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contribution in the United States to the initiation and completion of the world's first atomic bomb.

**L**eo Szilard (pronounced sē'lārd) was born in Budapest on Feb. 11, 1898, the son of Louis and Thekla Vidor Szilard. He studied at the University of Berlin, where, after receiving a doctoral degree in 1922, remained as Albert Einstein's assistant in physics until 1925 and then for 5 years as privatdozent. He was an outspoken opponent of Nazism, and a few days after the Reichstag fire, in April 1933, he took a train for Vienna. From there he made his way to Oxford, England, where he did research in nuclear physics at the Clarendon Laboratory. Five years later he went to Columbia University as a member of the staff of the National Defense Research Division.

Early in 1939 both Szilard and Enrico Fermi confirmed the reality of nuclear fission, which had been announced by Otto Hahn and Fritz Strassmann in Germany in January. Szilard wrote, "I knew that the world was headed for sorrow." He went to see Einstein and then persuaded Alexander Sachs to deliver a letter from Einstein to President Franklin Roosevelt warning him that "extremely powerful bombs of a new type" might be built by the Germans, based on atomic fission. Roosevelt immediately appointed the Advisory Committee on Uranium, which included Szilard, and in August 1942 the Manhattan Engineer District Project was ordered to build an atom bomb. Fermi and Szilard, who had had early engineering training, worked out the lattice structure of the first atomic pile, which on Dec. 2, 1942, produced the first successful self-sustaining nuclear chain reaction in history. Meanwhile, Szilard was named chief physicist of the Metallurgical Laboratory at the University of Chicago.

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## SZILARD / By Bernard Jaffe

The Hungarian-born theoretical physicist Leo Szilard (1898-1964) made a significant



Leo Szilard in 1945. (United Press International Photo)

duction of the atomic bomb as a legitimate war weapon against Japan. Nevertheless, on Aug. 6, 1945, the bomb was dropped on Hiroshima. Szilard became the crusading scientist, the leader of atomic scientists bent on bringing to Congress and the American people the fearful implications of nuclear war. In 1947 he formed the Emergency Committee of Atomic Scientists with Einstein as chairman, and he also sparked the movement for the civilian control of atomic energy. During the following year he tried unsuccessfully to see Truman, Stalin, and Khrushchev in an effort to get united action against a nuclear arms race. He addressed students and faculties around the country and organized the Council for a Livable World in Washington.

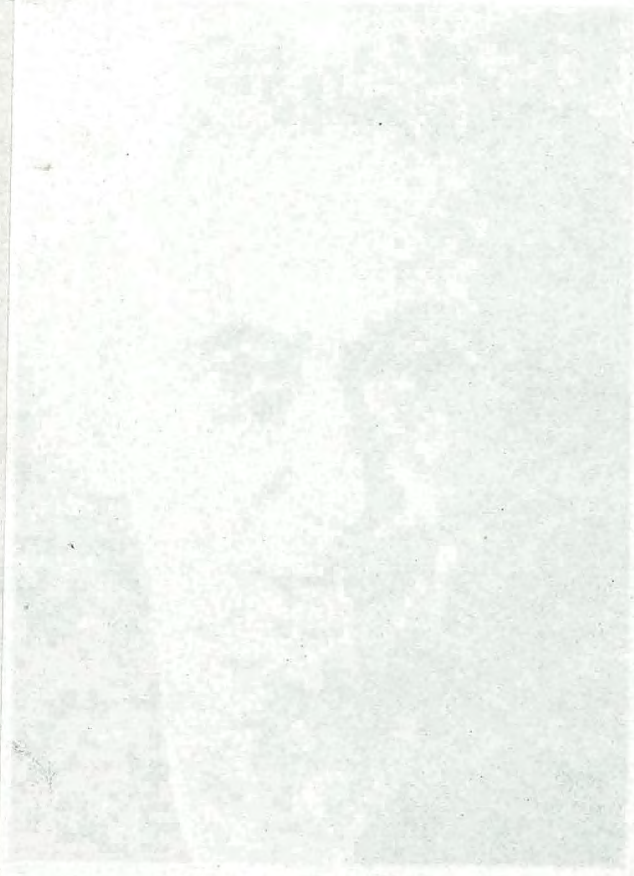
When cancer struck him, Szilard refused surgery and took radiation treatment instead. During his long illness, Dr. Gertrude Weiss, professor in the medical school of the University of Colorado, whom he had married in 1951, helped nurse him to recovery. In 1960 he received the Atoms for Peace Award. Early in 1964 he became a member of the Salk Institute for Biological Studies in La Jolla, Calif.; he died on May 30, 1964.

In 1961 Szilard's imaginative and stimulating book, *The Voice of the Dolphins*, was published. This was a collection of five short stories set in the future—parables, in a way, for the nuclear age.

**Further Reading**

Leo Szilard is listed in the Science study guide (VII, C, 4). Others who contributed to the development of the atomic bomb were James CHADWICK, Enrico FERMI, Otto HAHN, and J. Robert OPPENHEIMER.

Many biographical anecdotes are in Szilard's interview reproduced in the book by the Editors of International Science and Technology, *The Way of the Scientist: Interviews from the World of Science and Technology* (1967). A biography of Szilard by E. P. Wigner is in National Academy of Sciences, *Biographical Memoirs*, vol. 40 (1969). Memoirs of Szilard are included in Bernard Bailyn and Donald H. Fleming, eds., *The Intellectual Migration: Europe and America, 1930-1960* (1969).



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