understanding and more adequate skills? This will require time to ascertain. We have the works that the fellows published before they came to the center. We know the courses they taught and something of their research and teaching plans. After 1, 2, and 5 years, we shall examine the publications, the research plans, and the teaching activities of former fellows to find out how they differ from those before their center experience. Where there are differences, we shall try to find out whether and how they are related to activities carried on at the center. This will give some insights, although we cannot specify with certainty that any changes observed might not have developed without the benefit of the center experience.

A second purpose of evaluation is to guide the planning and operation of the center. Which policies facilitated productive study? Which ones interfered? Which activities were productive? Which ones were sterile? What problems were encountered by individual fellows? How were they solved? Which materials and services were helpful? Which ones were of little value? Answers to these questions can help us to improve the operations of the center. To obtain them, two procedures are being used. At the close of the year, each fellow was asked to write an evaluation of his center experience. He was guided by an outline of possible points with the following instructions: "Please comment on those points that suggest to you something worth saying, but do not feel bound to mention all of them. Please add your comments on points not included which seem important to you." These essays are very helpful in suggesting ways for improving the center program.

Some months after the fellows' return, we plan to follow up these essays with interviews and letters to get further judgments regarding center experiences and to get more detailed suggestions on points frequently mentioned in their written statements. Several comments are nearly universal in the essays. All of the fellows mentioned their great satisfaction with the year. The opportunity for free choice of study activities in an ideal physical setting was unique in their experience and highly valued. All of them mentioned the excellent library service, the fine secretarial assistance, the help they got from other fellows in criticizing papers and memoranda. Most of the younger men commented on the anxiety developed by the wide freedom available to them. They felt more keenly the responsibility for using time wisely when lack of productive effort could not be blamed on a heavy teaching load or routine responsibilities. In learning to use their freedom intelligently, many said that they discovered the insidious dangers of dissipating time and energy on trivial problems.

A majority of the essays emphasized the values obtained from working with people interested in similar problems but with quite different backgrounds of training and experience. However, several essays pointed out that interdisciplinary work requires solid links connecting the two or more scientists from different fields. Constructive efforts, they reported, required common problems and data on which to draw for questioning, analysis, and interpretation. Talking without common concrete contextual background did not get very far.

Several of the fellows commented on the "pay off" that had come from unexpected collaboration not foreseen in original plans, and they urged continuation of the policies of freedom and flexibility. Finally, most of them mentioned their eagerness to go on with work begun at the center.

There has not yet been time enough to follow up these essays, but these comments are helping to shape operations this year. The center is a new institution for the postdoctoral education of behavioral scientists. It has little tradition to guide it. If it is to be successful, it must utilize the insights and considered judgments of those who are and have been participants in this effort at mutual education.

Note

1. Mr. Hill resigned from the board of directors in September 1955 to become a vice president of the Ford Foundation.

W. D. Scott, Pioneer in Applied Psychology

Walter Dill Scott combined within himself distinction in the field of scientific inquiry, administrative ability of the highest order, a granitelike integrity, deep interest in people, and personal qualities of a most endearing character, the whole enlivened by a whimsical sense of humor.

It was my good fortune to come to know Walter Scott during the years prior to World War I when he was professor of psychology at Northwestern University and I was employment manager at the Curtis Publishing Company. When the war broke out in April 1917, he summoned to Washington a group of younger men who were active in the then new profession of "employment management," later to become known as personnel administration. I was fortunate in being a member of this group, which, under Scott's inspiring leadership, organized the Committee on Classification of Personnel in the Army. This committee planned, organized, and directed, with its military associates, the work in the Army training camps in this country and in the AEF that ascertained, so far as was then possible, the particular skills and qualifications possessed by each man being inducted into the armed forces and a military assignment in which he could use these skills and qualifications. The success of this work was due overwhelmingly to Scott's imagination and initiative and the respect he compelled on the part of military men.

When the war was over in the fall of 1918, Scott and five other members of this Army group organized a program to offer personnel consulting services to business and industrial interests. Walter Scott was the president of this group, which, borrowing his name, became known as the Scott Company. During the next few years personnel surveys were made of some 50 leading business and industrial organizations to determine in what ways the personnel situations in those organizations could be strengthened and improved, problems resolved, and morale and efficiency strengthened. After 4 years of useful and fruitful operation, the Scott Company suspended operations when Walter Scott was elected to the presidency of Northwestern University and the other members of the group transferred their energies to related work in education and industry. During the

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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