

view regarding the utilization of science, the new knowledge, as a force in determining solutions of the gigantic problems that will face the allied nations after the war. With the help of this new knowledge, applied rigorously and universally, it is possible that the nations may not only bear their burdens with some degree of ease, but attain a position which will make the occurrence of another war of this character absolutely impossible in the near or more remote future. If that should be the ultimate result, the blood and tears of millions in this war will not be shed wholly in vain.

It is my firm conviction that, had the allied nations cultivated the sciences as they must do henceforth, there would have been no such war as this. It is beyond question that Germany and Austria are, relatively, poor in natural resources. The one great resource which Germany possesses is to be found in the Strassfurt salt beds, which contain an enormous quantity of potassium salts, a supply without a parallel elsewhere. In all other resources she cannot compare with the British Empire or with France or the United States. Had she not developed her industries, through the rigorous application of science to them, and, had she contented herself with the methods and policy which Great Britain had followed in the last forty years, it is extremely doubtful if her ambitions would have driven her to adopt a policy of world conquest, or that, if they had, she would have been able to stand against the world in arms as she is doing to-day.

Forty years ago Germany began to develop her industries along scientific lines, not as a result of policy then expressly understood, but simply because those in the control of them recognized that it was only by applying all the scientific lore then available that they could find markets for their products, not only in Germany, but abroad. That they should have been so advanced in this respect must be attributed to the excellence of the German university system, which encouraged research along all lines, in the humanities, in philosophy and in the sciences. The graduates in science of these universities, doctors in philosophy, began to find their way into the industries in the "seventies" and their participation in them soon began to give results. It was due to their activities that Germany succeeded in capturing the control of the aniline dye industry, which was originally an English one. It was through their activities that the German chemical manufacturers began to dominate the world's markets. In the great industries, that of steel production, for example, the German pre-eminence was rendered possible by the utilization of the highest skill and expert knowledge that investigators, originally trained in the universities, could bring to bear on the subject.