

Sixty years since the Hiroshima and Nagasaki bombings

Part one: Prompt and utter destruction

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The following is the first in a three-part series marking 60 years since the dropping of atomic bombs on the Japanese cities of Hiroshima and Nagasaki. Part two was published on August 8 and part three on August 9.

In the early morning hours of August 6, 1945, an American B-29 warplane, named the *Enola Gay*, rolled down the runway of an American airbase on the Pacific island of Tinian. It flew for almost six hours, encountering no resistance from the ground.

At 8:15 a.m. local time, the plane dropped its payload over the clear skies of Hiroshima, a Japanese city with an estimated population of 255,000. The atomic bomb that the plane was carrying, “Little Boy,” detonated some 600 meters above the city center, killing 80,000 people—30 percent of the population—immediately or within hours of the explosion.

Three days later, on August 9, a similar plane carrying a more powerful weapon left Tinian but had more difficulty reaching its intended destination. After encountering fire from the ground, and finding its target city Kokura covered in clouds, it flew on to its second target, Nagasaki, a heavily industrialized city of about 270,000. Due to the specific topological features of Nagasaki, and to the fact that the bomb missed the city center, the effects were slightly less devastating. An estimated 40,000 people were killed outright.

Over the next several months, tens of thousands more died from their injuries, including radiation sickness caused by the nuclear devices. While exact figures involving such magnitudes are inherently difficult to come by, estimates of the total number of men, women and children killed within four months of the two blasts range from 200,000 to 350,000. Never before had such devastation been wrought so quickly.

The bombs, combined with a Soviet invasion of Japanese-controlled Manchuria on August 8, led quickly to the end of the war in the Pacific. On September 2, the government of Japan signed a treaty with the allied powers that essentially ceded complete control of the country to the American military.

Japan’s surrender, coming four months after the surrender of Germany, brought the Second World War to an end. At the same time, it marked a new stage in the increasingly antagonistic relationship between the United States and the Soviet Union, which had been military allies in the war. Within four years, the Soviet Union acquired its own nuclear weapon, initiating a nuclear arms race that continued for four decades.

The official rationale given by the US government for its use of nuclear weapons in the war has always been that it was necessary to save American lives by avoiding the necessity of an invasion of Japan. After the war, government officials, facing criticism for their decision to use the bomb, suggested that between 500,000 and 1 million Americans, and several million Japanese, were saved by dropping the bombs that completely destroyed Hiroshima and Nagasaki.

This rationale has always been highly suspect, and in subsequent years much evidence emerged demonstrating that not only were the estimated casualty figures from an invasion highly exaggerated, but that the war could have been quickly ended even without an invasion.

While the reasons for the use of the bombs are complex, they center around two interrelated geopolitical aims of the American ruling elite at the end of the war: (1) the desire to limit the influence of the Soviet Union in East Asia by bringing the war to an end before the Soviet forces advanced far into China toward Japan, and (2) the wish to have a physical demonstration of the unrivaled power of the American military, and its willingness to use this power to advance its interests.

The motives behind the decision to use the atom bomb will be examined in detail in the second part of this series. The contemporary significance of this most terrible anniversary—including the recent explosion of American militarism and the push to develop new types of nuclear weapons—will be the subject of the third article.

A new type of bomb

The Potsdam declaration, issued by the Allied powers on July 26, 1945, pledged the “prompt and utter destruction” of Japan if it did not agree to unconditional surrender. For the cities of Nagasaki and Hiroshima, this is certainly what the atomic bombs brought.

By the time of the bombing of Hiroshima, many of Japan’s large cities had been attacked severely by American air power. After the US military had gained control of Japanese airspace, the Air Force began to systematically bomb metropolitan areas, including the devastating firebombing of Tokyo earlier in the year, which killed an estimated 87,000 people. The fact that Hiroshima had so far not been targeted was considered something of an anomaly by its residents, since, in addition to civilian production facilities, the city housed an important military headquarters.

Nevertheless, the bomb caught the people of Hiroshima unprepared. A weather scouting plane had triggered sirens earlier in the morning, but an all-clear signal had been given once it departed. The *Enola Gay* and two planes that were accompanying it were assumed to be more scouting planes, and therefore the alarms were not sounded when they flew over the city.

The blast of the uranium bomb dropped on Hiroshima had the explosive equivalent of about 13,000 tons of TNT. The nuclear reaction in the bomb generated temperatures of several million degrees Centigrade. At the hypocenter, the point on the ground 600 meters below the explosion, temperatures reached 3,000 to 4,000 degrees Centigrade, two times the melting point of iron. The intense flash of heat and light, which incinerated everything within a kilometer-and-a-half of the hypocenter, was followed by an enormous shock wave that destroyed most buildings within two kilometers.

The Hiroshima bomb was targeted at the Aioi Bridge, which it missed by about 250 meters. According to one account, the bomb exploded instead directly above a hospital headed by a Dr. Shima: "The Shima hospital and all its patients were vaporized.... Eighty-eight percent of the people within a radius of 1,500 feet died instantly or later on that day. Most others within the circle perished in the following weeks or months." [1]

Those close to the hypocenter were instantly incinerated without leaving behind a trace, except for perhaps a shadow on a wall or street where their bodies had partially protected the surface from the initial flash of heat. One author notes that those closest to the blast "passed from being to nothingness faster than any human physiology can register." [2]

Those slightly farther from the center of the explosion did not die immediately, but suffered from severe third-degree burns all over their bodies, in particular to any areas that were exposed directly to the heat. They suffered a period of intense pain before dying of their injuries. Those who witnessed the explosion and survived invariably describe these victims in the most horrific terms.

A doctor who had been on the outskirts of the city when the explosion occurred wrote about what he saw as he rushed in to help the victims. He explained how, as he approached the city center, a "strange figure came up to me little by little, unsteady on its feet. It surely seemed like the form of a man but it was completely naked, bloody and covered with mud. The body was completely swollen. Rags hung from its bare breast and waist. The hands were held before the breasts with palms turned down. Water dripped from the rags. Indeed, what I took to be rags were in fact pieces of human skin and the water drops were human blood.... I looked at the road before me. Denuded, burnt and bloody, numberless survivors stood in my path. They were massed together, some crawling on their knees or on all fours, some stood with difficulty or leaned on another's shoulder." [3]

The description of disfigured people with "skin hanging down like rags" is common among those who survived to tell what they saw. Many saw people roaming the streets, in intense pain, often blind from the burns or deaf from the explosion, with their arms stretched out in front of them, "with forearms and hands dangling ... to prevent the painful friction of raw surfaces rubbing together," [4] some "staggering like sleepwalkers." [5]

Perhaps thousands died in this way. A doctor named Tabuchi described how, "all through the night," hundreds of injured people "went past our house, but this morning [August 7] they had stopped. I found them lying on both sides of the road so thick that it was impossible to pass without stepping on them." [6] One survivor wrote how he witnessed "Hundreds of those still alive ... wandering around vacantly. Some were half-dead, writhing in their misery.... They were no more than living corpses." [7]

Many of those who did not die immediately sought to find their way to the rivers or reservoirs to seek relief from the burning pain. A survivor describes how he "saw that the long bank of the river at Choju-En was filled with a large number of burned human beings. They occupied the bank as far as the eye could see. The greatest number lay in the water rolling slowly at the mercy of the waves," having drowned or died at the bank's edge. [8] Another doctor, Hanoka, described how he "saw fire reservoirs filled to the brim with dead people who looked as though they had been boiled alive." [9]

Much of the city within several kilometers of the blast's center was completely destroyed. Buildings that were not flattened by the explosion itself were consumed in the ensuing fire that engulfed the largely wooden homes. Many who were trapped when their homes collapsed over them died in this fire.

Dr. Hachiya writes, "Hiroshima was no longer a city, but a burnt-over prairie. To the east and to the west everything was flattened. The distant mountains seemed nearer than I could ever remember. The hills of Ushita and the woods of Nigitsu loomed out of the haze and smoke like the nose

and eyes of a face. How small Hiroshima was with its houses gone." [10]

Within a week of the explosions in both Hiroshima and Nagasaki, most of those who had been severely injured had either died or were beginning to recover. However, it was at this point that thousands of patients unexpectedly began to experience "sudden attacks of high fever which had risen above forty degrees Celsius.... And then they began to bleed from their mucous membranes and soon spat up quantities of blood.... It was also at this time that an uncanny form of depilation, or hair loss, began among the survivors. When patients raised their hands to their heads while struggling with pain, their hair would fall out with a mere touch of the fingers." [11]

This was radiation disease caused by the nuclear reaction, which emitted enormous quantities of gamma rays. At the time, however, doctors in the city had not yet learned about the peculiar nature of the bomb dropped over the city, and speculated that the population was suffering from a wave of dysentery, or perhaps chemical poisoning from something released by the bomb.

A British medical report explained that the radiation released from the explosion did not destroy the cells in the bloodstream, but attacked "the primitive cells in the bone marrow, from which most of the different types of cells in the blood are formed. Therefore serious effects begin to appear only as the fully-formed cells already in the blood die off gradually and are not replaced as they would normally by new cells formed in the bone marrow.... As red cell formation ceased, the patient began to suffer from progressive anemia. As platelet formation ceased, the thin blood seeped in small and large hemorrhages into the skin and the retina of the eye, and sometimes into the intestines and the kidneys. The fall in the number of white cells ... in severe cases lowered resistance, so that the patient inevitably fell prey to some infection, usually spreading from the mouth and accompanied by gangrene of the lips, the tongue, and sometimes the throat.... Deaths probably began in about a week after the explosion, reached a peak in about three weeks and had for the most part ceased after six to eight weeks." [12]

The radiation disease affected those nearest the blast most severely. However, it left profound psychological scars on many of those who survived, constantly tormented by the thought that, though healthy today, they too could succumb tomorrow.

The above description is derived primarily from testimony of survivors of the Hiroshima bomb. However, the effects in Nagasaki were similar. The Nagasaki bomb was dropped before the full devastation of the Hiroshima bomb had become widely known. The day of the bombing was pushed up to August 9 from August 11, because of poor weather forecasts for the latter date.

Nagasaki had long been a principal port and one of the most beautiful cities on the Japanese island of Kyushu. Its main industry was shipbuilding, which made it a target for the second bomb. The bomb exploded over the suburb of Urakami, home to what was then the largest cathedral in East Asia.

While there were many atrocities committed during the Second World War, the bombings of Hiroshima and Nagasaki were undoubtedly two of the greatest single acts of wanton destruction, in which the lives of hundreds of thousands of people, mainly civilians, were wiped out. They are events that should not be allowed to slip from the memory of working people around the world—a testament to the ruthlessness and destructive capacity of American militarism.

To be continued

Notes:

1. Wyden, Peter. *Day One: Before Hiroshima and After*, Simon and Schuster: New York, 1984, p. 253.
2. Frank, Richard. *Downfall: The End of Imperial Japanese Empire*, Random House: New York, p. 265.
3. Hida Shuntaro. "The Day Hiroshima Disappeared," in *Hiroshima's*

Shadows, edited by Kai Bird and Lawrence Lifschultz, The Pamphleteer's Press, Stony Creek, Connecticut: 1998, p. 419.

4. Hachiya, Michihiko. *Hiroshima Diary*, The University of North Carolina Press, Chapel Hill: 1955. p. 4.

5. Frank, p. 266

6. Hachia, p. 14.

7. Okabe, Kosaku. "Hiroshima Flash," in *Hibakusha: Survivors of Hiroshima and Nagasaki*, Kosei Publishing Co., Tokyo: 1986. p. 35.

8. Shuntaro, p. 419.

9. Hachiya, p.14.

10. *Ibid.*, p. 8.

11. Shuntaro, p. 428.

12. Frank, p. 468.



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