the entire program through these many years has been sustained with generosity by the founders.

The institute has become a guild of scientists. Here are gathered many men trained in chemistry, biology, physics and engineering. They help one another directly; and, even more important, they create an atmosphere of achievement for themselves in which there grow vision and determination for thorough, careful work. Their success is not accidental. It is the outcome of strong minds and of orderly thought, of good will and of good teamwork, of seeking toward a great end. Even the founders did not entirely foresee the results to be attained by such a guild, nor did they anticipate, in the days of the beginning, the full values to humanity which would flow from such researches.

As one who has had association with the founders through many years, their quiet, unpretentious guidance of the institute has deeply impressed me. Richard B. Mellon has gone. He had the satisfaction, however, of seeing the four walls of the new building completed. He was happy to watch the columns go into place; and he was happy, too, that he was regarded as a member of the guild. His courage, his patience and his imagination qualified him as a great and always to be honored member.

Of Andrew W. Mellon it is more difficult to speak, for he is here. His mind always proceeds through details to the final significance, and he seems never to be disheartened. These qualities of mind as a background to the endless discouragements and elusive headway of scientific research can be understood, it seems to me, best by one who has lived through large experience with such difficulties.

Their contribution is a noble gift to humanity.

We are delighted to have with us to-day the Honorable Andrew W. Mellon, whose sincere desire to make America the best place in this world in which to live and prosper has been the motive back of all his philanthropic contributions. I know that all of you join with Mellon Institute to-day in the pleasure of greeting our eminent founder, the Honorable Andrew W. Mellon.

ADDRESS OF THE HONORABLE ANDREW W. MELLON

The building being dedicated to-day realizes the hopes of many years. My brother and I had long looked forward to this occasion and it would have made him very happy if he could have seen, during his lifetime, the completion of this beautiful building for the Mellon Institute. I wish, too, that Dr. Robert Kennedy Duncan could have lived to see this day and the institute's many activities, for he was, in the beginning, at least, the inspiration of it all.

The manner in which it came about was quite unpremeditated, as those things often are. Strange as it may seem, it all goes back to a school of languages and a quite innocent desire on my part to speak French fluently enough to travel abroad in comfort—a desire, I may add, which remains unsatisfied to this day. At any rate, I called on the school for help, and they sent a young Frenchman to my house in the evenings during the summer of 1909. He was a very enthusiastic young man, and one night he brought a letter from his father in France who had made a chemical discovery, as he thought, and wanted it tested by some industry in a position to utilize the discovery commercially.

I gave the letter to the chief chemist of the Gulf Oil Company, who reported a few days later that the supposed discovery was not of practical value, and, to prove it, gave me a book, just then published, called "The Chemistry of Commerce," by Robert Kennedy Duncan, professor of chemistry at the University of Kansas. I read the book with interest, but the part which particularly enlisted my attention was the last chapter, in which Dr. Duncan described his plans for industrial fellowship, by means of which industry could utilize the services of qualified scientists to solve its problems, in much the same way as is being done here to-day.

After pointing out the confusion and waste in manufacturing, most of which was chemical, not mechanical, he went on to say that with larger combinations of capital and a new generation of business men becoming aware of the possibilities of the new knowledge, improvements were coming and would continue to come in industry as the aid of science was invoked to solve the problems constantly arising.

I was very much interested in these ideas of Dr. Duncan's, for as a result of all my reading and observation it seemed to me that improvement in the standard of living of the human race could come about in the future only by reason of new discoveries and inventions, just as, in the past, the steam engine and other inventions had been responsible for many improvements in the standard of living enjoyed by the average man to-day. It was these things, and not governmental or political action, that had increased production, lowered costs, raised wages, elevated the standard of living and so had brought about a greater participation of the human race in these benefits.

It seemed to me that an institution based on Dr. Duncan's ideas could help in this advance movement; and as my brother was keenly interested in the project, we lost no time in persuading Dr. Duncan to come to Pittsburgh and organize for us here at our university this Institute of Industrial Research. It em-

braces, as you know, not only chemistry but biology, for chemical research frequently develops biological discoveries also; and so it seemed fitting to cover both fields in this new and, at that time, unique institution.

Dr. Duncan became our first director and at his untimely death a few years later, just as the then new building had been completed, his assistant and close associate, Dr. Weidlein, took his place and has ably carried on the work, with the happy results of which you and all the world know. Those results speak for themselves and are the best proof, if any is needed, that an institution of this nature, organized and conducted along the lines Dr. Weidlein has projected, and with the facilities provided for the application of chemistry to industry, fills a useful and important place in modern life. The measure of the institute's success is the increasing volume of fellowships which have been established as the value of work currently accomplished has been demonstrated.

I can not praise too highly all that Dr. Weidlein has done in developing this institution and making it a factor of such constructive value in the life of this country, and, I may say, of the world, for science fortunately has no national boundaries and new discoveries in any country eventually benefit all mankind.

I have been very happy to have a part in this work and feel it has been a great privilege for my brother and me to provide this place where men of science can come in their search for new ways to increase the usefulness of industry, to promote health and so improve the common lot of all. It is science, not governments or wars of conquest, that open to us new horizons; and, as Dr. Duncan so truly said, the new processes and new powers which science will discover will in the future give man the chance to live and to live more abundantly. If this institute can contribute, even in small measure, towards this end, all of us here today can feel that our efforts will not have been in vain.

Mr. Mellon has paid a worthy tribute to Dr. Robert Kennedy Duncan, whose idea, courage and enthusiasm have carried through our organization to this day. "Nothing great," Emerson said, "was ever achieved without enthusiasm." The men engaged in research work at Mellon Institute have this quality to a marked degree, and I can assure you, Mr. Mellon, that your message will add to their courage and determination to succeed. They deserve all the credit for the accomplishments of the institute. This modern building with its majestic columns is the culminating step toward the dream of your brother, Richard B. Mellon, and yourself—the vision of a greater institute beautifully and efficiently housed, in keeping with the character of these scientists' contributions to humanity and to science.

Mr. and Mrs. Richard B. Mellon always were builders, not only of institutions but also of character. These excellent qualities are reflected in their children, Mr. Richard K. Mellon and Mrs. Sarah Scaife. They, together with their mother, have continued the work of Richard B. Mellon. It is impossible to name any worthy measure that has made for civic uplift and benefit in Pittsburgh that has not had the direct friendly assistance of the late Mr. Mellon. His son is a worthy successor and I am honored to present to you Mr. Richard K. Mellon, who represents his father and family. Mr. Mellon.

ADDRESS OF RICHARD K. MELLON

Honored guests and ladies and gentlemen: Well do I recall the opening of the first permanent building of the Mellon Institute in February, 1915. On that occasion I accompanied my father and mother and some classmates from Shadyside Academy. Of course, it was a rather interesting evening for us, but as I reflect, I realize that we younger fellows hadn't the slightest conception of what future developments were to bring forth, or what was contained within the walls of that former building. I am quite sure that none of us appreciated what knowledge of science meant to industry and business at large.

I was fortunate enough in those years to overhear at home the two brothers, my uncle and my father, discuss many times with the late Dr. Robert Kennedy Duncan, and later with Dr. Weidlein, the current findings and future possibilities in the field of scientific research. As time passed, I had an opportunity to become well acquainted with the various events that took place in the progress of industrial research. Those discoveries seemed rather thrilling at that time, as chemical warfare was taking such a prominent part in the great war. Following that period there was a tremendous expansion in industry in this country, as you all know, and it was during this era that research departments were started by corporations of all sizes and kinds.

Following this post-war expansion period came depression, and it is surprising to know how many industries survived on their research findings alone. Many of the products of manufacturing plants at the present time were conceived during the past few years. It has been said, and I think rightly so, that research in this country is responsible in a large degree for our present high standard of living.

When it is realized that there are more than 1,600 industrial research departments associated with nearly every line of industry, the recognition that is given to scientific findings can readily be seen. All these companies have their own particular problem and are at work seeking a solution that will advance their par-