Für den Falle, daß Du
davon über nichts gehört
38 L+ hast. Love V.

Michael Polanyi Is Dead; Chemist-Philosopher, 84

By JOSEPH COLLINS
Special to The New York Times

LONDON, Feb. 23 — Prof. Michael Polanyi, the physical chemist and philosopher, died yesterday in the hospital at Northampton. His age was 84.

Professor Polanyi, born in Budapest, came to England in 1933 from Germany, where he had resigned his position at the Kaiser Wilhelm Institute in protest against the Nazis. He became professor of physical chemistry at the University of Manchester and later, for 10 years until 1958, when he retired, he was professor of social studies there.

His wide interests, reaching out from science to politics and economics, were reflected in "The Logic of Liberty," which he published in 1951. He was best known for his work on the theory of reaction rates (reaction kinetics). This work began when he went to the Kaiser Wilhelm Institute for Physical Chemistry in 1925.

Professor Polanyi was a visiting professor at 14 universities, and his work as a chemist and his philosophic writings were perhaps better known in the United States than in Europe.

After his retirement from Manchester University—where he was made professor emeritus—he went to Merton College, Oxford, as senior research fellow. He again went into active retirement in 1961.

First Paper at 19

Professor Polanyi became a doctor of medicine at Budapest University in 1913. His first scientific paper, "Chemistry of the Hydrocephalic Liquid," was published when he was only 19. The following year he produced the paper "Investigation of the Physical and Chemical Changes of the Blood Serum During Starvation."

Before World War I, he published papers in Hungarian and German journals on the application of quantum theory to the third law of thermodynamics and on the thermodynamics of adsorption.

His work on the third law during the war, in which he served in the Austro-Hungarian Army as a medical officer, was assisted by a voluminous correspondence with Albert Einstein. Einstein by that time was a physicist of world renown but he replied to every letter from the unknown medical officer.

Professor Polanyi published the outlines of his theory of adsorption in 1916. He submitted it for a Ph.D. in chemistry at Budapest University in 1917.

By 1923 he was a member of the Kaiser Wilhelm Institute of Fiber Research. He entered new fields of research there and within months he had made the first interpretation of the X-ray diffraction pattern of natural plant fibers (cellulose).

This work, subsequently elaborated with K. Weissenberg, led to the rotating crystal method of X-ray analysis, which remains probably the most powerful weapon in the armory of the X-ray crystallographer.

Another new field for him was the plasticity and strength of solid material. His studies of this phenomenon culminated in a theory of dislocation, whose effects are still to be seen in the large number of papers in current journals of solid-state physics dealing theoretically and experimentally with dislocations and their consequences.

It was at the Kaiser Wilhelm Institute for Physical Chemistry that Professor Polanyi began experiments with a group of collaborators relating to the fundamental mechanics of the molecular dissociation at surfaces, the uncertainty principle for angular momentum (with E. Wigner); an absolute rate for unimolecular dissociation (also with Wigner); a theory of bimolecular activation energy (with H. Eyring); a generalized theory of absolute reaction rates (with M. E. Evans); as well as extensive work on ionic reactions in solution, on bond dissociation energies and on mechanism of polymerization. This work was done over a period of 15 years, much of it after he had come to England.

His interests broadened in England and in 1935 he published "U.S.S.R. Economics." Five years later he brought out "The Contempt of Freedom!" a condemnation of Soviet straitjacketing of science, politics and economics.

Several more books embracing economics, politics and patent reform were written before his "Science, Faith and Society" was published in 1946 and he turned almost exclusively to philosophy.

In 1948 he exchanged the chair of physical chemistry at Manchester for a chair in social studies there.

From 1951 the professor traveled widely, lecturing and writing. By 1960 he had published "Personal Knowledge," "The Study of Man" and "Beyond Nihilism."

His visiting professorships included those at the universities of Virginia, Chicago and California and Stanford, Duke and Yale. He was also an honorary member of the American Academy of Arts and Sciences.

In Britain he was also a fellow of the Royal Society.

In 1920 he married Magdalene Kemeny. She and one of their two sons survive him.

Cited by Princeton

When Princeton made Professor Polanyi an honorary Doctor of Science at its bicentennial celebration in 1949, the university cited him as "a veteran campaigner against those who would take from science the freedom she requires for the pursuit of truth."

But in 1951, when the University of Chicago offered him a life appointment to teach the philosophy of science, his visa was withheld under the McCarran Act on suspicion of past involvement in a subversive group. He resigned the Chicago appointment and continued to make his home in Britain.

He was soon able to visit the United States again and in 1965-66 was a senior fellow at the Center for Advanced Studies at Wesleyan University. His goal then was a theory of knowledge that would challenge reductionism—the concept that all things can be understood only in terms of the laws of inanimate nature. Professor Polanyi contended that this concept made anomalies of such thinngs as "the responsible choices of man, his moral and esthetic ideals, the fact of human greatness."

HOYT N. WARE

WASHINGTON, Feb. 23 (AP) —Hoyt N. Ware, director of the United States Information Agency's foreign press center, died here Saturday in his apartment, apparently of a heart attack. He was 58 years old.

Mr. Ware was an Associated Press Reporter before joining the State Department in 1949.