval Observatory, the Department of Agriculture, and the Geological Survey were established. Through the Land Grant College Acts the Government has supported research in state institutions for more than 80 years on a gradually increasing scale. Since 1900 a large number of scientific agencies have been established within the Federal Government, until in 1939 they numbered more than 40.

Much of the scientific research done by Government agencies is intermediate in character between the two types of work commonly referred to as basic and applied research. Almost all Government scientific work has ultimate practical objectives but, in many fields of broad national concern, it commonly involves long-term investigation of a fundamental nature. Generally speaking, the scientific agencies of Government are not so concerned with immediate practical objectives as are the laboratories of industry nor, on the other hand, are they as free to explore any natural phenomena without regard to possible economic applications as are the educational and private research institutions. Government scientific agencies have splendid records of achievement, but they are limited in function.

We have no national policy for science. The Government has only begun to utilize science in the Nation's welfare. There is no body within the Government charged with formulating or executing a national science policy. There are no standing committees of the Congress devoted to this important subject. Science has been in the wings. It should be brought to the center of the stage—for in it lies much of our hope for the future.

There are areas of science in which the public interest is acute but which are likely to be cultivated inadequately if left without more support than will come from private sources. These areas—such as research on military problems, agriculture, housing, public health, certain medical research, and research involving expensive capital facilities beyond the capacity of private institutions—should be advanced by active Government support. To date, with the exception of the intensive war research conducted by the Office of Scientific Research and Development, such support has been meager and intermittent.

For reasons presented in this report we are entering a period when science needs and deserves increased support from public funds.

Freedom of inquiry must be preserved

The publicly and privately supported colleges, universities, and research institutes are the centers of basic research. They are the wellsprings of knowledge and understanding. As long as they are vigorous and healthy and their scientists are free to pursue the truth wherever it may lead, there will be a flow of new scientific knowledge to those who can apply it to practical problems in Government, in industry, or elsewhere.

Many of the lessons learned in the wartime application of science under Government can be profitably applied in peace. The Government is peculiarly fitted to perform certain functions, such as the coordination and support of broad programs on problems of great national importance. But we must proceed with caution in carrying over the methods which work in wartime to the very different conditions of peace. We must remove the rigid controls which we have had to impose, and recover freedom of inquiry and that healthy competitive scientific spirit so necessary for expansion of the frontiers of scientific knowledge.

Scientific progress on a broad front results from the free play of free intellects, working on subjects of their own choice, in the manner dictated by their curiosity for exploration of the unknown. Freedom of inquiry must be preserved under any plan for Government support of science in accordance with the Five Fundamentals listed on page 32.

The study of the momentous questions presented in President Roosevelt's letter has been made by able committees working diligently. This report presents conclusions and recommendations based upon the studies of these committees which appear in full as the appendices. Only in the creation of one overall mechanism rather than several does this report depart from the specific recommendations of the committees. The members of the committees have reviewed the recommendations in regard to the single mechanism and have found this plan thoroughly acceptable.

EXHIBIT 2

GOP BALANCED-BUDGET PLAN SEEN CRIPPLING R&D

(By Anne Eisele)

Federal non-defense research and development programs would be cut by an average of one-third by fiscal year 2002 under a Republican balanced-budget plan approved by both houses of Congress late last week, according to an American Association for the Advancement of Science estimate of the plan's projected effects.

Although the individual program assumptions under House Continuing Resolution 67 are not binding on congressional appropriators, the plan's overall spending targets are obligatory. And they paint a dire scenario for R&D initiatives at the departments of Commerce and Energy, the National Aeronautics and Space Administration, and other agencies.

A total non-defense research and development cut of 33.1 percent would drop spending from the current-year level of $34.3 billion to $22.9 billion by FY 2002, under a compromise worked out between Senate Majority Leader Bob Dole (R-Kan.) and House Speaker Newt Gingrich (R-Ga.).

Not surprising, R&D programs at DOC and DOE—entities that many GOP lawmakers would like to see abolished altogether—take a beating under the GOP plan. Total Commerce Department R&D funding would be halved by 2002, and Energy Department non-defense R&D monies would drop 47.4 percent during the same period.

And while the National Institute of Standards and Technology's Science and Technical Research Services take their biggest beating from inflation, as they lose only one percent over the seven-year period, funding for NIST's $400-million Advanced Technology Program is canceled in FY 1997.

The Economic Development Administration and certain National Oceanic and Atmospheric Administration R&D programs also are zeroed out under the Republican plan. DOE's clean coal technology program would be wiped out, and fossil energy R&D faces an 81.8 percent reduction.

Meanwhile, the National Aeronautics and Space Administration takes it on the chin, sustaining an agency-wide cut of 35.9 percent; its key research areas, aeronautics and human space flight, plummet 43.9 percent and 35.1 percent, respectively. NASA's next-generation wind tunnel development program would be terminated in the upcoming fiscal year.

AAAS Preliminary—Final Budget Resolution—Projected Effects of Concurrent Budget Resolution (H. Con. Res. 67) on Nondefense R&D

[All figures in millions of dollars budget authority]

Agency/Program	Key	R&D** FY 1995 estimated	R&D FY 1996 estimated	R&D FY 1997 estimated	R&D FY 1998 estimated	R&D FY 1999 estimated	R&D FY 2000 estimated	R&D FY 2001 estimated	R&D FY 2002 estimated	R&D*** FY 2002 constant dollars	Constant dollar difference 1995–2002 (percent)
NIH	(13)	10,840	10,732	10,515	10,515	10,515	10,515	10,515	10,515	8,467	−21.9
Agency Health Care Polc	(2)	277	0	0	0	0	0	0	0	0	−100.0
Other HHS R&D	(3)	610	610	610	610	610	610	610	610	491	−19.5
Total HHS R&D		11,727	11,342	11,125	11,125	11,125	11,125	11,125	11,125	8,958	−23.6
NASA Human Space Flt	(1,14)	1,902	1,883	1,816	1,697	1,649	1,533	1,533	1,533	1,234	−35.1
NASA SAT Space R&D	(1,14)	5,072	4,476	4,375	4,263	4,085	4,082	4,082	4,082	3,287	−35.2
NASA Mission Support	(1,14)	1,619	1,711	1,678	1,660	1,651	1,634	1,634	1,634	1,315	−18.8
NASA SAT Aeronautics	(1,14)	882	677	653	639	629	614	614	614	495	−43.9
NASA Wind Tunnels	(2)	400	0	0	0	0	0	0	0	0	−100.0
Total NASA R&D		9,875	8,747	8,523	8,258	8,015	7,863	7,863	7,863	6,331	−35.9
General Science (Physics)	(1)	974	989	940	890	890	890	890	890	717	−26.3
Energy Supply R&D	(1)	2,210	1,790	1,620	1,560	1,486	1,431	1,431	1,431	1,152	−47.8
Fossil Energy R&D	(1)	350	119	107	95	87	79	79	79	64	−81.8
Energy Conservation R&D	(1)	396	213	206	198	193	188	188	188	152	−61.7
Clean Coal Technology	(2)	37	0	0	0	0	0	0	0	0	−100.0
Uranium Enrichment	(1)	3	2	1	1	1	1	1	1	1	−61.7
Total DOE nondef R&D		3,969	3,113	2,874	2,745	2,658	2,590	2,590	2,590	2,086	−47.4
Research & Related Acts	(4,14)	2,061	2,045	2,119	2,197	2,292	2,378	2,378	2,378	1,915	−7.1
Academic Research Infra	(1)	250	100	100	100	100	100	100	100	81	−67.8
Major Res. Equipment	(1)	126	70	55	26	0	0	0	0	0	−100.0
Education and Hum. Res	(1,14)	107	106	107	107	109	110	110	110	88	−17.6
Total NSF R&D		2,544	2,320	2,381	2,430	2,501	2,588	2,588	2,588	2,084	−18.1
Agri Research Serv. R&D	(1)	709	640	640	640	640	640	640	640	515	−27.3
ARS R&D facilities	(13)	44	29	27	24	22	20	20	20	16	−63.4
Coop. State Res/Extension R&D	(1)	419	345	345	345	345	345	345	345	278	−33.6
Coop. State Res/Ext. R&D facil	(13)	63	3	0	0	0	0	0	0	0	−100.0
Economics Research Serv	(1)	54	34	27	27	27	27	27	27	22	−59.7
Natl Agric. Stats Service	(1)	4	3	3	3	3	3	3	3	2	−35.4
Foreign Agricultural Serv	(1)	1	1	1	1	1	1	1	1	1	−29.1
Forest Service	(6)	204	160	156	156	156	156	156	156	126	−38.4
Other USDA R&D	(3)	44	44	44	44	44	44	44	44	35	−19.5
Total USDA R&D		1,540	1,259	1,242	1,239	1,237	1,235	1,235	1,235	995	−35.4
US Geological Survey	(1)	368	295	295	295	295	295	295	295	237	−35.6
Nat'l Biological Service	(1)	167	99	96	94	92	90	90	90	72	−56.6
Bureau of Mines	(1)	103	90	78	66	53	41	41	41	33	−67.7
Nat'l Park Service	(13)	19	18	18	18	18	18	18	18	15	−23.5
Other Interior R&D	(3)	30	30	30	30	30	30	30	30	24	−19.5
Total Interior R&D		686	532	517	502	488	473	473	473	381	−44.4
FHWA (Highway Admin)	(7)	277	130	130	130	130	130	130	130	105	−62.1
Federal Transit Admin	(1)	21	0	0	0	0	0	0	0	0	−100.0
Maritime Admin	(1)	3	0	0	0	0	0	0	0	0	−100.0
Federal Railroad Admin	(8)	28	8	8	8	8	8	8	8	6	−77.6
Other Transporation R&D	(3)	360	360	360	360	360	360	360	360	290	−19.5
Total DOT R&D		687	497	497	497	497	497	497	497	400	−41.7
NOAA R&D Facils	(1)	38	12	12	12	12	12	12	12	10	−75.1
NOAA Operations, Res & Facils R&D	(1)	531	472	465	458	443	429	429	429	346	−34.8
Other NOAA R&D	(2)	19	0	0	0	0	0	0	0	0	−100.0
NIST Sci & Technical Res Service	(4)	214	225	231	239	245	253	260	268	216	−1.0
NIST ATP	(2)	409	0	0	0	0	0	0	0	0	−100.0
NIST Construction	(4)	63	65	67	69	72	74	76	78	62	−0.9
Econ. Develop. Admin	(2)	1	0	0	0	0	0	0	0	0	−100.0
Other Commerce R&D	(3)	10	10	10	10	10	10	10	10	8	−19.5

AAAS Preliminary—Final Budget Resolution—Projected Effects of Concurrent Budget Resolution (H. Con. Res. 67) on Nondefense R&D—Continued

[All figures in millions of dollars budget authority]

Agency/Program	Key	R&D** FY 1995 estimated	R&D FY 1996 estimated	R&D FY 1997 estimated	R&D FY 1998 estimated	R&D FY 1999 estimated	R&D FY 2000 estimated	R&D FY 2001 estimated	R&D FY 2002 estimated	R&D*** FY 2002 constant dollars	Constant dollar difference 1995–2002 (percent)
Total Commerce R&D		1,284	783	784	787	782	777	787	797	642	−50.0
Total EPA R&D	(9)	619	554	554	554	554	554	554	554	446	−27.9
Total Education R&D	(10)	175	5	5	5	5	5	5	5	4	−97.8
Total AID R&D	(10)	314	0	0	0	0	0	0	0	0	−100.0
Total Veterans R&D	(3)	297	297	297	297	297	297	297	297	239	−19.5
Total NRC R&D	(3)	82	82	82	82	82	82	82	82	66	−19.5
Total Smithsonian R&D	(3)	135	135	135	135	135	135	135	135	109	−19.5
Total TVA R&D	(5)	89	0	0	0	0	0	0	0	0	−100.0
Total Corps R&D	(3)	55	55	55	55	55	55	55	55	44	−19.5
Total Labor R&D	(11)	62	26	26	26	26	26	26	26	21	−66.0
Total Other R&D	(12)	164	164	164	164	164	164	164	164	132	−19.5
Total nondefense R&D		34,303	29,911	29,261	28,901	28,621	28,467	28,476	28,487	22,939	−33.1

House Budget Committee Policy Assumptions: Fiscal Year 1996 Budget Resolution prepared by the House Budget Committee, May 10, 1995 and Conference Report for Concurrent Resolution on the Budget for Fiscal Year 1996, June 26, 1995.

** Source: AAAS Report XX: Research and Development FY 1996.

*** Expressed in FY 1995 dollars. Adjusted for Inflation according to GDP deflators.

Key of assumptions:

[1] Based on specific program reduction in House resolution, assuming R&D as percent of appropriation remains constant.

[2] Elimination of account in House resolution.

[3] Not specifically mentioned in either House or conference resolution; assumes freeze at FY 1995 level.

[4] Based on specific program INCREASE in House resolution, assuming R&D as percent of appropriation remains constant.

[5] Planned privatization in House resolution; would no longer be federal R&D.

[6] Reductions in Forest Resources and Management Research and Ecosystems Research in House resolution.

[7] Assumes $150 million reduction each year from elimination of Intelligent Vehicle Development R&D.

[8] Elimination of $20 million in R&D High-Speed Rail in House resolution.

[9] Elimination of $85 million in R&D for ETI; all other R&D frozen at FY 1995 level.

[10] Assumes elimination of all programs containing R&D within agency based on House resolution detail; Howard University R&D added back in conference.

[11] Elimination of ETA R&D in the House resolution; all other R&D frozen at FY 1995 level.

[12] HUD, Justice, and USPS R&D frozen at FY 1995 levels.

[13] Based on specific program reduction in concurrent resolution, assuming R&D as percent of appropriations remains constant.

[14] Conference added $2 billion over seven years to general science above House level; distributed over NASA and NSF research activities (excluding facilities).

Deflators: 1995—1.30; 1996—1.34; 1997—1.38; 1998—1.42; 1999—1.46; 2000—1.51; 2001 est.—1.56; 2002 est.—1.61; 1995–2002—1.24. Deflators from OMB, Budget of the United States Government FY 1996 until FY 2000, then 3.5 percent inflation thereafter.

EXHIBIT 3

PUBLIC SURPRISES POLLSTERS, BACKS FEDERAL R&D

(By Ken Jacobson)

Public opinion researchers went to the districts of some leading House Republicans in April expecting to hear condemnations of federal spending on R&D. Instead, recalls Steve Wagner of Luntz Research & Strategic Service, participants in focus groups they moderated tended to rate R&D an ''above-average priority'' even though many stood behind efforts to reduce the federal deficit.

''We went looking for things that didn't pan out,'' says Wagner, whose groups were recruited in New Orleans, the district of House Appropriations Committee Chairman Bob Livingston, and Houston, home of House Majority Whip Tom DeLay and Ways & Means Committee Chairman Bill Archer.

''We went looking for the degree to which government investment in R&D was seen as corporate welfare, and we didn't find it. We went looking for the degree to which concerns about the deficit cast such a pall over everything that R&D should take a disproportionate or even a proportionate cut, and they told us 'no.' It's fair to say,'' Wagner admits, ''that I was surprised by the extent of support'' for R&D that was in evidence.

That's not to say that the 10- to 13-voter groups, which met for two hours each, had a very detailed picture of how the federal government spends its R&D dollars. And that's true even though they were chosen to take part in the research—commissioned by IBM, Hewlett-Packard, Kodak, and Genentech—in part of their level of education and their interest in current affairs.

According to Public Opinion Strategies' Neil Newhouse, in charge of groups in House Science Committee Chairman Bob Walker's Lancaster, Pa., district and the Columbus, Ohio, district of House Budget Committee Chairman John Kasich, participants showed awareness that federal R&D encompasses the fields of space, health, and defense, but had little knowledge of specific programs.

Nonetheless, they staunchly defended the federal R&D function. ''We pushed people hard in terms of trying to get them to move away from support from R&D. But their support was broad and had a level intensity,'' Newhouse says, that ''contradicted what we saw as the current political environment.''

Behind their attitudes may be the fact that, as Wagner puts it, ''people are very pragmatic.'' Far from being greeted with what he regards as ''ideological'' stances, Wagner says, the researchers heard messages he encapsulates as: "'Jobs are a priority, finding a cure for AIDS is a priority, and if it takes the government to do it, the government should do it.' If they think government involvement will make the situation better, people will not hesitate to say that that's a legitimate function of government.''

Still, that doesn't imply an absolute faith in government, or even much faith at all. This mistrust, however, is also directed toward the private sector, and what emerges, according to the researchers, is a preference for public-private R&D partnerships.

''Neither the government nor private industry is completely trusted to make these investment decisions,'' states a summary of their findings that the two polling organizations issued jointly. ''The government remains the agency of the common interest. Private business is seen as more efficient, more disciplined, but also self-interested.

''These perceptions cannot be changed in the short run, but they can be used: Let the private sector say what is feasible, which technologies offer the promise of payoff, and [let] the government say what is in the national interest to develop. A partnership of both entities looking over each other's shoulder will likely be the most satisfying to the voters.''

WAS CONGRESS IRRESPONSIBLE? LOOK AT THE ARITHMETIC

Mr. HELMS. Mr. President, before contemplating today's bad news about the Federal debt, let us have ''another go,'' as the British put it, with our little pop quiz. Remember. One question, one answer.

The question: How many millions of dollars does it take to make a trillion dollars? While you are thinking about it, bear in mind that it was the U.S. Congress that ran up the Federal debt that now exceeds $4.9 trillion.

To be exact, as of the close of business yesterday, Tuesday, July 18, the total Federal debt—down to the penny—stood at $4,929,786,301,717.48, of which, on a per capita basis, every man, woman, and child in America owes $18,713.55.

Mr. President, back to the pop quiz: How many million in a trillion? There are a million million in a trillion.

AFFIRMATIVE ACTION

Mr. LIEBERMAN. Mr. President, I want to speak for just a few moments in reaction to the speech made this morning by President Clinton on the subject of affirmative action. The principle that every individual should have an equal opportunity to rise as high as his or her ability will take them, regardless of race, gender, religion, nationality, or other group characteristic, is a defining ideal of our society. We must be very wary of any deviation from that principle, no matter how well intended. That is why it is clearly time to review all Government affirmative action programs in which an individual's membership in a group, whether defined by race, gender, national origin, or other similar characteristics, may determine whether he or she will be awarded a Government benefit.

Mr. President, while America has clearly not yet realized the national