

that some coöperative endeavor could be outlined of mutual value and of service to the world. While many countries are represented in the membership of the American Pharmaceutical Association, more of the foreign students should become affiliated with the organization. We know what such education meant to a country that threw away, or at least lost, its opportunities. The words spoken at the banquet referred to are indicative of American ideals; science and art are developed along related lines. What Blackstone said may find direct or indirect application: "The sciences are of a sociable disposition, and flourish best in the neighborhood of each other; nor is there any branch of learning but may be helped and improved by assistance drawn from other arts." E. G. E.

RESPONSIBILITIES OF TECHNICAL MEN AND OBLIGATIONS OF THE PEOPLE.*

BY WARREN G. HARDING, President of the United States.

No one can be more appreciative than myself of the great advantages of a college education. I took my post-graduate course in the university of country journalism. This appreciation of the value of college education, and of the value of college-trained men in a democracy, has deepened with maturity and experience in public service.

Our civilization is an industrial civilization. Its problems primarily are those of production and distribution, which, to be solved from the standpoint of the maximum welfare of all our people, must find their answer in an ever-greater volume of cheaper goods of higher quality; otherwise, a progressive standard of living cannot be maintained, and the law of life, which is growth, hence, will be thwarted.

The solution of these problems is, in the aggregate, a tremendous responsibility which rests directly with technically educated men who are trained primarily for this work.

It is not too much to say that the future of society to-day is in the hands of technically educated men, for they are concerned directly with the operation and management of the material forces which radiate their influence into every avenue of human thought and aspiration.

The rapid progress we have made in the fundamental, material things of life, is the result of the study and work of men of this type, and reflects the value to society of specialized ability, for in no other way than by specialization of effort could such great contributions be made to the common welfare.

The same specialization whose results in the aggregate are so valuable to society has its drawbacks which, in so far as the individual practitioners of the great technical professions are concerned, tend to confine their respective interests to their immediate work to the sacrifice of activity in the broader field of public affairs.

Government increasingly is becoming more technical, because its great problems more than ever before are essentially technical problems, particularly as they relate to internal affairs of development and more efficient utilization of our natural resources, which in many things are dangerously approaching exhaustion. Not only must these be conserved, but substitutes must be found and developed.

* *Chemical Age*, September 1920.

This work is the duty of men best qualified to do it. These men are the technically educated men, who form the industrial "shock troops" of the army of civilization. They are civil engineers, mechanical engineers, electrical engineers, mining engineers and metallurgists, chemical engineers and chemists, and, lastly, that body of faithful men who constitute a condition precedent to all the rest, the teachers of technical men.

Government is looking more and more to these men for the great public service of development and more efficient utilization of our material resources.

The conditions of our time demand that technical men shall concern themselves with public affairs and reflect upon their respective professions the popular recognition accorded to members of the legal and medical professions and the ministry.

Representatives of the engineering professions should sit in our state and national legislative bodies, instead of being merely the administrative agents of the great engineering projects that our intensive civilization now demands shall have greater fruition.

Our government maintains great scientific agencies in the Patent Office, Bureau of Mines, Bureau of Standards, the Geological Survey and the Bureau of Chemistry and Experiment Stations of the Department of Agriculture. Here engineers and chemists and representatives of every department of applied science are employed under capable scientific administrators, to encourage the development of our natural resources, to discover new processes for their utilization, and to protect the inventive mind in the fruits of its prolific genius to which we are indebted more than to any other one source for the material greatness of our country.

These agencies must be supported liberally, for their work is as seed which yield their harvest in the increased fruitfulness of all human endeavor in field, mine and factory.

Not only must these agencies have adequate appropriation from our national and state treasuries to solve the problems demanding solution with increasing insistence but the scientific workers therein must have a wage that not only represents a balancing of the changed economic conditions, and which to a greater degree than at present will permit government to compete with private industry for their services, but which will encourage the development of a type of scientific investigators qualified to cope with the exacting demands of research, without which industrial progress will stagnate.

Team work finds its highest exemplification in the successful manufacturing organization. He who gives the most receives the most. The rewards of competitive industry do not go by favor but by capacity.

We want in government the methods of industry, and we should avail ourselves to a greater degree than ever before of the wisdom of men who have made American industry one of the wonders of the modern world.

The great technical professions form the cornerstone of material civilization. Their practitioners are derelict to their greater social responsibilities in their indifference to political affairs.

I want to encourage that interest and will help to reward the effort.

As one who appreciates the value of their work and worth, I pledge myself to aid our technical men in all matters looking to the popular recognition of their respective professions.