

Edward Teller, RIP

The Controversial Life of the Father of the H-Bomb

Before the first test of the atomic bomb in the New Mexico desert in July 1945, the senior scientists who worked on the Manhattan Project were bused to prearranged locations to observe the explosion. Edward Teller, then 37 years old, was among the scientists at Compañía Hill, twenty miles northwest of ground zero. Although the observers were supposed to lie on the ground with their backs turned to the blast, Teller disobeyed—he looked directly at the bomb. Protected with welder’s glasses and sunscreen, Teller watched the atomic flash: “It was as if I had pulled open the curtain in a dark room and broad daylight streamed in.”

The rest of Teller’s life was dominated by the power of the atomic nucleus—its immense physical power, which Teller helped to leash and unleash, and also its daunting political power, which gave shape and urgency to the Cold War.

Teller was a giant of science, and he mingled with the greatest minds of twentieth-century physics. Born in Budapest in 1908, by the time he graduated from high school Teller was already friends with fellow Hungarians Eugene Wigner (who would win the Nobel Prize for Physics in 1963), John von Neumann (one of the pioneers of computer science), and Leo Szilárd (one of the fathers of the atomic

bomb). To escape religious persecution of Jews, he left Hungary for Germany, where he studied with Werner Heisenberg, one of the originators of quantum mechanics. Then, to escape ethnic persecution of Jews, he left Germany for Denmark, where he studied with Neils Bohr, another eminent quantum physicist. Following a stint in London, Teller settled in the U.S. in 1935.

After some teaching, and some important research on radioactivity, Teller became an American citizen in 1941. That was also the year he joined the Manhattan Project. As Teller moved west, following Enrico Fermi from New York to Chicago to Los Alamos, he also moved from pure to applied physics, and permanently left behind theory. “After the war,” he said, “I tried to find my way back to the simpler life of a scientist and a teacher. I never succeeded.”

No, indeed: Teller’s life became far more complicated after the war. While most of the other scientists involved in fission research during the war came to advocate strict limits on atomic weapons, Teller believed that the United States should undertake an intensive program to create a fusion bomb, a device far more powerful than the original fission bombs used on Japan. As the leading lights of physics, from Einstein to Oppenheimer, came to oppose the bomb in the name of peace, Teller’s was almost the only voice calling for a more aggressive approach to military preparedness—especially after the Soviets tested their first atomic bomb in 1949.

In the years that followed, Teller contributed to the theoretical research for and the practical development of fusion weapons, and he shepherded the research from its earliest days—earning the nickname “father of the H-bomb.” He also remained an outspoken supporter of nuclear power generation, thermonuclear

weapon development and stockpiling, and even the use of small nuclear devices for demolition projects and other peaceable purposes. Many opponents of nuclear arms came to view Teller as a lunatic lust-ing after power and destruction. This mad caricature—which may have been the basis for the character of Dr. Strangelove in the eponymous film—has always conveniently overlooked the fact that no one has ever been killed by a hydrogen bomb.

Left-leaning scientists also came to blame Teller for his role in ending the career of physicist J. Robert Oppenheimer. “Oppie,” who had headed up research at Los Alamos during the Manhattan Project, was later a vocal opponent of the plans to build a hydrogen bomb. In the early 1950s, Oppenheimer was stripped of his security clearance after a review board determined he had too many ties to communists. Some people came to believe that Teller, in testimony before that board, smeared an innocent Oppenheimer. Although the actual transcript of the hearing doesn’t support that conclusion, Teller’s anticommunist views were enough to convince Oppenheimer’s defenders—and the bitter feelings against Teller never fully abated.

In fact, if anyone was smeared, it was Teller himself, especially in the late 1960s and early 1970s, when student agitation against the Vietnam War peaked. Teller was falsely accused of wanting to use nuclear weapons in Vietnam; his house was vandalized; he couldn’t give public lectures without getting shouted down; several radical groups accused Teller of “war crimes,” tried him in absentia, marched on his home, and burned him in effigy.

The leftist enmity for Teller only worsened in the 1980s, when he became the most prominent scientific proponent of a

ballistic missile defense system. Teller actually began concentrating on the problems of missile defense as early as 1961, and it was he who first introduced then-Governor Ronald Reagan to the concept in 1967 when Teller was at the Livermore labs. Although Teller sometimes threw his support behind defensive technologies that even today seem more science fiction than science fact—like lasers that can shoot down missiles—his motivation for supporting those defensive systems has always been valid: the U.S., and the rest of the world, are vulnerable to missile attacks.

By the time of Edward Teller's death on

September 9, 2003, he seemed to have moved from reviled to relic—becoming a dusty reminder of an earlier era. The names of Teller's friends, enemies, and projects have long ago migrated from the newspapers to the history books. Most people who think of him nowadays almost certainly recall him as a "shill" for conservative ideas, or as a scientist who alienated his colleagues. But throughout his life Teller was also that man in the New Mexico desert—facing the future without flinching, bringing his gaze and his tremendous intellect to bear on those things no one else had the courage to see.