

THE CHAIRMAN'S FOREWORD

The 10 years since the end of World War II have been a dramatic decade in the development of science in the United States. New discoveries of natural knowledge and its application at an unprecedented rate have strengthened our military defenses, stimulated our national economy, and bettered human welfare; new vistas of better ways of life have been revealed. These remarkable achievements have been enabled in large degree by the greatly increased financial support of scientific research and teaching by our Federal Government and by private industry. The National Science Foundation has done much to foster those developments. The Foundation has even heavier responsibilities and greater opportunities in the years ahead in order that our accelerating scientific progress may be sustained by the discovery of new knowledge and by the enthusiasm of newly trained scientists.

Heartening recognition of those responsibilities and opportunities by the Federal Government has been evident in the ever-increasing appropriations for the work of the Foundation. The need for further support will certainly increase if our Nation is to preserve the vitality we have inherited from our pioneering ancestors and which is nurtured by adventurous research. Science satisfies man's deep-seated desire to create a more satisfying way of life. Science is necessary to national survival in the fierce conflict of spiritual ideals and national economies.

In this scientific age it is more true than ever before that trained minds are our greatest sources of power and our most powerful weapons. The mission of the National Science Foundation is to prepare the minds of young scientists for the high purpose of research and to provide the facilities they require for their subsequent endeavor. Appropriations for such

a purpose are secure investments in the future of our country and in the welfare of its people.

Scientists traditionally have cultivated close associations with colleagues of other countries. It is natural that they should do so, for scientists of all nations are engaged in a common quest for common knowledge; the work of each is aided by knowledge of the work of others. Such associations and community of effort are of especial significance in these times of international dissidence and danger which emphasize the greater need for amity of nations.

Scientists are uniquely fitted to foster international unity and friendship, for they deal with facts and natural laws which are not modified by national boundaries. As scientific ambassadors they are not involved in the disputes of nations; they are effective cohesive forces in a world that is fragmented by divisive forces.

With increasing effort this Foundation fosters the diffusion of scientific knowledge between nations and aids our scientists to visit laboratories and colleagues in other countries; the Foundation has thus strengthened our country's ties to other friendly countries. By enabling our scientists to play a more active role in the international scientific community, we have helped fulfill the growing responsibility that derives from our country's position of pre-eminence in modern science. Our support of the vast undertakings which are planned for the International Geophysical Year is such a vital endeavor. By all exchange of scientists and scientific knowledge, "science is increased to the benefit of mankind in general" to quote the words of Benjamin Franklin. If our national goals were small and selfish, such support of international activities would be materially profitable; if we are magnanimous in our concept of national duty, to foster such relations is essential.

The surest measure of a nation's greatness is the moral and intellectual quality of its people. In this age of science a great national resource is an abundance of scientists who are teachers, investigators, writers, administrators, and those who apply new knowledge to the satisfaction of human wants. Such an

abundance we do not have; on the contrary, the scarcity of trained scientists is acute. To relieve that shortage which restricts our scientific progress is one of the present concerns and efforts of the Foundation.

We recognize a responsibility for the teaching of science which goes far beyond the training of scientists alone. We would further the better teaching of science so that all the citizens of our country may understand science more adequately in order that they can more effectively fulfill their responsibilities as citizens of our democracy. Unless there be such a widespread understanding of the scientific determinants of our civilization, our Nation will be rent by conflict between those who know and those who do not know.

The National Science Foundation is remarkable for the vast number of those who carry out its functions in all parts of our country. A small administrative organization relies upon the freely given advice and expert judgment of thousands of scientists drawn from universities and other research institutions and from industrial and Government laboratories. On their advice funds are granted for the work of scientists and teachers in universities, colleges, and schools in every state of the Nation. The freedom and integrity of our private cultural institutions are thus preserved. The culture of every state in the Union is thus enriched. It is truly a *National Science Foundation*.

DETLEV W. BRONK,
Chairman, National Science Board.