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# Paving the road to the apocalypse: Oppenheimer and Hiroshima

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**Abstract:** Christopher Nolan *Oppenheimer* theatrical release was 21 July 2023. It has received stellar reviews. As of November 2023, the movie has not been released in Japan and there is speculation that it may never be. Japanese critics have been quick to point out that the three hour long movie did not show the death and destruction in Hiroshima and Nagasaki. The over 200,000 dead and the survivors are largely absent from the movie. Finally, while the movie is not a celebration of the man dubbed the “father of the atomic bomb” it nevertheless paints him as sympathetic character. This treatment may be objectionable to some. Nolan’s movie is not about the decision to drop two nuclear weapons on Japan. It is not a documentary. Yet Oppenheimer the scientist can never be separated from atomic weapons and the slaughter of civilians. That he was tortured by the result of his work is true, but he was aware at what he was doing. An underlying theme of this essay is the dangers of hubris. This essay attempts to demonstrate how both the memory of Hiroshima and Oppenheimer are linked as both being contested icons. Nolan made this movie in a hyperpolarized America. The didactic functions would have to resonate with his audience. Oppenheimer, a brilliant erudite leftwing Jewish intellectual from New York, was humiliated and hounded out of public life in an era hysterical anti-communist rightwing politics. The specter of rightwing populism hangs over the movie and is thread throughout this essay. *Oppenheimer* is a cautionary tale about the deliberate and blind paths taken towards an apocalypse.

**Keywords:** *hibakusha*; film; Oppenheimer victimology; testimony.

**Resumo: Pavimentando o caminho para o apocalipse: Oppenheimer e Hiroshima** - O lançamento nos cinemas de *Oppenheimer* de Christopher Nolan ocorreu em 21 de julho de 2023. Recebeu críticas excelentes. Até outubro de 2023 o filme ainda não tinha sido resenhado no Japão, mas os críticos japoneses foram rápidos em apontar que o filme não trata da morte e destruição em Hiroshima e Nagasaki. Os mais de 200.000 mortos e os sobreviventes estão praticamente ausentes do filme. Sendo assim, embora o filme não seja uma celebração do homem apelidado como “pai da bomba atômica”, ele ainda assim o retrata como um personagem simpático. Este tratamento é questionável. O filme de Nolan não é sobre a decisão de lançar duas armas nucleares no Japão. Não é um documentário. No entanto, *Oppenheimer*, o cientista, nunca pode ser separado das armas atômicas e do massacre de civis. É verdade que ele foi torturado pelo resultado que se desdobrou de sua pesquisa, mas ele tinha consciência do que estava fazendo. Assim, um tema subjacente deste ensaio são os perigos da arrogância. O texto busca demonstrar como tanto a memória de Hiroshima quanto a de *Oppenheimer* estão ligadas por serem ícones contestados. Nolan fez este filme em uma América hiperpolarizada. As funções didáticas teriam que repercutir em seu público. *Oppenheimer*, um brilhante intelectual judeu erudito de esquerda de Nova Iorque, foi humilhado e expulso da vida pública numa era histórica de política de direita anticomunista. O espectro do populismo de direita paira sobre o filme e é um fio condutor ao longo deste ensaio. *Oppenheimer* é como um conto que pode advertir sobre os caminhos deliberados e cegos tomados em direção a um apocalipse.

**Palavras-Chave:** *hibakusha*; cinema; vitimologia de Oppenheimer; testemunho.

## Introduction

My own association with Hiroshima is decades long. Currently I am part of a UNESCO project which is translating the testimonies of Hiroshima bomb survivors (*hibakusha*).<sup>1</sup> More importantly, twice a year for over 20 years, I took international and Japanese university students from Osaka to Hiroshima to listen to the testimony of *hibakusha*. I served as interpreter.<sup>2</sup>

The *hibakusha* I worked with the most was Ms. Yamaoka Michio. She was only 800 meters from ground zero. She was horribly burned and disfigured. In 1955 she went to the U.S. with 24 young female bomb victims (later referred

1 In Japanese, *hibakusha* can be written two ways. The difference is in the second Chinese character which is pronounced <aku>. The first readings denote bomb (or explosion) while the second would refer to radiation exposure. Therefore, the translation would be “person affected by the bomb or person affected by radiation”.

2 The trip to Hiroshima was part of my course on Modern Japanese History which I taught in the Asian Studies Program at Kansai Gaidai University, Osaka, Japan. All students in the program could take the trip.

to as *Hiroshima Maidens*) and received treatment for her extensive keloid scars at Mt. Sinai Hospital in New York. She stayed with a Quaker family. The story of these young women is widely documented. She was the most courageous person I have ever met. She passed away in 2013.



Figura 1. The Author with Ms. Yamaoka Michio after her talk in Hiroshima. Source: Author's collection, October 2005.

In November 2010, I was invited to the World Summit of Nobel Peace Prize Laureates which was held in Hiroshima. His Holiness the Dalai Lama who is believed to be Avalokiteśvara, the Goddess of Mercy (in Japan, Kannon), a bodhisattva who embodies the compassion and mercy of all Buddhas, listened to the testimony of Mr. Takahashi Akihiro, a *hibakusha*.<sup>3</sup> With a trembling voice he recalled in detail the suffering which he both endured and witnessed. The sound of weeping filled the packed room. At the end of the talk, the Dalai Lama got up from his seat on the stage and slowly walked to Mr. Takahashi. He was in tears. He embraced this very frail man. Mercy bestowed.

Compassion, forgiveness, and empathy are at the core of conflict resolution. Yet, Hiroshima remains a contested landmark with emotions of wartime vengeance still voiced. Fundamental questions over how to frame the event remain unsettled. The sufferings of the *hibakusha* are still over-shadowed by the assumptions, lies, faculty logic, and political interference surrounding the necessity and justification of the two nuclear strikes.

Each year, before going to Hiroshima to tour the museum and most importantly to listen the testimony of a *hibakusha*, my students read much of the

3 Kannon, the Goddess of Mercy, is not a Buddha but a Bodhisattva, a being who is able to achieve Nirvana but delays doing so through compassion for all suffering beings. Mr. Takahashi passed away on 2 November 2011.

relevant literature on the bombings. They also saw the 1995 US TV documentary entitled “Why the bomb was dropped” (JENNINGS, 1995). This is a revisionist interpretation and asks vital questions. After returning from Hiroshima and back in the classroom I always asked the students to answer this question: “If you were a decision maker in the summer of 1945, with only knowledge and information available at that time, would you have ordered the atomic bombings of Hiroshima?” This was not a graded exercise.

Most of American students answered that they would order the bombings. Some would write they would only bomb Hiroshima but not Nagasaki. All European students answered the question with a resounding no. Japanese students said no. Chinese students from the mainland answered by writing yes, they would have ordered both attacks. Some added to their essays “What about Nanjing?”.

I was not completely shocked by the answers of the American students as this is what they were taught in school. The bombs were necessary as they ended the war and saved lives. The Japanese students were taught the opposite. European students had little knowledge of the war in the Pacific and Hiroshima, it was rare to read from them that they would have dropped nuclear weapons on Japan. The lack of any empathy from the Chinese students is of course based on a wartime view of Japan. Also, the exhibits in Hiroshima fell short of addressing their concerns over Japanese aggression, atrocities, and failures to adequately apologize (BEAN, 2020).

The answer of the American students echoes the results of a poll done in 2015 Pew Research Center, which found “that the share of Americans who believe the use of nuclear weapons was justified is now 56%, with 34% saying it was not. In Japan, only 14% say the bombing was justified, versus 79% who say it was not” (STOKES, 2015).

This persistent belief among of most of Americans is a troubling disconnect between a supposed military necessity and the slaughter at the other end of the bombsite. America cannot be morally wrong especially when it is confronting an enemy who is evil. Demonizing an enemy is part of an American approach to conflict. One does not negotiate with evil but use all force at one’s disposal to eradicate it thus bringing the world back to a state of peace.

It would be dangerous in the extreme if voices of the *hibakusha* are merely the casualties of war and if Hiroshima as the first example of “shock and

awe” proves the utility of nuclear weapons (ULLMAN, 1996). Peter Van Buren (2017) has stated: “But it is not only the history of the decision itself that is side stepped. Beyond the acts of destruction lies the *myth* of the atomic bombings, the post-war creation of a mass memory of things that did not happen”.

There are, of course other lessons to be learned from Hiroshima.

All the atomic bomb survivors I worked with would have used the Japanese word “hate” to describe war.<sup>4</sup> Hate is a very strong word in Japanese and when I first heard it uttered by Ms. Yamaoka. I had to stop and think what was this verb? I had learned it but never used or heard it. Hating war is certainly not the glorification of violence. Peace museums are not war museums.

The testimonies of the *hibakusha* are of course similar as they all witnessed the same horrible scenes. Many had parents who ventured into the hellscape of a destroyed city to find their children. Many of these later died of radiation related illnesses. When the *hibakusha* talked of this they weep uncontrollably. It was always very difficult for me to retain any composure as I translated.

When I first took students to Hiroshima there was an occasion when no one asked a question. At other times the questions were not clear and concise. It was better to prepare for the Q&A session. I recommended that students not ask speculative questions. The better questions would be “what type of medical care did you receive?”, “Was food and water available?”, “What did you think of war when it was raging?”. I clearly remember one student, Jeremy, say he would like to ask a question about whether the bomb had altered her belief in God. I told Jeremy and the class that I had not thought of asking this question, but it was excellent. There would also be questions on what the *hibakusha* thought of the Americans.

The answers among the *hibakusha* were honest. They all recounted how they had been taken out of school and placed in factories. They also undertook military training with the weapons being sharpened bamboo spears. All said they would fight to defend Japan. They all believed what the government told them. During the war, America was the enemy. The bomb had had killed their friends and family, destroyed the city, and ruined their lives.<sup>5</sup>

The medical help question was firmly answered. Nothing was available as hospitals were destroyed and medical personnel killed. They did say that

4 The verb employed was “nikumu” which is uncommon. Usually, people say “daikirai”.

5 *Hibakusha* suffered discrimination. Due to fears of radiation related diseases marriage was extremely rare.

cooking oil was put on their burns. This caused maggots to enter the wounds. This had a salutary effect. Some blamed the Japanese Government for not ending the war sooner. Some blamed the Showa Emperor. When the question about religion was asked, I could tell the speaker was surprised. I doubt the question had ever been previously asked. After a short pause, the response came. Faith in God was lost but later rekindled.



Figura 2. The Ruins of Urakami Catholic Church Nagasaki<sup>6</sup>. Source: Children of the Atomic Bomb. Available in: <<https://www.aasc.ucla.edu/cab/200708160003.html>>.

All *hibakusha* I worked with made anti-nuclear statements and called for the complete abolishment of nuclear weapons. I must add that one *hibakusha* when asked about what she thought of the Americans replied that they were *suteki* (splendid, wonderful). She explained they were tall, healthy and had very nice uniforms unlike the Japanese men at the time. After all, she was just a teenage girl at the time<sup>7</sup>. She blushed when she said this.

The bombing of Hiroshima is a singular event but its memory, colored by justifications and historical expediency, transforms the city into a plural proper noun of judgements, interpretations, beliefs, myths, and emotions. Which

- 6 In 1945, Nagasaki had the large Catholic community in Japan and storied history. The atomic bomb that fell on Nagasaki on August 9, 1945, detonated in only 500 m from the Urakami Cathedral. As the Feast of the Assumption of Mary (August 15) was near, Mass was held on 9 August and was well attended. "The cathedral was filled with worshipers who had gathered to pray for a speedy and just end to the war. It is said their prayers included a petition to offer themselves, if God so willed it, in reparation for the evils perpetrated by their country" (ARMSTRONG, 2017). Everyone in the church, including two priests, was killed.
- 7 Allied Occupation troops arrived in Hiroshima about 60 days after the August 15 surrender (NTPR, 2021).

Hiroshima are we discussing and in what time period? Was it the military target deliberately saved from conventional bombing which would be served up as a “virgin target” to test the effectiveness of a new super-weapon whose sheer terror could shorten the war?<sup>8</sup> Was it instead a defenseless city whose bombing was neither necessary nor justified? Was it, as asserted by the command pilot of the Enola Gay as well as President Truman in his first public announcement, a legitimate military target? Truman speaking on radio was clear about the destruction of Hiroshima saying in a vengeful tone: “The Japanese began the war from the air at Pearl Harbor. They have been repaid many folds. And the end is not yet” (ANNOUNCING..., 1945). This message was intended for the American public as well as to the leaders in Japan. It is harsh and unforgiving. In the language of today, Hiroshima was “payback.”

The competing memories of Hiroshima continue to go through many iterations. The very malleable nature of memory, the horrors the device inflicted, and total war theory as an operationalized military doctrine pose significant challenges when unraveling these narratives that compete for the same historical space.

In the United States, this is not just an ongoing and unresolved academic debate between different interpretations of both the necessity and justifications for the bombings but at a deeper level a litmus test of patriotism. Four generations after the end of the Second World War, with firsthand witnesses fewer and fewer, Hiroshima is still being reconstructed and remembered. Further complicating the issue is the almost unchallenged opinion that the generation which fought the war was the greatest generation in US history. Elizabeth Samet, Professor of English at West Point, in her most recent work *Looking for the good war: American amnesia and the violent pursuit of happiness* (2021) has explored the cost of sentimentalizing the “good war.” In a *New Yorker* book review, Carlos Lozada cogently writes: “Samet dismisses [Steven] Ambrose’s oeuvre, including the 1990s best-sellers, *Band of Brothers* (1992) and *D-Day* (1994), as less historical analysis than comic-book thought bubble” (LOZADA, 2021). Samet provides a much needed heresy as a wakeup call to the dreamy fantasies of what Americans are selectively remembering and forgetting about WW2. Given enough time, the process of history becomes allegory which is eventually transformed into mythology.

8 The term “virgin targets” was used by General Paul Tibbitts, the command pilot of the Enola Gay when discussing the targeting of Hiroshima (General Paul Tibbitts, 1989). Tibbitts repeats this term in *The Atomic Cafe* documentary (RAFFERTY, LOADER, RAFFERTY, 1982). There were certainly legitimate military targets in Hiroshima but the aiming point for the bomb was the center of the city. This was done on purpose to achieve maximum damage. The port facilities were not touched.



When this mythology is dramatized as popular culture like cinema powerful and persistent invented memories are created. Nolan's *Oppenheimer* adds another layer.



Figura 3. The Painted Nose of one of the three Planes on the Hiroshima Bombing Mission. Source: La Seconda Guerra Mondiale, 2019. Available in: <<https://www.lasecondaguerramondiale.org/fntsc/1150-necessary-evil.html>>. Accessed on: 30/09/2023.

### When filmmakers look for dramatic effects

"There are two events that have marked our century for all times: the shoah and the atomic bomb. These two moments in human history, embodied by Auschwitz and Hiroshima, will be the icons of our century" (BLUMENTHAL, 2006).

One hopes the quote above turns out to stand the test of time, but as we have shown memory is malleable and even iconic events are subject to revision and reinterpretation.

Social media can easily manipulate information. Popular forms of entertainment, especially movies, take artistic license to embellish and invent a story for dramatic effect. Hyperreality, a simulacrum, is not real but becomes so in the eyes of the viewer, the truth in its own right. When filmmakers deal with such subjects as the Shoah or Hiroshima, they are treading on sensitive ground. After all, Nolan as well as Spielberg were not making documentaries.

There is absolutely nothing unequivocal about Auschwitz. Hiroshima is contested. Debate has raged over the use of nuclear weapons against Japan even before the first bomb was dropped.

Christopher Nolan's blockbuster movie *Oppenheimer* is a bold bid to examine the life of one man in an attempt to unravel an iconic event and delve into the fears and politics of an ugly era. The movie has been enthusiastically reviewed. Nolan revisited a period in history where a series of decisions changed the whole trajectory of the world. Robert Oppenheimer was one of the people who turned the levers of history.

What does Nolan want audiences to think about Oppenheimer? What did he want the lens of his camera to illuminate? Was he seeking to redress past injustices to the man? He was not attempting to revise the debate as to the necessity of the bombs. In this regard, he offers the standard American treatment that they were necessary and ended the war.

Revisionist history and illuminating the past through cinema has both positive and negative aspects. Corrections can sharpen an understanding of past events by challenging traditional narratives which may have been biased and inaccurate. Revisionism, however, instead of clarifying can deepen polarization as the polemic over interpretation intensifies.

There are, of course, iconic events which become embedded in a national memory. These national memories are often memorialized in popular culture and codified in textbooks. When the national memory is personified in an individual then this hero plays a role in the emulating the values of the state. Cities are adorned with heroic bronze statues commemorating individuals and events.

In the wake of the killing of George Floyd, there has been an "unbolting" of statues and memorials. In America, this has been praised and also criticized. It is worthwhile noting that in France, President Macron explicitly stated: "the Republic does not unbolt statues" (POLITICO, 2020).<sup>9</sup>

It must be noted that, even the inscription on the Cenotaph for the A-Bomb Victims in Hiroshima is controversial. In this regard, the English translation given by the Hiroshima Peace Memorial Museum of the original Japanese is: "Let all the souls here rest in peace; for we shall not repeat the evil." It is critical to note that the original Japanese text does not contain a subject nor

9 In a televised address he stated: "The republic will erase no trace or names of its history, it will forget none of its works, it will tear down none of its statues." The original French is: "la République n'effacera aucune trace ni aucun nom de son Histoire. La République ne déboulonnera pas de statue." The French verb used is "déboulonner" literally unbolt. This movement for "unbolting" is also active in Brazil and throughout South America (SWEIGART, 2020).

does the word exact word for 'evil' appear. In Japanese the subject pronoun is often left out. Therefore, the insertion of the pronoun 'we' for the translation is somewhat understandable. The question raised by this insertion is obvious: who does the "we" refer to? Equally if not more important, in Japanese the word *ayamachi* is in the expression used on the Cenotaph. This word can be properly translated as "fault" or "mistake." It absolutely does not mean evil. The use of the word "evil" is critically important in how we chose to remember Hiroshima. Who and what is evil?<sup>10</sup> Can Hiroshima and Nagasaki be eventually unbolted from destructive myths? Nolan's movie may be helpful in having Hiroshima and Nagasaki stand in a light of reason.

It is obvious that, the same event would have different interpretations depending on who dominates the narrative. Most importantly, especially in a post-conflict situation where the power dynamics can be grossly asymmetric between victors and vanquished, the "losers" are often deprived of their voice. This asymmetrical power dynamic starkly appears in the diametrically opposed interpretations of where atomic bombing of Hiroshima and Nagasaki were justified.

The justification numbers for casualties reveal a cruel and abhorrent math fused with a persistent illogic.<sup>11</sup> The cruel math is simple: how many of them are you willing to kill to save how many of our people. Stimson in his 1947 Harper's article cited the casualty figure of one million. There is no documentary evidence to support this figure, yet it has become embedded as a national memory. Stimson's rationalized "this deliberate, premeditated destruction was our least abhorrent choice" (STIMSON, 1947). Yet who knew then if the bombs would actually end the war? The invasions of Japan were planned for 1 November 1945 in Kyushu and further landings in Honshu in March 1946. Would Japan have fought this long? An invasion would have been a tragedy

10 In August 1952, Radhabinod Pal, the Indian justice who had declared the eleven Japanese war criminals not guilty at the International Military Tribunal for the Far East in 1949, visited the newly found cenotaph in the Peace Memorial Park. Standing in front of the cenotaph, he questioned whom "we" referred to. Although "we" seemed to designate the Japanese who had started the war, Pal maintained, it should also refer to the Americans who dropped the atomic bomb and killed thousands of civilians. Pal is controversial and his verdict at the Tokyo War Crimes trial is misused by Japan's rightwing as an exoneration of Japan's war of aggression.

11 The cruel math continues today in the justifications for what is termed "collateral damage" and torture or "enhanced interrogation." The popular US TV show "24" often depicted scenes of torture as a plot device. In its first six seasons 24 broadcast eighty-nine scenes that feature torture (DANZIG, 2015). Critics of the show correctly argued that it glamorized the practice. The blockbuster movie *Zero Dark Thirty* (Kathryn Bigelow, 2012) highlighted torture as a key to uncovering which led to Osama Bin Laden. The CIA worked secretly with filmmakers (TADDONIO, 2015).

with casualties on both sides astronomic. The flawed logic assumes absolute causality which is that the action was both sufficient and necessary to bring about the effect (CAUSAL..., n. d.). The Emperor did announce surrender on 15 August 1945 and the timeline, nine days after Hiroshima, can seem persuasive but there are many other factors to be considered. The most senior US military officers did not see the necessity for the bombings of Hiroshima and Nagasaki. Chester W Nimitz, the commander in chief of the US Pacific fleet, insisted that they were “of no material assistance in our war against Japan”. Eisenhower agreed that they were “completely unnecessary” and “no longer mandatory as a measure to save American lives”. He also wrote “I disliked seeing the United States take the lead in introducing into war something as horrible and destructive as this new weapon was described to be.” General Douglas MacArthur, supreme commander of the southwest Pacific area, saw “no military justification for the dropping of the bomb.” Admiral Leahy wrote “that the use of this barbarous weapon at Hiroshima and Nagasaki was of no material assistance in our war against Japan. The Japanese were already defeated and ready to surrender... In being the first to use it we had adopted an ethical standard common to the barbarians of the Dark Ages.” *The Official Strategic Bombing Surveys* published on July 1<sup>st</sup>, 1946 (UNITED..., 1987) concluded that “Japan would have surrendered even if the atomic bombs had not been dropped” (JAPAN'S..., 1946).

The symbols of Hiroshima are the mushroom cloud and the Enola Gay, the B-29 bomber which dropped the bomb. The person most associated with the atomic bomb is Robert Oppenheimer. The film is not a retelling of the making of the atomic bomb, nor is it about the decision to drop the bomb. The movie is a further iteration of attempting to explain how a man so erudite and cultured could also be responsible for creating a weapon which would obliterate two cities and could in the long term end the world.

Oppenheimer's tale is cautionary. His fall was paved by his own contradictions and the fact that the weapon he had helped create would never be allowed to be controlled by those who would use it. Nolan chose the Irish actor Cillian Murphy to play Oppenheimer. Murphy lost weight for the part and appeared haggard, gaunt, and almost ghostlike throughout the film. Nolan has frozen and framed Murphy as a man haunted and near death. He looks exactly like the real-life Oppenheimer who on camera in a 1965 NBC news documentary *The Decision to Drop the Bomb* was asked what his reaction was when he witnessed the first atomic explosion at Alamogordo, New Mexico on 16 July 1945. He famously said: “We knew the world would

not be the same. A few people laughed, a few people cried, most people were silent. I remembered the line from the Hindu scripture the Bhagavad Gita. Vishnu is trying to persuade the prince that he should do his duty and to impress him takes on his multi-armed form and says, 'Now, I have become Death, the destroyer of worlds.' I suppose we all thought that one way or another."

Oppenheimer, born in 1904, was diagnosed with throat cancer in 1965 and died two years later. In the twenty-one years after Hiroshima his life was a series of both public adulation and betrayals and humiliations. When he was the director of the Manhattan Project's Los Alamos Laboratory during World War II, he was a young energetic chain-smoking manager who by the force of his personality, erudition, and organizational skills was able to push through an immensely complicated project.

Nolan's movie is based on the award winning 2005 book *American Prometheus: the triumph and tragedy of J. Robert Oppenheimer* written by Kai Bird and Martin J. Sherwin. The mythological Prometheus defied the Olympian Gods by stealing fire from them and giving it to humanity. For this act, he was condemned to eternal torment by being chained to rock where an eagle, a symbol of Zeus, would eat his liver. Each night the liver would grow back, and the torture would continue forever. Prometheus was eventually saved by Hercules. Oppenheimer's story is both Greek tragedy and modern-day *Frankenstein*. It is human hubris to transform the world combined with the man-made monster to haunt our thoughts. Oppenheimer became a ritual sacrifice on the altar of American Cold War political-military exigencies. Nolan's Oppenheimer as the tortured and hounded martyr is the central focus of the movie. The whole rationale and urgency surrounding the Manhattan Project was a legitimate fear that Nazi Germany would develop a nuclear weapon first. However, by March 1944 this was no longer the case (GERMAN..., 2016).<sup>12</sup> Yet the pace of work at Los Alamos increased. The enemy had shifted to Japan and targets were selected. Four cities had been left off the conventional bomb targets so they could serve as "virgin targets" to measure and evaluate the effectiveness of the nuclear bombs. This change in direction is a critical turning point for the whole project and for many of the scientists involved. Japan posed no counter nuclear threat so what was the purpose of the nuclear weapons being developed? Many of the scientists working in the Manhattan Project

12 There is also evidence that the leader of Germany's atomic bomb project, Werner Heisenberg, did not push as hard as he could have to develop a bomb. Furthermore, funding was a fraction of what the Americans were spending with the cost of the Manhattan Project \$2 billion. Germany's budget has been calculated at \$2 million (LENARD, HABER, 2011).

began to question how the military would use the weapon. Nolan does not make Hiroshima the central focus of the movie. It is Oppenheimer who is always on screen.

Oppenheimer's self-flagellation after Hiroshima is a fact. It is also disingenuous as his job was to create a weapon of mass destruction which he dutifully accomplished?

He absolutely knew what he was creating at Los Alamos, and it would be naïve to think that he was not fully aware of the consequences of his actions.

There are two particular scenes in the movie which has generated the most controversy.



Figura 4. The Other End of the Bombsite.<sup>13</sup> Source: NHK, 2020. Available in: <<https://www3.nhk.or.jp/nhkworld/en/ondemand/video/5001311/>>. Accessed on: 30/09/2023.

The first is Nolan has Oppenheimer looking at pictures from Hiroshima. He is shocked but the audience in movie theaters does not see what he sees.

13 This is a brutal picture showing a young barefoot boy barefoot patiently, 2017 shared the image among church officials around the world and highlighted the picture when he visited the city in November 2019.

The other end of the bomb sight, the victims are deliberately omitted from the scene. The critical question is: must we, the audience, see the victims? By choosing not to visualize the horrors and keeping the casualties out of frame, the director wanted to highlight the transformative effect on the man who helped create the weapon rather than the effects of the weapon itself. This realization also makes him finally find the moral compass which would inform his actions from August 6, 1945, onwards.

The second controversial scene has Oppenheimer at his security clearance meeting. Physicality is an important aspect of the movie. Cillian Murphy appears gaunt and almost skeletal throughout the movie. It is as if the Manhattan Project and the uranium-235 and plutonium-239 were consuming him alive.

In *Oppenheimer*, Nolan filmed his first sex scene. The scene is shot in a claustrophobic, shabby uncomfortable room. In reality, the hearing was not a public space but a small nondescript office room. The inquisitors' probe into the most intimate aspects of Oppenheimer's personal life. He has to answer questions about his affair with Jean Tatlock. All of this information was well known by the authorities at the time. Recounting his indiscretion adds nothing to the record. He does this as his wife Kitty (Emily Blunt) is sitting behind him. Nolan creates a dramatic fantasy scene showing Oppenheimer naked as he sits in the hearing. Tatlock is also then shown on top of him. They have sex in front of the senators and Kitty. It is visually shocking. Nolan uses the camera to make the audience feel Oppenheimer's public humiliation and to demonstrate how the inquisitors would stoop to the most intrusive questions to humiliate not only Oppenheimer but his wife. This reinforces the vindictiveness of those determined to purge Oppenheimer from public life.

After Hiroshima, there also seems to be a genuine transformation in *Oppenheimer*. Isidor Rabi, a 1944 Nobel Prize winner, noted:

At an assembly at Los Alamos on August 6, the evening of the atomic bombing of Hiroshima, Oppenheimer took to the stage and clasped his hands together 'like a prize-winning boxer' while the crowd cheered. He expressed regret that the weapon was ready too late for use against Nazi Germany (MONK, 2012).<sup>14</sup>

Yet, on 17 August, two days after Japan's announcement of surrender, he traveled to Washington and hand delivered a letter to Secretary of War Stimson

14 Rabi had a spectacular career. He was against the development of the hydrogen bomb, deeply critical of Truman and forcefully defended Oppenheimer at his hearing.

calling for a ban on nuclear weapons (*ibidem*). Did it really take so much time to go from exultation to revulsion? Did it really take so long to connect the dots that exploding a nuclear weapon over a populated city would result in instantaneous death for 70,000 to 80,000 people? Many more would die later. Oppenheimer was not alone in feeling almost euphoric upon hearing the news about Hiroshima. The overwhelming majority of newspapers and radio broadcasts extolled the power of the new bomb. In fact, at the time, only two cautionary and contrary voices could be heard. One was penned by Albert Camus, the other appeared in the newspaper of the Vatican City State *L'Osservatore Romano* on 7 August 1945 (VATICAN, 1945).

Camus instantly understood what had really happened and did not need weeks or years to contemplate the implications. He did not need to see pictures of horror. He wrote: “We can sum it up in one sentence: Our technical civilization has just reached its greatest level of savagery. We will have to choose, in the more or less near future, between collective suicide and the intelligent use of our scientific conquests”.

Meanwhile we think there is something indecent in celebrating a discovery whose use has caused the most formidable rage of destruction ever known to man. What will it bring to a world already given over to all the convulsions of violence, incapable of any control, indifferent to justice and the simple happiness of men — a world where science devotes itself to organized murder? No one, but the most unrelenting idealists would dare to wonder (CAMUS, 1945).

After the surrender, Japan was under occupation and censorship was heavy. This included information about Hiroshima. The silence over Hiroshima was broken by John Hersey's 30,000-word essay simply titled “Hiroshima” in the 31 August 1946 issue of *The New Yorker*. Hersey told the story of Hiroshima through the experiences of six survivors (HERSEY, 1946). The magazine sold out within hours. Einstein ordered one thousand copies. It was read in its entirety over nationwide radio. Influential newspaper commentators advised that it be read. U.S. public opinion toward nuclear weapons began to shift. The US Government took note of this and Truman himself asked Stimson to write an article, published in Feb. 1947, defending the use of the weapons. The enduring result of the article is that it stated if Japan had to be invaded one-million U.S. casualties would be incurred. The bombs therefore were necessary and had saved American lives. There is no documentary evidence to support these numbers.



What we remember and how well these memories transform over time while retaining their meaning is a fundamental question especially when dealing with apocalyptic events such as Hiroshima.

Nolan made this movie in a hyperpolarized America. The didactic functions would have to resonate with his audience. This is not an apology for dropping the bombs. What are the connections he is making? Oppenheimer's father was a very wealthy immigrant from the Kingdom of Prussia. His mother, born in Baltimore, was an artist. His family were non-observant Jews. Robert Oppenheimer's political views were decidedly leftwing. In 1936, Oppenheimer became involved with Jean Tatlock, the daughter of a Berkeley literature professor and a student at Stanford University School of Medicine. The two had similar political views. She wrote for the *Western Worker*, a Communist Party newspaper. Her character, played by Florence Pugh, has a prominent role in the movie. In 1940, Oppenheimer married Katherine Puening a radical student and former member of the communist party. Oppenheimer openly admitted that he was associated with the Communist movement (STOUT, 1963, p. 4). Furthermore, many of Oppenheimer's closest associates were active in the Communist Party in the 1930s and 40s including his brother Frank. It is no mystery that he could not have survived the anti-communist hysteria of the McCarthy period. All of this makes Oppenheimer a sympathetic figure today to those who oppose fascism and extreme right-wing populism.

The film spends a considerable amount of time on Oppenheimer's hearing over his security clearances and the activities of Lewis Strauss, played by Robert Downey Jr., who was one of the driving forces in these hearings. The result of these hearings was that Oppenheimer's clearance was revoked.

Hollywood, always needing villains, found two: Strauss and Edward Teller. Teller gave negative testimony at Oppenheimer's security hearing. He was the only member of the scientific community to do so. He is also known as the "father of the hydrogen bomb." This designation is not without controversy. At the time, many in the scientific community saw Oppenheimer as a victim of McCarthyism. As a liberal leftwing East Coast Jewish intellectual, it was easy to view him as someone who was unjustly attacked by a war-mongering conservative rabidly anti-communist rightwing antisemitic military industrial complex.<sup>15</sup> Nolan fused a dangerous 1950s McCarthy era onto a

15 Antisemitism was a fact of life in America with quotas restricting Jewish students from attending the most prestigious universities. Isidor Rabi was hired to teach at Columbia University in 1929. Remarkably, he was the only Jewish professor at the time. In 1947, Hollywood tackled antisemitism with the movie *Gentlemen's Agreement* starring Gregory Peck. Peck's character poses as Jewish to expose antisemitism in New York City and its wealthy suburbs.

story which would resonate in parts of contemporary America. Hollywood is, after all, located in California.

Perhaps one of the most intriguing people in Los Alamos was that of the Hungarian scientist Leo Szilard. It was Szilard who, with Einstein, wrote a letter to President Roosevelt on October 11, 1939, which urged President Roosevelt to act and initiate research on nuclear fission and the development of atomic weapons.

Szilard worked at Los Alamos and in June 1945. He played a vital role in drafting the "Franck Report" which urged the United States not to use the atomic bomb as a military weapon without prior demonstration and warning. He also penned the Szilard Letter urging President Truman to consider a demonstration of the atomic bomb's power to Japanese officials before using it as a military weapon. The letter expressed ethical concerns about unleashing such a destructive force on humanity. Szilard asked his friend Edward Teller to help circulate the letter at Los Alamos. Teller brought the letter to Oppenheimer who opined that the lab scientists should stay out of politics. No new signatures were collected. Oppenheimer understood the political dynamics and knew that petitions even if they reached President Truman would have no effect on the final decision. His job was to produce bombs. He would spend no political to support the dissenting opinions.

### **A popular and dangerous statement: "the belief that the end justifies the means"**

The movie *Oppenheimer* could have spent more time exploring the dynamic between Oppenheimer and those scientists who were against using the bomb against Japan. The Manhattan Project was instigated because the scientists, many who were Jewish were forced to flee Germany. They knew how good their students were and understood the danger. However, by mid-1944, it became apparent to many scientists including Oppenheimer that Germany's nuclear weapons program was unlikely to yield results. This realization shifted the focus of the Manhattan Project from concerns about a German bomb to the broader implications of nuclear technology and its potential for use in the war against Japan. Moreover, Oppenheimer wrongly thought the pace of building atomic weapons would slow down but instead it increased with Japan as the target. There was never a question of developing a bomb to counter Nazi Germany. Using it against Japan changed the reasons. This is the real story of Oppenheimer as he lost his way.

Oppenheimer knew that an atomic bomb would be dropped on Japan, but he did not know when it would happen. The most touching scene in the movie is when Oppenheimer learns from a radio broadcast that the United States has dropped an atomic bomb on Hiroshima. The helplessness and fear he feels are palpable.

What happened in Hiroshima seems like an inexorable inertia. Japan's attack mobilized the US. Japan was demonized and its people objectified. The Manhattan Project became a priority. The necessary funds allocated, and the weapons developed. Crews are trained and targets selected. Who was going to stop this paroxysm of slaughter? Not Truman. Interestingly, the US military was divided on the topic. Alternative opinions about ending the war in Japan through negotiation or by demonstrating the power of atomic weapons were dismissed or ignored by decision-makers. Oppenheimer played a role in not supporting the dissenting opinions among the Manhattan Project scientists. He helped pave the road to Hiroshima and Nagasaki.

Leo Szilard and others were morally courageous in not only attempting to wake people up from their moral slumber but also to organize a resistance to the bombings.

A good friend of Szilard, Jacob Bronowski was a Polish-British mathematician famous for writing and narrating the 13-part BBC television series *The ascent of man*. Bronowski visited Hiroshima and Nagasaki in 1945 as part of a British mission to evaluate the effects of the bombs (THOMAS, BRONOWSKI, 1946).

In the last episode of *The ascent of man* (1973), Bronowski visited Auschwitz. In an unscripted and totally unrehearsed spontaneous moment, Bronowski bends over a pond at the site of Auschwitz, where several of his family members were killed. As he stands ankle deep in the murky water he grabs a handful of silt, which is in fact human ashes, and asks how such an atrocity could happen: "There are two parts to the human dilemma. One [part] is the belief that the end justifies the means. The push-button philosophy, that deliberate deafness to suffering, has become the monster in the war machine. The other is the betrayal of the human spirit: the assertion of dogma that closes the mind, and turns a nation, a civilization, into a regiment of ghosts — obedient ghosts, or tortured ghosts... When people believe that they have absolute knowledge, with no test in reality, this is how they behave. This is what men do when they aspire to the knowledge of gods" (BRONOWSKI, 1973, p. 284-5).

Bronowski would have been horrified if he had heard Oppenheimer's testimony at his security clearance meeting in 1954 state: "from a technical point of view it was a sweet and lovely and beautiful job. I have still thought of it as a dreadful weapon" (UNITED..., 1954, p. 740-1).<sup>16</sup> This amazingly contradictory. It is perhaps understandable that his leadership in helping solve a vast array of technical challenges was sweet. He is proud and jocular. For the last scene of the movie Nolan brings back Einstein. Their conversation, invented by Nolan, is:

"When I came to you with those calculations," Oppenheimer tells Einstein, "We thought we might start a chain reaction that might destroy the entire world."

"What of it?" Einstein asks.

"I believe we did," Oppenheimer says (EBIRI, 2023).

Nolan deals obliquely with the unintended consequences of science on the very future of the earth and humanity itself. Richard Rhodes, who wrote two brilliant books on atomic weapons, commented in an interview in the *Atlantic Monthly* about the speed and development of Artificial Intelligence that may have catastrophic consequences (WARZEL, 2023). Rhodes is not alone in warning that we may be moving too fast and there have been calls to slow down or even declare a halt for at least six months. Elon Musk has called for a pause in the training of AI systems more powerful than GPT-4 citing fears of "profound risks to society and humanity" (VINCENT, 2023).

Hollywood have given us many AI dystopian futures. Oppenheimer and Hiroshima are object lessons in how to avoid the catastrophe of unintended and unforeseen consequences.

The road to the apocalypse is paved by those who insist that one has no choice.

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16 One can find Oppenheimer's testimony at a meeting of the US Atomic Energy Commission concerning his security clearance. Pages 740-41 are extremely important as he is asked: "You mean you had a moral revulsion against the production of such a dreadful weapon?" Answer: "This is too strong." Oppenheimer later says "Let us leave the word "moral 'out of it." Question: You had qualms about it." Answer: "How could one not have qualms about it. I know no one who doesn't have qualms about it." Oppenheimer was opposed to the development of the hydrogen bomb. Many thought that from a technical point of view the project was not feasible. Teller along with the Polish mathematician Stanislaw Ulam developed a breakthrough design. Oppenheimer called their idea "technically sweet." (Source: THORPE, C. (2006). *Oppenheimer: The Tragic Intellect*. University of Chicago Press.

interpreter for Hiroshima atomic bomb survivors and is part of a UNESCO project to record these stories. His most recent book is: *Peace Democracy Development*, co-authored with Dr. Johan Galtung.

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