ONE Promethean Legacy

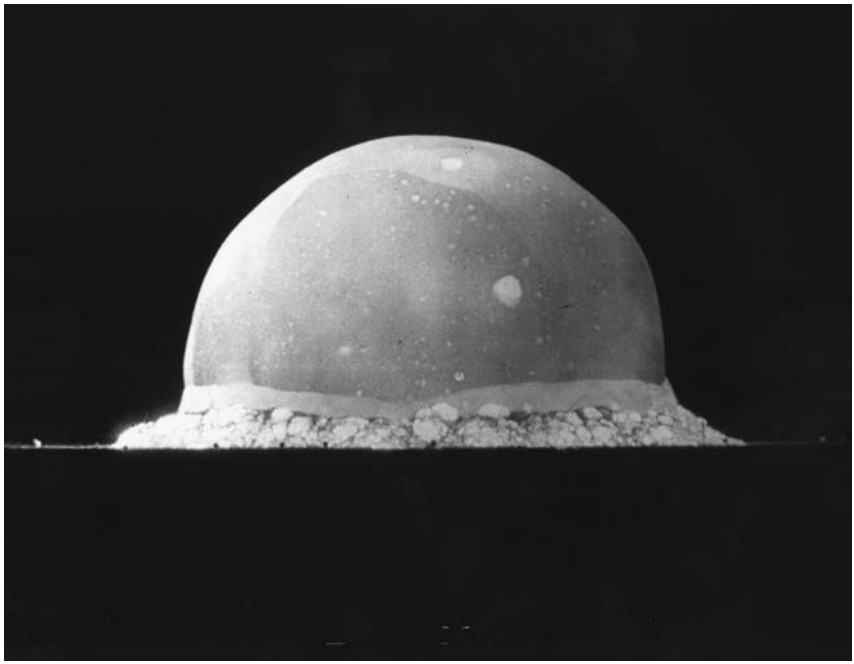

Figure 1. First atomic bomb, .016 second after detonation, 1945. Photo by B. Brixner, courtesy Los Alamos National Laboratory.

Energy fuels life. Like other animals we seek the best ways to capture it and funnel it to our own purposes. Our bodies glean energy from the food we eat. Some half a million years ago, anthropologists say, our ancestors gained control of fire to cook their food and warm their bodies. Maybe the ancient Greeks would have pointed to those long-ago campfires on the African savanna as evidence of the original visit by the mythical Titan Prometheus, who stole fire from the gods and bequeathed it to humans.

But that was only the beginning. The next installment came much later—just 10,000 years or so ago. Somewhere around this time, agriculture emerged. By domesticating plants and animals, we began to funnel more of the sun's energy to people. Our numbers mushroomed.

Ten millennia after that, during the nineteenth and twentieth centuries, the Industrial Revolution opened up the way for us to capture even greater amounts of energy. We began to mine and burn fossil fuels, long sequestered in the earth's crust. We prospered and multiplied as never before. Perhaps Prometheus smiled.

Then, on a midsummer morning in 1945, the most concentrated display of energy ever liberated by humans emerged in a remote New Mexico desert. On 25 July at exactly forty-five seconds past 5:29 A.M. Mountain War Time, a light ten times brighter than the sun materialized from the fading darkness. It bathed nearby mountains in a brilliance never before seen, blinding animals that watched from close at hand and startling others in the distance. Ranchers and farmers on their predawn rounds up to several hundred miles away stopped to marvel at the great light looming on the horizon.

At the source, the earth shook. Within seconds, an intense heat fused thousands of tons of soil into glass. Scientists later would say that all life within a mile perished. Shock waves rolled out in concentric circles. Ten minutes later, the ever-widening pulse of pressure broke windows in Silver City, 150 miles to the southwest. Somewhat prophetically, this awe-inspiring release of energy emanated from the southern New Mexico plain called the Jornada del Muerto, or Journey of Death.

The world's first atomic bomb, our ultimate claim on the gift of Prometheus, had exploded. In the months prior, parts for the five-foot-diameter explosive device, christened the "Gadget," had been constructed

at the top-secret Los Alamos laboratories. Then Gadget and a 240-ton container called Jumbo had traveled south by train to a lonely railroad siding on the sprawling Armendaris Ranch. Machines unloaded Jumbo onto a massive 64-wheeled vehicle, which crawled eastward across the sage and grass to Ground Zero, known ever since as the Trinity Site. Today you can visit the Trinity Site a couple of days each year when locked gates fall open to tourist access.

Less than a month after Gadget ignited, similar devices named Little Boy and Fat Man brought unbelievable havoc to Hiroshima and Nagasaki. World War II ended quickly after that, and scientists started planning peaceful uses for atomic energy.

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I came into the world four years before the explosion of Gadget and the end of World War II. Once the war ended, newly tapped supplies of raw materials, fossil fuels, and nuclear energy, combined with a capitalist arrangement that rewarded inventiveness, propelled Americans into an unprecedented half-century of wealth. My state, Texas, wallowed in oil, another Promethean gift to God's chosen. A unique source of energy important to prosperity then and now, oil catapulted America into the economic leadership of the world. Opportunity trickled down to nearly all.

I grew up in the backwoods of East Texas. Tall trees crowded against our tiny farmstead. Family traditions provided a kind of economic training camp for taking advantage of the wealth conferred by the abundant energy. Parents shaped by the hard times of the prewar depression demanded obedience and considerable effort. Work under prudent guidance could, in that energy-rich time, generate unexpected rewards.

My father introduced me to the theory of relative wealth. If you're well fed and warm, he said, having more things does not make you richer, only snootier. Although he made below the average national income, he felt privileged, I think. Sometimes he spoke of his own father who, still reeling from the Great Depression, had died shortly after my birth. My father sometimes would say, "I wish Daddy could have lived to see these good times."

A peculiar quirk of family dynamics set me off on my career. My father had a tendency to put my brother and me to work if we lay around

the house. Not particularly fond of chores, we plotted escape. We called it "going to the woods." Now I see it as a temporary retreat to the Stone Age. Or more appropriately the Stick Age, there being few stones in our habitat, which many called the Big Thicket.

As a cabinetmaker, Daddy worked away from home during the day, returning in the evenings. Outside our house, within a thirty-second sprint, great beeches and oaks could screen us from view, and when it came time for him to come home we often melted away into the woods. Eventually he built his own shop beside our house. After that, during weekends and school vacations, we sometimes kept to the woods all day to avoid having to sand cabinet doors, add to the store of winter firewood, or weed the front pasture.

Two decades earlier, in leaner times, my father had been forced to drop out of school in fifth grade to help support the family by farming. He never went back to school. We had it easier, my brother and I. Only much later did I realize how much easier, and why.

We played Tarzan and Jungle Jim, discovering a life that our genes recognized as proper. Mama subsidized the vagrancy. She packed sandwiches for longer jaunts and patched shirts we'd torn from overestimating our abilities to leap from branch to branch. Granddaddy and Grandma, who lived up the road the length of a football field away, showed us how to navigate the woods. They took us to dewberries in season, secret plum trees near abandoned homesteads, and fox grapes hanging low on the vine in the pinewoods hills. We had space, my brother and I, a privilege now lost to most Americans and indeed most humans. Woods stretched endlessly, the biggest chunks open to our explorations because of absentee owners, or tolerant ones.

For one dollar a year Granddaddy leased from Kirby Lumber Company three thousand acres of open pine forest a few miles beyond the hardwood habitat that closed in around our house. On this tract he ran cattle and wild woods-hogs. Once we grew old enough and gained possession of twenty-two–caliber rifles, we followed him. We gloried with him in his cows, which he called to feed with a far-reaching yodel, and we helped him harvest two-hundred-pound hogs that he'd rounded up as piglets and earmarked—the standard way of claiming ownership of free-ranging pork.

I decided to live this way forever. Eventually, and against all apparent odds given the history of industrialized man, it began to seem possible. As high school neared its end, I discovered that Texas A&M College, three hours' drive to the west, offered a curriculum in wildlife management. My parents and teachers did not seem to care what the subject of study was, only that I break the local code and go beyond high school. I built a dream of the future: to get paid to return to the woods and live among the animals.

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Taught for eighteen years the credo of rural East Texas, I had no notion when I left home that my values would change. Gradually I circled farther and farther from the security of home, entertaining new notions, questioning the old. Changes came slowly for me, imprinted as I had been onto a primordial existence in the woods. And unlike some on the journey from home, I clung to the most basic beliefs that instructed survival. One in particular that my father taught has stayed with me through the years: *Be careful who you believe.*

He is dead now. In retrospect, I see him as a natural skeptic, never fully comfortable with organized religion, the Freemasons who drafted him later in life, or the herd behavior of neighbors at the polls. *Be careful who you believe.*

One of my teachers in high school and the best ones at university phrased my father's philosophy another way: Question dogma. To question dogma in my younger years would have contradicted the obedience that worked well then. Probably obedience was a good arrangement for us youngsters. Given the risks that hovered over kids running wild in the woods, doubting the adults wasn't the best way to survive. But as I get older, dogma seems more and more in need of questioning.

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In wild animals, there comes an age when the young get restless. Their blood chemistry changes, their hormones surge, the closeness of birthplace begins to suffocate. The offspring, particularly the males, fall out with the parents. They leave home, sometimes at high speed with the elders in

chase. Biologists call this dispersal. By no accident, it coincides in time with entry into sexual maturity.

The human animal proves no different. We become restless as our bodies blossom in the teenage years. Daughters squabble with mothers; sons squirm under the rule of the old man. We leave if we can afford it, searching for new meaning and like-minded strangers, particularly those of similar age and opposite sex. The dispersal urge hit me especially hard.

In the wide world beyond home lurk those who would prey on dispersing youth. Army sergeants love teenage recruits—malleable, impressionable, looking for a place to fit in. The magnetism of universities and the social unrest they generate likewise reflect the search for the new, the rejection of the old. The search does not always proceed sensibly, said the late philosopher Eric Hoffer, who after World War II saw many young people become True Believers under the tutelage of social and religious extremists. Being born in a fortunate place and circumstance, I avoided the less desirable of the evangelists and at dispersal age set off for college.