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## From the A. A. A. S.

Mr. President, members of the AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE, Ladies and Gentlemen:

I am deeply honored in being with you tonight on the one hundredth anniversary of the founding of the American Association for the Advancement of Science. As President of the United States, I welcome you to Washington.

In the one hundred years since this Association was organized, science has helped transform the United States into the most productive Nation in the world. I know that in your meetings this week you will be looking back over the progress of American science in the past century. I also know that you are much more interested in looking into the future.

You are looking forward, I know, because we stand at this moment at the threshold of revolutionary developments. Scientific research daily becomes more important to our agriculture, our industry, and our health. The members of

Excerpts from the Address of the President of the United States at the Opening Session of the Centennial Celebration of the American Association for the Advancement of Science, Monday Evening, September 13, 1948, Washington, D. C.

this Association know better than I what developments to expect in the years ahead in physics, in chemistry, in biology and the other sciences, but I am certain of this—that science will change our lives in the century ahead even more than it has changed them in the hundred years just past.

I hope you will also be thinking about the relationship between science and our national policy.

Two years ago, I appointed a Scientific Research Board. Its report, entitled *Science and Public Policy*, was submitted last fall. The report stressed the importance of science to our national welfare, and it contained a number of important recommendations.

The most important were these:

First, we should double our total public and private allocations of funds to the sciences. We are now devoting, through Federal and private expenditure, little more than one billion dollars for research and development per year. With a national income of more than \$200 billion annually, the Board felt that we should devote at least \$2 billion to scientific research and development each year.

Second, greater emphasis should be placed on basic research and on medical research.

Third, a National Science Foundation should be established.

Fourth, more aid should be granted to the universities, both for student scholarships and for research facilities.

Fifth, the work of the research agencies of the Federal Government should be better financed and coordinated.

I hope that you have been weighing these recommendations carefully, and that if you agree with me that they are sound, you will consider how they can be made effective national policies. . . .

If we are to maintain the leadership in science that is essential to national strength, we must vigorously press ahead in research. There is one simple axiom on which this thought is based. The secrets of nature are not our monopoly. Any nation that is willing and able to make the effort can learn the secrets that we have learned. Such a nation may, indeed, discover new facts of nature we have not yet discovered.

Our problem, therefore, is not a static one of preserving what we have. Our problem is to continue to engage in pure—or fundamental—research in all scientific fields. Such research alone leads to striking developments that mean leadership. Yet it is precisely in this area that we, as a Nation, have been weakest. We have been strong in applied science and in technology, but in the past we have relied largely on Europe for basic knowledge. . . .

Some of the fundamental research necessary to our national interest is being undertaken by the Federal Government. The Government has, I believe, two obligations in connection with this research if we are to obtain the results we hope for. First, it must provide truly adequate funds and facilities.

Second, it must provide the working atmosphere in which research progress is possible.

As to the first point, the Government is developing impressive programs in many scientific fields. Fundamental research is being carried on for the *National Military Establishment* in the laboratories of the armed forces, of industry, and of our universities. The *Atomic Energy Commission* has been pushing its extensive research. The *National Advisory Committee for Aeronautics* has expanded its many aeronautical developments. The Federal Security Agency has engaged in extensive medical studies, in its own laboratories like the *National Institute of Health*, and through grants to colleges and universities. Other Federal agencies, such as the Departments of Commerce, of Agriculture, and of the Interior, have pursued vigorous programs. The *Inter-Departmental Committee on Scientific Research and Development*, appointed by me last March, aids in coordinating the Government's many research programs. I sincerely hope that these programs will be further developed and coordinated by the early passage of a *National Science Foundation* bill.

The second obligation of the Federal Government in connection with basic research is to provide working conditions under which scientists will be encouraged to work for the Government. Scientists do not want to work in ivory towers, but they do want to work in an atmosphere free from suspicion, personal insult, or politically motivated attacks. It is highly unfortunate that we have not been able to maintain the proper conditions for best scientific work. This failure has grave implications for our national security and welfare. . . .

Continuous research by our best scientists is the key to American scientific

leadership and true national security. This indispensable work may be made impossible by the creation of an atmosphere in which no man feels safe against the public airing of unfounded rumors, gossip and vilification. Such an atmosphere is un-American. It is the climate of a totalitarian country in which scientists are expected to change their theories to match changes in the police state's propaganda line. . . .

We are only in the beginnings of the atomic age. The knowledge that we now have is but a fraction of the knowledge we must get, whether for peaceful uses or for national defense. We must depend on intensive research to acquire the further knowledge we need. We cannot drive scientists into our laboratories, but, if we tolerate reckless or unfair attacks, we can certainly drive them out.

These are truths that every scientist knows. They are truths that the American people need to understand.

## A Statement on the Relationships of the Voluntary Health Agencies to the School Health Program

Several groups either legally or through common interest share in the school health program. The growth of the program and of the health knowledge upon which it is based is almost staggering. Only through the effective relationship of all groups with important contributions to make can the school health program approach its goal, the

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Science has no political affiliation. Concern for our national security is non-partisan. Sober recognition of scientific research as the basis of our future national security should certainly be non-partisan. All Americans have a solemn obligation to avoid those methods and procedures which are impeding scientific research—whether adopted mistakenly with good intent, or advocated in the name of security by men with other axes to grind. . . .

Now and in the years ahead, we need more than anything else the honest and uncompromising common-sense of science. Science means a method of thought. That method is characterized by open-mindedness, honesty, perseverance, and, above all, by an unflinching passion for knowledge and truth. When more of the peoples of the world have learned the ways of thought of the scientist, we shall have better reason to expect lasting peace and a fuller life for all.

best possible health for all children now and throughout their lives.

School authorities by law carry the ultimate responsibility of all programs conducted in the schools. This includes the school health program. Since the control of communicable disease is a part of every school program and is frequently by law the responsibility of the public health department, and since in some states departments of health are responsible by law for medical examinations and follow-up, the latter to the extent set by local statute shares the responsibility of the school health program.

There are many groups without legal