

So Death Does Touch the Resurrection. **Religion, Literature and the Nuclear Bomb**

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Abstract: The aim of this paper is to present the religious and the literary inspirations of the Los Alamos narratives by focusing on Oppenheimer, who both provides the literary contexts for the story of the bomb and becomes a hero of the tales that emerge. My principal sources are Richard Rhodes's *Making of the Atomic Bomb*, a Pulitzer-winning detailed factual account of how the nuclear weapon was conceived and produced, as well as fictional or semi-fictional depictions of the life Oppenheimer and his men led in the New Mexico desert. The latter include *Principles of American Nuclear Chemistry* by MIT graduate professor-turned-novelist Thomas McMahon; *Los Alamos*, a thriller by Joseph Kanon; and *Atomic Dreams. The Lost Journal of Robert Oppenheimer*, a graphic novel by Jonathan Elias and Jazan Wild.

Keywords: physics and religion, Robert Oppenheimer, Los Alamos, the Manhattan Project

Robert Oppenheimer, the director of the best known scientific project in the twentieth century personally responsible for the creation of the Los Alamos atom bomb, once noted that 'taken as a story of human achievement, and human blindness, the discoveries in science are among great epics' (Rhodes 1986, 1). The Manhattan Project, climaxing in the New Mexico desert with the first man-made nuclear explosion, does make for an epic story which can be, and often is, narrated in a grand and lofty style. This modern epic marked a turning point in human history and the dawn of a new kind of civilization. The making of the atomic bomb ushered in the beginning of the Cold War, the atomic era, and American military hegemony. Moreover, for the first time in history, the human race became capable of self-annihilation and to survive, it had to restrain its violent instincts.

It was at Los Alamos that people saw a nuclear explosion for the first time when the new weapon was tested in the spring of 1945. Those who were at the test site left vivid descriptions of the events in their letters, memoirs, interviews and books. It seems that the common denominator of their accounts is a prevailing feeling of the novelty of seeing what no one has ever seen before. The spectators emphasize their inability to express themselves as their prior experiences contained nothing from which to draw a comparison: 'the atom bomb did not fit into any preconceptions possessed by anybody' (Rhodes 1986, 674). As a result, the Los Alamos reports are full of approximations and parallels and, interestingly, these are religion and literature – metaphysical poetry, Shakespeare's dramas, Greek myths, Sanskrit epic poetry – that serve as the vehicles of these metaphors. Los Alamos is where the humanities and the natural sciences meet: not only does cultural heritage serve to express the awe nuclear explosions evoke but, conversely, the story of Los Alamos becomes the subject of numerous books, from factual reports to novels and comic strips.

The aim of this paper is to present the religious and the literary inspirations of the Los Alamos narratives by focusing on Robert Oppenheimer, who both provides the literary contexts for the story of the bomb and becomes a hero of the tales that emerge. My principal sources are Richard Rhodes's *Making of the Atomic Bomb*, a Pulitzer-winning detailed factual account of how the nuclear weapon was conceived and produced,¹ as well as fictional or semi-fictional depictions of the life Robert Oppenheimer and his men led in the New Mexico desert. The latter include *Principles of American Nuclear Chemistry* by MIT graduate professor-turned-novelist Thomas McMahon; *Los Alamos*, a thriller by Joseph Kanon;² and *Atomic Dreams. The Lost Journal of Robert Oppenheimer*, a graphic novel by Jonathan Elias and Jazan Wild.³

Robert Oppenheimer was born in the United States into an aristocratic German-Jewish family. Brought up in high society, he was a frail but brilliant child, 'repulsively good' (Rhodes 1986, 119) at everything at school. He grew

¹ Richard Rhodes is an American historian and author of non-fiction. *The Making of the Atomic Bomb* is his most famous book.

² Joseph Kanon is an American author of thriller and spy novels set in the 1940s. *Los Alamos* is his first novel. It was written in 1997 and immediately became a bestseller.

³ *Atomic Dreams* was released in July 2009 and became the first graphic novel to be downloaded in over 200 countries. This dream-like story of the race to build the first atomic bomb is now a classic.

up to be an outstanding figure: very tall and very thin with arresting blue-grey eyes and an extremely narrow frame. As a talented young man, he dabbled in every subject, learnt numerous languages, collected all pieces of interesting information he found, and tried his hand at different branches of science, yet he had a self-destructive drive and he constantly felt a sense of loss, resulting in a serious psychological crisis. Finally, having made up his mind, he went to Europe to specialize in physics as a student of Ernest Rutherford. Working in the laboratories, he took a keen interest in religion. He was also interested in ancient Hindu culture and became 'overeducated in these fields which lie outside the scientific tradition' (Rhodes 1986, 149). After his return to the United States, Robert Oppenheimer taught at Berkley and soon earned the reputation of being one of the country's most brilliant young physicists. He became involved in American attempts to construct a nuclear weapon very early: he is reported to have drawn a scheme of an atom bomb on the blackboard of his office at Berkley, just after the discovery of fission. Soon, he gathered around him an informal group of brilliant scientists, whom he half-jokingly called the 'luminaries', in order to share ideas and discuss problems connected to nuclear chemistry. During these talks, a variety of technical and philosophical issues were raised: would the atomic bomb trigger the explosion of the nitrogen in the atmosphere and of the hydrogen in the ocean? Is it perhaps better to accept the slavery of the Nazis than to run the risk of procuring the final catastrophe, the destruction of the planet? Or could the production of a deadly weapon be justified by the fact that its very existence would stop all wars? People who knew Robert Oppenheimer when General Leslie R. Groves asked him to direct the atom bomb project and oversee all the scientists involved remember him as a tall, nervous and intent man, who seemed to be 'like a young Einstein and, at the same time, like an overgrown choir boy' (Rhodes 1986, 443).

As previously mentioned, the Manhattan Project has been described in numerous writings of those working in the secret laboratories at Los Alamos and their families. Trying to express their feelings at the test site and in the desert, they often looked to religion and literature. The emotional tension they felt resulted from a number of frustrating circumstances: the war effort; having to leave behind homes and friends, in some cases as refugees; moving down to the middle of the unfriendly New Mexican desert; and living in a secluded, secret place under constant surveillance. Most understood that they were all dealing with a very dangerous and possibly uncontrollable force and watching

phenomena no human had ever seen or studied before. The absolutely unique situation of being the first caused many to resort to religious or philosophical discourse, and they described the bomb in the context of famous literary works on Humankind and its place in the Universe. It was Oppenheimer's education and erudition that made the Los Alamos narratives so full of literary allusions: from the very beginning of the construction of the labs, he provoked numerous discussions on death, destruction, resurrection and rebirth; he set the tone of the debates, making the people at Los Alamos both work on the bomb and reflect upon what they were doing.

It is within this dual frame of hope and despair, killing and saving lives, that the new weapon was discussed. Oppenheimer was familiar with the current European debate on the decline of the West and its pre-World War I values. It was precisely just after the Great War that Sigmund Freud wrote *Beyond the Pleasure Principle* and *Civilization and Its Discontents*, essays in which he described the death drive as superior, older and stronger than sexual instincts. The latter paper called the entirety of human civilization a mistake: for societies to function, each individual is forced to renounce his or her natural drives and desires and to repress narcissism and self-love, replacing them with respect for the rights of fellow-citizens. Such a forced respect means that every new-born baby is in but a few years taught to control its natural instincts and become a moral being. This is favourable for society as a whole, but frustrates each and every individual. Internalized aggression in the moment of stress 'is sent back where it came from, i.e., directed against the ego' (Freud 1994, 792), and thence neuroses. The common good is built on personal repression, Freud said, and the day the human race chose the narrow path leading to civilization was the day we renounced happiness forever. Towards the end of the paper Freud defines one of the major causes of contemporary anxiety:

Men have brought their powers of subduing the forces of nature to such a pitch that by using them they would now easily exterminate one another to the last man. They know this - hence arises a great part of their current unrest, their dejection, their mood of apprehension (Freud 1994, 802).

'We don't have time for seminars on civilization and its discontents,' the fictitious Robert Oppenheimer says in Kanon's novel *Los Alamos* when

he learns that Leo Szilard and other pacifists are trying to prevent the Trinity tests (Kanon 1998, 435). Aware of the century-long discussions on progress and the price humanity pays for it, the Oppenheimer of the novel wants the bomb to be made and is ready to accept the burden. Surprisingly, at the very moment of the explosion, he does not feel terrified or guilty like everybody else. 'The worst part is I was pleased when it went off. It worked' (Kanon 1998, 513), he says as the deadly violet light fades away. Yet he immediately adds that future generations will hold him to blame, and when his colleagues compare him to Prometheus, who also brought humanity a new dangerous power, he is not willing to accept the compliment. 'Fire was a gift. This is curse' (Kanon 1998, 513), he replies.⁴ The second cliché Kanon evokes is when he compares Robert Oppenheimer to Alfred Nobel, who, having invented dynamite, hoped that such a deadly substance would by its very existence end all wars as no one would risk killing so many soldiers in one explosion. Oppenheimer is not nearly as naive, yet he does retain some hope that, perhaps in the future, learning the secrets of nature will actually make people wiser. 'A little learning is a dangerous thing,' he says echoing Alexander Pope's famous remark, 'a lot isn't. Maybe it's what we need (...) I'm going to hope for the best' (Kanon 1998, 515).

Robert Oppenheimer's reputation of a humanist and an erudite who enjoyed literature and is himself a poet accompanied him from Berkley to Los Alamos. 'The frail figure' (McMahon 2003, 167) of Oppenheimer with his hollow cheeks and anxious eyes, which exists in the memories of people who were at Los Alamos with him, became a literary construct: the embodiment of a restless spirit, a Gothic mad scientist, or a Romantic tormented genius. He was the scientific Director of the project. The military chief, Leslie Groves, seemed to be his direct opposite: a big stout soldier with a tanned face and energetic manners who looked like 'somebody T. E. Lawrence might have bought a horse from before he set off across Sahara' (McMahon 2003, 94). This comparison to Lawrence of Arabia is very telling; the Los Alamos experience of living in the desert, among the natives, in some secret place during wartime is itself a literary motif, and an 'epic' adventure. Filled with war, exotic settings and espionage, it bore a striking resemblance to a Hollywood production.

⁴ Yet the comparison stuck and Oppenheimer is still frequently likened to the ancient Greek Titan, as in the award-winning biography *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer* (2005) by Kai Bird and Martin J. Sherwin.

From the very first days of the desert labs, the scientists gathered in Los Alamos talked about religion and literature, compared their own fate to the lives of diverse literary characters, and read and performed in their scarce leisure time. As early as in April 1943, when the first small group of Robert Oppenheimer's team started working, their evening pastime was to read aloud passages from Shakespeare's *The Tempest*. According to Rhodes, they found Prospero's monologues very inspiring: the idea of being lost in a wilderness far from civilization and striving to master the powers of nature, control them and make them serve humankind was very appealing to them as they sat in military barracks in the middle of the New Mexican desert setting up labs to create the world's deadliest weapon.

The very territory of the site was organized with references to literary tradition. Naming streets, alleys and centres was Oppenheimer's job and he later admitted that he looked for inspiration in his readings. The most prominent place, the nuclear test site, he called TRINITY, and the same name was given to the main street in the barrack village. Some years after the war, when he was writing down his memories, Leslie Groves asked Robert Oppenheimer in a letter about his reasons for selecting TRINITY as the code name. Surprisingly, Oppenheimer claimed that in naming places he had in mind John Donne's poem *To God My God in My Sickness*, and he found himself often repeating the lines –

As West and East
In all flatt Maps – and I am one – are one
So death doth touch the Resurrection.

The comparison of a dying man's body to the map, the flat plane stretching from the East to the West – from where the Sun rises to where it sets – from the symbolic place of birth to the symbolic place of death – obsessed Oppenheimer. The setting sun is sure to rise again in the morning, and in most human religions after death there comes rebirth; in the Hindu tradition that he studied, this takes the form of reincarnation. The association of the atomic blast with the Sun also comes from Oppenheimer. The set simile describing the blast as 'brighter than a thousand suns' originates in the verse of the *Bhagavad-Gita*, which Oppenheimer recalled reading at the site. That phrase was later used by Austrian Robert Jungk in his book *Brighter than a Thousand Suns: A Personal History of the Atomic Scientists*, and by J. G. Ballard in his famous novel *Empire*

of the Sun, set in south-east Asia at the time of the Hiroshima and Nagasaki explosions. Ballard symbolically calls the United States a new Empire of the Sun, an empire that harnessed the nuclear blast to outshine the natural sun, which had stood for the Japanese empire and can be found on its flag.

Yet in the lines of John Donne, quoted by Oppenheimer to explain the origins of the TRINITY codename, the word 'Trinity' is not used. In fact, Oppenheimer claimed that he had blended references to his favourite *To God My God in My Sickness* with another poem of the same author, *Batter My Heart Three-Personned God*. In the latter poem, God is evoked in his triune identity; similarly, in the *Bhagavad-Gita*, the supreme deity takes on three avatars: Brahma the Creator, Vishnu the Saviour, and Shiva the Destroyer, who together represent the cycle of life and death. This reflects Robert Oppenheimer's obsession, the paradoxical hope that dying leads to resurrection and that producing a lethal weapon may also lead to the end of the war and thus redeem its makers. His love for the *Bhagavad-Gita*⁵ and his constant references to it in Los Alamos became a legend. Oppenheimer had 'discovered *Gita* at Harvard; at Berkley he had learned Sanskrit... to set himself closer to the text... a worn pink copy occupied an honoured place on the bookshelf [in his study in Los Alamos]' (Rhodes 1986, 662).

The *Bhagavad-Gita* was written in the form of a dialogue between Arjuna, the warlord prince, and Krishna, the principal avatar of Vishnu. In it, Krishna offers numerous pieces of advice on the human condition, truths which sound simple but can be mediated and elaborated upon. Oppenheimer knew some of the book by heart and referred to it often when asked to speak in public, especially when asked without any time to prepare as was the case on the day President Roosevelt died during the last months of the war. In order to calm his people and persuade them that the new president, Harry Truman, would let them keep working on the secret project, he told them: 'In the Hindu scripture, the *Bhagavad-Gita* it says "Man is a creature whose substance is faith. What his faith is, he is," the faith of Roosevelt is one that is shared by millions of men and women" (Rhodes 1986, 614). He spoke to his heterogeneous group of scientists and their families, representatives of different nationalities and religions, many of whom were fugitives, and all of whom loathed the war and hated the Nazis. The references to the *Bhagavad-Gita*

⁵ This 700 stanza-long devotional poem incorporated into the great Aryan epic the *Mahabharata* was written during the time when in Europe the Greek culture was in decline.

had a universal ring and gave the impression of reaching beyond cultural differences.

According to his fellow scientists, Oppenheimer sought solace in reading the *Gita* in moments of anxiety. During the night preceding the TRINITY test, he is said to have translated a quatrain of the poem:

In battle, in forest, at the precipice in the mountains
On the dark great sea, in the midst of javelins and arrows
In sleep, in confusion, in the depths of shame
The good deeds a man has done before defend him (Rhodes 1986,
663).

This is the 'universal' moral lesson that the old Hindu religious literature can give all of us, believers and unbelievers, Jews and gentiles alike. On the day of the test explosion, Oppenheimer was very anxious, simultaneously wishing for the success of the bomb and apprehensive about the far-reaching effects of that success. As he watched the blast, his head was full of the *Bhagavad-Gita* that he had read and translated the previous night. Later he wrote:

The blast has passed... I remembered the line from the Hindu scripture... Vishnu is trying to persuade the Prince that he should do his duty and to impress him he takes on his multiarmed form and says: 'Now I am become Death, the destroyer of worlds'. I suppose we all thought that, one way or another (Rhodes 1986, 676).

Thus, in describing the completely new experience of a human-controlled nuclear explosion, he finds a frame for his complicated emotions in a very old cultural tradition. In his mind, the eastern epic parallels Western Greek myths, both cultures influence his understanding of what the human mastery of nuclear power really means. The bomb is a challenge, but it also represents new hope for the human race, a chance to mature and enter a new level of self-awareness:

We thought of the legend of Prometheus of that deep sense of guilt in man's new power, that reflects his recognition of evil,

and his long knowledge of it. We know that it was a new world, but even more, we knew that novelty itself was a very thing in human life, that all our ways are related to it (Rhodes 1986, 707).

Thus, Oppenheimer was both sensitive and articulate. He was able to use his extensive readings to give voice to very subtle mixtures of emotion. Moreover, his literary tastes influenced the way the Trinity explosion entered popular imagination. The references he used – comparing the blast to intensified sunlight, evoking Donne’s religious poetry, and referencing the Hindu epic about Vishnu the Destroyer – all became part of cultural tradition. Although the remark of his fellow scientist, George Kistiakovsky, just after the explosion ‘Now we are all sons of the bitches’ (Rhodes 1986, 675) was described by Oppenheimer as ‘the best thing anybody said after the test’ (Rhodes 1986, 675), it is Oppenheimer’s poetic associations that are now canonical.

One part of Oppenheimer’s appeal, which makes him attractive to popular fiction authors, is his vulnerability. He was the kind of boss his subordinates tried to protect and defend. Tormented from the inside and out, he suffered for Los Alamos, for his people and for the bomb; at least in the popular renderings of his story. *Atomic Dreams. The Lost Journal of Robert Oppenheimer*, a comic book by Jonathan Elias and Jazan Wild, is an example of a popular, half-mythic account of Oppenheimer’s life narrated in terms of guilt, suffering and atonement. In this cartoon, a long, long, time ago, somewhere in the desert in Apache territory, an atrocious murder takes place in which a man kills his brother. At this moment, the primordial evil awakes and exclaims, anticipating Oppenheimer’s love for the *Bhagavad-Gita*: ‘I am become death! The destroyer of worlds!’ (Elias and Wild 2009, no pagination).

Many centuries later, during the Second World War, Oppenheimer is summoned by Groves to join the project and become the scientific director of the laboratories. ‘When Uncle Sam picks your number... you don’t ask questions’ (Elias and Wilde, no pagination), he says and boards the train South. Yet his mind is far from quiet, he knows that that the war and the project are ‘that damned nightmare again... Id, ego, superego. Freud would have a field day’ (Elias and Wild 2009, no pagination). Not only is he tormented by moral doubts and excessive self-awareness, but he also has more down-to-earth problems: Groves must defend him to the White House officials who call him ‘the friend of the Reds.’ Groves declares: ‘he is brilliant. He’s no commie.’

The governmental agents agree to make Oppenheimer the Director but they warn that 'we'll tap every line and trail his every move' (Elias and Wild 2009, no pagination). Oppenheimer suffers constant invigilation; he is frustrated because 'every test fails' and the White House urges that he should 'show the world the demonstration of the bomb' (Elias and Wild 2009, no pagination). The primordial evil spirit awakens in the desert and whispers in his ear, 'face history, don't be lost in it,' while at the test site Groves asks: 'It's sort of like playing God, isn't it, Oppenheimer?' (Elias and Wild 2009, no pagination). The answer is the blaze and the words the spirit pronounces through Oppenheimer, 'I am become death! The destroyer of worlds!' (Elias and Wild 2009, no pagination), which are in fact a repetition of what the murderous brother had said millennia earlier in the same desert. The same evil spirit is shown on board *Enola Gay* and in Hiroshima after the blast; the narrator comments 'it tasted blood and liked it. All those years underground how hungry it became!' Robert Oppenheimer, a tool in the hands of history, evil spirits, politicians, agents and his own overly sophisticated mind, is shown suffering from pangs of consciousness and political accusations. Removed from the project after the war, he feels remorse and is punished and then rehabilitated. The cartoon ends abruptly with his death and cremation.

This graphic novel is popular and simplistic, with its evil Indian religion influencing the course of the Second World War, ghosts of the Hiroshima victims tormenting their killers and gory pictures of carnage. Yet its message is very similar to the suggestions made by the authors of far more serious Los Alamos narratives: Oppenheimer was made to produce the bomb and then punished for having produced it. The very same features which allowed him to succeed were later the reason for his downfall. In all, he seemed to be a very likeable and decent figure. Richard Rhodes pities Oppenheimer because he never received the Nobel Prize that many of his less talented colleagues got. As a very young scholar at the turn of the 1930s, Oppenheimer was interested not in mainstream research but the 'subtleties of the invisible cosmic margins' (Rhodes 1986, 150). His focus was on the 'dying stars,' hypothetical stellar objects whose existence he had predicted, but which were actually discovered only forty years later and named neutron stars and black holes. Had he still been alive in the 1970s, he would have undoubtedly received a Nobel for his juvenile stroke of genius (Rhodes 1986, 150). According to Rhodes, in Los Alamos Robert Oppenheimer made the project work

by turning the heterogeneous assembly of people into one team, and yet all the time the Director –

carried private pain. He was kept under constant surveillance, his movements monitored and his rooms and telephones bugged, strangers observed his most intimate hours. His home life cannot have been happy. Kitty Oppenheimer responded to the stress of living in an isolated Los Alamos by drinking heavily. [Authorities] were convinced Oppenheimer was a Russian spy. They interrogated him frequently fishing names (Rhodes 1986, 570).

In Joseph Kanon's *Los Alamos*, the protagonist, Connolly, is a private detective sent to Los Alamos to discreetly find out who killed one of the scientists there. He observes this strange status of Oppenheimer: the boss whom everybody adores is at the same time the least secure and the most vulnerable of the scientists. Connolly discovers that before the murder, Oppenheimer withdrew a substantial sum of money and sent it to someone and demands an explanation. Aware that he is being accused of a crime, Oppenheimer answers bitterly:

And you thought he was blackmailing me? What on earth about? Do you think there is a single thing about me the government doesn't already know? (...) Your left-wing friends. Your right-wing friends. (...) Your Jewish friends. Your old girlfriends. Your students. (...) Do you ever feel conflicting loyalties? (Kanon 1998, 150)

It turns out that the money in question was sent to his former girl-friend, Jean Tatlock, for her psychiatric treatment and Oppenheimer had never ceased to try to help her. These attempts cause him trouble because Jean was a communist. Nevertheless, after her death he feels guilty and the guilt for the prospective deaths of the bomb's future victims add to this feeling, 'a quick flash and (...) the Japanese finally startled out of their mad reverie (...) a hundred to save a thousand. A new kind of mathematics' (Kanon 1998, 230). Oppenheimer is described as a scapegoat, carrying all the guilt of this dehumanized arithmetic and he accepts this role voluntarily. At the test site,

he seems 'alarmingly thin, the eyes set deeply in their sockets, the bony fingers clutching the cigarette nearly skeletal. His voice, dry and scratchy, seemed to cry out for rest but instead his body was in constant motion pacing edgily' (Kanon 1998, 435).

Consumed by guilt, tormented by the authorities, and aware of all the subtle Freudian ironies of the situation, the Oppenheimer in the Los Alamos narratives discussed above grows to embody the project. He represents all the Euro-American intellectuals who produced the bomb and at the same time read Freud and Wells and believed in the inherent death-driven self-destructiveness of our civilization.

Oppenheimer's literary culture gave him a religious frame of reference to describe the genuinely new experience of the display of nuclear power. In his eyes, the scientists engaged in the project were like the heroes of Hindu and Greek epics or the personas of John Donne's poetry. At the same time, the story of Los Alamos itself has become a legend and a piece of twentieth century scientific folklore and Robert Oppenheimer is the narrative focus: his love

for physics and the desert, his description of the bomb as brighter than a thousand suns and of himself as Death, the Destroyer of Worlds, are now mythic.

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