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WM. E. RITTER

LA JOLLA, CALIF.

### THE NATIONAL RESEARCH COUNCIL

ON April 19, 1916, at the closing session of the annual meeting, the National Academy of Sciences voted unanimously to offer its services to the president of the United States in the interest of national preparedness. The council of the academy was authorized to execute the work in the event of the president's acceptance.

On April 26 the president of the academy, accompanied by Messrs. Conklin, Hale, Walcott and Woodward, was received at the White House by the president of the United States. In presenting the resolution adopted at the annual meeting, it was suggested that the academy might advantageously organize the scientific resources of educational and research institutions in the interest of national security and welfare. The president accepted this offer, and requested the academy to proceed at once to carry it into effect.

Immediately following this visit, the president of the academy, in harmony with resolutions adopted by the council on April 19, appointed the following organizing committee: Messrs. Edwin G. Conklin, Simon Flexner, Robert A. Millikan, Arthur A. Noyes and George E. Hale (*chairman*).

At a meeting of the council of the academy, held in New York on June 19, the organizing committee presented the following statement of work accomplished up to that date.

Much time was devoted during the first five weeks to the organization of committees to meet immediate needs, including those on Nitric Acid Supply (A. A. Noyes, chairman), in cooperation with the American Chemical Society; Preventive Medicine (Simon Flexner, chairman), in cooperation with the Committee of Physicians and Surgeons, and Synthetic Organic Chemistry (M. T. Bogert, chairman), in cooperation with the American Chemical Society. Special attention was also given to

arrangements for cooperation with the scientific bureaus of the government, the committee of physicians and surgeons, the naval consulting board, the national societies devoted to branches of science in which committees were immediately needed, the national engineering societies, the larger research foundations, certain universities and schools of technology, and the leading investigators in many fields of research, both on the industrial and the educational side. The hearty encouragement received from all of these men and institutions leaves no doubt that, as soon as a general request for cooperation is sent out, it will meet with universal acceptance.

During this preliminary period a more comprehensive plan of organization was developed, and finally embodied in the form indicated below. It was recognized from the outset that the activities of the committee should not be confined to the promotion of researches bearing directly upon military problems, but that true preparedness would best result from the encouragement of every form of investigation, whether for military and industrial application, or for the advancement of knowledge without regard to its immediate practical bearing. The scheme of organization must be broad enough to secure the cooperation of all important agencies in accomplishing this result.

After considering a variety of plans the organizing committee presented to the Council of the Academy the following recommendations:

That there be formed a National Research Council, whose purpose shall be to bring into cooperation existing governmental, educational, industrial and other research organizations with the object of encouraging the investigation of natural phenomena, the increased use of scientific research in the development of American industries, the employment of scientific methods in strengthening the national defense, and such other applications of science as will promote the national security and welfare.

That the council be composed of leading American investigators and engineers, representing the Army, Navy, Smithsonian Institution and various scientific bureaus of the government; educational

institutions and research endowments; and the research divisions of industrial and manufacturing establishments.

That, in order to secure a thoroughly representative body, the members of the council be chosen in consultation with the presidents of the American Association for the Advancement of Science, the American Philosophical Society, the American Academy of Arts and Sciences, the American Association of University Professors, and the Association of American Universities; that representatives of industrial research be selected with the advice of the Presidents of the Society of Civil Engineers, the American Institute of Mining Engineers, the American Society of Mechanical Engineers, the American Society of Electrical Engineers, and the American Chemical Society, and that members of the cabinet be asked to name the representatives of the various departments of the government.

That research committees of two classes be appointed, as follows: (a) Central committees, representing various departments of science, comprised of leading authorities in each field, selected in consultation with the president of the corresponding national society. (b) Local committees in universities, colleges and other cooperating institutions engaged in scientific research.

The organizing committee also recommended the following plan of procedure, subject to such modifications as the National Research Council may deem desirable.

1. The preparation of a national inventory of equipment for research, of the men engaged in it, and of the lines of investigation pursued in co-operating government bureaus, educational institutions, research foundations and industrial research laboratories; this inventory to be prepared in harmony with any general plan adopted by the proposed government council of national defense.

2. The preparation of reports by special committees, suggesting important research problems and favorable opportunities for research in various departments of science.

3. The promotion of cooperation in research, with the object of securing increased efficiency; but with careful avoidance of any hampering control or interference with individual freedom and initiative.

4. Cooperation with educational institutions, by supporting their efforts to secure larger funds and more favorable conditions for the pursuit of research and for the training of students in the methods and spirit of investigation.

5. Cooperation with research foundations and other agencies desiring to secure a more effective use of funds available for investigation.

6. The encouragement in cooperating laboratories of researches designed to strengthen the national defense and to render the United States independent of foreign sources of supply liable to be affected by war.

The council of the academy voted to accept the proposals of the organizing committee, and instructed it to proceed with the formation of the National Research Council in accordance with the plan recommended by the committee.

In consultation with the presidents of the various societies already mentioned, most of the members of the council have now been chosen.

The endorsement of the president of the United States and the authority to secure the appointment of government representatives is conveyed in the following letter to the president of the academy:

WASHINGTON, D. C., July 24, 1916.

DR. WILLIAM H. WELCH,  
*President of the National Academy of Sciences,  
Baltimore, Maryland.*

MY DEAR DR. WELCH:

I want to tell you with what gratification I have received the preliminary report of the National Research Council, which was formed at my request under the National Academy of Sciences. The outline of work there set forth and the evidences of remarkable progress towards the accomplishment of the object of the council are indeed gratifying. May I not take this occasion to say that the departments of the government are ready to cooperate in every way that may be required, and that the heads of the departments most immediately concerned are now, at my request, actively engaged in considering the best methods of cooperation.

Representatives of government bureaus will be appointed as members of the Research Council as the council desires.

Cordially and sincerely yours,  
[Signed] WOODROW WILSON

Under this authority, the appointment of representatives of the army, navy and various scientific bureaus of the government will now be arranged with the members of the cabinet.

It is expected that the first meeting of the council will be held in September.

It has already been stated that cordial desire to cooperate has been encountered on every hand. Special reference may now be made to certain striking cases. The first of these illustrates how the council, taking advantage of the increased appreciation of the value of science and the spirit of national service which have resulted from the war, may obtain the cooperation of educational institutions and assist them in adding to their endowments for scientific research. Throop College of Technology, in Pasadena, California, is a small institution of high standards which gives special attention to research. President Scherer, hearing of the plans of the research council, offered the assistance and cooperation of the recently endowed research laboratory of chemistry and secured at once an additional endowment of one hundred thousand dollars for scientific research. Under somewhat similar circumstances, a gift of \$500,000 has been made to the endowment of the Massachusetts Institute of Technology, with the expectation that much of the income will be used for research at that institution.

Another illustration of friendly cooperation, of special importance because it assures the support of the national engineering societies, is afforded by the following resolution of the Engineering Foundation of New York, adopted at the annual meeting of the foundation, on June 21, 1916:

WHEREAS, the National Academy of Sciences of the United States of America has taken the initiative in bringing into cooperation existing governmental, educational, industrial and other research organizations with the object of encouraging the investigation of natural phenomena, the application of scientific principles in American industries, the employment of science in the national defense, and such other objects as will promote the national welfare, and

WHEREAS, these objects are among the objects for which The Engineering Foundation was created,

Now, Therefore, be it Resolved, that The Engineering Foundation hereby registers its approval of the coordination and federation of the research

agencies of the country undertaken by the National Academy of Sciences and expresses its willingness to join with and assist the National Academy in accomplishing the above federation.

The foundation also offered to devote its entire income for the coming year (including a special gift of \$5,000 for this purpose from its founder, Mr. Ambrose Swasey) toward the expenses of organization, and to provide a New York office for the council in the Engineers Building.

The presidents of the American Philosophical Society, of the American Association of University Professors, and of Yale University have already expressed their intention of proposing the adoption of similar resolutions by the institutions which they represent and of recommending the appointment of committees to cooperate with the National Research Council; and it is expected that other societies and educational institutions will take similar action.

Respectfully submitted by the organizing committee.

GEORGE E. HALE (*chairman*),  
EDWIN G. CONKLIN,  
SIMON FLEXNER,  
ROBERT A. MILLIKAN,  
ARTHUR A. NOYES

GEORGE E. HALE

#### A BRITISH BOARD OF SCIENCE AND INDUSTRY<sup>1</sup>

WE have received for publication from the British Science Guild the following memorandum on the relations which should exist in future between the state and science, and suggesting that a national statutory board of science and industry should be formed. The memorandum, which has been forwarded to the government, is signed by some 220 of the most important representatives of industry, science and education:

The British Science Guild, which was founded in 1905 with the object of bringing home to all classes "the necessity of applying the methods of science to all branches of human endeavor, and thus to further the progress and increase the welfare of the empire,"

<sup>1</sup> From *Nature*.