years since then, Walter Dill Scott achieved great success as president of Northwestern University and brought added distinction to that already distinguished institution.

Others can speak of his scientific achievements better than I, and they will doubtless do so, but I will yield to none in my great admiration and affection for Walter Scott and my admiration for him in terms of the qualities mentioned in my opening paragraph. I am quite sure that all of us who worked with him during these years have felt that our association with him has constituted one of the brightest chapters in our lives.

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George Placzek, Theoretical Physicist

Last October George Placzek died in Zurich at the age of 50 after a long and painful illness. To a devoted circle of friends his death came as a terrible shock. To the world of physics it means the loss of a theoretical physicist with a universal and lucid understanding of physics, for whom the well-founded structure and significance of a theory were more important than the immediate adjustment to some recent observations.

Placzek was born in Czechoslovakia and began his scientific work in Vienna, later spending time at many of the scientific centers in Europe. He worked in Holland with Kramers, in Rome with Fermi, in Copenhagen with Bohr, in Russia with Landau. In 1938 he came to the United States and worked at Cornell University until the outbreak of World War II. He participated in the war effort, first in Montreal with the Canadian Uranium Project and later in Los Alamos; after the war he worked at the General Electric Research Laboratory for about 2 years and then spent the rest of his life at the Institute of Advanced Study at Princeton University.

Placzek's contributions to physics range over many fields. Most widely known is his work on the Raman effect during the period 1929–34. He put the theory of the Raman effect of molecules on a new basis by incorporating the classical description (as proposed by Cabannes and Rocard) into the quantum formalism. An entire science is based on the use of the Raman effect for the determination of molecular structure; the pioneer work and the fundamental ideas of these methods are mainly due to Placzek. He was the first to investigate systematically the relationships between the scattered light of a molecule and its symmetry properties. His development of the theory of scattering by molecules is a masterpiece in its generality and intrinsic beauty. It can be found condensed in a review article by him, "Rayleigh Streuung und Raman effect," in the *Handbuch der Radiologie,* ed. 2, vol. 6 (1934). His studies of the scattering of light enabled him to solve a number of problems in this field with better and more general methods than had been used before. Examples are a study on the scattering of medii at the critical point and on the scattering of crystals and liquids. In this period he acquired a mastery of the problems of scattering that made him the foremost expert in this field.

In the early 1930's, Placzek spent some time in Rome with the group around Fermi and in Copenhagen at Niels Bohr's institute. He was attracted by the newly developed neutron researches and worked experimentally and theoretically at the exploration of the fascinating problems of neutron-induced nuclear reactions. With O. R. Frisch, he published some work on the capture of slow neutrons, and, after coming to the United States for permanent residence in 1937, he joined with H. A. Bethe in the fundamental paper on neutron resonances, which gave a strong impetus to the development of our knowledge of slow neutron reactions. From then on his interest remained focused upon neutron physics. His great experience in the theory of scattering that he acquired in his earlier works was of special importance here. He became the expert in the theory of neutron scattering and in the theory of the slowing down of neutrons in matter.

When World War II broke out, Placzek naturally turned to the problems of the neutron propagation in nuclear chain reactions. He developed the most powerful methods for the treatment of the slowing down of neutrons by collision in matter and for the treatment of the diffusion of slow neutrons in matter.

The years after the war were devoted to further refinements and new developments in the theory of neutron scattering. This problem regained interest recently when the fundamental question of the electron-neutron interaction was raised. In order to identify the part of the scattering of neutrons in matter that is caused by this interaction, the theory of the scattering, elastic and inelastic, in solids and liquids had to be developed in all detail, and this was done by Placzek in his typically thorough and elegant way. Only with the help of his theories is it possible to interpret neutron scattering in crystals and liquids.

Unfortunately, Placzek did not write many papers. The style of his papers is impressive to the initiated in its elegance and conciseness, but it is hard reading for the outsider. The same was true of the few lectures that he delivered. This is why too few people know the importance of Placzek's contribution to physics and the great loss his death means for theoretical physics. The style of his thinking was true to the fine tradition of the classical period of theoretical physics, as exemplified by Rayleigh, Lorentz, and his old friend, Kramers. It is unfortunate that his long-suffered disease and his early death did not allow him many contacts with the younger generation, who do not always appreciate the value of style.

To his friends George Placzek was not only the expert in his field who was always ready to help and explain; he was a great human support to them in times of stress and difficulty. They respected him for his clear sense of values and often went to him for counsel, knowing they would find a true helper with the vast experience of a full and interesting life. They have reason to mourn his passing.

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