increased by common international effort. We believe that through such common effort, the coexistence between nations of different social and economic structure can become not merely peaceful and competitive, but to an increasing degree cooperative, and therefore more stable.

As scientists, we are deeply aware of the great change in the condition of mankind which has been brought about by the modern development and application of science. Given peace, mankind stands at the beginning of a great scientific age. Science can provide mankind with an ever-increasing understanding of the forces of nature, and the means of harnessing them. This will bring about a great increase in the well-being, health, and prosperity of all men.

The Responsibility of Scientists

We believe it to be a responsibility of scientists in all countries to contribute to the education of the peoples by spreading among them a wide understanding of the dangers and potentialities offered by the unprecedented growth of science. We appeal to our colleagues everywhere to contribute to this effort, both through enlightenment of adult populations, and through education of the coming generations. In particular, education should stress improvement of all forms of human relations and should eliminate any glorification of war and violence.

Scientists are, because of their special knowledge, well equipped for early awareness of the danger and the promise arising from scientific discoveries. Hence, they have a special competence and a special responsibility in relation to the most pressing problems of our times.

In the present conditions of distrust between nations, and of the race for military supremacy which arises from it, all branches of science—physics, chemistry, biology, psychology—have become increasingly involved in military developments. In the eyes of the people of many countries, science has become associated with the development of weapons. Scientists are either admired for their contribution to national security, or damned for having brought mankind into jeopardy by their invention of weapons of mass destruction. The increasing material support which science now enjoys in many countries is mainly due to its importance, direct or indirect, to the military strength of the nation and to its degree of success in the arms race. This diverts science from its true purpose, which is to increase human knowledge, and to promote man's mastery over the forces of nature for the benefit of all.

We deplore the conditions which lead to this situation, and appeal to all peoples and their governments to establish conditions of lasting and stable peace.

Signers

This statement was unanimously adopted by the following scientists:

Australia. M. L. E. Oliphant and Hans Thirring.

Canada. Brock Chisholm and Sir Robert Watson–Watt.

Czechoslovakia. Viktor Knapp and J. Kozesnik.

Denmark. Mogens Pihl.

France. Father Daniel DuBarle, Bernard Gregory, J. Gueron, and Antoine Lacassagne.

German Democratic Republic. Gunther Rienacker.

Federal Republic of Germany. Max Born, G. Burkhardt, Helmut Honl, Werner Kliefoth, and Hanfried Lenz.

Great Britain. Lord Boyd-Orr, Dame Kathleen Lonsdale, C. F. Powell, M. H. L. Pryce, J. Rotblat, and George Thomson.

Hungary. Lajos Janossy.

India. K. S. Krishnan and P. C. Mahalanobis.

Italy. E. Amaldi and E. Boeri.

Japan. Iwao Ogawa, S. Tomonaga, Yasuo Miyake, Shoichi Sakata.

Netherlands. B. R. A. Nijboer.

Norway. Gunnar Randers.

Poland. Leopold Infeld.

United States. Harrison Brown, David Cavers, William Davidon, Bernard Feld, Bentley Glass, Morton Grodzins, David Hill, H. J. Muller, Jay Orear, Harry Palevsky, Linus Pauling, Vance L. Sailor, Frederick Seitz, Walter Selove, Eugene Rabinowitch, Alvin Weinberg, Victor Weisskopf, and Eugene Wigner.

U.S.S.R. N. N. Bogolubov, N. A. Dobrotin, E. K. Fedorov, E. A. Korotin, A. M. Kuzin, V. P. Pavlichenko, D. V. Skobeltzyn, A. V. Topchiev, V. S. Vavilov, and A. P. Vinogradov.

Yugoslavia. Paul Savic.

Division Changes at National Institutes of Health

The U.S. Public Health Service has announced the creation of the Division of General Medical Sciences and the reorganization of the Division of Research Grants at the National Institutes of Health. The new division will have three main functions: (i) administration of research project grants in the basic sciences and other fields, (ii) support of training in the medical sciences through fellowships to individuals and research training grants to universities and medical colleges, and (iii) administration of the Center for Aging Research. The first two functions have been transferred from the Division of Research Grants; the third from the National Heart Institute.

The Division of Research Grants becomes responsible for the study and evaluation of all research grant and fellowships programs at the National Institutes of Health. It will continue to provide for all institutes and divisions (i) a mechanism for technical review of applications for grants and fellowship awards through 30 consultant panels called study sections, and (ii) business operations for processing and paying of grant and award funds.

G. Halsey Hunt, formerly chief of the Public Health Service's Hospital Division and more recently director of the Center for Aging Research, has been named chief of the Division of General Medical Sciences. Ernest M. Allen will continue to serve as chief of the Division of Research Grants.

Education in the United States

Educational levels in the United States have been rising steadily since World War II, according to a report from the Metropolitan Life Insurance Company. In 1957 more than two-fifths of the population at ages 25 and over had at least a secondary-school education, compared with only one-fourth in 1940. During the same period the proportion of adults with limited schooling declined substantially, those with less than 5 years of formal education dropping from about 14 percent to 9 percent.

As a result of the long-term trend toward increased schooling, the proportion of persons who have gone through high school or beyond is now markedly greater at the young adult ages than at the older ages. For example, two-thirds of the white women now aged 20 to 24 have had that much education. By comparison, the proportion is two-fifths for women at ages 45 to 54 years and only a little more than one-fifth for those past 65.

With the continuing rise in the educational level, by 1975 more than one-half of the adult population will have had at least a high-school education, and almost one-tenth will have received a college degree. Among the white male population, about one-seventh will have completed college. It is predicted that the population of college graduates in the country in 1975 will be at least two-thirds greater than the present total of 8 million.

National Institute for Atmospheric Research

Fourteen universities are represented on a University Committee for Atmospheric Research that is establishing a National Institute for Atmospheric Research with a federally supported, multimillion-dollar, 5-year budget. Twelve of the institutions already have pledged participation in a nonprofit corporation to

Hugh Ferriss' rendition of the Smithsonian Institution's new Museum of History and Technology as seen from Constitution Avenue. Building was designed by the architectural firm of McKim, Mead, and White (see "Imaginary tour," page 1057).

run the institute. The University of Chicago was the first university to make a positive response to the project.

The University Committee for Atmospheric Research was organized in February 1958 as a result of recommendations made in January by the National Academy of Sciences Committee on Meteorology. In mid-July, an agreement was drafted at a meeting at Pennsylvania State University. The announcement that 12 universities have joined the compact was made on 9 October in New York City at the Gold Medal Award dinner of the New York Board of Trade.

Royalties for Atomic Work

A claim for royalties on the gaseous diffusion method for separating uranium-235 from uranium-238 is currently under consideration by the Atomic Energy Commission and is expected to be settled within a few months. The claim was put before the commission's Patent Compensation Board by the Basic Science Foundation, an organization founded by the four scientists, John R. Dunning, Eugene T. Booth, Alfred O. C. Nier, and Aristid V. Grosse, whose work led to the development of the separation process. The claim, if it is granted, is expected to involve large amounts of money, as the award would be based on the value of the uranium-235 produced since the development of the process.

Two other major awards have been made under the patent provisions of the Atomic Energy Act of 1946, one of $300,000 to Enrico Fermi and his associates and one of $400,000 to Glenn Seaborg and three of his colleagues.

Balloon-Borne Laboratory

The Office of Naval Research is currently engaged in a program which is ultimately aimed toward making available to academic, industrial, and governmental scientists a manned balloon-borne laboratory, 20 to 30 miles above the earth, for the purposes of research, environmental testing, and systems experimentation. Three ONR stratospheric flights, made with two-man crews within a sealed gondola and reaching altitudes up to 86,000 feet, have demonstrated the technical and economic feasibility of the "strato-lab" concept.

Prior to initiating the construction of a fully instrumented research vehicle, however, ONR has decided to sponsor a study divided into the following phases: (i) to determine comprehensively what research objectives a manned, stratosphere laboratory 20 to 30 miles aloft might serve, and roughly what the relative significance of those objectives might be; (ii) to state the requirements for the strato-lab stemming from each of the research objectives considered; (iii) to state the specifications for a strato-lab cabin system, optimizing its characteristics to best meet the complex combination of requirements resulting from the functions desired.

A preliminary classification of the possible fields where a strato-platform might be useful is as follows:

1) Physical science—astronomy, astrophysics, geophysics, meteorology, (static, dynamic), physics of the upper atmosphere, geodesy, propagation (ionospheric, tropospheric).

2) Medical, biological, and psychological sciences, including: (i) the effects of the environment on animals, (ii) exploration of the distribution of spores, and so on, in the stratosphere.

3) Testing of military and commercial equipment and techniques; use of environment for test purposes; testing of parachute and escape procedures.

4) As a laboratory tool in systems research: as a laboratory for developing systems which may involve tethered, unmanned balloons, such as a balloon-borne antenna for radar or relay purposes, or military reconnaissance. Here the usefulness of the strato-lab lies not in comprising an element of the proposed system, but rather in its employment as a laboratory for the study and development of such balloon-borne elements.

It is the opinion of ONR that the areas of phase i are so broad and diversified that no single organization can fully explore them; rather, the scientific community as a whole must be asked to assist in planning a program of research for the strato-lab. Accordingly, ONR has asked the Vitro Laboratories, Silver Spring, Md., to put these questions before the scientific community: Would a manned balloon-borne stratospheric laboratory assist or further your research and development activities? How? What functional requirements, that is, stability, weight, etc., would these activities impose on the Strato-Lab?

Correspondence should be addressed to: Vitro Laboratories, Silver Spring Laboratory, 14000 Georgia Ave., Silver Spring, Md.

Business and Education

A study conducted by the Council for Financial Aid to Education has shown that American business in 1956 directed 34 percent of its philanthropic giving to education. A total amount of $28.5 million was donated to educational institutions by the 275 business concerns which were examined in the council's study. The survey showed that the company groups with the highest average gifts to education were electrical machinery, mining, chemicals and petroleum, and coal. The lowest average contributions were made by banking, insurance, utility, and telecommunication groups.

Of the companies in the survey, 20 percent had given more than $100,000 to education. More of the money was in the form of unrestricted gifts than ever before, and there was less endowment giving. The council estimated that in 1956 all business concerns in the nation had contributed $110 million to education.

Russian Medical Literature

A 90-page source book on Russian medical literature has been published by the National Library of Medicine, Public Health Service. Entitled *Guide to Russian Medical Literature,* the book lists 137 important Russian medical journals, reviews 20 Russian journals in the medical and biological fields which are available in complete English translation, and describes sources from which Russian journal literature may be ob-