

1945: Dropping the Bomb

Sixty years ago this August, the nuclear age began with U.S. attacks on the Japanese cities of Hiroshima and Nagasaki



SMOKE rises 20,000 feet above Hiroshima after the atom bomb strike, Aug. 6, 1945.



BY SAM ROBERTS

The *New York Times* first referred to an “atomic bomb” in 1914, when it dismissed science fiction writer H.G. Wells’s gloomy prophecy for the 20th century: In his novel *The World Set Free*, published that year, Wells imagined a nuclear holocaust in 1959.

The Times barely mentioned the phrase again for 30 years. Yet during that time, atomic weaponry evolved from nothing more than theories first put forth by Albert Einstein into the devastating bombs dropped on the Japanese cities of Hiroshima and Nagasaki 60 years ago this August.

The advent of World War II had made the quest for the atomic bomb into a nail-biting, if highly secretive, race against time. By the early 1940s, the United States, Germany, Japan, and the Soviet Union were each competing to perfect the ultimate weapon that would win the war—for them.

The U.S. would eventually win that race for several reasons: its single-minded pursuit of the bomb in a



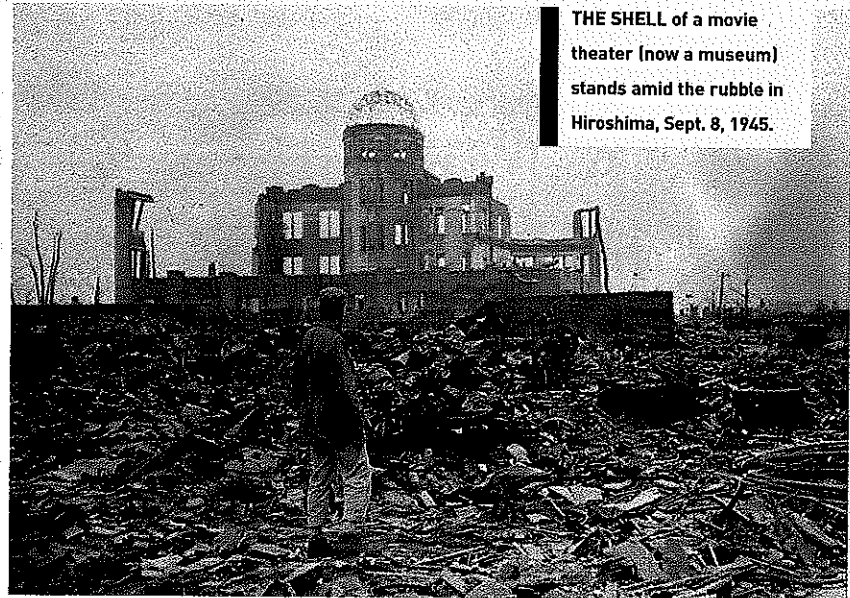
PRESIDENT ROOSEVELT



PRESIDENT TRUMAN



THE PLANE that dropped the Hiroshima bomb and its pilot, Col. Paul W. Tibbets Jr.



THE SHELL of a movie theater (now a museum) stands amid the rubble in Hiroshima, Sept. 8, 1945.

program known as the Manhattan Project; its industrial might; and its partnership with scientists from Britain and Canada, and with scientists who had fled Germany and European countries conquered by the Nazis.

EINSTEIN'S WARNING

Back in 1939, as war loomed, Einstein (himself a refugee from the Nazis) had warned President Franklin D. Roosevelt in a letter about the potential destructive power of a nuclear weapon—and the danger of one falling into the wrong hands.

An unprecedented mobilization followed. Thousands of scientists were recruited to secret cities created in Tennessee, Washington State, and New Mexico—so secret that, while the Germans and Russians suspected the U.S. was working on an atomic bomb, not even Vice President Harry S. Truman was fully informed.

The science of making a bomb was complex and involved figuring out how to unleash the enormous amounts of energy contained in atoms, as Einstein had theorized in his famous

equation $E=mc^2$. Much of the research was conducted at a former boarding school for boys in Los Alamos, N.M., not far from Santa Fe. But before the bomb was completed, Roosevelt died, on April 12, 1945, leaving to Truman the twin burdens of finishing the bomb and deciding whether to use it.

Just before dawn on July 16, scientists and military experts gathered at Alamogordo, N.M., to test whether their theories would actually work. They did. A giant fireball exploded into a mass of dust and gaseous iron, soaring a mile a minute and forming a mushroom cloud. The blast carved a 1,200-foot crater in the desert floor. The blinding light and rumbling sound traveled hundreds of miles.

BATTLING JAPAN

By that time, the war in Europe was over (Germany had surrendered on May 7, without having made an atom bomb), but the war against Japan went on. The Allies were slowly recapturing Japanese-occupied China, Southeast Asia, the Philippines, and other Pacific islands, and the

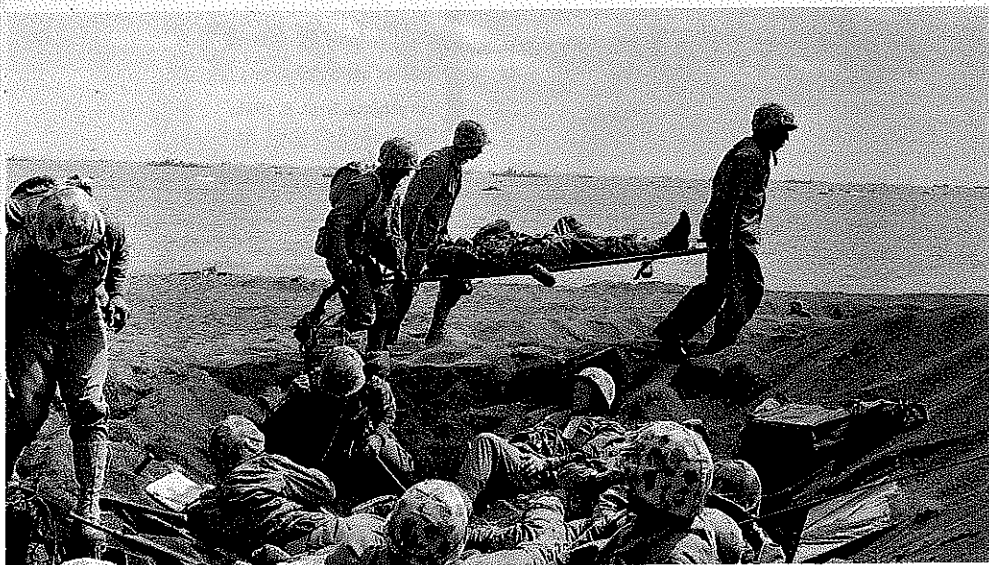


IN NAGASAKI, the day after the atom bomb fell, a boy carried his burned brother.

bloody combat was taking a huge toll.

Most military analysts believed a full-scale invasion of Japan itself would be necessary, and costly. The Truman administration concluded that using the bomb would compel Tokyo to surrender and would spare America →

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MARINES at Iwo Jima, Japan, 1945; Truman said the atom bomb saved lives.

the heavy casualties that would result from an invasion. (See *Debate*, p. 32.)

On August 6, an air-defense alert was sounded in Hiroshima, a city of several hundred thousand people in southern Japan. But only a few planes were spotted, so the all clear was given. Moments later, an atomic bomb—named Little Boy by the U.S. military—was dropped on the city, ushering in a new scientific and geopolitical era.

NAGASAKI'S DESTINY

The War Department said the bomb packed more explosive power than 20,000 tons of TNT, had a destructive force equal to the payload of 2,000 B-29s, and was more than 2,000 times more powerful than any previous weapon. “The force from which the sun draws its power has been loosed against those who brought war to the Far East,” Truman declared.



JAPAN SURRENDERS aboard the *USS Missouri*, in Tokyo Bay, Sept. 2, 1945.

Three days later, a second bomb, called Fat Man, was dropped on Nagasaki, about 200 miles southwest, one of several potential targets that day. *New York Times* reporter William Laurence, who was aboard the plane that dropped the bomb, wrote: “The winds of destiny seemed to favor certain Japanese cities that must remain nameless. We circled about them again and again and found no opening in the thick umbrella of clouds that covered them. Destiny chose Nagasaki. . . .”

The two bombs killed as many as 200,000 people instantly. Many more

died later or suffered unspeakable injuries not only from the fireball and its shockwaves, but also from the largely unknown dangers of radioactivity, which would linger invisibly and doom generations to genetic defects.

On August 15, Japan’s emperor, Hirohito, publicly accepted the Allies’ peace terms because, he said, the enemy “has begun to employ a new and most cruel bomb, the power of which to do damage is indeed incalculable.” On September 2, Japan formally surrendered, ending the war.

‘I WOULD DO IT AGAIN’

Truman, who had wrestled with the decision to use the atom bomb, would write two decades later: “I stopped the war that would have killed a half million youngsters on both sides if those bombs had not been dropped. I have no regrets, and under the same circumstances, I would do it again.”

In the 60 years since, no atomic bombs or their more sophisticated nuclear successors have been detonated in wartime. For decades, the two superpowers, the U.S. and the Soviet Union, sparred politically and even militarily through surrogates, but the strategic balance imposed by “mutually assured destruction” deterred nuclear war.

Today, the “nuclear club” includes at least eight nations. U.S. officials are concerned that the former Soviet Union’s poorly guarded stockpile, or technical expertise supplied by Pakistan’s leading nuclear scientist, could allow terrorists to build or get their hands on nuclear weapons.

H.G. Wells imagined that possibility, too, in his prophetic 1914 book. “Destruction,” he wrote, “was becoming so facile that any little body of malcontents could use it.”