Dangerous Boy

Tom Litster

Trinity atomic bomb test, July 16, 1945

"Deep things in science are not found because they are useful; they were found because it was possible to find them."

— J. Robert Oppenheimer

A Star is Born

> "You might well ask why people with a kind heart and humanist feelings would go and work on weapons of mass destruction."
>
> —Hans Bethe, Director of the Theoretical Division, Los Alamos

1939. Eminent physicists have been peering into the atom. They are interested in splitting it. "Fission" is an exciting new word. Getting lots of neutrons to behave in the right way at precisely the right millisecond might result in a chain reaction, and a tremendous bang.

Three of those physicists happen to be in Chicago and are having conversations. Leo Szilard, former student of Albert Einstein who came to America to keep away from German fascists, and who believes a very big nuclear chain reaction is possible, and dreams of nuclear-powered rockets that will one day fly us away from Earth. Enrico Fermi, an Italian physicist with a Nobel Prize, who is onto something specific about getting chain reactions to actually work. Isidor Isaac Rabi (I.I. to his friends), a Polish Jew who came to America as a child and did not know the earth revolved around the sun until he read it in a library book.

It's possible to imagine one of their conversations as something like this (imagine it as "three physicists walk into a bar" if you wish, although this will be no joke):

Enrico cups his hands, nods toward the street, and matter-of-factly remarks, "A little bomb like this and it will all disappear."

Leo is alarmed and declares, "This should be kept secret. Enrico waves him off with a word, "Nuts!"

I.I weighs in, “Why nuts?” Enrico explains, “There is a remote possibility that neutrons may be emitted in the fission of uranium, and perhaps a chain reaction can be made.”

Leo remains alarmed, “What do you mean by remote possibility?” Enrico clarifies, “Well, ten per cent.”

Now I.I. is also alarmed, “That’s not a remote possibility if it means we all die.”

In California, a skinny professor named J. Robert Oppenheimer (“Oppie” to his friends), who is an exquisitely intelligent theoretical physicist with deep interests in philosophy and poetry, and who seems to grasp the important problems, has sketched a crude drawing of an atomic bomb on his office blackboard. He already has a pretty good idea what a big bang it would make.

JULY 16, 1945. It’s not quite dawn in a remote desert valley of New Mexico, Jornado del Muerto, which roughly translates as Journey of Death. It’s a test site not far from the Los Alamos Laboratories of the Manhattan Project, the most secret project ever undertaken by the US government. Robert Oppenheimer is the Scientific Director, despite misgivings of the Army general in charge. “The guy has no grasp of military procedure. Christ, he doesn’t even understand baseball. But somebody has to design the damn bomb. This guy can design a bomb.”

Robert Oppenheimer putting the final touches on the Trinity bomb.

At the site of Los Alamos Boys School in New Mexico’s high desert, a secret town of 6,000 people, including families, has spread across 46,000 acres including roads and the right of way for power lines. Enrico, I.I., and Leo are key physicists. Albert Einstein and Neils Bohr have paid visits and been consulted. Humanity’s first weapon of mass destruction—the atomic bomb—has been designed and

developed. Oppie has chosen Trinity is the name for its first test. Possibly in reference to Brahma, the Creator; Vishnu, the Preserver; and Shiva, the Destroyer; though others will say it is a reference to a John Donne poem.

The plutonium core of the bomb, code-named Little Boy, was driven from Los Alamos, the former boys school, in the back seat of an Army sedan. It's the heart of a bulbous, hand-made contraption bolted together through pipe fittings and sitting atop a 100-foot tower that could be an over-sized child's tree house. Some parts are simply taped on. A baffling maze of wires dangles from it. Inside, the energy of the stars awaits a spark. The ground directly below the tower has been code-named Zero.

A thunderstorm is passing over. I grew up in the southwest desert country and I know these summer storms. They smell of creosote and greasewood and wet rock. It's the smell of promise. You might even think it comes from God and wonder if heaven has touched earth.

Scientists are in bunkers, soldiers in trenches with radio transmitters so they will know when to duck. VIPs from secret government committees came by bus from an Albuquerque hotel where they had steak dinners and cocktails, and have been seated on a hillside far away from Fat Man. They are the project elite—the spirit of modernity in science, industry, warfare, and mastery over nature. They put on darkened goggles. Edward Teller (who will be Stanley Kubrick's inspiration for Dr. Strangelove) applies sunburn lotion just to be safe. In a few moments, they will call on mythos and the language of gods to speak of what they see.

5:45 A.M. Neutrons get knocked loose. A chain reaction multiplies eighty times in millionths of a second. A fireball rises as half of a sphere. According to ancient theologians, the sphere is the perfect form in which to contemplate God, the form into which God made Earth from the void. It's a mythic symbol of completion and unity and the absolute, and of the Universe and spirit versus the Earth and matter. Around Fat Man, a wide circle of desert sand turns into a green glassy mineral never seen before on earth. It will be officially named *trinitite*.

A few people laugh, a few cry, most are silent. Oppenheimer will be famously quoted, "I am become Death, shatterer of worlds." The Technical Director of Los

Alamos replies, “Now we’re all sons of bitches. I’m sure at the end of the world, in the last milliseconds of earth’s existence, Man will see what we have just seen.”

A New York Times science writer, secretly invited to Trinity but told he can’t publish his story until after this secret weapon has been dropped on a city somewhere, will invoke Prometheus breaking his bonds to bring elemental fire to earth. Like a mortal beholding the visage of a god, he will write a hallelujah:

“And just at that instant there rose from the bowels of the earth a light not of this world, the light of many suns in one … Being close to it and watching it as it was fashioned into a living thing so exquisitely shaped that any sculptor would be proud to have created it, one somehow crossed the borderline between reality and non-reality and felt oneself in the presence of the supranatural.”

The rest of America is waking up, turning on radios, or on their way to work when energy immanent in the Universe is brought inside human history. Passengers on a Union Pacific train crossing New Mexico see a greenish light flash across the horizon. A blind girl 120 miles away is startled, and asks, “What’s that?“ Anyone with a decent telescope trained on the moon at that instant had a chance of seeing the milliseconds of fireball faintly reflected on its surface. None of them know that the world has changed and cannot be recalled to a previous state.

No one knows that Hiroshima, a city they probably have never heard of, will become a part of America’s history, and America part of Hiroshima’s history; or that they will collectively huddle under a mushroom cloud in a fear never known before; or that a new geological age, the Anthropocene, will become part of their story and their children’s story, and that a thin layer of plutonium deposited around the planet by nuclear weapons tests will be designated as the geological marker for the new age.

The physicists and the VIPs go back to the Albuquerque hotel. They dance and drink. They congratulate themselves on superb physics, and for doing what others doubted could be done. They have flown closer to the sun than Icarus. It is as close to omnipotent as humankind has come.

The general in charge dispatches a coded message to Harry Truman, who is in Germany trying to “play poker” with Joseph Stalin over the fate of postwar

Europe. The message reads: “Little Boy operated on this morning. Diagnosis not complete but results satisfactory and already exceed expectations.”

TWO DAYS LATER, in the San Francisco harbor, two sailors carry a lead bucket suspended from a crowbar onboard a naval cruiser. Imagine them as midwestern handsome, shirt sleeves rolled high on their arms, listing slightly together under the weight of their load. They have been at war since they were too young to vote. In the bucket is the bullet assembly for a second atomic bomb, still code-named Little Boy.

Enola Gay, the most famous plane of World War II, waits for Little Boy.

The sailors padlock Little Boy to the deck and the USS Indianapolis sets sail to a remote island in the far Pacific, within striking distance of Japan. A specially modified B-29 bomber with a remarkably over-sized bomb bay meant for a single bomb, and able to fly higher than any plane had flown, is waiting on a runway. Its crew has been training in secret for six months. No one else on the air base seems to know why this odd plane and its crew is there, standing apart from all the other bombers that are routinely delivering firebombs to Japanese cities.

The cruiser will slip past a remaining Japanese submarine (their navy has been virtually destroyed at this point in the war). After delivering its cargo, it will set sail for the Philippines and be sunk by the submarine it had evaded. Three hundred of its crew will die in the water of the Pacific, some eaten by sharks. America will regard this as a horror story.

When they hear what Little Boy does to a single Japanese city, in a single instant, America will mostly cheer—the ‘Japs” got what they deserved. When they hear about a second city and the Japanese emperor’s surrender, plainspoken people will celebrate, sailors will kiss their girls, and towns will hold parades.

The Chosen Ones

> "In my mind's eye, like a waking dream, I could still see the tongues of fire at work on the bodies of men."
> — Masuji Ibuse, *Black Rain*

AUGUST 6, 1945. It's a perfect summer morning in Hiroshima. An American weather plane flies over, triggering air raid sirens. No one worries about a weather plane. They know that when American planes come to bomb, they will come in formations of a hundred or more "Bs" (by now nearly everyone in Japan recognizes American B-29 bombers, and simply calls them "Bs").

Weather planes have been flying for several days, looking for a break in the heavy weather over Japan. The pilot of the plane has already radioed to the pilot of the specially modified B-29 bomber that the center of the city and the Aioli Bridge over the Ōta River, the designated aiming point, are in plain sight.

The tailgunner asks the pilot, "Colonel, are we splitting the atom today?"

The Colonel answers, "That's about it."

From 30,000 feet above Hiroshima, Little Boy starts its fall toward what will become a new kind of space in the world: *ground zero*. For forty-three seconds it is slowed by a small parachute, giving the plane time to turn and fly away from the shock wave of its weapon.

Commuters are boarding streetcars. Cyclists are crossing the Aoili bridge into downtown as shopkeepers are opening shops. Children are on the way to schools where teachers wait for them. An entire class of schoolgirls is at work clearing streets for when the "Bs" will come with firebombs (sixty cities have already been burned). People are curious as to why they have not come already. Why have they been spared? Right now, they are curious about why only one plane? and why so high in the sky?

8:15 A.M. For a second time on Earth, barely three weeks after the Trinity test when "there rose from the bowels of the earth a light not of this world," there is a flash of light like nothing ever seen before—a newborn star is directly above them. If not instantly dead, those watching the plane are instantly blinded. In milliseconds the fireball is everywhere. If it is carbon, it starts to burn—buildings burn orange, bodies burn blue. Blackened bodies might be the coals of an underworld, or figures torn from an ancient eschatological text. Shadows on stairs and walls mark where skin, bones, and organs had been less than a second before. They were transmuted into carbon—the ultimate dehumanization.

Carbon shadows on the steps of a bank in downtown Hiroshima (photograph was censored by US Army Occupation Press Code). Each shadow had been a person entering or leaving the bank, or sitting on the steps, at 8:15 a.m.

Try to imagine the unlucky ones not dead before the brain registers pain. They careen into empty space, no longer recognizing anything, or knowing if they are even in the world. Has a supernaturally magical and evil thing ended the world? They are mostly naked, clothes are rags, faces are burned and blistered. Peeled skin hangs from fingers, arms are held away from bodies because it's too painful for skin to touch skin. They are silent except for whispers of "water, please, water." Those who can stand, stagger away from fires and toward one of the seven branches of the Ōta River. Many fall down with a thud, dying one after another. The ones that make it, jump in—among floating bodies, they hope the cool water will ease their pain.

A pyrocumulus cloud of smoke, vapor, bits of buildings, people, trees, and soil rushes into the sky—sixty thousand feet above a congestion of death. It creates its own irradiated rainfall within minutes, falling as thick black drops that stick to

the skin. No one has seen a black rain before today. Mouths desperate for water open to it.

Survivors are at an earthly boundary between living and dead, not sure on which side they will be in an hour or a day. They will turn white from the boric applied to their red burns, and call each other "ghost people." Many will never leave this rubble or the deadly radiation. Those who do will be known among the Japanese as *hibakusha*—"bomb-affected people," and regarded with suspicion because no one understands what happened or this mysterious sickness.

Hibakusha are a people who had not existed anywhere on Earth until this morning, and do not exist anywhere else.

Robert Lifton, an American psychologist and historian, spent two years in Japan trying to understand the experience of being a *hibakusha*. In *Death in Life: Survivors of Hiroshima,* he describes a "death imprint" comparable only to survivors of the fourteenth century plague and twentieth century Nazi concentration camps.

"The death imprint of Hiroshima and Nagasaki survivors is made unique by three aspects of their ordeal: the suddenness and totality of their death saturation, the permanent taint of death associated with radiation aftereffects, and their continuing group relationship to world fears of nuclear extermination. . . . The *grotesqueness surrounding the death imprint* had additional significance: it conveyed the psychological sense that death was not only everywhere, but was bizarre, unnatural, indecent, absurd."

Hiroshima survivor drawing

A *hibakusha* recalling that morning in Hiroshima: "I had a terrible lonely feeling that everybody else in the world was dead and only we were left alive."

Back at Los Alamos, the general in charge calls Oppenheimer with the news: “I’m very proud of you and all your people. Apparently it went with a tremendous bang.” People run through halls and knock on office doors with the news: “It worked! Hiroshima was destroyed!” There are cheers. They make reservations at a hotel in Santa Fe where they will celebrate. But some sit silently, even nauseous, as depression sets in. Far away from Santa Fe, the ‘atomic scientists’ of Nazi Germany have been arrested and confined to a rural estate in England. When they are told the news of Hiroshima, many of them weep.

When the B-29 lands back on Tinian Island, all the personnel line the runway to greet the crew, each of whom are barely twenty years old. There are cheers and beers. The plane’s pilot, Colonel Paul Tibbets, who will become nationally famous for a time, tells everyone the Aioli Bridge “was the best damned aiming point I have ever seen.” That night the only story on the island is that maybe this half-magical weapon, something out of science fiction, means their war will end the next day.

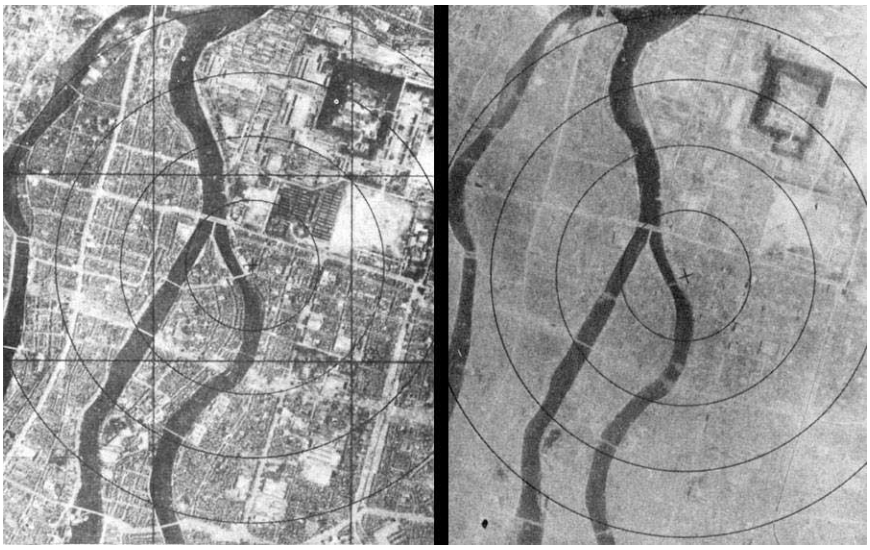
In three days, it will happen again, another starburst above another city. There was Hiroshima, then there wasn’t Hiroshima. There was Nagasaki, then there wasn’t Nagasaki.

After the smoke and fires died down, planes returned for photographs that would document Little Boy’s effectiveness at destroying an enemy’s city. The US government sent out carefully curated photographs to circulate among the press. The photos would allow the public to be spectators riding along with the bombardier. They see a barren landscape where a city’s downtown had been. It was meant to be seen as a field of victory and convey the irrefutable power of a reigning weapon of war.

Within the borders of aerial photographs, a ruined landscape was miniaturized, without any human traces of destruction. Relegated to a netherland beyond view were hundreds of thousands of people, half of them corpses or walking ghosts; people searching piles of bodies hoping to recognize a family member, even bring home a pail of bones hoping it is an older brother, a younger sister, a grandparent; the bodies carried to hillsides and cremated with gasoline; and crows pecking at bodies not burned quickly enough. With a sleight of hand, one

set of experiences replaced another: the “bizarre, unnatural, indecent, absurd” became a necessary sacrifice for peace, and a celebration of the Manhattan Project and its superb scientists.

America had “harnessed the basic power of the universe,” proclaimed President Harry Truman. “What has been done is the greatest achievement of organized science in history.”



Ground zero in downtown Hiroshima, before and after. Peter Schwenger: "Ground zero is itself a somewhat oxymoronic term. Ground melts away at the point of a nuclear explosion, and the figurative ground of our conceptual systems disappears as well, swallowed by the yawning zero."

IN CASE YOU ARE WONDERING why Hiroshima (why drop the bomb at all is an entirely different question).

A secret committee in Washington D.C., which included Oppenheimer, chose potential targets in Japan (Germany had already surrendered, so no chance to drop atomic bombs there). The criteria included “urban populated areas” with at least some military significance (Hiroshima had almost no military significance

and hardly any air defense system); cities that would "most adversely affect the will of the Japanese people to keep fighting;" and cities not damaged by relentless air raids and firebombing—"virgin targets," they were called by the committee. Virgin targets had been deliberately kept off limits to conventional bombing until the atomic bomb was ready. These targets would allow the military to "accurately assess the bomb's effect in an urban environment." The number of "virgin targets" was becoming less every week.

A final criterion (fatal to Hiroshima) was good visual bombing conditions, so as to not waste a rare and valuable weapon by missing the target; and to provide visibility for good photographs of the destruction in order to calibrate the power of an atomic bomb.

The head of the committee circled the chosen cities in red ink on a *National Geographic* map and sent it along to Harry Truman's Secretary of State for urgent final approval. The Secretary did not approve Kyoto. He and his wife had visited the city prior to the war, and they considered it too beautiful for destruction in such a terrible way.

On August 6th, Hiroshima, on the list of 'virgin targets,' had the misfortune of cloudless skies. Visibility was great. A city, a day, and an hour became a story belonging to the world.

BY SEPTEMBER, Americans want to hear from the "atomic scientists" who made this possible. The government schedules a press conference. Journalists favor Oppenheimer in his fedora hat.

"Is there any limit to nuclear weapons?" he is asked.

Oppie answers, "If you ask: 'Can we make a lot of them?' the answer is yes. If you ask: 'Can we make them terribly more terrible?' the answer is probably."

The celebration of our 'atomic scientists' did not last. Photographs of the pyrocumulus clouds over Hiroshima and Nagasaki, nicknamed the "mushroom cloud" within days, became recognized around the world as the visual condensation of limitless destruction. Anyone who saw a simple image of it knew

what to fear: *the end of everything*. A few dozen men with a few dozen planes could—likely would—settle everything.

We were Pascal's thinking reeds who can contemplate the universe and then eliminate ourselves from it.

Art from Ashes

> "Every image of the past that is not recognized by the present as one of its concerns threatens to disappear irretrievably."
> — Walter Benjamin

WHEN THE SINGLE PLANE TURNED and flew away from Hiroshima, the tailgunner snapped a photograph of the world's first mushroom cloud rising almost impossibly quickly until it was higher than the plane. In America (the ones who bombed), the photograph offered an Olympian view, and only asked of us to accept a narrative of triumph and supreme power.

Hibakusha mother and child

On the ground, the ones bombed (the *hibabkusha*) would need a new formulation of self in order to find a bridge back to the world. *Hibakusha* artists turned to fiction, poetry, painting, and film to address their internal ruin and find a symbolic imagery of re-creation. Whatever their medium, they all faced the question of what art can and cannot say about atrocity.

Iri and Toshi Maruki, husband and wife, became the most acknowledged of the painters. The Marukis were living in Tokyo when they heard reports of the destruction of Hiroshima. They left by train to search for family members, arriving three days after Little Boy. They stepped off the train to the stench of

death, maggots, and flies. They walked through black rain that was still falling. Few of their relatives had survived the blast, and Iri's father would soon die of radiation illness. For a month, the Marukis carried the injured, helped cremate the dead, and searched for food and water for survivors.

Before they stepped off that train, Iri was known for minimalist renderings of landscapes and nature, and Toshi for scrupulous studies of the human figure. The infernal slaughter of humans found its way into everything they painted after that. American press photos showed barren landscapes from the bombardier's view. Iri and Toshi wanted to paint what was absent and reconstruct what had been scattered. They insisted on human figures.

"Hiroshima Panel #1: Ghosts"

They began painting collaboratively on large murals of multiple sections. "Ghosts," the first of what would become the *Hiroshima Panels*, represent survivors wandering like vagrants in a landscape they could no longer recognize. Human forms are already somewhere else, bodies not grounded anywhere. There are occasional swirls of color, mostly vermilion depicting the fires of Hiroshima, the fires of Hell. In the stark black of sumi ink and charcoal, figures appear in brush strokes boldly applied in one part, and in another

"Floating Lanterns"

part, nearly vanish to nothingness. Upended trees are mixed with the remains of mothers and children.

In "Floating Lanterns," life-giving water is a current for floating the dead. In an elegy for the bodies that filled the Ōta River, lanterns float without perspective. Each lantern encloses a human reminder.

The Marukis completed 15 *Hiroshima Panels* with eight distinct Japanese-screen/scroll style sections. The average size is six feet by twenty-four feet. They depict a world scorched by disaster and acknowledge a grief that is always nearby in the soft parts where the wound was. They also painted large-format murals of the atrocities of the Japanese army in China, the Japanese abuse of Korean laborers and American prisoners of war, and the horror of Auschwitz. They painted a slaughter-bench of history.

When Iri and Toshi opened a permanent gallery for their work in Tokyo in 1967, an elderly *hibakusha* woman visited and said, "These are our paintings." Remembrance was her defense against the oblivion Little Boy almost succeeded in establishing, and a barrier against the loss of human significance.

In 1995, Iri and Toshi Maruki were nominated for the Nobel Peace Prize, and Iri died (both had developed health issues related to the radiation of Hiroshima). They have been internationally recognized, and their murals have been shown in more than 20 countries. In 2015, American University in Washington D.C. hosted an exhibit that included artifacts collected from the debris of Hiroshima and Nagasaki, as well as six folding screens from the *Hiroshima Panels*.

Today, the *Hiroshima Panels* are exhibited in the Hiroshima Peace Museum. More than seventy years from when atomic bombs fell on two cities, these paintings are still an opportunity for us to imagine an undertow of grief ambushed by history, and to break the silence surrounding the atrocities that are omitted from our myths about war.

In nearby Hiroshima Peace Park, under a large mound of grass is a hollowed-out space containing a collection of porcelain cans on shelves. Each one holds the ashes of a single victim of Little Boy, a name is inscribed on the side of the can.

Behind curtains are dozens of wooden boxes containing unclaimed ashes of seventy thousand unidentified victims. These ashes are emblematic of a breakdown of the human matrix, and impaired mourning as a consequence.

The Marukis' scorched world and its ghosts, along with the simple, unpolished drawings by the survivors (painter and critic John Berger called them "screams from hell") can remind us of the risks inside "the deep things in science." Once realized, there were horrific consequences. Hardly a painterly past, these images inform our present. The Bomb is still a political currency in a postwar world order of 'superpowers' it created. We are all *hibakusha*—"bomb-affected people."

Hiroshima Panels, Iri and Toshi Maruki

Epilogue

> "The Bomb was one of those categories of Being, like Space and Time, that, according to Kant, are built into the very structure of our minds, giving shape and meaning to all our perceptions."
> —Paul Boyer, historian

TRINITY ENTERED AMERICAN FOLKLORE. Memoirists, historians, biographers, and journalists described every sight, sound, and smell. It seeded conversations about the future. Screenwriters and novelists tested their limits with the images of fireball and mushroom cloud as a kind of Götterdämmerung. It was violence too great for old symbols and words to hold. The British novelist Martin Amis wrote an essay titled "Unthinkable," in which he observed: "Although we don't know what to do about nuclear weapons, or how to live with nuclear weapons, we are slowly learning how to write about them."

Atomic bombs became hydrogen bombs (Oppenheimer's 'terribly more terrible') and then simply the Bomb. It escaped the bounds of weaponry and became the *nuclear sublime*—a curious consciousness of something in the world that the sublime was supposed to protect us from. Our everyday vernacular had new metaphors for extremity: *going nuclear* and *the nuclear option* for any situation of significance; *fallout* from a bad personal decision or a dust-up between powerful organizations with competing interests; *vaporizing* of something we had thought to be a reliable solid in our life; *meltdown*, a passing moment of temper or the dissolution of a personality. Universally understood metaphors.

Hiroshima escaped the bounds of an event in Japan and became a semi-sacred one in world history. It claimed a place in our cultural memory alongside Auschwitz as an avatar of the unspeakable. The Jews among Hitler's victims and the victims of Harry Truman's decision to drop the bomb ("use 'em as you wish," he cabled to his Air Force commanders on Tinian Island) were marked as morally

distinct. And there was a new type of personage: the "survivor," a hallowed individual who had borne witness to a historically unique horror.

Hiroshima and Auschwitz were sites of "holocausts" (writers more often used that term to describe the potential of nuclear war than to describe the European genocide). America's triumphalist narrative and Truman's boosterism of his scientists and their bomb gave way to morally serious people commemorating that sunny morning. "Hiroshima Day" was promoted (we bombed Nagasaki too), and in the early 1960s there were protests and memorials around the world (Denmark held demonstrations in 45 towns on August 6, 1963).

After the Cuban missile crisis, and a few other near misses, the world realized that another *Hiroshima* could come from the miscalculation of a few government leaders, the miscalibration of one person sitting at the bottom of an ICBM missile silo, or a system malfunction.

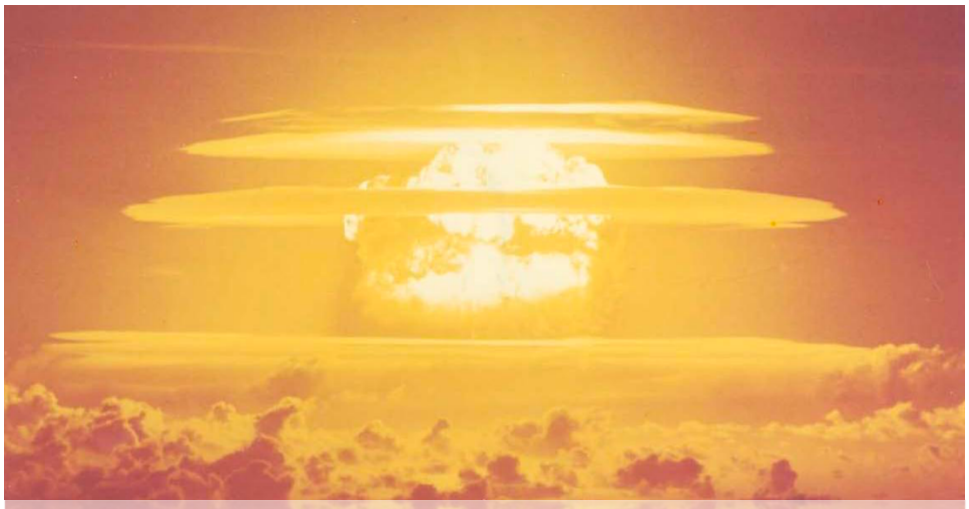
And then we wanted to forget, move on. We were fatigued by the Cold War, and "mutually assured destruction," and the terror. We were tired of being as Susan Sontag characterized us: "The trauma suffered was that from now on to the end of human history, every person would spend his individual life under the threat not only of individual death, which is certain, but of something almost insupportable psychologically — collective incineration and extinction that could come at any time."

We are in an age with an abundance of nuclear weapons but no nuclear memory. A visceral understanding is missing. We go about our daily lives expecting each day to be more or less like the one before it—as did the shopkeepers, office workers, streetcar commuters, children on their way to school in downtown Hiroshima at 8:15 am on August 6, 1945. We would like to think of nuclear war as a bygone terror that no longer terrifies, like polio.

Like fish that only know the water they swim in (water altered almost eighty years ago), something occasionally reminds us of the water by roiling it. Something like a single sociopathic autocrat brutalizing Ukrainian cities and their people, sparing no one in range of artillery and cruise missiles, and reminding us of his 'nukes' in case we think of getting too much in his way. We despair over a global

order being broken. It's largely a geopolitical order created by the Bomb—who has it, and who does not, which is the origin story of being a 'superpower.'

Already we were faced with the slow rolling apocalypse of 'global boiling' and a dramatically altered climate, and now there is this (again). It's enough to make one feel as if they are at the edges of existence, at margins and limits and extremes. We didn't expect this, we say. Yet I did expect it. It is not so easy for me to forget. I still have a visceral memory. I am still haunted by spectral images of the Bomb—the omnipotent destroyer and protector—linking the world together as one big weapon, one global machine with only a few hands at the levers.



"Learn from me, if not by my precepts, at least by my example, how dangerous is the acquirement of knowledge and how much happier that man is who believes his native town to be the world, than he who aspires to become greater than his nature will allow."
—Mary Shelley, Frankenstein; or, The Modern Prometheus