

# SCIENCE

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MSS. intended for publication and books, etc., intended for review should be sent to Professor J. McKeen Cattell, Garrison-on-Hudson, N. Y.

## THE WORK OF THE NATIONAL RESEARCH COUNCIL

As has already been announced, the National Research Council is acting as a department of the Council of National Defense, dealing with the organization of science and research as affected by the war.

Direct connection with the work of the Army and Navy, both at home and in the field, has also been established. Brigadier General George O. Squier, chief signal officer, has recently addressed the following letter to the chairman of the Research Council:

DR. GEORGE E. HALE,  
Chairman, National Research Council,  
Munsey Building,  
Washington, D. C.

*My dear Dr. Hale:* In the Signal Corps questions involving the selection and organization of large numbers of scientific men and the solution of research problems are constantly arising. The National Research Council, organized at the request of the President, and acting as a department of the Council of National Defense, in close cooperation with similar bodies abroad, has federated and coordinated the scientific resources of the country and concentrated them upon the solution of military problems. It is accordingly the one agency in a position to meet the present needs of the Signal Corps.

I therefore request the Research Council to act as the advisory agent of the Signal Corps in the organization of its various scientific services and the solution of research problems. To this end I would suggest that Dr. Robert A. Millikan, vice-chairman and executive officer of the Research Council, apply for a major's commission in the Officers' Reserve Corps, for detail in charge of this work.

Very truly yours,

GEORGE O. SQUIER,  
Brigadier General,  
C. S. O.

July 2, 1917

In accordance with this request Dr. Millikan is now acting as the representative of the National Research Council in general charge of scientific questions referred to the council. Dr. C. E. Mendenhall has been put in charge of the development of the various instruments used in connection with airplanes. Dr. Augustus Trowbridge, also nominated by the council, has organized an important branch of the scientific service for the army in France. Other scientific services for the army are in process of organization.

The Navy Department has recently established a special board of four naval officers and four civilian advisory members to coordinate and organize all problems relating to submarine warfare. The National Research Council is officially represented on this board by its executive officers. The general plan adopted by the Navy Department contemplates the closest possible cooperation between the Navy Department bureaus, Navy Department boards, the Naval Consulting Board, and the National Research Council. A group of forty leading physicists, convened by the National Research Council for an exhaustive discussion of submarine problems with the members of the French Scientific Mission, is now represented by a committee cooperating with the above mentioned special board in tests and investigations of various devices for submarine offense and defense. Many physical laboratories are also taking part in this work.

The chairman of the council, Dr. George E. Hale, has given his entire time to the work in Washington, and the following members of the council are residing there as well:

- Dr. Raymond Pearl, chairman of the agricultural committee.  
Dr. William H. Holmes, chairman of the anthropology committee.

- Dr. S. W. Stratton, chairman of the committee on census of research.  
Dr. M. T. Bogert, chairman of the chemistry committee.  
Dr. W. F. Durand, chairman of the aeronautics committee, and vice-chairman of the engineering committee.  
Dr. Alonzo E. Taylor, chairman of the food committee.  
Dr. V. C. Vaughan, chairman of the committee on medicine and hygiene.  
Dr. Charles D. Walcott, chairman of the military committee.  
Dr. L. A. Bauer, chairman of the committee on navigation and nautical instruments.  
Dr. Van H. Manning, chairman of the committee on noxious gases.  
Dr. R. A. Millikan, chairman of the physics committee.  
Dr. C. E. Mendenhall, vice-chairman of the physics committee.

During the past month the above-mentioned members of the council have been actively cooperating with the members of the French scientific mission now in Washington, as a result of which it has been possible to formulate various agencies for the consideration of technical problems for the solution of which definite need has arisen at the battle front. The members of this mission have recently been joined by Dr. Giorgio Abetti of the Royal Astronomical Observatory of Rome, sent as a representative of the Italian Government.

Furthermore, most of the members of the foreign service committee of the council, who have been in France and England for a period of two or three months, have returned to the United States and have brought with them much valuable information relative to the organization and development of scientific activities in connection with the war. A few members of the committee have remained in France to continue their observations and investigations, under special detail. Formal reports have been submitted to the council, through its executive and military com-

mittees, relating to the observations and experiences of the members of this committee, in connection with which recommendations for cooperative investigations in this country are made.

The special committees of the council on the subjects of optical glass and noxious gases have submitted reports, which in turn have been transmitted by the executive committee of the council to the General Munitions Board and the Council of National Defense. As a result, arrangements have been made for providing the government with optical glass through cooperation between the Bureau of Standards, the geophysical laboratory of the Carnegie Institution of Washington, the Bausch & Lomb Optical Company, and the Pittsburgh Plate Glass Company. Researches on noxious gases have been placed under the charge of the director of the Bureau of Mines, acting in cooperation with the army and navy and the committee on noxious gases of the National Research Council.

It is expected that announcement may be made at a later date relative to problems initiated by the various committees of the council and means for their solution.

A number of friends have generously contributed to provide funds for the expenses of the council. It is also a pleasure to announce that at a recent meeting of the Carnegie Corporation of New York, the following resolution was passed:

*Resolved*, That the sum of fifty thousand dollars (\$50,000) or so much thereof as may be necessary, be and it hereby is appropriated to the Carnegie Institution of Washington, to be expended in the discretion of the president of said institution to meet expenses incurred by the National Research Council during the war; and that the treasurer be and he hereby is authorized to make payments as needed on the certificate of the Carnegie Institution of Washington.

## PSYCHOLOGY AND NATIONAL SERVICE

AMONG the many scientific problems which the war has forced upon the attention of our military authorities there are several which are either psychological or present a psychological aspect. In the opinion of experts many of these problems are immediately soluble and it therefore becomes the duty of professional psychologists to render national service by working on such problems. For this reason a committee on psychology has been organized, with the approval of the council of the American Psychological Association, by the National Research Council. This committee consists of J. McKeen Cattell, G. Stanley Hall and E. L. Thorndike from the National Academy of Sciences; Raymond Dodge, S. I. Franz and G. M. Whipple from the American Psychological Association, and C. E. Seashore, J. B. Watson and R. M. Yerkes, chairman and member of the National Research Council, from the American Association for the Advancement of Science.

At the first meeting of the committee, it was voted "that whereas psychologists in common with other men of science may be able to do invaluable work for national service and in the conduct of the war, it is recommended by this committee that psychologists volunteer for and be assigned to the work in which their service will be of the greatest use to the nation. In the case of students of psychology, this may involve the completion of the studies on which they are engaged."

It is the function of this general committee to organize and, in a general way, supervise psychological research and service in the present emergency. Problems suggested by military officers or by psychological experts are referred by the committee to appropriate individuals or institutions for immediate attention. Already at the suggestion of the council of the American Psychological Association the chief psychological laboratories of the country have been offered to the committee for such use as the military situation dictates. Moreover, the membership of the American Psychological Association, in response to a