with a sermon in which he asked whether the time had not come for science to abandon something of its severe spirit of isolation. The entire program of the meeting, indeed, was given over to a consideration of the social consequences of scientific discoveries. It represented a plea for the closer affiliation of science in the task of government "in terms which admit of unfettered inquiry, of undiminished loyalty to the truth, and a vision characteristic of the great age of Greece." This at least is what reports of the meeting said of it, and if that is not an appeal for a more humanistic science one is at a loss what to call it.

Among those who call themselves pure scientists, whatever their particular field, there are many who feel that they would demean themselves and lose caste among their fellows should they engage in researches that obviously point toward some utilitarian purpose. This I have always regarded as an academic pose; for in the disinterested pursuit of knowledge, to stumble, as did Röntgen or the Curies or Banting, on something not only of great scientific importance but which at the same time was immediately applicable to human welfare is certainly nothing to be ashamed of.

There have been plenty of socially minded and benevolent—dare I say humanistic?—scientists in the past. One quickly thinks of Benjamin Franklin, of Count Rumford and Humphry Davy, to give a few examples. Two of them were American-born, and to one of these the citizens of Munich erected a monument in gratitude for the reforms in public service and social economy that he had brought about while a resident in Bavaria. In their day was organized in England a Society for Improving the Condition and Adding to the Comforts of the Poor "by the systematic employment of scientific methods and knowledge."

Whether the present British Science Guild whose professed purpose is "to promote the application of the scientific methods to social problems and public affairs" is an outgrowth or a continuance of the older society I am not prepared to say, but the fact that no such organization exists in America should give our scientists pause. Never was there greater need for such a movement, and people are beginning to ask why our social problems are not being attacked by those presumably best fitted to solve them because of their familiarity with scientific methods.

Something of the sort might well enough grow out of the Science Advisory Board recently appointed to give advice and make recommendations to the government regarding ways in which science might be of service to the public interest. And should the leaders among our scientists grow more sensitive to the mood of the times and be persuaded at this juncture to focus their highly trained and inventive minds intensively on these difficult subjects, a more humanistic attitude of science or humanization of scientific effort might result which might check the present trend toward a machine-made and -operated civilization whose social dislocations more than offset the personal convenience of its many time-saving and labor-saving devices.

So let us hope that when some future student of this confused and disconcerting period in our history comes to tell of it, he will be able to say: That at the very time when such progress in their subjects was being made as never before, with one discovery following on the heels of another, the scientists and engineers of the country temporarily abandoned the investigations dear to their hearts in order to concentrate on problems the most difficult of all to solve—those that have to do with the social well-being of the community at large. Thus, under a quickly spreading Religion of Humanity, there began a new era—one in which scientists took a commanding position in a rapidly changing world and through their well-planned and executed experiments a new and rational science of society came into being and made its first great forward movement.

It has been said[8] that one distinct advantage we hold over our predecessors is that we have more history behind us; and that the value of classical studies is what they teach us, by example or warning, of the experiences of the civilizations from which we have sprung. So in all likelihood my imaginary historian in recording the new humanistic spirit that was born of the great depression will have occasion to add that those who played the most effective part in bringing it about, whether scientists or not, were persons who knew where were to be found the most noble examples of civic duty, who were familiar with the long history of another republic and who remembered Cicero's maxim, *Salus populi suprema lex esto.*

OBITUARY

DEATH OF THREE FORMER PRESIDENTS OF THE PHYSICS CLUB OF PHILADELPHIA

DURING recent months the Physics Club of Philadelphia has lost by death three of its former presidents.

Edward A. Partridge, president during 1912–13, died on March 22, 1934. He was educated at Central High School, Philadelphia, and at the University of Pennsylvania. In 1898 he was awarded the doctor's degree in mathematics. His life work was science

[8] J. W. Mackail's "Classical Studies," 1925, XII.

teaching in the Philadelphia schools. He was in charge of the department of science at West Philadelphia High School from 1912 to the day of his death.

He represents a vanishing type—the true scholar engaged in public secondary education. He collected a library of several thousand volumes on physics, philosophy, mathematics, astronomy and general literature. He read the important languages of Western Europe. He held memberships in many learned societies and was a constant reader of scientific journals. He was one of the first scholars in Philadelphia to sense the importance of the famous Einstein paper of 1916 and to discuss it in public.

In his pupils he assumed the existence of intelligence and intellectual curiosity. To these qualities he appealed. A record of more than forty years of inspiring teaching bears testimony to the genuineness of his educational philosophy.

Joseph M. Jameson, president during 1921–22, died on August 4, 1934. He was a native Pennsylvanian and was educated at Cornell University. He was in charge of physics at Pratt Institute for fifteen years, and from 1913 to his death was vice-president of Girard College. He was the author of "Elementary Practical Mechanics" and edited the Wiley Technical Series. He was active in scientific and educational societies. He wrote numerous articles on problems of science teaching. In recognition of his services to education Temple University awarded him the honorary degree of doctor of pedagogy in 1920.

In his teaching of physics, Dr. Jameson assumed in his pupils an interest in the machines, inventions and appliances of everyday life. He sought to convert this interest into a desire to comprehend the underlying sciences. This was his favorite method. It has numerous adherents in the educational world, and among them Dr. Jameson was recognized as one of its ablest spokesmen.

Edward J. Brady, president during 1925–26, lost his life at sea on the morning of September 8, 1934, in consequence of the burning of the steamship *Morro Castle.* He was educated at Cornell University. For many years he had been in charge of the Physical Laboratory of the United Gas Improvement Company.

He was the inventor of the Brady B.T.U. Indicator, a device used in gas plants throughout the world. For this invention he was awarded the Beal gold medal in 1919. He developed laboratory methods used in testing gas, oils and high temperature refractories.

The laboratory which he directed bears the stamp of his genial and wholesome personality. A member of his staff has said, "A year under his patient and able training was the equivalent of a graduate course in pure and applied physics." He was a member of many scientific and engineering societies. Among them the Physics Club ranked as a favorite hobby.

All three were men of sterling character and attractive personal traits, respected and admired by their associates. Through the death of these men this club has lost some of its most active members, and Philadelphia has lost three of its ablest men of science and three exemplary citizens.

DR. BERTRAM H. BUXTON

1852–1934

A UNIQUE figure passed from the ranks of British and American scientific investigators by the death of Dr. Bertram H. Buxton, which occurred at Devon, England, on December 5, 1934, at the age of 82 years. His life covered two full generations and witnessed the development of most of our modern science.

His work began in the early nineties, on board a cholera ship in New York Harbor, under Commissioner Doty. In 1902 he became pathologist to the Memorial Hospital, where he prepared Coley's toxins for the treatment of inoperable sarcoma. He then became director of the Huntington Fund for Cancer Research. In Cornell University Medical College he worked many years in the Loomis Laboratory, in bacteriology, biology and pathology. He was appointed instructor in bacteriology in 1898, associate professor of biology in 1903 and professor of experimental pathology in 1904. He returned to England in 1912. He made important contributions on the differential diagnosis of paratyphoid fever, on the bacteriology of typhoid fever, and on the physical chemistry of agglutination. He distrusted researches directed toward immediate practical ends. When a series of papers on "Absorption from the Peritoneal Cavity" seemed likely to have practical or commercial importance, he abandoned the field at once, went to Venezuela and produced a remarkable study of the invertebrate eye. He was a pioneer and expert in microphotography, and some of his early work has never been surpassed. His sole diversion was riding the bicycle and his remarkable skill in trick performances was long remembered by the pedestrians on the upper west side of Central Park.

Writing in the London *Times,* Dr. C. G. L. Wolf says: "His beautiful and original researches in the physical chemistry of agglutination laid a foundation of much of the very practical work now being done on the assay of toxins and antitoxins. The perfect charm, breadth of view, and superb technique are memories of Buxton which will not easily be forgotten by his many pupils and associates."

On returning to England he engaged in the study of plant physiology, especially the pigment functions and the production of hybrids. At the John Innes