

In Passing: Dr. Oppenheimer

Founder and victim of the Atomic Age

Dr. Robert Oppenheimer helped unleash the awesome power of the atomic bomb. Yet he had other attributes: philosopher and horseman, linguist and cook, lover of philosophical poetry and fine wines.

Dr. Oppenheimer's death from throat cancer at his Olden Farms home in Princeton, N.J., on Feb. 18 deprives mankind of a genius in physics and a scholar deeply concerned about science and public policy as it affects both the United States and the entire world.

Tributes to the man, the scientist, the scholar poured in from many countries. Although interment was private, the memorial services in Princeton on Feb. 25 were attended by many of the nation's top scientists and administrators, as well by students who revered him.

J. Robert Oppenheimer was born in New York City on April 22, 1904, the son of a wealthy textile importer who had come to this country from Germany when he was 17. His Baltimore-born mother was an artist and art teacher before her marriage.

"Oppie," as he was known to friends and colleagues during World War II when he masterminded the atomic bomb project, became director of the Institute for Advanced Study at Princeton in 1947. In this position, from which he retired last June 30, Dr. Oppenheimer strengthened the Institute's role as a center where new ideas relating to all facts of human endeavor could be exchanged among the 200 resident scholars and scientists.

After his retirement, Dr. Oppenheimer remained at the Institute as senior professor of theoretical physics, the post once held by Dr. Albert Einstein.

He showed his scientific talent at an early age when, as a five-year-old, he began a rock collection that, when he was 11, earned him election to the New York Mineralogical Society, its youngest member. He attended the Ethical Culture School in New York, entered Harvard at the age of 18, graduating *summa cum laude* three years later.

Dr. Oppenheimer received his PhD from Goettingen University in Germany in 1927 with a thesis on quantum mechanics, following a year of study at Cambridge University in England.

In 1929, he accepted concurrent appointments as assistant professor of physics at the University of California



Ann Ewing

by Ann Ewing

at Berkeley and California Institute of Technology. During his 12 years of service on the two faculties, Dr. Oppenheimer founded and nurtured a school of theoretical physics unequalled in the United States, which served as a magnet to draw specialists in this field from the entire world.

His contributions to theoretical physics were far-ranging and profound, although not easily understood by non-physicists. During 1930, for instance, he published a critique of Dirac's theory proposing that the world consisted of positive and negative energy states. Dr. Oppenheimer's work resulted in a revision of the theory.

In 1935, Dr. Oppenheimer and Dr. Melba Phillips discovered what is now known as the Oppenheimer-Phillips effect, which involves the break-up of deuterons in collisions that had been thought too weak to cause disintegrations. In the late 1930's Dr. Oppenheimer, with Dr. G. M. Volkoff, analyzed the gravitational collapse of astronomical objects in terms of the general theory of relativity, calculations that are now being applied to quasars.

Although the world of physics, and especially of atomic and nuclear physics, may seem remote from everyday experience, Dr. Oppenheimer never found it so. Revealing some of its mysteries was to him a fascinating challenge.

He once described his view of science this way:

"The last centuries of science have been marked by an unabating struggle to describe and comprehend the nature of matter, its regularities, its laws and the language that makes it intelligible. The successes in this struggle, from the Sixteenth Century until our own day have inspired the whole scientific enterprise, and lighted the world of technology, and the whole of man's life."

The spectacularly successful flash of

the world's first atomic bomb over the New Mexico desert on July 16, 1945, was largely Dr. Oppenheimer's creation. When the story of the Los Alamos Laboratory was told at the end of World War II, he was acclaimed by scientists and the public as a spokesman for the new age he had helped to create.

Nine years later, however, he was summarily and, many believe, senselessly removed from his high position as a Government consultant on scientific matters, particularly in the field of nuclear energy; his security clearance was revoked despite the fact that his loyalty was not questioned.

The story leading to the revocation is nearly as complex as the man who was its central figure.

Dr. Oppenheimer himself made public, on April 13, 1954, his suspension as a consultant to the U.S. Atomic Energy Commission. On the same day, the AEC announced that President Dwight D. Eisenhower late in 1953 had ordered that a "blank wall be placed between Dr. Oppenheimer and any secret data."

Most of the allegations made in the AEC's letter of Dec. 23, 1953, ordering the suspension, were old ones that had previously been sifted and resifted by Government authorities.

The main new item concerned Dr. Oppenheimer's alleged lack of enthusiasm for a crash program to develop the hydrogen bomb, both before and after President Harry S Truman's order to go ahead on it in January, 1950.

The reinvestigation of Dr. Oppenheimer was initiated on July 7, 1953, when AEC Chairman Lewis L. Strauss requested removal of classified documents from the physicist's custody, an action that followed by just a month the renewal of Dr. Oppenheimer's con-

(Turn to page 211)

... Dr. Oppenheimer

(From page 205)

tract as a consultant to the Commission and occurred four days after Strauss took over as AEC chairman.

The physicist's file was subsequently studied not only by the AEC but by the Department of Justice because it contained "substantial derogatory information" under the terms of President Eisenhower's Executive Order 10450.

Dr. Oppenheimer requested a hearing in March, 1954, and a special personnel security board convened on April 12 for that purpose. Its chairman was Gordon Gray, a former Secretary of the Army and then president of the University of North Carolina. Thomas A. Morgan, former president of the Sperry Corporation, and Dr. Ward V. Evans, Loyola University chemistry professor, were the two members.

In a long letter replying to the charges, Dr. Oppenheimer said that so-called "derogatory information" could be understood only in terms of "my life and my work," of which he then presented a summary in chronological order. He first related facts concerning his education, pointing out that, until 1936, he had no interest in economic or political affairs.



National Academy of Sciences

At the Academy Centennial in 1963.

The changes that began in late 1936 resulted from a "continuing smoldering fury about the treatment of Jews in Germany. I had relatives there, and was later to help in extricating them and bringing them to this country.

"I saw what the depression was doing to my students. Often they could get no jobs or jobs which were wholly inadequate. And through them, I began to understand how deeply political and economic events could affect men's lives. I began to participate more fully in the life of the community. But I had no framework of political conviction

or experience to give me perspective in these matters."

Dr. Oppenheimer then elaborated upon his experiences with left-wing organizations, associations previously long known and thoroughly probed. He also replied to the charges concerning the hydrogen bomb program, or the "Super," as he called it.

In concluding his letter, he stated, "I have reviewed two decades of my life. I have recalled instances I acted unwisely. What I have hoped was, not that I could wholly avoid error, but that I might learn from it. What I have learned has, I think, made me more fit to serve my country."

Although the Gray panel found Dr. Oppenheimer to be a "loyal citizen," it nevertheless recommended against reinstatement of his security clearance.

The panel's decision was upheld by the AEC Commissioners in a four-to-one decision announced June 29, 1954. With only a few exceptions, scientists disagreed with the revocation decision, noting that Dr. Oppenheimer had not changed but security regulations and the climate of national opinion had.

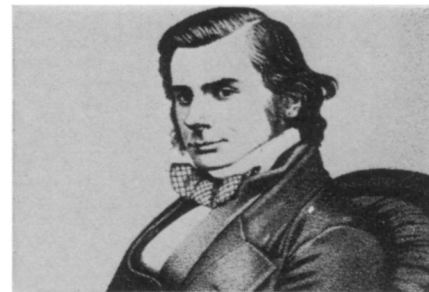
Some charged that he was a martyr to the era of McCarthyism.

When Dr. Oppenheimer was selected in 1963 to receive the Enrico Fermi Award, the highest honor conferred by the AEC, the accolade was viewed by many as an indirect apology from the Government for the highly controversial 1954 ruling. Although officially the award was presented in recognition of his outstanding contributions to the development of nuclear energy, it was regarded as an effort to remove any lingering doubt of official stigma left from the 1954 decision.

In accepting the award, Dr. Oppenheimer referred obliquely to the 1954 matter when he noted, in remarks written before President John F. Kennedy's assassination and reaffirmed for President Johnson, that it took "some charity and some courage for you to make this award today."

In a letter to the New York Times (Feb. 23), Dr. I. I. Rabi of Columbia University stressed Dr. Oppenheimer's great human contributions. Nobelist Rabi praised him for "his wit, his brilliance, his biting sarcasm, his kind generosity and his almost universal culture. . . . He knew everything, learned quickly, had a retentive memory and an extraordinary clarity of expression. He would listen to an incoherently expressed idea and turn it into a logical and clear exposition."

Dr. Oppenheimer is survived by the former Katherine Harrison, whom he married in 1940, a son Peter, 25, and a daughter, Katherine, 22. His brother, Frank Oppenheimer, is a professor of physics at the University of Colorado.



Thomas Henry Huxley

ON A PIECE OF CHALK

*Edited and with an Introduction
and Notes by Loren Eiseley*

A science classic, by the famous nineteenth-century biologist who was the foremost advocate of Darwin's theory of evolution, made available as a separate volume for the first time. Profusely illustrated by Rudolf Freund. Appendix, Bibliography, Index.

\$4.95



SCRIBNERS

Double Your Reading Speed?

A noted publisher in Chicago reports there is a simple technique of rapid reading which should enable you to double your reading speed and yet retain much more. Most people do not realize how much they could increase their pleasure, success and income by reading faster and more accurately.

According to this publisher, anyone, regardless of his present reading skill, can use this simple technique to improve his reading ability to a remarkable degree. Whether reading stories, books, technical matter, it becomes possible to read sentences at a glance and entire pages in seconds with this method.

To acquaint the readers of this publication with the easy-to-follow rules for developing rapid reading skill, the company has printed full details of its interesting self-training method in a new booklet, "How to Read Faster and Retain More" mailed free to anyone who requests it. No obligation. Send your name, address, and zip code to: Reading, 835 Diversey Parkway, Dept. 540-013, Chicago, Ill. 60614. A postcard will do.—Adv.