# Oppenheimer The Movie, The Indians and The Bomb In A Tale Of Different Worlds

## By

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*Abstract. The Oppenheimer movie narrates the story of the Manhattan Project that was launched to build the first atomic bomb during World War II. The movie develops a particular type of scientific character as a tragic hero. It does not include the story of the displacement of indigenous and land-based peoples and the poisoning of sacred lands and waters and the air that was the result. The setting of the large project on indigenous lands surrounded by marginalized people demonstrates the impact of nuclear colonization on peoples’ lives, lifeways and livelihoods. This case analyzes the character and plot as portrayed in the movie and does not claim to describe Oppenheimer or other individuals in terms of historic fact. However, the facts of building of the nuclear bomb project and its immediate and continuing impacts on indigenous peoples are factual and well- documented. Much of that is absent from the movie. This case seeks to contrast two worldviews and provide a counterpoint for understanding the trajectory of events and impacts that were ignited by the Manhattan Project and continue to flow like the waters from a broken dam*.

# The Alternative Story: An Overview

The story of Pajarito Plateau where Los Alamos, New Mexico is located today began long before the narration in the blockbuster movie “Oppenheimer” starts. The Pueblo Indians of the Pajarito Plateau and the Rio Grande Valley cared for the lands for centuries that were to be transformed into the site of the Manhattan Project. They built strong traditional agricultural communities with advanced social systems. Anthropologists generally discuss a time of their occupation that goes back at least 10,000 years. During the Coalition and Classic Periods of these indigenous peoples, large pueblos, or cities, were built on the Pajarito Plateau. After periods of drought, sometime around the 1600s and after, new pueblos were constructed along the Rio Grande River. Indigenous cultures were vibrant, based on indigenous knowledge and a base of agriculture and trade.

Hernando Cortes led the first phase of Spanish colonization, centered in Mexico and extending Spanish rule across the continent. The conquistador Coronado led the first expedition into New Mexico. In 1598, Juan de Onate arrived in New Mexico with colonists and established the first Spanish colony As Governor, he

brought in the Spanish system of land tenure and grants that conflicted with the indigenous system. Cultural, economic, and spiritual oppression led to the Pueblo Revolt of 1680 that drove the Spanish out for around 12 years. The return of the Spanish was still harsh for Native cultures, but it did lead to more recognition of indigenous ways. The Spanish system of land grants led to a checkerboard of Pueblo and Spanish communities along the Rio Grande. The Hispanic and Indigenous communities were culturally distinct and conflict around land tenure and religion remained. The Mexican Revolution signaled the end of Spanish rule in New Mexico, while codifying the Spanish land grant system. The Mexican- American War of 1846 to 1848 was settled by the Treaty of Guadalupe Hildalgo. The Treaty recognized the Spanish and Indian land grants assuring the continuance of the divided land ownership in New Mexico. The United States took over a large swath of what was once part of Mexico, further dividing it with a checkerboard of private property around the Spanish grants.

The same Pajarito Plateau became the brain trust center for Manhattan Project with its dedication to building the atomic bomb. Overnight, the city of Los Alamos was built on these ancient Pueblo lands to house the scientists and staff building the bomb. Other Manhattan Project sites rose in Washington State and Tennessee. As the Manhattan Project rose from the ground to become the Los Alamos Scientific Lab, the Jicarilla Apache Nation, the Pueblo of Cochiti, the Pueblo of Jemez, Pueblo of Nambe, Pueblo of Ohkay Owingeh, Pueblo of Picuris, Pueblos of Pojoaque, Pueblo of Santa Clara, Pueblo of San Ildefonso, Pueblo of Taos, the Mescalero Apache Nation and the Navajo Nation in New Mexico, Arizona and Utah all carried the burden of its impacts. The Manhattan Project displaced these Tribes and their connections to the land, as well as the local Spanish villages and settlers. To complete the wartime mission of building the bomb, the United States appropriated lands for the secret project in 1942 under the direction of Major General Leslie Groves of the Army Corps of Engineers within the Department of the Army. The main facility locations were selected at least in part due to the demographic of marginalized populations. The government built fences and established checkpoints to prevent “unauthorized” use by indigenous and local peoples. Gun towers and fences went up on the lands - secrecy and security were foremost. Eventually the Los Alamos facility took 54,000 acres. All but 8,900 acres of the original acreage that were part of the USDA Forest Service were taken by eminent domain or purchased for a low government-determined price. , and resources key to indigenous peoples’ well-being and survival were lost. Access for grazing, hunting, use of sacred sites, medicine, gathering foods and the natural protection of the Plateau was denied.

Insert map

The effects were drastic and long-term, leaving lands scarred and removed from use, and lands and waters along the Rio Grande Ri v e r w e r e burdened with the effects of radiation pollution. Tribal members worked on all the Manhattan sites as technicians, service and maintenance workers, scientists, and at least one physicist. The location of Los Alamos left few options for local employees, so tribal members, especially from San Ildefonso Indian Pueblo and other nearby Pueblos, were hired along with people from the local Spanish villages. Mining for uranium needed for the project on Navajo lands resulted in unprecedented pollution and subjected Navajo workers to the unprotected and lowest paid jobs in the mines. Ongoing contamination and exploitation of tribal natural and cultural resources and labor continues today, long after the Manhattan Project. The Trinity Test Site, near Los Alamogordo, New Mexico led to one of the great examples of direct radiation exposure from testing the first nuclear bomb. The site was selected to detonate the first nuclear bomb because it was “wilderness,” and yet dozens of families went about their business as the first fallout of the atomic age rained on them. In fact, the selection of the Trinity Site evicted and impacted local ranchers and nearby residents, including Spanish settlers and indigenous peoples. The Mescalero Apache Reservation was only about fifty direct miles away. This first explosion was a “dirty bomb” where 80% of the plutonium core failed to fission, so it actively spread radioactive material across New Mexico and beyond. There were going to be plenty of downwinders in the wake of the bomb test and the scientists knew it.

The list of displacements from the associated Manhattan sites in other states is long and extends past the Southwest to Washington and Tennessee. For Washington, the Confederated Tribes and Bands of the Yakama Nation, The Confederated Tribes of the Umatilla Indian Reservation, Nez Perce Tribe and Wanapum Nation were directly impacted to build Hanford. In 1943, the United States government evicted Native American Nations living along the Columbia Basin to build Hanford for plutonium production facilities for the atomic bomb. The evictions impacted multiple Tribes’ diet of food grown along the Columbia River and important fishing sites, leading to negative impacts on health. Tribes were excluded from these lands and their treaty rights as barbed wire fences and security gates put boundaries around the Hanford site.

In the South the government’s development of Oakridge National Laboratory in Tennessee impacted the lands of the already displaced Absentee Shawnee Tribe of Oklahoma, Cherokee Nation of Oklahoma, Choctaw Nation of Oklahoma, Muscogee Nation of Oklahoma, Eastern Band of Cherokee Indians of North Carolina, Eastern Shawnee Tribe of Oklahoma, Poarch Band of Creek Indians,

Quapaw Tribe of Oklahoma, Seminole Nation of Oklahoma, The Shawnee Tribe, Chickasaw Nation, and the Keetoowah Band of Cherokee Indians in Oklahoma. The area composed of the Oak Ridge Reservation has evidence of human settlement dating back at least 14,000 years. The Indian Removal Act of 1830 displaced most of these people, but it did not remove their connection to indigenous lands or certain treaty rights from which this project would exclude them. Oak Ridge as part of the Project, explored a method for quantity production of plutonium -239 that required the construction of a medium-sized reactor.

As for Oppenheimer the movie, it leaves out the real story of the Manhattan Project’s main characters, New Mexicans, author Alicia Inez Guzman argues. It leaves out the people who were violently evicted to build Los Alamos, the Indian and Hispanic men and women who did essential work for the Manhattan Projector and the thousands of New Mexicans affected by the Trinity test and continuing radioactive and chemical leakage from the Lab. The movie opens with beautiful views of the New Mexican landscape, as it appeared empty and seemingly unpeopled in a view that denies the presence of so many people who were indelibly transformed by the Manhattan Project and what followed. (Guzman August 8, 2023)

# The Oppenheimer Story: The Movie and the Man

J. Robert Oppenheimer is introduced in the blockbuster movie “Oppenheimer” as a graduate student and later a professor noted for bringing the study of quantum mechanics into focus at American universities. Known for his studious commitment and his contacts with scientists particularly in Europe who were working on nuclear projects, he was launched into the scientific leadership of the wartime Manhattan Project in 1942 to build the first atomic bomb. This was a research and development effort mounted during World War II to apply theoretical physics to making of an atomic bomb. The Manhattan Project was in the race to beat the Nazis in making the bomb. It led to the nearly overnight construction of a military-industrial complex that ended with dropping the first bombs on Hiroshima and Nagasaki. (Rhodes, 2012) On the global scale, it changed human history, birthed the Cold War and fueled the irrepressible arms race.

Albert Einstein was the first person who was persuaded to use his influence to communicate the military value of uncontrolled fission chain reaction to President Franklin D. Roosevelt. After the U.S. entered World War II, the War Department took over responsibility within its Army Corps of Engineers. Always nuanced in his concerns about the impacts of nuclear fission and the bomb, he later shared his reservations and concerns about the potential for uncontrolled chain reactions that

could blow up the world in a letter to the President. In the end, the application of theoretical physics and nuclear fission to the making of a bomb weighed heavily on his conscience. With the impetus of wartime concerns, the secret Manhattan Project moved ahead to build the first atomic bomb. Brigadier General Leslie R. Groves was placed in charge of all Army activities, especially engineering, related to the project. It was known by 1940 that German scientists were working on a similar project. Security was the primary justification for many actions during the Manhattan Project. Even the deaths of New Mexicans who were impacted by the project were kept secret. (Guzman, 2022) Fifty-two acres were initially appropriated and thousands of sites and facilities developed for the Project grew to 54,000 acres.

Oppenheimer was recruited to lead the Manhattan Project.

American scientists, many of them refugees from fascist regimes in Europe, came together in the project to exploit the newly recognized fission process for military purposes. He was joined by Hans Bethe, Enrico Fermii, Edward Teller, Leo Szilard, Klaus Fuchs, Glenn Seaborg, Ernest O. Lawrence Richard Feynman, Norris Bradbury, Harold Urey, Theodore Hall and Mark Oliphant. 1n 1942, a number of British and Canadian scientists moved to the United States to join the project. The Native scientists, Floy Agnes Lee, a biological scientist from Santa Clara Pueblo and Herbert York the Mohawk physicist who both worked on the Manhattan Project received no mention in the movie, though they are recorded in the annals of Princeton University. (Princeton University n.d.) There were probably others who remain unrecorded.

The movie “Oppenheimer” barely mentions the impacts on Native and local peoples. The displacement of indigenous peoples receives only one throw-away line in the movie. When asked who will be displaced by building Los Alamos, the actor playing Oppenheimer responds something about a boy’s school and some local Indians who “come up there.” The movie portrays the beautiful ranch owned by Oppenheimer and his brother, perhaps the unintended magnet that originally brought Oppenheimer and the Project to New Mexico. He could enjoy his ranch in the upper Pecos region of New Mexico 78 miles away from the Manhattan Project , safely located on the back side of another mountain range called the Sangre de Christos on other side while working on the bomb. Native, Spanish, and small rural agriculturalists were marginalized and there would be little public media or political coverage of the effects of the dangerous project on them in rural New Mexico. They were entirely left out of the movie. The model of silencing the marginalized and impacted peoples’ lives on in the movie. In her recent book, Myrrhia Gomez argues that the Manhattan Project built an imperial nuclear empire on the backs of poor farmers, laborers and Indian Pueblos. She examines the experiences of Nuevo Mexicanos who have been impacted by both the military- industrial complex and the commercial industry surrounding nuclear production in her recent book *Nuclear Nuevo Mexico.* (Gomez, 2022) General Groves, taking

charge of the military and security aspects of the Manhattan Project, appropriated the lands of Spanish and local ranchers and agriculturists and critical use areas used by the indigenous peoples. The land and its resources and residencies were made available to the scientists. It is ironic, if not expected, that the Oppenheimer’s ranch featured in the movie was not among the lands appropriated.

In the movie, Oppenheimer takes the position that the Los Alamos Lab should be ended after the War. The movie suggests the heavy weight on his conscience. When asked what to do with the location, his line in the script has him blurt out: “Give it back to the Indians.” In the movie, he does not address the toxicity, the continued security problems, the damages, the nuclear waste or any of the related problems the aftermath might entail. Instead, the movie moves to the ironic aftermath, with Oppenheimer in front of the McCarthy hearings accused as a spy. Though first selected for his contacts with European scientists, he is now accused of being a communist. The probe reaches into his leftist leaning U.C. Berkeley days where he brought quantum mechanics into the curriculum. The problem led to the loss of his security clearance. H e w a s finally vindicated in the movie and he was restored at the end as the tragic hero of the movie. The formal accusations go away and his security clearance is restored years after his death. In his life, he remained concerned about the bomb and its existential threats to humanity.

After the war, the nuclear production work did not go away. The Los Alamos Scientific Lab, or Site Y as it was called in the Manhattan Project, remained the lead site for nuclear component manufacture until 1949 and continued with backup production and “special functions” after that time. In 1981 it was renamed Los Alamos National Lab. Its expanded functions included even more destructive thermonuclear weapon design, the hydrogen bomb and testing, explosive development and testing, nuclear reactor and other research, radioactive material production and testing, radioactive waste disposal and additional projects. This fuller story of the aftermath of the Manhattan project remains untold.

# The Oppenheimer Movie World View

The movie portrays a “tortured scientist” painted as a struggling hero. The character in the movie represents one type of scientific culture that favors individual achievement through genius and focus. The extreme focus o f t h e c h a r a c t e r allows him to wear blinders that mask the impacts of the Manhattan Project on indigenous and local people, and in fact, all those around him. He does not hear the warnings of others, but rather pursues one goal—the bomb, as his great achievement. In contrast, within indigenous communities, individual achievement fueled by genius and individual accomplishment was only functional in how it served the whole community. The bomb development work sat within the context

of World War II and the arms race with the Nazis that c r e a t e d a justification over everything that transpired with the vision of what might happen to the world if it lost a nuclear arms race with Germany. Oppenheimer and other Jewish scientists worked with knowledge of the antisemitism and Nazi persecution of the Jews. The awareness of the destruction of relationships all around him is further blanketed by an intense drive for success. This world view pushes the bounds of the relationships within the human and natural ecosystem. Ironically it does not encompass the discrimination and harms to the Spanish and indigenous cultures.

The discovery of nuclear fission makes the creation of the bomb inevitable in this cultural-scientific ecosystem. The walls of morality melt around the force of a mindset--to stop it, you would have to stop physics. (Rhodes, 2012) The wartime emergency fueled it. Despite the questions of morality that were arising, dropping of the bomb was justified because it put a quick end to the war and saved thousands of American lives, including those of many Native American soldiers. American land was threatened. The threat was already realized for indigenous people in Hawaii, with imminent threats to Alaska and the Northwest Coast. A few weeks before Hiroshima, 123,000 Americans and Japanese killed each other on Okinawa.

When the angst produced by the portrayal of Oppenheimer’s version of science meets the strong security measures imposed on the project in the movie, he resists but eventually caves to security impositions and apparently accepts and even promotes keeping secret the devastating effects that were about to befall indigenous peoples, and later, the Japanese at Hiroshima and Nagasaki. The development of the Oppenheimer character leans heavily on two Pulitzer-prize winning tomes—*The Making of the Atomic Bomb* by Richard Rhodes and the biography *American Prometheus* by Kai Bird and J. Sherwin. Both of these books generally represent the worldview of Oppenheimer in the movie. The drive to damage the external enemy misses the inevitable damage to its own internal body of communities. This perhaps helps to explain a scientific worldview that focuses on completing construction of the thing, even if it might in a parallel universe extinguish human life. One might consider the idea of complementarity from quantum physics as a partial explanation for this worldview, for it allows that objects ( bombs?) have conflicting properties that cannot be observed at the same time. By removing a holistic vision of the world, a terrible bomb becomes a wonderful tool: ending the war obfuscates the possibility of ending the world. As if destined, the more powerfully destructive hydrogen bomb comes into being further along the path. The worldview is enhanced by moving at warp speed without reflection on an uncertain path that somehow leads to joy, success and heroism at the same time it leads to the inevitable destruction of life. Just how

much life might be destroyed is at the heart of the uncertainty. It is the great gamble, and science is the gambler in this story.

It is only later, after the Trinity and other tests and the end of World War II, that the burden of conscience becomes more fully realized in the character.

Oppenheimer wants to close down Los Alamos and he fears the arms race. In the movie, he has terrible visions of the exploding bomb. At the end of the wartime project, he utters the second throwaway line---“Just give it back to the Indians.” It is as if he has a backdoor realization that the indigenous others had some claim after all. Yet there is no recognition of the damage done to the lands that were taken for Los Alamos and the radioactive damage that was leaking offsite into the homes and lands of indigenous and local peoples. In the movie, he all but removes himself from responsibility for the future environmental damage as the Los Alamos Lab continues and becomes embedded in the economy and future of New Mexico and its peoples. Instead, the movie turns to the irony of Congress’s descent into the McCarthy era accusations of communism. Oppenheimer himself is accused of disloyalty, of being a spy, without any real evidence. Politics constructs a situation that attacks the very kind of blinding commitment and patriotism that served as the justification for the Manhattan Project in the beginning. The Committee delves into his early leftist leanings at University of California Berkeley, where his real work was bringing in quantum mechanics. In the end, Oppenheimer and his worldview of science is vindicated in the movie.

# The Indigenous World View

The indigenous relationship to the land is founded in the concept of stewardship. The phrase “All my relations” connects human beings to all other life and to the land and water and all of its features. Thousands of years of practice combine with foundational ways of knowing that act as boundaries to destruction. The wealth of indigenous knowledge allows for the enhancement of opportunities that reciprocate for takings from the environment. They indigenous peoples of the Pajarito Plateau do not think they owned the land—they actually possessed the land in a continuing dynamic of reciprocation for what the land gave them. Relationships of accountability and responsibility lead to resistance to destructive behaviors.

In modern times, the Tribes joined resistance to external attacks from global actors. Their commitment to their ancestral lands and cultures translated to patriotism. They joined military units in disproportionate numbers. Their concerns in World War II were balanced by understandings from their ancestors. This worldview made possible the contributions of the Navajo code-talkers that made a significant difference in World War II, defeating the Japanese with code communication rather than bombs.

The attachment to indigenous lands runs deep in the special understandings of these relationships to land and water, especially amongst the Rio Grande Puebloan peoples. The very symbols on their pottery are embedded with narratives about those relationships. The bear paw is the walker and keeper of the land, while Avanyu, a serpent like water spirit symbol, is the controller and water protector. Feather symbols represent the keepers and controllers of the sky.

Maria Naranjo, Santa Clara Pueblo potter and activist and a nurse once measured samples for radioactivity at Los Alamos. (I) She points to the nearby peoples of Santa Clara Pueblo, Ohkay Owingeh, (formerly known as San Juan Pueblo) and San Ildefonso Pueblo and the peoples of the extended Espanola Valley that follows the Rio Grande River: and describes their bond with the land: “This place is a sacred place and the people who were planted here are still here….that this is one of the spots where whatever starts here, goes around the world. We know this because of what was last planted in this sacred place: the atomic age. We saw this go around the world. (Fisher, 2019), ” With other organizations, they forced Los Alamos to procure the very first clean stormwater permit which will require the Lab to meet stormwater management requirements in other 400 legacy sites as part of a Clean Water Act settlement. A settlement was also reached under the Clean Air Act against the Department of Energy, aka the Lab, for releasing radioactive material into the air.

As caretakers, activists like Naranjo, tribal governments and local residents created organizations and partnered with external organizations to resist the damage still emanating from Los Alamos.. Three times they won their case with the Environmental Protection Agency to stop the expansion of nuclear pit production. ”These plutonium pits are the key components for triggering the nuclear explosion of thermonuclear weapons. They have not been manufactured in the U.S. on a regular basis since 1989. The “pits” are hollow, spherical shells of plutonium about the size of bowling balls. Due to factors including plutonium aging, safe and security advancements, global risk and weapons modernization, these pits need to be replaced from time to time.” (NASA, n.d) Currently the Los Alamos Lab is the only site with the capacity to produce nuclear pits. Scientists have discovered that plutonium is unstable and radioactivity decays over time, making replacement a requirement for certainty and safety. (Los Alamos National Lab, Dec. 13, 2021.

The Manhattan Project, enmeshed in a parallel narrative combining one particular view of science, extreme secrecy and patriotism, conflicted with indigenous world views. In contrast, the indigenous view emphasized community and internal collaboration as the foundation for shared success. This worldview is holistic--- and through it the Manhattan Project could not be removed from its impacts. Within the extreme context of World War II an indigenous worldview might not

so much as deny the making of the bomb, but it would deeply question how it was done. While the Los Alamos scientists celebrated the explosion of the first atomic bomb at the Trinity Site, San Ildefonso Pueblo held o f f its celebration until the end of the war. But the nuclear trajectory was not to end with the war: a new expanded version of the Lab was soon reborn to spread and further impact indigenous and local peoples.

In the end, the indigenous peoples could not walk away. From their worldview, they are propelled to resist the continued impacts of radiation from the Los Alamos and they bear its burdens. San Ildefonso Indian Pueblo elder Kathy Won Povi Sanchez recollects the impacts as she talks with interviewer Heather Bryan about the Lab that was built within her sacred mountains and where nuclear waste was stored in sacred kivas: “There’s so much disconnect in a culture of violence that doesn’t give space for a language of love to help mend the world or to help heal soul.” (The Nerve! July 22, 2023 sites.libsyn.com)

Concern for the health and wellness of indigenous peoples continues as in the words of Beata Tsosie-Pena, Tewa Women United Environmental Health and Justice Coordinator and Los Alamos downwinder, that follow: “…they deserve an economy not dependent on warfare, that does not conflict with their values, around protecting their birthright of water air, food, medicine, land and future generations. Land that the Creator intended us to live on in perpetuity and reciprocal care for time immemorial.” (Tewa Women United, n.d.)

The indigenous worldview does not exclude science. It does demand that science serve the community and take place within boundaries that conserve traditional ways, k n o w l e d g e , life and health. Though the boundaries are adaptable, they exist within principles of reciprocation and stewardship. The Tribes of New Mexico and the multi-state Navajo Nation continue to monitor the effects of Los Alamos and to hire and collaborate with independent scientific researchers to counteract the reports of the federal government that they do not trust. The State of New Mexico also continues to challenge Los Alamos National Lab studies and claims about the effects of their operations, both proposed and existing. A Government Accountability Project Report completed detailed environmental sampling and found potentially harmful radioactivity in Pueblo homes and lands and many other offsite areas in 2018. It is not over.

# The Aftermath: The Trinity Site and Beyond

The movie follows the official and accepted accounts of the selection of the Trinity Site that was chosen for the first test of the nuclear bomb. Oppenheimer is portrayed as thoughtfully roaming around New Mexico in 1944 for a test site in the wilderness for this first and uncertain nuclear explosion where the effects would

just be on sand and cactus. And oh, air purity. (Rhodes, 2005) . However, in the reality outside the movie, the Trinity Site was hardly that remote---local ranchers had to be evicted. Thirteen thousand people were within 50 miles of the nuclear explosion: more than half a million people were in the critical radius of 150-200 miles- Albuquerque New Mexico and El Paso Texas were less than 200 miles away. The Mescalero Apache Reservation was just 50 miles away. Oppenheimer and the Manhattan Project knew that the site was not so isolated and that it was hardly uninhabited. (Wheeler and Sterchi, 2023) Local Spanish and Native residents who were especially close were hit with the rain of radiation as they went about their daily tasks. They were never notified of the danger ---no warning of a star-level explosive force that was going to happen in their backyards or the irradiation exposure to their crops, livestock, water, and the radioactive contamination in the food and milk that entered their very bodies. They became the “downwinders” who were hit with the impacts from the denotation of “the Gadget,” the code name for the plutonium bomb used in this test. Unusual instances of cancer and other diseases associated with radiation and toxic chemicals followed them through generations. (Little 2023, Tucker and Alvarez 2019, Phillippe, et al 2023)

This first bomb was a dirty bomb. Eighty percent of the bomb’s plutonium failed to fission. Two hundred and thirty tons of sand and ash fell from the cloud it produced and spread material over Southern New Mexico and beyond. The day of the test a meteorologist warned that the oncoming thunderstorm that day would spread radiation far and wide over New Mexico’s peoples. The mushroom cloud rose 38,000 feet. With the rain that fell from the thunderstorm later that night, local ranchers may have sipped a radiation cocktail from their drinking water obtained from open cisterns, ponds and windmill tanks. They ate the radiation-dusted produce from their gardens and made use of the beef and poultry they raised along with dairy products, oblivious to the secret mist of radiation poison that fell upon it all. The movie presents Oppenheimer’s actual recollection at the time of detonation from Hindu scripture -- “Now I am become Death, the Destroyer of Worlds.” It was all too true for the downwinders. While his focus in the movie remained world-changing and global, he seemed blind to the lengthening local shadow of death at his feet.

The lack of planning for data collection to monitor the effects of the Trinity bomb was alarming. Methods to measure the radiation from the bomb with specially designed “badges” were ineffective because the means to use them were shadowed by the secrecy of the project. Soldiers dispatched to “chase the cloud” to monitor the spread of radiation were not provided with long distance radios that could transmit data to the center in Albuquerque. Others were set out to gather samples

with vacuum cleaner filters. These actions---remember they were designed in a project led by world famous scientists--- were so ill thought out that one could conclude they were done without care and perhaps to evade responsibility and litigation for the real effects of the test. In material left out of the movie, General Groves dismissed a report that outlined the dangers of radioactive fallout and possible measures like evacuation to mitigate it. (Kaplan, 2023) The result was no good data and an alarming lack of concern for the safety for those who would be affected. The scene was set—without the data of exposure, the downwinders

couldn’t prove it. The government could get away with pretending it didn’t happen. Yet generations of the local residents not in the movies, largely poor Native and Spanish people, would suffer from repeating inter-generational cancers. Even after dropping the bomb on Hiroshima and Nagasaki, the army maintained for years that fears of “radiation sickness” were “enemy propaganda.” (Wheeler and Sterchi, 2023)

In 1995, President Bill Clinton offered an apology---“Americans were kept in the dark about what was being done to them…not for the compelling reason of national security but for the simple fear of embarrassment, and that was wrong.” (Wheeler and Sterchi, 2023) The government began to address its past failure of value and humanity with the Radiation Exposure Compensation Act (RECA) in 1990.

People exposed to atmospheric nuclear tests might get a one-time payment of

$50,000. Navajo uranium miners, millworkers and laborers might receive a payment of $100,000; under specific circumstances and in specific areas. Because of the lack of data, estimates of cancer doses and the number of cancer cases cannot be established with certainty. For that reason, RECA applies to residents within s o m e areas of impact because a direct causal link to their cancer cannot be established. But RECA did not address the damage to the lands and waters that the downwinders and miners continued to use in their daily lives. RECA was set to expire in July 2024, and it applied to a limited number of counties in Arizona, New Mexico and Utah.

The Trinity Downwinders have never had access to RECA, nor have they received a reason. Nor does the Oppenheimer movie help them change the narrative of secrecy and obfuscation of the truth mounted by the Manhattan Project. Many believe the movie will only enhance the long shadows created to cover up what happened to them. On the other hand, Senator Ben Lujan of New Mexico got a bill passed through the Senate in 2023 to extend and expand RECA. The bill passed the Senate shortly after the release of the movie, and yet it was the work of persistent advocates including the Pueblos, the Navajo Nation and Native- based organizations along with Hispanic and environmental advocates and other

senators over a very long period of time. It is perhaps true that the movie brought out the story, however shaped by past accounts and left with significant gaps in the truth, to the political attention it needed to pass. With the other senators, L u j a n introduced legislation that would extend RECA to the Trinity Site downwinders and other test sites and to more Navajo miners as part of the National Defense Authorization Act that has now passed the Senate. The fate of the bill in the House is unknown: it remains in limbo due to concerns about expenditures. In 2024, it was removed from legislative defense bills, with those opposing it concerned with cost. The fiscal facts reflect government priorities -- the government conservatively spent $6 trillion on nuclear weapons development. Since 1990, $2.5 billion has been spent through RECA to compensate a limited number of those with illnesses related to the weapons development. How many billions and trillions of dollars in health care costs and damages to land, water, farms, subsistence, economies and personal losses from the project and its aftermath remains unknown.

# It Continues---More of What’s Not in the Movie

It has been said before that the discovery of nuclear fission made the creation of the bomb inevitable. To stop it, you would have to stop physics. (Rhodes, 2005) There would be no boundaries brought to bear on the development of weapons and it wasn’t going to stop with the end of the war. The Manhattan Project morphed into the Los Alamos National Lab that continues to this day and was soon launched into the research and production of nuclear weapons with an expanding mission. Only recently the Lab plunged into proposals for building more plutonium “pits” that act as triggers in nuclear weapons. The Lab again placed itself into the center of debate about the future production of weapons and the impacts of that production.

Health impacts from Lab created radiation t h a t w a s spreading offsite were kept secret for years. It was not until 1994 that the Center for Disease Control (CDC) was able to mount the Los Alamos Historical Document Retrieval Assessment (LAHADRA) Project that allowed the CDC access to documents about offsite radiation doses, create an information database, declassify documents and develop a prioritized list of containment releases since 1943. (CDC, 2010) They contracted the work with an independent research firm. After 2004, some limitation was put on their access, mainly due to security lapses at the Lab. They completed their report and shared it locally and with the public in 2009. Released into the environment were a number of radioactive and chemical materials with serious health impacts. Some of the most serious were reported as priorities including the evidence of radionuclides from plutonium uranium and the mixed product radioactive lanthanum in airborne particles. In addition, a

waterborne radionuclide in evidence:: Strontium-9 is the dangerous radioactive isotope of strontium produced when uranium-235 and plutonium-239 fission. Additional chemicals reported were uranium (as a heavy metal), TNT, and carbon tetrachloride. Radiation can increase risk of cancer and genetic effects including effects on unborn children. Breathing or absorbing these materials through eating food, breathing or other methods can affect the lungs and the intestines, bones or thyroid. Radiation sickness can directly result in death. In addition, the chemicals involved in the nuclear production process are carcinogenic and cause a range of serious diseases to the body, skin and organs.

Toxic radiation continues to leak into the waters of New Mexico. The spill of radioactive material into the Rio Puerco spill on the Navajo Reservation was the largest in history. The water-borne leakage is made worse by the fact that Southwest is prone to flash flooding. A USDA Forest Service team including some university scientists was permitted to tour key sensitive areas where leakage from some of the “lesser radiated” materials used in the continued production of plutonium and nuclear materials and devices were stored/buried in the 1990s. The area was affected by sudden rains and flash flooding. Scientists and Forest Service tribal liaisons observed areas that were eroding downslope and other areas where gates that were supposed to hold eroding radioactive material were woefully inadequate.[[1]](#footnote-1) These observations supported assertions by the nearby Tewa Pueblos that vegetation and waters of the Rio Grande below were continuing to receive irradiated material. Authorities at Los Alamos apparently became aware of either the implications of the location or the makeup of the team with the presence of tribal liaisons. They abruptly ended the tour, bringing the team in for a standard and safe presentation in the auditorium. Even the highways were not safe in New Mexico. As Los Alamos continued to remove radioactive materials to a location near Carlsbad, New Mexico for burial, emergency medical technicians received warnings during their training about unlikely vehicles like vacation campers that might be carrying radioactive waste for disposal.[[2]](#footnote-2)

Pressure to stay quiet about the problems emanating from the continued production of nuclear material from mining, weapons development and nuclear waste storage in New Mexico continues: it has become a major component of the state’s economy. It remains tightly hinged to the concept of “national security.” Joseph Masco takes an anthropological approach in his book *Nuclear Borderlands* looking at how diverse groups including the Indians, weapons scientist at Los Alamos National Lab, Nuevo Mexicano communities and antinuclear activists have mobilized into a debate on what constitutes “national security.” He argues that the

U.S. government focus on potential nuclear apocalypse during the Cold War obscured its broader effects on American society and certainly on New Mexican

groups. (Masco, 2006) Charlie Warzel presents the idea that imagined arms races are

just as powerful a motivator as real ones.(Warzel, 2023)

Congressional legislation continues to deliver funds to New Mexico for the Los Alamos Lab. The downwinders and the Navajo miners, the Pueblo Indians, the Apaches and the Hispanics continue to speak out and find new ways into the public space as they suffer from radiation related cancers and other diseases and the impacts to their lands and waters. Could a movie that essentially leaves their stories out actually fuel a desire to learn more? Could the other story finally come out? It is true that publications that tell their story are being published now. Will these new stories open the door to accountability and action? Will the relentless resistance of Pueblo activists and concerned citizens will out in the end? Or will the sickness of nuclear colonialism continue unabated?

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1. 1. I was present on this tour as one of the USDA Forest Service team that reviewed the Los Alamos sites in the 1990s. This is my description of what I saw and experienced during that tour.

   [↑](#footnote-ref-1)
2. 1. While working for the National Park Service in New Mexico in 1980 I attended Emergency Medical Technician Training in Cerillos New Mexico. As part of the training we were informed that we needed to take extra care in responding to vehicle accidents to ensure safety from radioactive exposure even with vehicles without US government plates, as private vehicles were then carrying radioactive waste away from Los Alamos on New Mexico highways.

   [↑](#footnote-ref-2)