

## Energy Seekers

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Just before dawn on July 16, 1945, scientists unleashed a new terror into the world—what the poet Paula Gunn Allen, a descendant of the Pueblo of Laguna, would later describe as “the light of annihilation.”<sup>1</sup> This first atomic weapon harnessed the energy of a substance created when stars violently exploded billions of years ago. That substance, a heavy metal that came to be known as uranium, was then lodged into the earth’s crust, dormant.

During the Manhattan Project, uranium would be feverishly mined, milled, and enriched. It could then be used to detonate an atomic weapon or further irradiated in nuclear reactors to generate a kind of radioactive twin, plutonium. Either way, scientists were furiously and secretly attempting to fashion a weapon whose destructive force came by splitting atoms, some of the smallest units of matter known to humanity.

Scientists detonated that first atomic weapon in a southern New Mexico desert known as the Jornada del Muerto, a site chosen because it was deemed isolated and uninhabited. Here, a star would explode on earth, cleaving open the dark sky with a burst of light ten thousand times hotter than the surface of the sun—so hot, in fact, that it turned the desert sand into green glass.

Fifty years later, Gunn Allen wrote:

empty land to anglo eye  
though reservation surrounds  
wraps around as hills, peaks  
plain, tufts of grass, sand  
transforms to glass beneath  
vaporized sky  
mountain meltdown<sup>2</sup>

That morning, the desert became a kind of outdoor laboratory. Of course, scientists had already detonated explosive packages in the canyons near the Pajarito Plateau—where J. Robert Oppenheimer had chosen to hide the lab, nearly 250 miles north of the Trinity site. To maintain secrecy, the military used eminent domain to remove Indigenous and *Nuevomexicano* families for a government project they knew nothing about. At least some of those families would then become the Manhattan Project’s main source of manual labor. *That work*—the undisclosed activity that has come to characterize Los Alamos National Laboratory today—began approximately three years before what Gunn Allen came to call “mountain meltdown.”

In those tense, early hours of July 16, before the bomb was set to explode, speakers broadcast dance music, interrupted only by occasional updates on the preparations. By five in the morning, scientists covered their faces in sunscreen, put on dark sunglasses, and laid on their stomachs, waiting.

First came the flash, and then a bright ball of light. The time was 5:29, and so powerful was the explosion that even the instruments meant to measure it ceased to function.

“Finally I could remove the goggles and watch the ball of fire rise rapidly. It was surrounded by a huge cloud of transparent purplish air produced in part by the radiations from the bomb and its fission products,” Kenneth Bainbridge, one Manhattan Project physicist, wrote of the blast. “No one who saw it could forget it, a foul and awesome display.”<sup>3</sup>

“It was like being at the bottom of an ocean of light,” added Joan Hinton, one of a handful of women physicists on the project. “We were bathed in it from all directions. The light withdrew into the bomb as if the bomb sucked it up. Then it turned purple and blue and went up and up and up.”<sup>4</sup>



Local *Nuevomexicanos*—who were neither warned of the blast nor evacuated—feared that the light signaled the end of the world and dropped to their knees and prayed. The same searing light bleached the brown fur of nearby cows white. In the days that followed, radioactive ash rained down from the sky onto crops and water sources. Oppenheimer, for his part, recited a line from the Bhagavad Gita: “Now I am become Death, the destroyer of worlds.”<sup>5</sup>

The desert was not only a makeshift laboratory, then, but also a backdrop for an intense—even life-changing—aesthetic experience. The bomb was monstrous; yet to the scientists who bore clandestine witness, it appeared strangely beautiful. Or rather, it was sublime in the way that philosophers had so ardently attempted to define centuries ago—inciting a sense of “perverse pleasure” that mixes both fear and delight, according to Simon Morley. In conceptions of the sublime, an onlooker is faced with something so truly frightful that it upends the ability to make sense of it, an experience that was itself thought to be aesthetic.<sup>6</sup>

Herein lies the fundamental tension that we’ve faced in this place for centuries: between the aesthetic and the extractive, and between two

different kinds of energy seekers. That is, our arid lands—simultaneously prelapsarian and post-apocalyptic—have been stages for inner reflection and physical transformation, healing and renewal. Yet, to use the words of the great journalist Eduardo Galeano, New Mexico has also been a place of “open veins.”

“Everything, from the discovery until our times, has always been transmuted into European—or later United States—capital, and as such has accumulated in distant centers of power,” Galeano wrote of Latin America. “Everything: the soil, its fruits and its mineral-rich depths, the people and their capacity to work and to consume, natural resources and human resources.”<sup>7</sup>

The same, I believe is true, of this place.

Consider that just decades after Europeans arrived in what they deemed the “New World,” mapmakers depicted this region—then New Spain’s northern frontier—as “Tierra Incognita,” or unknown land. Centuries later, when the US annexed one third of Mexico’s total territory, landscape painters depicted this place as if it were uninhabited. Manifest Destiny was then the “nation’s gospel,” as I have written elsewhere, and it hinged not only on actual displacement—the forced migration of Indigenous peoples and others of mixed descent to make way for white, westward advancement—but also pictorial displacement. Emptiness wasn’t simply emptiness, it signified potential future capital.

A *New York Times* article from the 1860s reflected the sentiment of the era when it promoted the belief that the “Anglo-Saxon race is preeminently the colonizing race; that it has, and always has had, a spirit of adventure, a power of endurance and a general sturdiness of character, that particularly enables it to extend itself over the globe.”<sup>8</sup>

New Mexico, simultaneously, was denied entrance into statehood some four dozen times over sixty-four years—largely because of its so-called “mongrel” population, as some in Congress put it. Thus began the region’s makeover as a desert Shangri-La, an era that saw an intense effort to depict New Mexico for outside eyes. Tourism brochures would be filled with paintings by Thomas Moran, Maynard Dixon, and Ernest Blumenschein, promoting New Mexico as a mystical, light-filled desert that contrasted with the industrial heaviness of America’s metropolitan centers. The newly

minted Atchison, Topeka and Santa Fe Railway even set up its own real estate office here.<sup>9</sup>

Shortly after New Mexico finally became the forty-seventh US state, in 1912, the New Mexico Land Office’s Bureau of Publicity described it “as the Land of Opportunity, beckoning the home-seeker, the permanent investor and the capitalist.” Here, one could find “public lands, agriculture, horticulture, stock raising, coal, copper, gold and other minerals.” New Mexico was ripe for touristic discovery, too, the Bureau went on to say. “Now that [the American tourist] is disbarred from Europe”—likely a result of World War I—“he should turn his attention to this land of antiquities.”<sup>10</sup> New Mexico and the Southwest were christened America’s playground.

This period marked a broader cultural moment of antimodern retreat into New Mexico. Industrialization at home and the Great War abroad had provoked malaise in the nation’s city-dwellers, who then turned to the rural margins to rejuvenate and emulate local populations. “Defined as a withdrawal to the ‘exotic,’” I once wrote, “the pursuit of intense physical and spiritual experience and quest for self-reliance, antimodernism characterized the turn-of-the-twentieth century attitudes of those living through the effects of urbanization.”<sup>11</sup> Artists, health seekers, and at least one psychoanalyst came to New Mexico during this era.

Aldous Huxley was among that wave of interlopers and would base the utopian aspects of his dystopian book, *Brave New World* (1935), on his time in New Mexico. The British writer D. H. Lawrence would call New Mexico “the moon of America.”<sup>12</sup> Yet another writer compared this place to Rip Van Winkle, as if it, too, had fallen asleep only to awaken in another century—so behind the times as to be “the United States, which is not the United States.”<sup>13</sup>

Oppenheimer was also among those early interlopers, first coming to New Mexico not as a scientist but as a tourist. Just out of high school, Oppenheimer traveled to the Southwest for a summer in 1922, spending much of his time at a dude ranch in the Sangre de Cristo mountains. According to his biographers, Oppenheimer had previously been “physically delicate” and “emotionally vulnerable.” But under the “rugged” and “spartan” conditions of New Mexico—the opposite of his New York City home—he transformed into

a gritty outdoorsman. He came back to visit again and again. “My two great loves are physics and New Mexico. It’s a pity they can’t be combined,” he would later remark.<sup>14</sup>

That a traveler could be transformed by time spent in New Mexico wasn’t an uncommon narrative. The same year of Oppenheimer’s life-changing summer trip, Lawrence wrote a travelogue, “The Wilful Woman,” about Mabel Dodge Luhan’s first impressions of New Mexico, as she encountered its “mud boxes” and “church-places” en route from New York City. “Knocked about . . . as if a Penitente herself,” Luhan, an East Coast patron of the arts, had landed in “a country that hit her with hard knuckles, right through to the bone.”<sup>15</sup> The Penitentes Lawrence referenced were a lay Catholic brotherhood in New Mexico who enacted physical penances throughout the Lenten season. Penitentes fascinated these antimoderns—transplants and visitors alike—who had come here looking to be more in touch with their corporeal selves (the modern dancer Martha Graham among them). Graham would even choreograph a dance called *El Penitente* (1940) based on her time in New Mexico.

The Transcendental Painting Group had likewise organized in Taos, seeking to create a new pictorial language of the inner spirit. The movement lasted roughly four years, just as Nazi Germany was gaining power. While abstract in tendency, these painters sought to differentiate their works from European abstraction, hewing instead to more esoteric pursuits. “We are not, like the early masters, religious painters, we are scientific painters,” said William Lumpkins, a founding member of the group. “We are trying to reach beyond the illusory forms of materialism into the reality of form of the immaterial.”<sup>16</sup>

It’s no coincidence that science was then also reaching “beyond the illusory forms of materialism” into the “quantum theory of atomic systems,” as Oppenheimer later described—or, in the words of another scientist, stumbling upon “a quite unexpected and deeply embedded layer of the secrets of Nature.”<sup>17</sup>

In fact, just as antimodernism was reaching its peak in New Mexico, scientists in Europe had discovered that it was possible to split heavy atoms. That revelation “leads me to expect that the element uranium may be turned into a new and important source of energy in the immediate

future,” Albert Einstein wrote in a letter to President Roosevelt in 1939. The President created the Advisory Committee on Uranium soon after.<sup>18</sup>

The process Einstein referenced was called fission, and it would become a crucial phenomenon for the development of nuclear reactors and weapons. Making such a weapon would require splitting “a trillion trillion atoms,” as the historian of science Alex Wellerstein has said, and require thousands of tons of uranium ore.<sup>19</sup>

But before that fearsome technology was harnessed, Oppenheimer, who owned a ranch in the Sangre de Cristo mountains, was chosen to lead the scientific arm of the Manhattan Project. When the search began in earnest for the site in which this research might take place, he thought of the New Mexico high desert where he’d ridden horses, camped, and endlessly explored in his moments of respite. The landscape needed to be open enough for a town, he and others argued. Plus, Oppenheimer wanted a beautiful view of the mountains. Los Alamos, perched on the Pajarito Plateau, became the chosen locale.

It was this collision of art and science—of antimodernism and hyperfuturism—that would create the conditions for nuclear weapons produc-

tion in New Mexico. That is, the greatest scientific minds came here largely because of how tourism boosters had shaped this place in the American consciousness. It was seen as otherworldly, the kind of exotic beyond in which self-actualization was possible. Geographically distant from political centers and big cities, it was thought to be a cloistered environment that healed the mind, body, and spirit. These very same characteristics—domestic, yet somehow foreign—were summoned to rationalize the decision to build a nuclear weapon here. And it was these traits that ultimately served the government-backed imperative for secrecy.

Nowhere is that overlap more obvious than at Ghost Ranch. In fact, Manhattan Project scientists were known to descend into the surrounding valleys and seek respite from their work there—the very same place that artist Georgia O’Keeffe would go to get away from the turmoil of New York. O’Keeffe would later recall the presence of mysterious men with seemingly fictitious names at Ghost Ranch—none of whom she knew, much less the real reason for their presence in the region. It was here that the blockbuster movie *Oppenheimer* was filmed, nearly eighty years later.

Besides the beauty that came with isolation, historian and writer Myrriah Gómez points

out yet another benefit that Army Corps of Engineers Colonel Leslie Groves saw in housing the Manhattan Project here—a “reasonable availability of labor.”<sup>20</sup>

Unbeknownst to him, many *Nuevomexicano* men took jobs at the lab because the work was stable and local. Traveling across the West in search of work as miners, farm hands, and sheep herders had been a norm until then. While the secret laboratory’s location meant that it was possible to stay home the entire year and make a decent living at the same time, it also indelibly bound the local community to the bomb.

This acknowledgment resides in the periphery of our consciousness. And yet, as the fireball rose into the sky that morning in 1945, it was also the outcome of a social contract that has never been truly equitable. New Mexicans’ agency in this unfolding narrative was, to put it differently, challenged by a confluence of factors—a need for labor, advances in science, the reigning trend of antimodernism *and* the persistence of a particular landscape imaginary.

Indeed, this alignment between science and a way of seeing and thinking about this place share in a colonial gaze—one that projects emptiness even as it pursues the sublime. In the realm of aesthetics, such sublime experiences were believed to take place when man faced down the menacing power of nature; or, as artists would represent it, when a supreme spectacle almost annihilates the spectator. That sensation goes beyond words, philosophers believed, and even thoughts. In the end, though, the spectator always walks away transformed. Here, the the scientist played the role of the observer, treating the land as an open canvas for creative acts of destruction.

To be clear, this was no aesthetic exercise. Meaning fractured that morning, and a real-world cost was exacted on the bodies—brown bodies, mostly—that were seemingly erased from the landscape frame. One might call this the beginning of a nuclear world order, one that transformed our consciousness, our lands, and the very cells in our bodies. It divided time into before and after. Some scientists have even proposed that that morning marked the beginning of the Anthropocene, an epoch dominated by humans. According to Gómez, this also marked the beginning of nuclear colonization.

A chain reaction might be another way to describe it. While the lion's share of the uranium for the Manhattan Project came from Belgian Congo and Canada, just five years after that fateful July morning, the first commercial uranium deposits would also be discovered in New Mexico. Of the 261 uranium mines that were developed statewide—twenty-four million tons of ore were mined, for instance, from a place on Pueblo of Laguna tribal lands called Jackpile, in western New Mexico—the most prodigious would go on to make us the fourth-largest producer of uranium in the world. The business was capricious, however. Companies shot up and then shuttered. Towns boomed and busted. All to provide the raw material that powered Cold War nuclear weapons and reactors—and all eventually marring New Mexico's postcard landscapes. Indigenous lands saw some of the greatest degradation and health harms, with little to no recourse.

Today, we are the only cradle-to-grave state for uranium production in the nation: we've mined the raw material for nuclear weapons, produced the bomb cores that serve as detonators, and then put the waste generated back into the ground. And let's not forget that we have one of the largest subterranean stockpiles of nuclear weapons, at Kirtland Air Force Base in Albuquerque.

When Einstein wrote his 1939 letter to the president, what was to come was still a matter of speculation. But he knew, even then, that fission could change the world. "This new phenomenon would lead to the construction of bombs," he wrote presciently. His advice at the time was to seek uranium mines, to seek the energy of stars.

It was to seek, that is, as Gunn Allen later wrote, "the light of annihilation."

- 1 Paula Gunn Allen, "Trinity: 50 Years Gone Return," in *Life is a Fatal Disease: Collected Poems 1962–1995* (Albuquerque: West End Press, 1997), 196–98 (reprinted on pages 152–53 in this volume).
- 2 Gunn Allen, "Trinity: 50 Years Gone Return," 197.
- 3 Kenneth Bainbridge, "1975: All in Our Time: A Foul and Awesome Display," *Bulletin of Atomic Scientists* (May 1975), <https://thebulletin.org/premium/2020-12/1975-all-in-our-time-a-foul-and-awesome-display/>.
- 4 Cited in Ruth H. Howes and Caroline L. Herzenberg, *Their Day in the Sun: Women of the Manhattan Project* (Philadelphia: Temple University Press, 1999), 56.
- 5 Kai Bird and Martin J. Sherwin, *American Prometheus: The Triumph and Tragedy of J. Robert Oppenheimer* (New York: Vintage Books, 2006), 301.
- 6 Simon Morely, "A Short History of the Sublime," MIT Press Reader, accessed April 10, 2025, <https://thereader.mitpress.mit.edu/a-short-history-of-the-sublime/>.
- 7 Eduardo Galeano, *Open Veins of Latin America: Five Centuries of the Pillage of a Continent* (New York: Monthly Review Press, 1973), 2.
- 8 "Can Mexico be Americanized," *The New York Times*, June 16, 1865: 4.
- 9 Keith L. Bryant, Jr., "The Atchison, Topeka and Santa Fe Railway and the Development of the Taos and Santa Fe Art Colonies," *Western Historical Quarterly* 9, no. 4 (October 1978): 438–41. Also see: Marta Weigle and Barbara A. Babcock, eds., *The Great Southwest of the Fred Harvey Company and the Santa Fe Railway* (Tucson, AZ: University of Arizona Press, 1996).
- 10 *New Mexico: Its Resources in Public Lands, Agriculture, Horticulture, Stock Raising, Coal, Copper, Gold and other Minerals, Its Attractions for the Tourist, Homeseeeker, Investor, Sportsman, Healthseeker and Archaeologist* (Santa Fe: State Land Office, Bureau of Publicity, 1916), 10–14, 29.
- 11 Alicia Inez Guzmán, "Connected in Isolation: Land and Landscape in the Greater Southwest" (PhD diss., University of Rochester, 2016), 84.
- 12 D. H. Lawrence, "Indians and an Englishman," in Keith Sagar, ed., *D. H. Lawrence and New Mexico* (Salt Lake City: Peregrine Smith Books, 1982), 2.
- 13 Charles F. Lummis, *The Land of Poco Tiempo* (New York: Charles Scribner and Sons, 1893), xii.
- 14 Bird and Sherwin, *American Prometheus*, 81.
- 15 Lawrence, "The Wilful Woman," in Sagar, *D. H. Lawrence and New Mexico*, 7–8.
- 16 Cited in Jonathan Griffin, "The Artists Who Wanted to Rise Above It All," *Apollo* (November 20, 2021), <https://apollo-magazine.com/transcendental-painting-group-new-mexico/>.
- 17 Robert Jungk, *Brighter than a Thousand Suns: A Personal History of the Atomic Scientists* (New York: Harcourt Brace, 1958), 9.
- 18 Letter of August 2, 1939, from Albert Einstein to Franklin Delano Roosevelt, Atomic Archives, <https://www.atomicarchive.com/resources/documents/beginnings/einstein.html>.
- 19 Alex Wellerstein, *Restricted Data: The History of Nuclear Secrecy in the United States* (Chicago: University of Chicago Press, 2021), 17.
- 20 Myrriah Gómez, *Nuclear Nuevo México: Colonialism and the Effects of the Nuclear Industrial Complex on Nuevomexicanos* (Tucson, AZ: University of Arizona Press, 2022), 36.