Case 8  
Providing Scientific Knowledge to Solve Public Problems:  
National Research Council

*Carnegie Corporation of New York, 1917*

Steven Schindler

*Background.* In 1863, Congress chartered the National Academy of Sciences as a means by which the government could obtain the advice of scientists about matters of national interest, particularly relating to the country’s needs in the midst of war. After the Civil War, however, the Academy became relatively inactive, as the government rarely sought its services. In 1913, George Ellery Hale, renowned astronomer and foreign secretary of the Academy, was displeased with the lack of participation of the Academy in matters of growing national importance. Hale proposed sweeping reforms to make the Academy more relevant to social and government needs and more active as a scientific authority in the United States. His plans included opening membership to younger scientists and constructing a new home to suit the Academy’s new purpose. Initially, his proposals met with little favor among other Academy members. Undeterred, in 1914, Hale sought a grant from the Carnegie Corporation for $950,000 to build the new headquarters he envisioned for the Academy, but the Corporation rejected his request.

The same year, war broke out in Europe. Responding to an appeal by Thomas Edison following the 1915 sinking of the *Lusitania*, the Navy constituted a Navy Consulting Board to assist in the development of viable military technology to ready the United States for potential future involvement in World War I. Notably to Hale, none of the Academy’s members were asked to serve on the Consulting Board. Rallying a group of fellow scientists, Hale secured from the Academy an offer to provide President Woodrow Wilson with such scientific counsel as the country might need in case national crisis or war arose. A group led by Hale personally delivered the Academy’s offer to the president, who accepted the offer under a condition of confidentiality.

Two months later, in a reorganization intended to strengthen its capacity for scientific coordination and research, the Academy created the National Research Council (NRC). Next, Hale convinced the Council of National Defense, created by Congress, to rely on the National Research Council for advice on any scientific matters. Throughout World War I, the NRC operated by matching particular needs of the military services with civilian scientists who had expertise in the relevant research area.

The National Research Council found early financial support for its work in the Engineering Foundation, the Carnegie Corporation (its largest supporter during the war), the Rockefeller Foundation, and the federal government.

*Strategy.* The Carnegie Corporation, only a few years old, provided an ideal source of funds for promoting coordinated scientific expertise to the government. Hale first approached Elihu Root and Henry Pritchett, a fellow astronomer, to enlist their support for reforms. Pritchett was less than confident in Hale’s vision for the Academy, but Root became a strong supporter. Despite the Corporation’s initial disapproval of Hale’s objectives and proposals, Root remained confident in the eventual success of reform. The establishment of the NRC, which opened its membership to more active, younger, more broadly representative scientists than those in the Academy, apparently diffused the Corporation’s initial disapproval of Hale’s proposals. The U.S. involvement in war also raised the stature of the NRC to national importance. Root secured Corporation grants for the Academy and the NRC channeled through the Carnegie Institute of Washington $50,000 in 1917 and $100,000 in 1918.

Following the war, President Wilson, pleased with the work of the NRC in national crisis, decided
that the NRC should be maintained in peacetime. With Executive Order No. 2859 of May 11, 1918, President Wilson recognized the contributions of the NRC and extended it as an organization in perpetuity. This action gave the NRC a stronger basis from which it could secure more significant funding. Root demonstrated his support of Carnegie funding in a speech entitled “The Need for Organization in Scientific Research,” in which he cited successful research coordination efforts in Europe alongside those of the National Research Council. The National Research Council tended to be more favored than other efforts in part because it was private and independent of government. In March 1919, The Carnegie Corporation gave $5 million to the National Academy of Sciences and National Research Council for endowment and new building construction.

**Impact.** During World War I, the technological developments coordinated by the National Research Council include “listening devices to detect submarines, range finders for airplanes, and intelligence tests to classify army recruits.” More broadly, the NRC is now the primary source, for Congress and agencies of the Executive Branch, of objective scientific assessments of major problems facing the American public.

**Notes**

129. “Organization of the National Research Council,”
130. Ibid.
132. Ibid., 41–42.
135. Ibid., 44–47.
136. “Organization of the National Research Council,”
137. Ibid., 47–49.
138. Ibid., 43.