LA-UR-21-29558
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Title: Why didn’t Oppenheimer ever win a Nobel Prize?

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Intended for: Web

Issued: 2021-09-28

**Why didn't Oppenheimer ever win a Nobel Prize?**
**By Brye Steeves**

For his scientific achievement, he would be forever known as the father of the atomic bomb – but never as a Nobel laureate.

The pinnacle of global recognition, the Nobel Prize was bestowed on 18 of J. Robert Oppenheimer's colleagues with whom he worked at the Manhattan Project site in Los Alamos. There, in just 27 months and in a perceived race with Nazi Germany, the scientists created the first nuclear weapons. Their efforts brought the world into the Atomic Age and helped end World War II. Several were awarded the prize before coming to work at the wartime lab, while most would go on to win later in life.

Oppenheimer was nominated for the Nobel Prize for Physics three times: in 1946, in 1951, and in 1967. Colleagues, scholars, and surely Oppenheimer himself pondered why he was never bestowed the honor.

"To understand this," said James Kunetka, historian and author of *The General and the Genius*, "you have to first examine the man's academic life before and after the war."

**Undisputable genius**
Born in 1904 into a wealthy Jewish family and raised in New York, Oppenheimer was obviously gifted. He completed the third and fourth grade in just one year and later skipped a portion of his eighth-grade year. Remarkable anecdotes of brilliance illustrate his life through early adulthood. As a boy, he was interested in mineralogy and, at age 12, presented his research paper to the New York Mineralogical Club and became an honorary member. As a young academic, he learned Dutch in six weeks to successfully deliver a technical lecture on a trip to the Netherlands. It was there he was first dubbed "Oppie" ("Opje" in Dutch.)

"[He was] one of the sharpest people I have ever seen or heard of, intellectually," said longtime friend Harold Cherniss in a 1979 interview. "When he became interested in anything, he very quickly picked up an enormous amount of knowledge about it."

After graduating at the top of his high school class, Oppenheimer studied science at Harvard University, where he was admitted to graduate-level physics classes his first year. He also took courses in literature, languages, religion, and philosophy and earned his degree in just three years, but with no social clubs or athletics listed under his name in the 1926 yearbook. Certainly introverted then, but also perhaps lonely, Oppenheimer once told a friend, "It's no fun to turn the pages of a book and say, 'Yes, yes, of course, I know that,'" according to an October 1949 article in *Life* magazine.

After a stint at the University of Cambridge in the United Kingdom, Oppenheimer went to the University of Göttingen in Germany, where he studied quantum physics. He earned his doctorate in 1927 and by 1929, had accepted offers to teach at both the California Institute of Technology (Caltech) and the University of California, Berkeley.

Oppenheimer's early research focused on energy processes of subatomic particles, including electrons, positrons, and cosmic rays, as well as neutron stars (collapsed cores of massive stars) and black holes. He was soon recognized as a leader in theoretical physics and had earned the respect of scientific greats, such as Albert Einstein and Niels Bohr (see Page xx).

"However, many of his colleagues and critics point out that his production of significant papers was surprisingly thin," Kunetka said. "It was said by some that he far too often co-authored papers with his students rather than initiated them. (Nobel laureate and physicist) Hans Bethe noted that, while Oppenheimer and others were perhaps more brilliant, he (Bethe) was more productive."

Oppenheimer proved to be an outstanding teacher, inspiring and influencing students. He earned a loyal following, if not outright adoration. "... Like most of his students, I would more or less follow him to the ends of the earth," recalled Manhattan Project scientist Robert Christy in a 1983 interview.

**Leadership**

Oppenheimer lacked large-scale managerial experience and his associations with Communist party members were problematic. And without a Nobel Prize, it wasn't certain whether Oppenheimer would have the prestige to direct the Los Alamos scientists.

But as soon as General Leslie Groves met Oppenheimer, none of that mattered, according to an Oppenheimer biographer, Ray Monk. The young professor impressed the Manhattan Project leader with both his intelligence and practicality. Oppenheimer would seemingly be able to turn blackboard theories and lab experiments into atomic weapons. Groves also may have seen a drive based ambition, according to Monk, assuring him that Oppenheimer would, indeed, succeed.

In the fall of 1942, Groves hired the 38-year-old Oppenheimer, who recommended Los Alamos as the site for the clandestine lab and recruited science's greatest minds to join him there. By then, Oppenheimer was described as charismatic and charming. He was the center of attention at parties, drinking his signature martinis and gesticulating with cigarettes through story after story, his bright blue eyes sparkling.

"Oppenheimer commanded not just the loyalty but the deep respect of everybody who was at Los Alamos, and I cannot think of anyone else who would have succeeded as he did in that sense," said Manhattan Project physicist and Nobel laureate Roy Glauber (see Page xx).

But Oppenheimer was also known as cruel and intolerant, and called a showman and a power seeker. Even still, said Alan Carr, senior historian at Los Alamos National Laboratory's National Security Research Center, Oppenheimer's worst enemies would concede that he achieved greatness during the war.

“He was very close to being indispensable,” an unnamed Los Alamos scientist said, according to the 1949 *Life* article. Another said, “The main decisions were made by Oppenheimer, and all proved to be correct.”

**Atomic success**

Oppenheimer’s directorship, perhaps along with his genius, culminated on July 16, 1945 when the world’s first-ever atomic bomb was successfully detonated in the New Mexico desert. Oppenheimer, who read and wrote poetry, named the test “Trinity.” He said years afterward that he may have been inspired by a John Donne poem that includes the line: “Batter my heart, three-person'd God.”

Weeks later and just days apart, the United States released the gun-type uranium bomb, Little Boy, and the implosion-style plutonium bomb, Fat Man, above Japan. Groves phoned Oppenheimer after the first detonation.

According to a transcript of the recorded call, Groves said, “I think one of the wisest things I ever did was when I selected [you] the director of Los Alamos.”

To which Oppenheimer responded: “Well, I have my doubts, General Groves.”

And Groves replied: “Well, you know I've never concurred with those doubts at any time.”

**After World War II**

Oppenheimer once said “physics and desert country” were his “two great loves.” It was in Los Alamos that these came together, and where his work as a physicist changed the world.

He left Los Alamos a few weeks after WWII’s official end on September 2, 1945. “Oppenheimer” was now a household name. With his face on magazine covers, star-treatment followed. His celebrity, though, did not translate into a Nobel Prize.

He first returned to Caltech, but soon left to lead the Institute for Advanced Study in Princeton, New Jersey, as well as serve as the chairman of the Atomic Energy Commission. Much of his focus shifted from his prewar physics to policy work. Oppenheimer spoke out in opposition to the development of the even more-powerful hydrogen bomb, questioning its feasibility early on, but also deeming it an unnecessary weapon. Meanwhile, he wrote and lectured, but didn’t, however, resume much research.

In 1954, he lost his security clearance – and his official standing in the scientific community – following unsubstantiated accusations against his loyalty. Though his supporters remained steadfast and numerous, Oppenheimer was disgraced and largely retreated from his public life and work, pushing him further from a Nobel Prize than ever.

**Why no prize?**

Kunetka says that the simplest explanation is that before WWII, Oppenheimer's published work was not considered significant enough. Carr agrees, adding that Oppenheimer never made a major discovery, nor did he ever prove a significant theory.

"The Nobel Prize requires more than just a remarkable idea," Carr said, "it requires evidence."

For his Manhattan Project work, Oppenheimer himself said that creating the atomic bombs was inventive rather than scientific, according to the *Life* 1949 article.

When he was first nominated in 1946 for the Nobel Prize, the Nobel committee was hesitant to award it to someone so closely tied to the atomic bombs, according to *American Prometheus*. Many scholars and scientists through the years have concurred.

Others, though, have said Oppenheimer's scientific focus would change frequently and he didn't work sufficiently in any one area to warrant the Nobel Prize. Meanwhile, biographer Ray Monk thought Oppenheimer's work was more significant than credited and some scientists, including Nobel laureate Luis Alvarez (see Page xx), speculated that Oppenheimer's work on black holes may have warranted the Nobel, had he lived long enough to see them brought into fruition. (The prizes aren't awarded posthumously.)

"In the end," Kunetka said, "we don't know."

Carr said, "Did he achieve greatness? Yes, of course. What Oppie led his wartime team of scientists to achieve was nothing short of remarkable. He will always have that incredible scientific legacy."

**Loyal following until the end**

Oppenheimer died at his New Jersey home in 1967 after unsuccessful treatments for throat cancer. He was 62 and was survived by his wife, Kitty, and their two children. Kitty spread his ashes near their simple beach home in the U.S. Virgin Islands, following a memorial service at Princeton University. An estimated 600 people attended.

"Science is not everything," Oppenheimer once said, "but science is very beautiful."

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- **Plutonium and poetry: Where Trinity and Oppenheimer's reading habits met**

By **Patty Templeton**, digital archivist, National Security Research Center; https://int.lanl.gov/news/news_stories/2021/july/0712-oppenheimer-literature.shtml

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