

In the Shadow of the Manhattan Project

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Each August 6 in Hiroshima, speakers reiterate familiar statistics, such as how the Hiroshima-Nagasaki bombs tragically slaughtered 140,000 people. Many evoke J. Robert Oppenheimer's sense of dread which led him to quote the line from the Bhagavad-Gita: "I am become Death, the destroyer of worlds." Remembrance bells will ring in the cities whose destruction has become synonymous with atomic nightmare; bells chime synchronously worldwide.

Another city deserving a place in this narrative of nuclear victimhood is Los Alamos, New Mexico. The tiny town with a population of twelve thousand was where the first atomic bomb was developed by the Manhattan Project, under Oppenheimer's lead.

The Manhattan Project decades hence burgeoned into Los Alamos National Laboratories (LANL) a massive facility, easily 27,000 acres embedded in a New Mexico mountain plateau. LANL reigned, the "crown jewel" nuclear weapons facility, America's premier "nuclear weapons campus" throughout the Cold War, and remains responsible for the preponderance of the caretaking and upgrading of the American nuclear stockpile.

New Mexico is a mostly agricultural, mountainous state, listed among the poorest in the nation, still characterized (as it was at the time of the Manhattan Project) by a certain ethnically condescending aura of "foreignness" due to being the state with the highest percentage of Hispanics, alongside the second highest percentage of indigenous peoples. Los Alamos, New Mexico, is a government town—a vital community of schools and civic associations, but an oasis. The miniscule town boasts one of the highest per capita incomes in the United States, and is almost 80 percent white. It is surrounded by swathes of ethnic poverty.

LANL is today New Mexico's premier employer of construction and service workers, leveraging a weak economy towards stability, although a discrimination lawsuit filed against LANL in 1999 revealed that few Hispanics, Native American, or native New Mexicans at the facility earned above 60 thousand dollars a year. Its seventy-year existence (Los Alamos was a "secret city" started under the umbrella of the code-named Manhattan Project in 1942) has made New Mexico a site of ongoing conflict over nuclear environmental hazards. Every other month another newspaper article appears featuring oppositional quotes between a LANL spokesman, and a representative of a nuclear watchdog group, often debating nuclear waste. Hiroshima and Nagasaki represent the destructive capacity of nuclear weapons used abroad, while Los Alamos emblemizes the stateside impact of the nuclear weapons complex. It is both the case that in New Mexico nuclear issues have become a seemingly day-to-day affair, while LANL's seventy-year footprint has left behind a substantial "buried history" shadowing the streams of cars of thousands of service workers winding from "the valley" (surrounding northern New Mexico ethnic communities) to earn a living "up on the hill."

Every August 6 a few hundred anti-nuclear activists gather in Los Alamos' Ashley Pond Park, a popular location for concerts and summer entertainments. The same park displays Los Alamos' 50th anniversary of "the bomb" memorial, a plaque embedded in a large stone. A memorial was initially conceived and proposed by an elementary school in Albuquerque, New Mexico, whose children raised \$20,000 in donations to erect a "Peace Globe" but "peace" is a contentious, possibly an accusatory word in Los Alamos, whose town leaders rejected the overture. The city responded by erecting the present plaque which reads, "This monument honors those people gathered here at Los Alamos and its neighboring communities whose work on the Manhattan Project ended World War II

and who later helped develop the nuclear forces that deterred global conflict for the past fifty years." The irony epitomizes an ongoing battle of narratives which may begin for many visitors as they drive into city limits to be greeted by a sign reading "Los Alamos—Where Discoveries are Made" both a coy reference to its major historical accomplishment, and a reminder that the locality remains a bedroom community of weapons scientists, overwhelmingly white relocatees.

Even in New Mexico too much emphasis on Hiroshima diverts the conversation away from the sociological and environmental impact of LANL's seventy-odd-year shadow. To use a metaphor in keeping with Manhattan Project scientists' tendency to personify the bomb sentimentally, "fat boy and little man" grew Goliathan. The behemoth is so entrenched that LANL's absence would devastate many New Mexico communities economically.

"We're not friends, and LANL doesn't like us," forthrightly admits the executive director at Nuclear Watch of New Mexico, Jay Coghlan. Coghlan describes his work as a cat-and-mouse game in which he assumes essential information may be withheld: "We spend a lot of time going over official government reports, trying to piece information together, and reading between the lines." LANL's presence is counterbalanced by several watchdog groups (Concerned Citizens for Nuclear Safety, Nuclear Watch of New Mexico) which engage in by now par-for-the-course legal disputes with LANL over environmental safety issues, and support organizations (the Tularosa Basin Downwinders Consortium, Las Mujeres Hablan) devoted to excavating New Mexican nuclear history, while pursuing restitution for nuclear crimes dating as far back as 1942.

"Reading between the lines" is a pertinent phrase. The Manhattan Project operated under complete veils of inscrutability, priority privilege, and secrecy, while today LANL is a semi-privatized government operation primarily answerable to the Department of Energy. That watchdog groups feel that the information they gather, disseminate, and often build lawsuits from must be culled by "reading between the lines" reflects an ongoing and unresolved tension between national security and the public trust. Still today, the most basic information regarding LANL operations is often *not* easily accessible. (For example: how much plutonium is kept at the facility?)

The crux of the ongoing conflict is—as it has been since the Manhattan Project—both *what constitutes* public safety and what information related to public and environmental safety LANL is obliged to reveal under the auspices of "national security." "Reading between the lines" is also symptomatic of a legacy of dependence and suspicion, particularly entrenched between LANL and Native American communities, which entails the Manhattan Project's "dark side" of cavalier subterfuges, as in the case of the New Mexico downwinders.

Many-generational laborers among the stream of cars winding towards LANL each morning migrate from the largely Hispanic Tularosa Basin, or Native American settlements of the Pajarito Plateau. These places were among the first detrimentally marked by stateside nuclear testing, and unpackaging their legacy shows that the Manhattan Project's "invasion" into New Mexico stamped a prototype. Rural New Mexicans were the first American *downwinders*.

Downwinder is still a word shrouded in an otherworldly mystique, a word which carries insinuations of apocryphal rumor. It is a synonym for illness in extremis. Or perhaps as much a synonym for the rumor of illnesses which initially seem mere cursed luck set upon populations left naively uninformed and unaware of immediate risks, much less that decades may pass between initial radiation exposure and its bodily effects, typically leukemia, cancer, and abnormally high incidences of stillbirths.

More specifically *downwinder* is a general name for people and places which received the radioactive fall-out of nuclear test blasts conducted by the United States, Great Britain, France, China, and the Soviet Union throughout the Cold War era. The Soviet and U.S. tests included blasts conducted in the Marshall Islands from 1946-58, contaminating aboriginal island peoples; the French conducted blasts in the South Pacific—including over exotic Tahiti—which cavalierly poisoned indigenous peoples, as well as in the Sahara, and Algeria. The most numerous stateside blasts were developed at Los Alamos and conducted at the Nevada Test Site, from 1951-62, which spread radioactive fall-out to areas of Colorado, Nevada, New Mexico, Idaho, and Utah.

While a patina of rumor has been enhanced by lengthy court battles establishing the link between radiation exposure and symptoms, the legitimacy of many downwinder claims has been conceded, if individual claimants meet rigorous medical burdens of proof. A path toward monetary compensation was streamlined by belated congressional action. Only in 1990 did Congress enact a Radiation Exposure and Compensation law, which should have—though still has not—clarified fact and fiction, and legitimized rural New Mexico's counter narrative, often comparable to a story widely told from the vantage point of the colonizer, never the colonized.

It is still not sufficiently appreciated that the blast at Hiroshima was *not* the first atomic explosion. In the weeks leading up to Hiroshima, the Manhattan Project at Los Alamos detonated the first nuclear test blast, codenamed "Trinity" which occurred 250 miles south, near Alamogordo, New Mexico, in the Tularosa Basin, and in local lore remains an event which still leaves the living survivors and their descendants, at best, befuddled, with feelings veering between confusion, frustration, and indignation bordering on anti-patriotism against the perpetrators of "a stateside nuclear attack."

In *Now It Can Be Told*, originally published in 1962, by General Leslie M. Groves, the ranking military officer and Oppenheimer's primary non-scientific partner at the Manhattan Project, General Groves describes the Trinity blast as a "fairly sized nuclear explosion" occurring in a "generally nonpopulated area" and concedes the virgin test was full of unknown variables, and supremely lacking in safety controls.

The scientists conducting the blast naively intended for the Trinity detonation to avoid attention by occurring at an hour when "everyone would be asleep." The objective was to contain panic. But the Trinity test was delayed until 5:30 am, late enough that fear in the wake of the flash was not the privilege of the Manhattan Project personnel. The sight permanently etched terror into the memory of many observers. "[The detonation] was the biggest thing I had ever seen in my life. It was rolling, getting fatter and bigger and taller. My mother said: 'The sun is coming close. The world is coming to an end.' She told me to drop to my knees, but I kept looking. If it was the end of the world, I wanted to see it. I was waiting for God to come out from around the ball of fire," reads an exemplary account of the scene witnessed by a shocked eight year old, living at the time in a farming settlement near Alamogordo.

Groves' memoir, *Now It Can Be Told*, is an unintentionally revealing master narrative in which the writer's contradictions and shady omissions when narrating the Trinity blast expose the Manhattan Project's skewed priorities. After describing the tremendous Trinity flash and fireball, he writes his "greatest concern was over radioactive fall-out and the possibility it might concentrate on a populated area or even an isolated ranch." He claims that the Trinity Site was chosen with special caution; it "had no Indian population at all" which he uses as a justification for not providing pre-blast information to a representative of the Bureau of Indian Affairs. (This makes little sense: the Bureau undoubtedly would have been concerned by a Native American *presence*, but comforted by an absence.) "Generally nonpopulated area" is left undefined. Nevertheless "the city about which we were most concerned was Amarillo, TX, some three hundred miles away." It was for *their* benefit,

presumably (not the benefit of the Native Americans whom Groves has “generally,” or altogether, erased from the scene, or the farming settlements near Alamogordo that he never specifically mentions) that after Trinity he sanctioned a press release falsely stating the macabre fireball witnessed in outlying areas was the result of a large ammunition magazine detonation. Groves’ awkward underscoring of a large, urban, and white population in Amarillo three hundred miles away (at the expense of pocket New Mexico communities which dotted the area) reveals a general concern for *secrecy*, not safety. When population estimations include farmers, farming communities, and Native Americans, some 38,000 Americans lived within a closer radius than Amarillo, Texas.

The secret Trinity blast left such a scarred impact on New Mexico downwinders that it is often spoken of symbolically to represent the Manhattan Project/LANL’s history of secrets. ‘Trinity’ has become a kind of palliative shorthand for nuclear waste, ruin, and human rights abuses. In fact, Trinity was not the last occasion LANL conducted undisclosed blasts. For the next two decades (until 1962) LANL conducted less monumental canyon detonations known as RaLa (Radioactive Lanthanum) experiments, which were not plutonium tests, but nonetheless were highly radioactive. RaLa tests were airborne experiments conducted only on blustery days when high winds picked up fall-out. The fall-out was directed away from the residences of LANL scientists towards communities (still in LANL reports called “generally nonpopulated areas”) of Native Americans.

Furthermore Native Americans were later employed cleaning up debris from the experiments, without having been informed of the wisdom of radioactive protective gear. The shock of having been kept ignorant of the blasts—whose acknowledgement only occurred as late as 1994—caused considerable bad blood, enhancing feelings among Native Americans of institutionalized paternalism *vis-à-vis* LANL.

The scientists at LANL initiated and oversaw many Cold War plutonium tests and data collection studies conducted across America on unwitting subjects. *The Plutonium Files*, by Eileen Welsome (1999) records many incidents of Manhattan Project data collection studies at various hospitals across the United States in which subjects received doses of radioactive iron. Easily thousands of Americans were test subjects. In one study at Vanderbilt University (1945-49) 829 pregnant women were given radioactive drinks. From 1946-53, students at a Massachusetts school for retarded boys were given daily doses of radiation mixed into breakfast foods. President Clinton released documents detailing the tests in 1993.

From 1959 to 1980, LANL operated an undisclosed tissue analysis program throughout New Mexico hospitals. Tissue samples useful for the purpose of tracking radioactive exposure were extracted from corpses during hospital autopsies without informing or receiving the informed consent of relatives. LANL settled claims with relatives in 2001. A LANL statement acknowledged wrongdoing, but extemporized “the program was conducted with the best of intentions, and within the legal and ethical standards of the time.”

Representatives of *Las Mujeres Hablan* (The Women Speak), a coalition of New Mexican women seeking global disarmament, would add to the list by underscoring that the Manhattan Project acquired New Mexico lands by wielding an act of eminent domain against tribal peoples and Hispanic villagers. The Manhattan Project “stole” lands, called the appropriated territories, “generally nonpopulated,” and (even LANL acknowledges) contaminated the plant, water, and livestock supplies. The New Mexican Native Americans communities surrounded by unremediated nuclear waste since the Manhattan Project are today cancer ridden—by some estimations demonstrating cancer at seven times the national average. Ironically, cancer was unheard of amongst New Mexico Native American populations before 1945.

Work at nuclear facilities was egregiously health hazardous throughout the 1950s and 1960s,

leading Congress to pair the Radiation Compensation Exposure Act (1990) with an Energy Employees Occupational Illness Compensation Act in 2000. Certain hazardous worker conditions at LANL and elsewhere may have been the result of scientific ignorance; but the *alpha* nuclear facility's culpability is both symbolic and direct. LANL both "birthed" the bomb, and provided the world with a model for parental manipulation—hence ever since the Manhattan Project nuclear facilities have been located in poor areas in which they can paper over environmental hazards by incrementally making nuclear work an economic necessity. It is also worth noting that since Trinity the destructive capacity of the nuclear project has been a cross weightily borne by indigenous populations over the globe.¹ A preponderance of *all* America's nuclear crimes or mishaps resulting from weapons testing have involved studies at LANL and LANL-trained scientists, and the mendacity involved in the land appropriations, the Trinity blast, and covert test blasts throughout the 1950s involving massive radioactive releases fueled a crisis of belief in the possibility of respecting citizen's rights and the machinations of national defense, which burgeoned into the worldwide anti-nuclear movement.

The early 1990s proved watershed years for the American nuclear weapons complex. The Cold War ended; America signed the START I and START II nuclear arms reduction treaties; Congress belatedly recognized stateside nuclear crimes or indiscretions; President Clinton authorized the release of documents regarding Manhattan Project abuses. The crimes and indiscretions reported in this article were generally supported by early 1990s document releases. For a brief, passing moment, nuclear crimes occupied center-stage; the surreal "nuclear uncanny" was certified reality. Despite protracted (or ongoing) court fights, Native Americans, land owners, nuclear workers, downwinders, uranium miners (employed mining uranium needed to produce plutonium) and others have received limited compensation.²

Over a billion dollars have been paid to various claimants, yet few claimants have ever felt "satisfied" when contemplating the human tally. LANL, conveniently, keeps limited statistics on employee health and illnesses, but the Department of Energy reports that approximately 285 million dollars has been paid out specifically to LANL workers in health claims. Those payments may be no more significant than that a door remains open for future health claims.

The 1990s beleaguered New Mexicans with many questions, as revelations cascaded regarding the Cold War abuses. After releasing the incriminating documents President Clinton provided pacification by expressing his commitment to a Comprehensive Nuclear Testing ban, signaling the end of an era of such abuses. The future would be free of large stateside radiation releases and new downwinders—perhaps.³ Did the stories of the past belong to the past? Or should the sigh of relief which accompanied lessened tensions only sharpen the point that LANL's guarantees of present-day safety were built upon foundations of buried history? Narratives of Trinity, Nevada, and high-level radiation exposure suffered by 1950s and 1960s LANL employees were accompanied by (seemingly) less urgent articles on conflicts between LANL and environmental groups over plutonium transportation, waste emission, and such, a comparison which provided an odd sense of relative security. The psychodynamics of pent up tension, relief, the conceptual unfathomability of nuclear fall-out or certain Cold War excesses, compounded by a sense of inevitability in the face of LANL's economic clout collaborated to render historical abuses less meaningful.

LANL's 1990s mission diversified in the sense that its programs expanded to include nuclear energy research and practical applications in medicine. Nuclear weapons caretaking (for the stockpile) and production (meaning the upgrading of Cold War weapons with new warheads and plutonium triggers) consolidated at LANL, during the same decade.⁴ While other programs shut down, LANL became the primary U.S. site of plutonium production. The Cold War's demise suggested a safer New Mexico, yet the amounts of hazardous materials immediately held at the facility increased.

There is more than one way to draw lines from the past to the present, the situation *as is* in the light of pernicious revelations. One line follows along a technological route, and settles on the conclusion given enhanced experiential knowledge that the nuclear weapons-energy complex is clearly less hazardous than it was. Environmental legal disputes indeed prove this point, showing how flaws will be soon corrected. The anti-nuclear movement, however, argues that nuclear production whether of weapons or energy can never be truly “safe.”

Dishearteningly many conflicts with LANL hinge on a pair of quotation marks. The past and the present continually collide in disputes over a definition. “Safety” has become a post-Cold War legal conundrum. The official explanation promulgated by LANL for the extraordinary cancer rates among New Mexico Native Americans is that radiation effects have been benign, while enhanced reliance on processed food among the tribes since World War II has led to diabetes and cancer. Environmentalists point out that LANL’s measurements on the harmful radiation effects are based on crude and outmoded 1950s studies of white men, while for decades LANL has intentionally eschewed updating its studies by performing analyses which would provide information on radiation exposure when experienced by women, other races (such as the majority of the estimated 38,000 Trinity downwinders), and given variables of genetic predisposition and body types. New Mexico activists won a Pyrrhic victory in 2004 when after many lawsuits the Department of Energy issued an order for LANL to complete nuclear waste remediation of decades of rural New Mexican waste by 2014. LANL has (by its own admission) lagged behind the 2014 deadline, now pleading lack of funds to undertake a major land remediation program.

Cases of blatant mismanagement throw doubt upon the seriousness of the nuclear weapons-energy complex’s definition of safety. A major 1994 environmental lawsuit was clinched by a LANL *whistleblower*. An environmentalist group filed suit for extreme violation of radioactive air pollution regulations. The suit prevailed with considerable assistance from an internal LANL engineer who provided evidence detailing LANL’s arbitrary or willful lack of compliance. The whistleblower later stated the primary fault laid in “a human behavior problem,” a culture of “intellectual arrogance” on the part of “division directors, some of whom had been at the Lab since the Manhattan Project, and they weren’t going to allow any external entities to control the future of the program.”

Another major lawsuit over water pollution—levels of chromium in New Mexico groundwater—was resolved in 2007 both by fines and a court order that LANL supply the necessary information for an independent manager to establish a public-access database. This judgment was enthusiastically hailed by Native Americans who envisioned independent analysis of LANL environmental data. The court-ordered database soon collapsed. Five years later the foundation that was acting as database manager issued a statement protesting it “received considerable blowback from LANL,” noncooperation which “jeopardized our ability to be a neutral third-party, as well as maintain our independence from LANL directives.”

Contemporary LANL is rarely featured in the news media, an exception being the 1999 scandal involving Win Ho Lee, a LANL scientist accused of espionage. Lee was eventually exonerated, but the implication of an overwhelmingly white institution’s in-house racism and inherent suspicions of a Chinese employee shadowed the case. In the late 1990s, LANL lost a “glass ceiling” discrimination lawsuit brought by Hispanic workers. In 2005, LANL suffered another whistleblower scandal when an auditor revealed rampant discrepancies in its contracts with the Department of Energy. The auditor, Chuck Montaña states, “The lab didn’t want auditors exposing costs that were unreliable or excessive. Or questionable.” Montaña’s findings of multimillions of excessive contract expenses were corroborated by an independent investigation by the Department of Energy. Montaña views LANL as “a cash cow. There has never been the downsizing of the nuclear complex there should have been in 1992 after the end of the arms race. LANL no longer has its Cold War mission.” Montaña uses a word often associated with the nuclear weapons complex, *hubris*, when he describes decisions

affecting public safety such the 1990s increases in plutonium production. “The waste will be greater, the chances of accidents are going to be greater,” but LANL will evade post-Cold War irrelevance.

The Los Alamos prototype “birthplace of the bomb” also gave birth to the nagging contradictions entailed in stateside proximity to such destructive powers. LANL maintains “national security” yet its relationship with New Mexico environmental groups is essentially adversarial. LANL employs thousands, yet every week newspapers feature advertisements informing former employees (up to as recently as 1994) of their right to file illness compensation claims. Employment at LANL—an inevitability in poor communities including the afflicted Native American tribes which regard LANL as a historical culprit—is a two-edged sword. Generational family and factory yarns soften the edges, yet necessity shackles workers to a relationship of fear of compromised personal safety akin to slavery.

Joseph Masco in the nuclear ethnographic study *The Nuclear Borderlands* defines “the nuclear uncanny” which is “a dulling effect,” a state of suspended tensions “produced by inhabiting an environmental space threatened by military-industrial radiation.” In folklore the uncanny was under the sway of the supernatural; today the nuclear uncanny is adjudicated by lawsuits. Many Americans falsely believe the United States has ratified a Comprehensive Nuclear Test Ban. Rural New Mexicans routinely hear window-shaking explosions (con conversationally known as “bombs”) resounding near LANL property. These are legal detonations of nuclear waste, not “bombs.” Still, each detonation evokes the “buried past” of Trinity, of RaLa downwinders, and of unknown toxins. New Mexico is fire country; summer fires have blazed dangerously near the plutonium tanks and waste sites. In 2011, a massive blaze required every man, woman, and child in Los Alamos to evacuate, leaving New Mexicans wedged between psychological denial and apocalyptic time.

Footnotes

1. The indigenous of the Rongelap in the Marshall Islands, where the United States conducted blasts, today suffer generational immune system vulnerabilities; cataracts; cancers and leukemia; miscarriages, congenital defects, and infertility. Testing conducted by France blanketed French Polynesia and Tahiti. The largest single stateside radioactive toxin release in U.S. history occurred in 1979 in Church Rock, New Mexico, a Navajo town, when a waste disposal pond breached its dam, releasing tons of radioactive water.
2. Many have been disappointed by the complicated route toward compensation. Downwinders, in particular, have felt shortchanged by a patriotic reluctance to sanction their claims. The Radiation Exposure and Compensation Act of 1990 prioritized veterans and worker-related claims. It restricted downwinder eligibility claims to the directly impacted, although many downwind areas appear to suffer inherited susceptibility to cancer. Spouses, children, and grandchildren can sue on behalf of deceased relatives. It furthermore restricted downwinder claims to very specific locales. Perhaps the Act represented a grudging admission by Congress that the 1950s Cold War tests were morally tainted, while safeguarding the dignity of the original enterprise. The surviving Trinity downwinders, and descendants, as well as all downwinders in Idaho have so far been denied eligibility.
3. The UN ratified a comprehensive nuclear testing ban in the 1990s and President Clinton expressed his support in 1996. Nevertheless, the U.S. Congress has never ratified the ban. Several attempts to have the U.S. join the UN ban have been stymied in Congress.
4. The production of replacement nuclear warheads for existent weapons has often been questioned, yet appears to still be permissible under nuclear arsenal reduction treaties, such as the START treaties.