

MP-IDSA Issue Brief

Oppenheimer and the Indian Knowledge Tradition

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September 12, 2023



While the movie Oppenheimer has refreshed people's memories of the horrors caused by the atomic bombings of Hiroshima and Nagasaki, it is not well known that Robert Oppenheimer was admired by a section of the Indian intelligentsia during the Cold War for various reasons. These included his familiarity with Indian philosophical traditions and his advocacy of peaceful nuclear uses. Oppenheimer's philosophy on science and society also resonated with the dominant Indian thinking of the relationship between science and mankind.

The Christopher Nolan directed movie, *Oppenheimer*, not only made waves all over the world but has refreshed people's memories of the horrors caused by the atomic bombings of Hiroshima and Nagasaki. Along with the Ukraine–Russia conflict, which generated debates about the threats to use nuclear weapons, the film has succeeded in bringing nuclear weapons to the forefront of public imagination in general and security discourse in particular. The movie has also highlighted the dilemma of the creators of the nuclear bomb.

The film is principally adapted from two works¹—Pulitzer prize winning authors Kai Bird and Martin J. Sherwin's *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer* and Martin J. Sherwin's *A World Destroyed: Hiroshima and the Origins of the Arms Race*. The general criticism is that the film did not depict the trauma caused by the bombings of the two Japanese cities and for not portraying 'the massive health or environmental toll of the sprawling nuclear weapons production complex'.².

Critics have also pointed out³ factual inconsistencies in the film. These range from not adequately depicting the decision relating to the use of nuclear weapon to the petition of scientists minus Oppenheimer against the use of nuclear weapons on Japan without giving it enough warning to the relationship of Oppenheimer with German scientists.

The film did mention procurement of uranium but did not elaborate where the uranium came from. The US had set up the Combined Development Trust to control the world's uranium ore market under General Leslie Groves. The objectives of the trust were to secure the availability of uranium for the Manhattan Project and to prevent acquisition of uranium by other countries, especially the Soviet Union. If the Democratic Republic of the Congo was the principal supplier of uranium used for making the nuclear bombs which were dropped on Japan, other countries were also targeted for procuring uranium for American nuclear weapons.

¹ Daryl G. Kimball, "'Oppenheimer', the Bomb, and Arms Control, Then and Now", Bulletin of the Atomic Scientists, 29 July 2023.

² Ibid.

³ For example, Victor Gilinsky, "<u>Thought-provoked by 'Oppenheimer'</u>", Bulletin of the Atomic Scientists, 28 July 2023; Stewart Prager, "<u>Oppenheimer' is Terrific. But it's Just a Movie'</u>", Bulletin of the Atomic Scientists, 28 July 2023; Chris Griffith, "<u>A Manhattan Project Historian Comments on 'Oppenheimer'</u>", Bulletin of the Atomic Scientists, 28 July 2023; Andrew Facini, "<u>Oppenheimer's Vision for Arms Control is Still Upon Us</u>", Bulletin of the Atomic Scientists, 28 July 2023; Daryl G. Kimball, "<u>Oppenheimer', the Bomb, and Arms Control, Then and Now</u>", Bulletin of the Atomic Scientists, no. 1; Jonathan Stevenson, "<u>Why 'Oppenheimer' Matters</u>", *The American Prospect*, 28 July 2023.

Although the film flags the role of nuclear scientists who fled Europe due to fear of persecution and some prominent nuclear bomb scientists such as Klaus Fuchs and Edward Teller figure prominently in the narrative, the role of the Jewish scientists in the nuclear weapons project is not properly depicted.

However, Professor Strew Prager at Princeton University notes "Oppenheimer' is terrific. But it's just a movie … But will this substantial work of art make a difference to the future of nuclear weapons policy? I expect it won't".⁴ ⁵

Indian Intelligentsia and Oppenheimer

During the Cold War, Oppenheimer became the subject matter of a specialised discipline like strategic studies, especially nuclear studies. With the end of the Cold War, though, it is safe to say that Oppenheimer was hardly a subject of discussion in the nuclear discourse. Even in the strategic studies courses, he almost disappeared.

This writer was introduced to Oppenheimer about 35 years ago by his doctoral thesis supervisor, Professor Matin Zuberi, the Oxford University educated and left of the Center academic who came across as a great admirer of Oppenheimer during the Masters programme at JNU. Our very first class started with the *Sanskrit shloka* Oppenheimer apparently chanted during the trinity test. Zuberi also chanted the shloka with great pride:

"sri-bhagavan uvaca kalo 'smi loka-ksaya-krt pravrddho lokan samahartum iha pravrttah rte 'pi tvam na bhavisyanti sarve ye 'vasthitah pratyanikesu yodhah".

While the sense of pride on Professor Zuberi's face was apparent, the translation and interpretation of the verse, 'Now I am become death, the destroyer of worlds', which has generated debate and disagreements among many regarding the actual meaning of the verse, it seemed was not his concern. He focused on the broad Indian philosophy of the *Gita* which Oppenheimer had found relevant. However, the verse and the meaning both have been over presented *vis-à-vis* Oppenheimer. The criticism by some Indian writers⁶ may also have not taken into account the context in which Oppenheimer was rendering

⁴ Stewart Prager, "Oppenheimer' is Terrific. But it's Just a Movie", no. 3.

⁵ Ibid.

⁶ For example, see "<u>Devdutt Pattanaik Says Oppenheimer's Understanding of Gita was Flawed"</u>, India West Journal.

the verse. For him, as for many, the *Kaal* means death. He was perceiving *Kaal* in terms of the devastating impact of nuclear weapons on humanity.

Admittedly, the over-projection of one verse has given a completely different meaning of what the *Gita* or the Indian knowledge tradition means. It is part of the understanding of the universe: the beginning, the middle and the end. It is a time-cycle that encompasses all the stages. The tradition also has the concepts such as Kali which is beyond *Kal* or time, and *Bhdrakali* controller of life and death. Indeed, nuclear weapon, to a great extent, had created an imagination during the Cold War that it may control the issues of life and death of mankind.

This particular verse, which had been supposedly chanted by Oppenheimer, became officially known much later in a 1965 NBC television documentary. However, a 1948 issue of the *Time* magazine and the book of William L. Laurence, *Men and Atoms* had mentioned that the verse had been muttered by Oppenheimer during the Trinity test. This was not the only verse that is relating to Oppenheimer. He was fascinated by other verses of the *Gita* and many other Sanskrit texts.

However, Professor Zuberi would frequently quote Verse 12 of Chapter 11 of the *Gita* while remembering Oppenheimer:

"दिवि सूर्यसहस्रस्य भवेद्युगपदुत्थिता। यदि भाः सदृशी सा स्याद्धासस्तस्य महात्मनः।"

[divi sūrya-sahasrasya bhaved yugapad utthitā yadi bhāḥ sadṛiśhī sā syād bhāsas tasya mahātmanaḥ].

It is translated as"

"If the splendour of a thousand suns were to blaze out at once (simultaneously) in the sky, that would be the splendour of that mighty Being."

The book *American Prometheus*, which was one of the works used by Nolan, had given several examples of the influence of the *Gita* and the Indian philosophy on Oppenheimer. The later edition of the book has discussed the work of James A. Hijiya, published by the American Philosophical Society⁷ in details. Oppenheimer found the *Gita*'s relevance in resolving his dilemmas. At that time, the dilemma was to do his duty, which was to work on nuclear science and nuclear weapon development programme. He was even

⁷ James A. Hijiya, **"The 'Gita' of J. Robert Oppenheimer"**, Proceedings of the American Philosophical Society, Vol. 144, No. 2, June 2000, pp. 123–167.

criticised in a section of the academic community for being a fatalist. The authors of the book also inform that the night before the Trinity test, all were tense and nervous. Oppenheimer chanted another shloka from the *Gita* to cheer up the team which says that the God defends a person who does good deeds.

The book mentions that even the test site (Trinity) may have been named by Oppenheimer after the Indian *Trimurti*—Brahma, Vishnu and Mahesh. But in the film, this fact is not pictured or told. The authors of the book write:

Oppenheimer dubbed the test site 'Trinity'—though years later, he wasn't quite sure why he chose such a name. He remembered vaguely having in mind a John Donne poem that opens with the line 'Batter my heart, three-person'd God . . .' But this suggests that he may also have once again been drawing from the *Bhagavad-Gita*; Hinduism, after all, has its trinity in Brahma the creator, Vishnu the preserver, and Shiva the destroyer.⁸

Earlier, too, according to the authors, Oppenheimer considered the *Gita* relevant for a person in overcoming emotional distress. In a long letter to his brother, Frank Oppenheimer, he explained the beauty of the *Gita* in managing life. Although in taking a decision on a crucial issue like nuclear weapons development, he was seen acting like Arjun looking for an answer from Krishna, for the management of his inner self, he looked towards the *Gita* as a philosophy of life. Even later, in his struggle with President Roosevelt, he drafted a short note taking the help of the *Gita* highlighting the significance of faith.

For Professor Zuberi, the rendering of the verse of the *Srimad Bhagwat Gita* was basically a discovery of India by Oppenheimer. Some studied the Indian knowledge tradition but very few of them saw its relevance. For him, the idea of India or the knowledge tradition of India was rarely discovered and appreciated by Americans. In fact, Oppenheimer was not alone in acknowledging the relevance of the *Gita*. Some of the poets he venerated such as W. B. Yeats and T. S. Eliot, apparently, were aficionados of the *Gita*. Jeffery Paine, in his book the *Father India*⁹, has chronicled several leading figures who were influenced by the Indian knowledge tradition.

For Professor Zuberi, the quoting of the *Gita* by Oppenheimer was an acknowledgment of the Indian knowledge tradition in capturing the essence of nuclear weapon, its potency and impact. Professor Zuberi was an admirer of Jawaharlal Nehru. He held the

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⁸ Kai Bird and Martin J. Sherwin, *American Prometheus: the Triumph and Tragedy of J Robert Oppenheimer*, e-Edition, Vintage Books, 2006.

⁹ Jeffery Paine, Father India, Penguin, 1999.

view point on the basis of a confidential note that he had seen that Nehru had instructed Bhabha to keep the weapon option open in the India nuclear weapons programme, though Professor Zuberi started articulating in the mid-1990s, not in the classroom of late 1980s and early 1990s.

Why was Oppenheimer admired so much among a section of intelligentsia in India? Although it has been denied that the government of India led by Prime Minister Nehru offered him the citizenship, yet the documentary evidences indicates his proximity to the atomic establishment of India, especially Homi Jahangir Bhabha. Even in the nonscientific community, he has a very positive image despite being the father of the American nuclear bomb. Like my professor, the Indian academic and policy communities, in general, had great admiration for Oppenheimer. A combination of factors contributed to Oppenheimer's positive image in India. Of course, his knowledge of the Indian tradition added to the flavour.

First, Oppenheimer's persona matched the dominant Indian ideology during the Cold War. In the Indian imagination, he was a progressive free thinker. He was considered a supporter of the communist ideology, but he was thrown out of the party because of his reading of Sigmund Freud. He had a left tilt but was not a pure communist who has 'a rigid mental world tightly sealed from outside influences'10 as described by two American communist historians, John Earl Haynes and Harvey Klehr.¹¹

Oppenheimer's ideology combined the ancient tradition somewhat similar to the vision of Nehruvian worldview as reflected in the Discovery of India. In India, there were persons like Swami Sahajanand Saraswati¹² and Rahul Sanskrityayan who too represented the unique blend of the left ideology and the Indian knowledge tradition. In 1942, Swami Sahajanand Saraswati broke away from the Communist Party of India¹³

¹⁰ Kai Bird and Martin J. Sherwin, American Prometheus: the Triumph and Tragedy of J Robert Oppenheimer, no. 8.

¹¹ Ibid.

¹² M.G. Radhakrishnan, "Story of a Forgotten 'Hindu Communist", Mathrubhumi.com, 24 December 2022.

¹³ G.C. Pandey, "Swami Sahajanand and His World View: Some New Perspectives", Proceedings of the Indian History Congress, 2010-2011, Vol. 71 (2010-2011), Indian History Congress, pp. 677-687; Communist Party of India (Marxist-Leninist) Liberation, "Remembering Swami Sahajanand: Excerpts from Flaming Fields of Bihar", 26 March 2021; Pratyush Kumar, "A Kisan at the Crossroads of History, Politics and Law: Political Thought and Action of Swami Sahajanand Saraswati", Südasien-Chronik - South Asia Chronicle 11/2021, SüdasienSeminar der Humboldt-Universität zu Berlin, pp. 179-215; Bipan Chandra et al., India's Struggle for Independence: 1857-1947 (Revised and Updated), Penguin Books, 2012, p. 453.

and as a President of the Kisan Sabha participated in the Quit India Movement.¹⁴ Netaji Subhash Chandra Bose had declared 28 April, the day of his arrest by the Britishers as the Swami Sahajanand Saraswati day. Oppenheimer had been influenced by even writers like Ernest Hemingway. And, of course, Oppenheimer matched the broad thinking of Professor Zuberi.

Second, India, a democracy, has a strange engagement and relationship with the United States, another democracy. The country's intelligentsia likes American democracy, but has been sceptical of its capitalist model of economy and cautious of its foreign policy. During the Cold War, generally, the atmosphere was critical of the American establishment. Oppenheimer was a symbol of anti-establishment inside the US. Possibly, this was one of the reasons for his respect among the intelligentsia. The admiration seems to have basically flown in from the sympathy he had evoked for the withdrawal of his security clearance in 1954.

The famous statement of Oppenheimer that Senator Robert Kennedy's proposal to President Johnson for working with the Soviet Union to stop proliferation should have been initiated 20 years ago just after the Trinity's test is a testimony that he had sympathy for the Soviet Union from the very beginning. A pro-Soviet sympathizer with an anti-American establishment image was greatly respected in India. This is a different issue that in the same 1980s, the same section was highly critical of the Nuclear Non-Proliferation Treaty, promoted by the US and the Soviet Union both. Even the idea of international control of atomic minerals, in which Oppenheimer was involved, was not taken positively by the same section.

Third, our Professor painted a highly liberal and humane picture of Oppenheimer as a man who was disturbed over his own creation. As the film also portrays, Edward Teller was an opponent of Oppenheimer. Zuberi was an admirer of Oppenheimer but a great critic of Edward Teller, the supposed father of the American hydrogen bomb or the thermonuclear device. He held the view that the military-industrial-scientific complex of the US did not allow the guilt of Oppenheimer to reach a logical conclusion in nuclear disarmament. Oppenheimer as an antagonist of hydrogen bomb and the vertical proliferation which led to the qualitative development of nuclear weapons helped create a positive image for him in India.

Fourth, Oppenheimer was also considered a strong supporter of peaceful nuclear uses. Since 1947, in different meetings, he promoted the role of nuclear energy in generating

¹⁴ "Sahajanand Saraswati", Azadi ka Amrit Mahotsav, Ministry of Culture, Government of India.

electricity. The International Atomic Energy Agency (IAEA) maintains that Oppenheimer's forecast of a large-scale expansion of nuclear power plants has amazingly become a reality, 15 although Oppenheimer's initial thought of the large-scale development of nuclear power plants was set in the context of the industrialised countries. However, Oppenheimer and Bhabha had a very good equation on many of the nuclear issues. Both had worked together to promote peaceful uses of nuclear science at the IAEA and outside.

Fifth, Oppenheimer's philosophy on science and the society resonated the dominant Indian thinking of the relationship between science and mankind. Zuberi brought his tape recorder and played Oppenheimer's famous lecture "The Sciences and Man's Community" in which Oppenheimer insisted on the role of open society in promoting science. He talked about 'a vast, complex, ever-growing, ever-changing, ever more specialized and expert technological world' in the context of a 'world of humanity'. Oppenheimer opined that

We, like all men, are among those who bring a little light to the vast unending darkness of man's life and world. For us as for all men, change and eternity, specialization and unity, instrument and final purpose, community and individual man alone, complementary each to the other, both require and define our bonds and our freedom.¹⁷

Conclusion

The forgotten Oppenheimer with all the flaws in him and in the film has brought the nuclear weapon in the global nuclear discourse. As the film does not seem to have any agenda to push any particular nuclear policy, including nuclear disarmament, it may not result in any drastic global nuclear result. For sure, it has sensitised the human psyche about the devastating nature of science. The sense of responsibility of 21st century's advanced sciences and the scientific inventions ought to lie on inventors and their sponsors as well. In India, Oppenheimer had a positive image and narrative built on select facts. A revisiting of the old and new facts may provide a better picture of Oppenheimer and his worldview.

¹⁵ Bertrand Goldschmidt, "When the IAEA was Born", IAEA Bulletin, 48/1, September 2006.

¹⁶ J. Robert Oppenheimer, *Atom and Void: Essays on Science and Community*, Princeton University Press, 1989, p. 73.

¹⁷ Ibid., p. 75.

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