

# Raymond Bowers

*July 11, 1927 — April 29, 1979*

Raymond Bowers, professor of physics for nearly twenty years at Cornell, was born and educated in England. He gained his first degree at the University of London in 1948 and his doctorate in physics at the Clarendon Laboratory, Oxford, in 1951. After two years postdoctoral study at the University of Chicago, he joined the Westinghouse Electric Corporation in 1953 and was a research physicist there for seven years. In 1960 he came to Cornell as a member of the Department of Physics and of the Laboratory of Atomic and Solid State Physics.

Raymond Bowers gained national and international prominence as an outstanding research physicist and as a commentator and analyst on science and public policy. His research interests were in the areas of solid-state and low-temperature physics, and his discoveries at Cornell included the first detection of the helicon, a magnetoplasma mode in metals akin to the ‘whistler’ signal observed in the ionosphere. He was aided in this work and in his work over the years on liquid helium, luminescence, semiconductors, and thermoelectric phenomena by many gifted research students and postdoctoral associates. The experimental metals physics group he built up at Cornell was highly regarded in the United States and abroad.

In the middle and late 1960s Bowers developed what became an abiding interest in the impact of science and technology on national and international affairs. He was an astute and perceptive observer in this area and was a frequent participant on national task forces and committees. He served, for example, on the staff of the Office of Science and Technology in the Executive Office of the President in 1966-67, in 1968 on the National Academy of Sciences Panel to Study Science and Regional Development, from 1972 to 1975 on the Committee on Science and Public Policy of the American Association for the Advancement of Science, and in 1977 on a task force to study national communications policymaking. In addition he served as a consultant to industry and to government, most recently to the Department of State and to the National Science Foundation. His knowledge, skill, and experience in questions relating to science and public policy were made available to the Cornell community at large through the establishment in spring of 1969 of a new program in science, technology, and society in which he served as the founding deputy director. He involved himself in the activities of this new venture with great intensity and effectiveness and he played a very important role in formulating the policies and guiding the development of the Program in Science, Technology, and Society at Cornell, especially during his period as director, from 1973 to 1978. His special interest was technology assessment, a field in which he became one of the world’s experts.

The value of Raymond Bowers\* work in many different areas of human endeavor has been widely recognized. He was a fellow of the American Academy of Arts and Sciences, a fellow of the American Physical Society, a fellow of the Physical Society of London, and member of many other professional societies.

His activities and interests at Cornell encompassed both the sciences and the arts. During his years on the Cornell faculty, Bowers served on the editorial board of the Cornell University Press, on the executive committee of the Society for the Humanities, and on the Faculty Committee on Music. He was an excellent teacher and throughout his career at Cornell was deeply involved in teaching programs at both undergraduate and graduate levels, first in the Department of Physics and then in the Program on Science, Technology, and Society. In 1965 he was coauthor, with Alfred Kahn, of a major report on undergraduate education at Cornell.

In recording the great qualities of Raymond Bowers as a scholar, a teacher, an innovator, and a wise man, we are likely to miss his marvelous personal attributes. He was a remarkably decent and kindly person, one who worried deeply about interpersonal relationships and one who had a particular concern for young people, whether students, postdoctoral associates, or junior faculty. He had about him humor and wit which he used with great effectiveness in illuminating even the most serious of issues.

Just before his untimely death he was awarded a Guggenheim Fellowship, which he had planned to take up in England; he had been due for a well-deserved sabbatic leave in the fall of 1979.

*Frank A. Long, Neil W. Ashcroft*