Hiroshima Study Guide

Hiroshima by John Hersey

BOOKRAGS

Contents

Plot Summary

On August 6, 1945, at 8:15 AM local time, an atomic bomb detonated over the city of Hiroshima, Japan. Estimates suggest that over 100,000 people died, tens of thousands were never recovered. Roughly ¾ of the people died within hours, most of the remainder within days or weeks. Approximately 40,000 people were injured. Nearly 80% of the city's 90,000 houses were destroyed; the heat at the point of explosion was estimated to be 6,000 C. The explosion was followed by a second atomic detonation at Nagasaki, Japan. Together, they effectively ended World War II.

The book considers the lives of six individuals and is set against the wider backdrop of the aftermath of the explosion. As originally published in 1946, the book contained four chapters. Chapter 1 related the events occurring at the moment of detonation. Chapter 2 considered the day of the explosion. Chapter 3 considered the following week. Chapter 4 discussed the following months. In 1985, the book was republished with an additional chapter. Chapter 5 considers the personal history of the six survivors from the vantage point of several decades.

Toshiko Sasaki was working as a clerk on the day of the explosion. She was immediately buried under a mountain of falling books and debris and remained buried for many hours. Her leg suffered compound fractures, and she was initially considered beyond medical assistance. For several months, she was transferred between various facilities until her leg healed without being set. After the war, she was comforted and educated by Father Wilhelm Kleinsorge. She was eventually baptized, entered a convent, and later took her vows. She subsequently lived a life of quiet and profound service to others.

Dr. Masakazu Fujii owned a private hospital that was destroyed by the explosion. He suffered from a broken clavicle and ribs and quickly retired to the countryside to recuperate. After the war, he developed a successful practice and focused on healing through the pleasure principle—always indulging his passions. In his older age, many viewed him as stubborn and withdrawn. In 1963, he hosted a party and then went to his room where—perhaps accidentally—he suffered brain injury from sleeping with a gas line running open. He spent the next approximately decade in a coma and then died.

Hatsuyo Nakamura was a widowed mother of three. They were at home when their house was destroyed by the atomic bomb. She dug her three children from the rubble, and they escaped to a park. In the subsequent years, she suffered calamitous health failures due to radiation sickness and eked out a subsistence living for her children by performing odd jobs. She eventually worked in a factory and recovered her health. Although she suffered several hospitalizations, she successfully raised a family under appalling conditions of devastation and poverty.

Father Wilhelm Kleinsorge was a priest at the mission home at the time of the detonation. He spent the next several months and years providing what service he could to others in need. After the bombing, he suffered profound health complications

from radiation sickness and was hospitalized frequently, once spending an entire year under medical care. His ceaseless service garnered hundreds of baptisms and dozens of weddings. As he got older, his health continued to fail until he died under the watchful care of his friends.

Dr. Terufumi Sasaki was a surgeon at the Red Cross Hospital on the day of the detonation. He spent the ensuing days and weeks offering first aid and medical treatment to the thousands of survivors. Haunted by the images of the atomic holocaust, he eventually retired to a small community and provided medical services. His practice gained huge popularity and within several years, he was rich and prosperous, if somewhat eccentric. He also suffered health complications, including the loss of a lung due to cancer.

Reverend Kiyoshi Tanimoto was a Christian advocate who suffered little immediate physical harm from the detonation. He spent the next days and weeks in tireless service to others until nearly collapsing from exhaustion. In later life, he suffered some health complications from radiation sickness but was largely able to prosecute his goals effectively. He traveled extensively throughout the United States on several tours, garnering support for Hiroshima survivors and anti-nuclear weapon groups. Although he was later marginalized as unreliable or self-seeking, he was largely successful in his life's goals.

A Noiseless Flash

A Noiseless Flash Summary and Analysis

On August 6, 1945, at 8:15 AM local time an atomic bomb detonated over the city of Hiroshima, Japan. Estimates suggest that over 100,000 people died, tens of thousands were never recovered. Roughly ¾ of the people died within hours, most of the remainder within days or weeks. Approximately 40,000 people were injured. Nearly 80% of the city's 90,000 houses were destroyed; the heat at the point of explosion was estimated to be 6,000 C. The explosion was followed by a second atomic detonation at Nagasaki, Japan. Together, they effectively ended World War II.

An atomic bomb was detonated over Hiroshima, Japan, in the morning of an early August day in 1945. Thousands of people were instantly killed, and tens of thousands were maimed. Toshiko Sasaki, Dr. Masakazu Fujii, Hatsuyo Nakamura, Father Wilhelm Kleinsorge, Dr. Terufumi Sasaki and Reverend Kiyoshi Tanimoto were among those who experienced the world's first military atomic detonation. Although the text considers other individuals, the six indicated people are the principle actors throughout the concise volume. After a brief general introduction, the remainder of Chapter 1 is divided into six paragraphs, each one examining an indicated individuals. The chapter focuses on the moment of the detonation.

Reverend Tanimoto was "a small man, quick to talk, laugh, and cry." He wore his hair parted in the middle and long. His face had a wise yet fiery look, and his movements were usually nervous and fast. He was, nevertheless, considered to be a cautious and thoughtful man, and had attended Emory College in Atlanta, Georgia, graduating in 1940. He spoke excellent English and usually dressed like an American. Tanimoto's family had been spending nights in a distant suburb to avoid the possibility of aerial bombing. Thus, Tanimoto was alone in the parsonage on the morning of the atomic detonation. Tanimoto had recently heard of massive bombardments in other Japanese cities, and waited with dread for Hiroshima's probable fate. Most nights, the massed bombers used Hiroshima airspace as an assembly area, thus air raid warnings were frequent. Besides sending his family to the suburbs, Tanimoto had spend considerable time moving valuables from the parsonage and his dwelling to more-remote, hence probably more-safe, locations. As the chairman of the local tonarigumi, Tanimoto was well-informed and positioned. As part of his responsibilities, he was helping a neighbor move some belongings early on the morning of the atomic detonation. Tanimoto and his neighbor were moving the belongings through the center of Hiroshima when air raid sirens sounded. When the sirens ceased and the all-clear was sounded, Tanimoto and his neighbor had moved some distance up a valley to the house of another man, their ultimate objective. After they paused for a rest, a brilliant white flash filled the sky. It was so bright that it seemed a sheet of sun. Tanimoto, 3,500 yards from the blast center, leaped between two large boulders in a nearby garden while his friend ran into the house. Moments later, a concussive wave flattened the house and most of the neighborhood. Twenty miles away, a fisherman friend of Tanimoto saw the giant flash

and heard a tremendous explosion. Tanimoto eventually stood and staggered into the street where he saw numerous people and soldiers walking around with bleeding and sometimes grievous injuries. Huge clouds of dust arose everywhere and started to blot out the morning sun.

Mrs. Hatsuyo Nakamura was the widow of a tailor. Isawa, her husband, had entered the army shortly after the birth of their third child. She heard nothing from him for years and then received a telegram of his honorable death. For many years, Nakamura had provided for her family by using her husband's sewing machine and taking in piece work. The night before the atomic detonation, Nakamura had heeded an air raid warning and taken her three children and hiked for many miles to a safe assembly area. Before dawn, she had returned to her Hiroshima home with her children. When the morning air raid sirens sounded, she and her children were too tired to once again make the trek to presumable safety. Instead she consulted the chairman of her tonarigumi and decided to ignore the warning. She later fed her children breakfast in bed and then watched her neighbor continue the noisy demolition of his house. The house was inside one of the many proscribed fire lanes and had been ordered dismantled and removed. As she watched her neighbor, the very air turned brilliant white. She took one single step toward her children's room before the atomic detonation concussion—1,350 yards away—threw her body through the air and demolished her house. She extricated herself from the rubble and began to search for her children somewhere underneath the remains of the structure that had once been their home.

Dr. Masakazu Fujii was prosperous and hedonistic, enjoying expensive whiskey and many late mornings. Fifty-years-old, he was gregarious, popular and established. Fortunately, however, on the morning of the atomic detonation, he arose early and escorted an acquaintance to a local rail station. Dr. Fujii's privately-owned and operated small hospital was located on the bank of the Kyo River and his bedroom was in a portion extending over the water. Having returned from the train station, Fujii sat and read the morning paper on his porch. There he saw the sky turn brilliant white—as he rose to his feet the concussive blast—1,550 yards distant—knocked his entire hospital over and into the river. Fujii was also thrown into the river where he was pinned by concrete beams. Fortunately, his head was above the surface of the water.

Father Wilhelm Kleinsorge of the Society of Jesus, was a German priest. At thirty-eight years of age, he was thin with a hollow chest and dangling hands and big feet. He had been experiencing a prolonged bout of illness and, coupled with the stress of rising xenophobic suspicions of foreigners, he was usually tired. Another priest, Father Cieslik, shared many of his physical ills. Kleinsorge had read Mass and prayers in the mission chapel when the air raid sirens went off. After the all-clear signal was sounded, the various priests ate breakfast and then commenced odd jobs. Kleinsorge returned to his room, undressed, got into bed and began reading a newspaper. An incredible flash filled his room and Kleinsorge, 1,400 yards from the detonation, thought for an instant that the mission had suffered a direct hit from a conventional bomb. Later, Kleinsorge was unable to recall what happened next or how he got out of the mission house—one of the few structures durable enough to withstand the blast. He slowly regained awareness,

wandering, bleeding in only his underwear, listening to cries of "Shu Jesusu, awaremi tamai! Our Lord Jesus, have pity on us!" (p. 13).

Dr. Terufumi Sasaki was a surgeon with the Red Cross Hospital. He took his medical training at Eastern Medical University in Tsingtao, China, and spent many evenings in the country at his mother's house. While spending time in the country, he began to practice medicine on a small scale. Due to this, he was usually exhausted. On the morning of the atomic detonation, he was running behind schedule. After reporting to work, he began his daily routine. Half-way up a staircase, he saw the entire area illuminate brightly. Just 1,650 yards from the blast center, the concussive wave smashed into the hospital almost immediately. The sturdy building shielded Dr. Sasaki from the brunt of the impact but he suffered numerous light lacerations and contusions. Portions of the hospital collapsed, however, and within seconds the entire area erupted in frenzied confusion. The hospital staff mistakenly assumed that only the hospital area had been bombed and concentrated their medical efforts on assisting those current patients who had survived the immediate blast. For hours, they were unaware that the entire city was destroyed.

Miss Toshiko Sasaki, no relation to Dr. Sasaki, was a clerk for the East Asia Tin Works. She habitually arose very early to complete housework before reporting to her job. Sasaki cooked breakfast for her extended family and performed other domestic tasks before making the forty-five minute commute to work. After preparing for a morning meeting, she returned to her desk which was situated quite far from the windows but also bracketed by tall bookcases. The atomic detonation filled the office with brilliant light and sent glass fragments everywhere—only 1,600 yards from the detonation the building, it suffered near-total destruction. Sasaki was immediately buried under a great press of books and bookshelves which was in turn covered by debris and splinters from the collapsed ceiling. Sasaki's leg was broken and twisted under her and, in the complete darkness, entombed by books, she quickly lost consciousness.

The Fire

The Fire Summary and Analysis

Chapter Two's construction is straightforward but not entirely chronological. The focus shifts between significant individuals more than once and—like Chapter One—attempts to recount a several-hour block independent of other individual's experiences. This makes the text easy to read and understand and aids materially in the presentation of facts. The chapter focuses on the day of the detonation.

Tanimoto ran into the street and was shocked by the vista of destruction. He saw a file of bloody soldiers stagger down the street and then took the arm of a dazed old woman who was staggering along and crying out. He took the woman and her infant to a nearby assembly point where he was surprised to see dozens of people already awaiting medical treatment. Not understanding the nature of the attack, he was surprised that the all-clear signal had been sounded and concluded that the localized area of the city must have been bombed by at least several large explosives. He sought out a high point for observation and only then realized the vast extent of the destruction. Dust and smoke rose everywhere and began to obscure the entire city in a dense mist. A curious rain fell consisting of condensation caused by the column of heat rising over the city.

Nakamura crawled across the debris of her house and partially freed one of her children from the rubble. From far below, she could hear her other children calling for help and frantically dug into the wreckage. After several minutes of sifting through the rubble, she managed to free all three of her children—bruised but essentially unhurt. Wearing only underwear, the children followed Nakamura into the street as rising plumes of dust and smoke turned the day as dark as night. Nakamura slowly realized that all of the houses in her neighborhood were collapsed and that many of her neighbors were dead. As Nakamura looked on, numerous small fires began to flare up in the wreckage. Mrs. Hataya, a neighbor, suggested that they flee the expanding conflagration and seek shelter at Asano Park, a nearby reserve. Accompanied by her children and neighbor, Nakamura traveled to Asano Park with only a few recovered belongings. On the way, they heard many cries for help from under collapsed buildings. Only the Jesuit mission house remained standing, and Nakamura saw a bleeding Kleinsorge wandering around in his underwear.

After the explosion, Kleinsorge regained his senses and gathered with the other priests of the mission. The sturdy Jesuit house had protected them from massive injury although nearly all suffered various minor wounds. Kleinsorge and the other priests hastily rescued some trapped individuals. Kleinsorge then returned to his room to discover it devastated. One frail suitcase, strangely, was unharmed. The priest used it to gather the mission papers, some money, and some other minor belongings. Some of the other priests then returned from brief excursions and reported that the entire area was devastated, fire were rapidly spreading, and that several routes of egress were entirely blocked by rubble.

Fujii's private hospital had collapsed into the river. Fujii, pinned in the freezing river, hung helpless and stunned for about twenty minutes as the sky darkened. Finally gathering his strength, he managed to wriggle free of the beams which pinned his chest and climbed onto the riverbank. Cut, wet, bleeding, without his spectacles, and nearly naked, Fujii wandered around and shakily asked various people what they thought had happened. Dr. Machii, an acquaintance, stated that it must have been a Molotoffano hanakago, a type of self-scattering cluster bomb. Fujii then stood dazedly and saw two distant fires. He had trouble correlating the at-first few fires with the incredible number of burn victims he saw staggering about him. He wondered how so many were burned and why the burns were so extensive and terrible. Fujii also noted that even though the morning had been still, violent gusts of wind were whipping through the city. After some more minutes, Fujii watched as the winds spread the once-distant and small fires into numerous vast conflagrations. Finally regaining some initiative, Fujii enlisted the aid of passersby to rescue some of his acquaintances from the rubble of the hospital. Then the small group of injured refugees hunkered down at the river's edge to avoid the worst of the raging conflagrations that seemed to be engulfing the entire city. Regaining his strength somewhat, Fujii became increasingly worried as more and more people crowded toward the river, many slipping into the water. Later in the evening, Fujii and a nurse walked out of the city, finding some medical supplies on the way. Fujii was startled by the numbers of dead, dying, and seriously wounded people and the near-total lack of medical or other assistance. By nightfall, he reached the outer suburbs where he took shelter with some relatives. Even though their house was five miles from the center of the detonation, its windows were all missing and its roof had collapsed.

Fujii's experiences were typical of many Hiroshima physicians. With offices, hospitals, and equipment destroyed, most physicians had little materials to work with. Many were themselves injured to varying degrees, and none had an understanding of the disaster. Of the roughly 150 doctors in the city, over one-third were dead and most of the rest were wounded. Of the nearly 1,800 nurses in the city, over 1,600 were dead or too wounded to work. At the Red Cross Hospital, only six doctors and ten nurses were able to function. Medical facilities were shattered, broken, disorganized locales that quickly overflowed with the dead and dying. Most practitioners resorted to working without method or triage, simply moving from one victim to the next and offering what amounted to little more than first aid. The symptoms of most patients were bewildering, with extensive burns, vomiting, and strange injuries to eyes and faces.

Sasaki remained unconscious for about three hours, buried by books. When she regained consciousness, the pain in her leg was so severe that she concluded it had somehow been severed. She called out for help, heard people walking around on the rubble above her, and heard many others calling for help. Over the next several hours, Sasaki was slowly dug free by various workers. They dragged her out into a courtyard. Unable to walk, she was placed into a tiny makeshift shelter with two other grievously wounded people and abandoned.

Kleinsorge gathered some clothing and then walked around trying to help recover buried victims. He approached one house, guided by a frantic woman, but the wreckage was ablaze as was most everything around. He returned to the mission home, gathered

the other priests and Mr. Fukai, the secretary, and began to evacuate. Fukai demanded to be left behind to perish. Kleinsorge refused to abandon him and physically hauled him away from the wrecked mission home. The priests made their way through the wrecked city, ignoring cries from blazing and collapsed houses because of a total inability to help. At one point Fukai broke free and scampered back into the burning wreckage. This time, Kleinsorge let him go. Within a few more minutes, the mission home—having withstood the concussive blast—was consumed in flames.

Tanimoto ran toward the devastation in search of his family. He passed hundreds fleeing the city. All seemed burned, and many were vomiting. As he walked closer to the central zones, he noted that all the buildings were destroyed and burning. After some distance, he was prevented from further progress by massive walls of fire. He made numerous detours, searching for a way to his home which was not blocked by fire. Amazingly, he then met his wife. She told him that she had been buried in rubble, along with their infant, but had been rescued. Tanimoto's wife then continued out of the city, and he remained with a desire to help his fellow church members, if possible. He passed hundreds of wounded people and spent time fetching water for many. Finally, he met up with a group of friends and acquaintances including Kleinsorge. They continued on to Asano Park.

Nakamura and her children were among the first to arrive at Asano Park. They were joined by thousands of other refugees attracted by the remaining vegetation and the belief that forthcoming American bombing raids would not target trees and grass. Nearly everyone in the park vomited and was nauseated. Rumors circulated that the Americans had dropped some type of poison gas. Kleinsorge and his acquaintances also arrived at the park. Throughout the day, some people with no visible injuries suddenly died. Tanimoto reached the park. Humanitarian compassion led most of the uninjured or slightly injured to do what little they could to assist wounded and dying people. Hundreds of gruesomely and grievously injured burn victims were placed by the river edge and began to die. After fetching water, Tanimoto sought out a small boat and began to pole it back and forth over the river, ferrying seriously wounded into the park. In the evening, however, the park caught fire and most of the people took refuge in a thin strip of open land along the river. Many were forced into the water and drowned. As the fires subsided, the convection caused huge drops of water to begin falling. Panicked survivors thought that the Americans were raining down gasoline upon them for a further conflagration. This hysteria was interrupted when several powerful tornadoes, spawned from the super-heated air column caused by the atomic detonation, ripped through the park uprooting trees and killing many people. Late in the day, Tanimoto, Kleinsorge and some others returned into town and salvaged food. They found that pumpkins were cooked on the vine and potatoes were baked in the ground. They returned to the park with rice, potatoes and pumpkins only to find that many people were too sick to eat. Many vomited whatever they consumed. Tanimoto met Mrs. Kamai, a neighbor, who held her dead infant and searched for her husband. Knowing that her husband—a soldier—was probably dead, he nevertheless promised to help search for him.

Details are Being Investigated

Details are Being Investigated Summary and Analysis

Chapter 3 focuses on the days following the detonation, from the second day to perhaps the end of the first week. On the evening of the day of detonation—nearly twelve hours after the bomb—Japanese naval vessels moved up the various rivers running through Hiroshima and used loudspeakers to make announcements that hospital ships were coming and that the catastrophe was being investigated. Although the announcements brought hope, they were hollow, and no aid materialized. That night, many died while the remaining survivors tried to sleep with varying success. Late in the evening, a party of priests from a distant suburb arrived in Asano Park to assist their coreligionists. The priests carried several wounded, and Father Superior LaSalle to Tanimoto's boat and traveled up river. They passed many stranded people who were threatened by drowning from the tidal surge. One of the children they rescued died within hours. After delivering the priests, Tanimoto worked furiously for several more hours trying to rescue as many as he could. Tanimoto, Nakamura and Kleinsorge remained awake for most of the night. The next morning, rumors that American paratroopers had infiltrated the city circulated among the military. Kleinsorge and the other priests continued to evacuate their coreligionists and offer what meager assistance they could. Kleinsorge fetched water for many. He also noted that the burns caused the previous day were already suppurating with pus. Later in the afternoon, he walked to a local police station to file a damages claim for the loss of the mission. Tanimoto surveyed the rising river and saw many bodies washing downstream. Angered by the absence of doctors, he searched in the city until he located medical staff. He then encouraged them to travel to Asano Park. They refused, noting that they must attend to the lightly wounded only. The seriously wounded would die anyway. Although Tanimoto found the analysis chilling, he reflected that it was certainly logical. He returned to the park and helped as he was able. On the fourth day, he again met Kamai. She was still clutching the autolyzing corpse of her infant. Tanimoto later returned home to recover some things and met several neighbors, finding them suddenly receptive to Christianity's message.

Fujii spent the night in pain on the floor of his relative's wrecked home. A self-examination had discovered a fractured clavicle, probably fractured ribs, and multiple cuts and contusions over nearly his entire body. He then went to another relative's house, undamaged by the explosion, to recover. There he was visited by Father Cieslik, an associate of Kleinsorge. They discussed recent events, and Fujii insisted that the bomb was composed of a vast quantity of finely ground magnesium which had ignited when it finally came in contact with wires of the city's power grid.

The Red Cross Hospital was inundated with thousands of persons seeking medical care. Dr. Sasaki salvaged a pair of spectacles to replace his own and continued to work. Within hours, all supplies were exhausted and ersatz bandages were manufactured from linens. Finally reaching exhaustion, he sought out a moment of relaxation outside the hospital. For the first time, he realized the damage was not localized. Over the next

several days, he did not sleep but worked around the clock. After three days, supplies and medical staff finally began to arrive from various surrounding locales. Dr. Sasaki staggered out of the hospital and made the long walk home.

Sasaki, immobile and grievously wounded, was simply abandoned. She spent two nights in pain, sleepless. Her leg became distended and putrid, and then she was found by some friends. They told her that her mother, father and baby brother were probably dead. She was transported by truck to a relief station where she was examined and given up for dead. She was eventually evacuated by boat to a distant medical facility but was disheartened to learn they were not properly equipped to repair her shattered leg. She remained feverish for a few days and was then evacuated to make room for incoming soldiers. Her leg was still suppurating and untreated. She was transported to another hospital where the doctor decided her leg was too infected to set the bones.

Early on the morning following the atomic detonation, the Japanese radio broadcast a succinct announcement that Hiroshima had suffered heavy destruction from a small raid of B-29s using a new type of bomb. A later shortwave broadcast from the United States confirmed that the new bomb—more powerful than the British Grand Slam—had been what would eventually be known as a twenty kiloton atomic weapon. It is unlikely that many, if any, survivors heard either broadcast. On August 9th, the second atomic bomb exploded over Nagasaki.

Eventually the Nakamura family went to live with relatives in a nearby city. Even as they left Hiroshima, Japanese physicists and scientists were descending upon the city with all manner of equipment. After many deaths, order again was established at the Red Cross Hospital. Cleaning crews discovered that, curiously, all of the X-Ray film and plates in the hospital had been exposed while still in the packaging. On August 15th the emperor addressed the nation via radio broadcast and announced Japan's surrender.

Panic Grass and Feverfew

Panic Grass and Feverfew Summary and Analysis

Chapter 4 was the original final chapter of the text. It focuses on a longer period following the detonation, extending beyond the initial week considered through Chapter 3. Because of this, it is less strictly chronological than the preceding chapters. Although many of the experiences are attributed to one individual or another, they are very general in nature and were probably experienced by most or all survivors. For example, Kleinsorge makes daily foot visits into the center of the city from the suburban locale in which he takes up residence. He observes the extensive destruction, often sees bodies or other scenes of calamity, witnesses public postings of relatives searching for each other, and is amazed at how quickly lush, green vegetation springs to life all over the shattered remains of the city. He experiences this all with a sort of metaphysical musing on multiple levels. There are the routines of life to attend to, and he makes trips to the bank and completes insurance forms. There are the physical after-effects of irradiation and he is always exhausted and frequently dizzy and weak. There are the philosophical musings and he is distressed that such devastation could be caused in a single instant. As with many others, Kleinsorge's initial wounds begin to heal but after about a week, they stop healing and become worse. Kleinsorge, the Makamura family, and Tanimoto have persistent nausea, weakness, fever, and general malaise. These capricious symptoms would, eventually, be referred to as radiation sickness.

Sasaki was transferred several more times and remained in pain for weeks. Her infected leg was judged too inflamed for repair. Amputation was considered but insufficient supplies and personnel forestalled any treatment. She eventually was transported to the Red Cross Hospital in Hiroshima, her leg in splints. She found the amazing bursts of plant life all through the city bewildering and disconcerting. Sasaki was ironically placed in the care of Dr. Sasaki. He performed an examination, noting that her mucous membranes were heavily spotted with petechiae and that she was feverish. The petechiae, or spot hemorrhages, were very common among blast survivors, as was hair loss. Dr. Sasaki had no plaster or other cast materials, and Sasaki was thus place on a mat and treated with aspirin for her fever. Sasaki lay with her leg infected for months until the bones healed without being set. Her leg was permanently disfigured. Elsewhere, Fujii made similar notes about his patients. He had taken up residence with a friend in a house by a river. Late in September an unusually heavy rainstorm caused widespread flooding and mudslides—once again Fujii worried about a riverside building and fled to a nearby house. His action proved prudent as his friend's house was swept entirely away by raging floodwaters. The floods also threw down nearly all of the few bridges that had survived the atomic detonation. Over the next months, Fujii recuperated, established a private practice, and became once again successful.

Because illness was so acute and so prevalent in the weeks following the detonation, various rumors began to spread that the Americans had poisoned the city. Meanwhile,

Japanese and American physicists scrutinized the area and took many observations. Radiation readings using Lauritsen electroscopes concluded that the background radiation was elevated but not dangerous. Concrete had been discolored; granite had been fused; and in some cases shadows had been imprinted by the searing light of the blast—this was not nearly so prevalent, however, as later would be believed. Various measurements were used to triangulate the torii, or precise location of detonation above the ground.

In early September, Kleinsorge collapsed and was taken to the hospital with a high fever. He was sent to Tokyo for treatment where he became something of a medical curiosity. The survivors began to garner a national identity as a class—and not an always-favorable one. After months, Kleinsorge was discharged with orders to take a daily two-hour nap. After months, the Nakamura family began to slowly recuperate. Tanimoto concluded that he was simply overworked but changed his mind when, after a month, he was still unable to rise from bed. Dr. Sasaki and others developed a crude epidemiology of the radiation disease. The first phase was a reaction to the bombardment of the body, a rapid collapse. It killed 95% of the people within one half mile of the explosion. The second stage set in about two weeks after the bombing, and consisted of nausea, headache, diarrhea, malaise, fever as high as 106◦ F, and falling hair. The second phase was also accompanied by various profound blood disorders such as plummeting white-cell counts, petichiae and anemia. Many died during this phase. The final phase was less focused but included recovery from the blood disorders complicated by systemic infection, the development of keloid tumors over burns, and general malaise. The third phase caused many deaths and persisted for weeks to months or longer. Treatments mimicked those developed to treat overexposure to X-ray. Eventually doctors came to believe that, during the explosion, gamma radiation had entered the body and interacted with phosphorous in the bones; the phosphorous then slowly emitted beta radiation that destroyed the marrow.

A new municipal government was established. Various programs were initiated to salvage, clear, and rebuild. Citizens returned over the following months. Utilities were repaired and stabilized. The ruined city began to recover. Once a center of military bases, the city had to re-invent its economy. Statistical workers eventually announced that 78,150 people were killed by the bomb; a further 13,983 were missing; and 37,425 had been injured. No one believed the figures to be fully accurate, but they were accepted as official. Later estimates continued to increase the number killed until well over 100,000 were tallied. Direct burns caused by the bomb killed about twenty-five percent. Fifty percent were killed by other injuries caused by the bomb. Twenty percent were killed because of radiation sickness. Sixty-two thousand out of 90,000 dwellings were destroyed with 6,000 more damaged beyond repair. The heat at the point of explosion was estimated to be 6,000 C. For months and years, scientists swarmed the city and made numerous measurements and observations. The American military routinely suppressed international dissemination of information about the bomb, though it circulated freely in the local media. Most scientists understood that the Hiroshima and Nagasaki bombs were relatively small for atomic weapons, and considerations of the heroic means necessary to withstand nuclear detonations were contemplated.

Months after the detonation, Sasaki met Kleinsorge in the hospital and began to seek solace in Christian belief. Nakamura recovered some family wealth and lived in a shack, working, as she was able to support her children. Tanimoto returned to the city and struck up a reliable friendship with Kleinsorge and the other Jesuits. The mission was rebuilt. It was one of the first durable and large structures to emerge from the wrecked city. After about six months, operations at the Red Cross Hospital had returned to more-or-less normal, though Dr. Sasaki remained the only surgeon on staff. One year after the bomb, Sasaki was a cripple, Nakamura was destitute, Kleinsorge was in the hospital, Dr. Sasaki was exhausted, Fujii had suffered calamitous loss, and Tanimoto's church was gone. Even so, Hiroshima survivors began to enjoy a strong insider community spirit. Surprisingly, most were uninterested in the atomic bomb and did not much consider the ethics of its use. Many children survivors came eventually to view the day of the bombing as an exhilarating adventure rather than as a calamity.

The Aftermath

The Aftermath Summary and Analysis

Chapter 5, unlike previous chapters, is divided into six distinct named segments that are tightly focused on the post-war history of the six principle individuals considered earlier in the text. The chapter was written about four decades after the preceding chapters and bears subtle but noticeable stylistic differences. Of course, some information presented in each section is necessarily applicable to a larger sphere than a single individual is.

In Japanese society, the atomic detonation survivors were viewed with suspicion. They were often discriminated against because employers considered them unreliable workers due to frequent medical problems. Many also considered them somehow contaminated and feared they might be contagious. Survivors were largely ignored by the government and their medical needs and personal economies were in a state of limbo. In 1954 opinions began to change, however, and by 1957 new laws had been enacted which offered some compensation and support to survivors. In 1955, there was a world conference on anti-nuclear weapon considerations. The effects of radiation sickness widely were not appreciated prior to the use of the atomic weapons. Doctors Sasaki and Fujii were among other healthcare practitioners who assisted in the diagnosis and treatment of various aspects of radiation sickness.

After the war, Hatsuyo Nakamura suffered heavily from radiation sickness and was always exhausted and ill. She found it difficult to hold a job and her children often were hungry. She adopted a resigned attitude toward the atomic bombing, estimating it as, more or less, a natural disaster. For nearly a decade, Nakamura performed odd jobs and suffered from poor health, at one time having a serious roundworm infestation. Due to social discrimination, she and her children usually avoided mentioning their connection with the atomic bombing. By 1953, she had secured a better job in a factory and worked consistently for the next thirteen years. Her children grew up and succeeded in their endeavors. In 1966, she retired. In 1967, she traveled to a national shrine. By 1975, her economic situation had improved and stabilized. In 1985, she was again hospitalized but recovered and returned home.

Several days after the atomic detonation medical professionals arrived from the surrounding communities and Dr. Terufumi Sasaki retired to his family's home in the suburbs where he tried to recover his mental health. He suffered terrible mental haunting form the things that he saw after the bombing. Sasaki came from a very wealthy family but suffered severe monetary setbacks during and immediately after the war, often from theft or robbery. He enjoyed a good marriage. From 1945 to 1950, he attempted, with others, to develop treatments for keloid scars—largely without success. In 1951, he resigned from the Red Cross Hospital and began a small practice in a rural community. His practice prospered and throughout the 1950s, he became wealthy and successful, even as he documented recurrent problems among atomic bomb survivors

—findings that would later be recognized as radiation sickness. In 1963, he lost a lung to cancer and suffered a near-death experience that, though undefined, he would later view as the turning point of his life. In 1972 his wife died. By 1977 he had pioneered local successes in geriatric medicine and was enjoying unprecedented success as a respected, if eccentric, doctor.

After Father Wilhelm Kleinsorge rendered heroic and compassionate service for several weeks following the detonation, he suffered exhaustion and malaise. Perhaps more than any other individual considered in the text, Kleinsorge suffered catastrophic health failures due to radiation sickness. He suffered multiple and lengthy hospitalizations for the remainder of his life. In 1948, he was transferred to another mission and continued selfless service. He eventually naturalized as a Japanese citizen and adopted the name of Father Makoto Takakura (he was buried as Father Wilhelm Takakura). In 1956, he suffered serious health failures and was hospitalized for one year with infected and pus-filled fingers, flu like symptoms, joint pain, cataracts, and leucopenia. In 1961, he was transferred to the rural town of Mukaihara where he continued a simple life as a priest. In 1966, he hired a new cook, Satsue Yoshiki. The two became very close friends and she nursed him throughout the remainder of his life. In 1971, he suffered another major hospitalization. In 1976, he slipped and fell, fracturing multiple vertebrae. Medical treatment proved ineffective or misdirected, and Kleinsorge was bedridden for the remainder of his life. He died under the care of Yoshiki in 1977. The author notes that Kleinsorge's grave routinely is memorialized with fresh flowers. Kleinsorge's multiple hospitalizations at various locations and with numerous seemingly unrelated health problems is a good, if unfortunate, example of radiation sickness.

Toshiko Sasaki remained buried for many hours with a compound fracture of her leg. After being rescued from the debris she was given up as medically hopeless and was abandoned with two other individuals. However, she survived. Over the next months, she was transferred frequently among medical facilities until her leg eventually healed without being set. During 1946, she recovered and sought solace in Christian faith, being instructed by Father Kleinsorge. She finds peace and converts to Christianity. In 1947, she recovered enough strength to take a job in an orphanage though her leg is deformed and painful. She receives several operations which somewhat correct the problem. In 1954, she entered a convent and in 1957 took her vows as Sister Dominique Sasaki. As a nun, she is compassionate, successful, and insightful. In 1970, she toured other convents around the world and finally retired in 1978. She performed volunteer service for four more years until health complications from radiation sickness caused her to become more passive. In 1980, she formally was honored for her twenty-five years of service. Sasaki is a preeminent example of a person recovering from disaster and thereafter devoting her life to worthy humanitarian endeavors.

After escaping the conflagration and devastation cause by the atomic detonation, Dr. Masakazu Fujii retired to the countryside where he began a long recovery. After the war, Fujii returned to his usual convivial self, enjoying foreign languages, items, and peoples. In 1948, he opened a new clinic in Hiroshima that was successful. His five children were largely successful and many followed his footsteps into the medical practitioners. Fujii focused his personal recovery on the pleasure principle, enjoying fine whiskey and other

delicacies. In 1955, he joined an exclusive country club and developed a mania for baseball. In 1956, he toured the United States on a medical education journey, accompanying many Hiroshima Maidens for surgery. By 1963, many felt he had grown stubborn and grouchy; at the end of that year, he threw a party with many guests. Fujii retired early and—apparently accidentally—ran gas into his bedroom, subsequently suffering brain damage. He lived the next eleven years in a vegetative state and eventually died. Unfortunately, his family quarreled over his considerable estate.

Immediately after the war, Reverend Kiyoshi Tanimoto preached Christianity, helped others, and finagled funds and supplies to construct a new church. In 1948, he traveled to the United States to gather funds. While there, he began to proselyte about the establishment of an anti-nuclear weapon conference center and shrine in Hiroshima. The idea caught imaginations in the United States and Tanimoto went on a lecture circuit expounding his ideas—incidentally, ideas that were completely unknown in Japan. By 1949, he had made many influential contacts and garnered wide support. In 1950, he returned to Japan and publicly espoused the idea of an anti-nuclear weapon conference center and shrine in Hiroshima. In the same year, he again traveled to the United States and lectured. He also championed the so-called Hiroshima Maidens. In 1955, he was featured on a television show but was also deemed, by the United States government, an unreliable and potentially unstable person. Although his ideas persisted, he was mostly swept aside. In the 1960s, the Japanese anti-nuclear weapon movement had become politicized and fragmented further diminishing Tanimoto's influence. He went on speaking tours of the United States in 1976, 1981 and 1982, and subsequently retired. The final segment of the text exploring the life of Tanimoto is peculiar in structure in that it features various italicized news items, inserted in chronological order, announcing the development of atomic weapons by various countries. This juxtaposes well with Tanimoto's lifelong fight against nuclear weapons but does diverge somewhat from the general biographical nature of the remainder of the text.

Characters

Toshiko Sasaki

Sasaki was a clerk in the personnel department of the East Asia Tin Works. Sasaki is not related to Terufumi Sasaki. She was at work when the atomic detonation took place and was immediately buried by an avalanche of books and debris. She remained buried for many hours with a compound fracture of her leg. After being rescued from the debris she was given up as medically hopeless and was abandoned with two other individuals. However, she survived. Over the next months, she was transferred frequently among medical facilities until her leg eventually healed without being set.

During 1946, she recovered and sought solace in Christian faith, being instructed by Father Kleinsorge. She finds peace and converts to Christianity. In 1947, she recovered enough strength to take a job in an orphanage though her leg is deformed and painful. She receives several operations which somewhat correct the problem. In 1954, she entered a convent and in 1957 took her vows as Sister Dominique Sasaki. As a nun, she is compassionate, successful, and insightful. In 1970, she toured other convents around the world and finally retired in 1978. She performed volunteer service for four more years until health complications from radiation sickness caused her to become more passive. In 1980, she formally was honored for her twenty-five years of service.

Dr. Masakazu Fujii

Dr. Fujii was a physician and owner of a private hospital. He was sitting on his porch when the atomic detonation took place; his home and private hospital were obliterated. Fujii was thrown into a nearby river where he was pinned by debris. Eventually extricating himself, an examination revealed a fractured clavicle and broken ribs. After escaping a widespread conflagration, Fujii retired to the countryside where he began a long recovery. After the war, Fujii returned to his usual convivial self, enjoying foreign languages, items and peoples. In 1948, he opened a new clinic in Hiroshima that was successful. His five children were largely successful, and many followed his footsteps into the medical practitioners.

Fujii focused his personal recovery on the pleasure principle, enjoying fine whiskey and other delicacies. In 1955, he joined an exclusive country club and developed a mania for baseball. In 1956, he toured the United States on a medical education journey, accompanying many Hiroshima Maidens for surgery. By 1963, many felt he had grown stubborn and grouchy; at the end of that year, he threw a party with many guests. Fujii retired early and—apparently accidentally—ran gas into his bedroom, subsequently suffering brain damage. He lived the next eleven years in a vegetative state and eventually died. Unfortunately, his family quarreled over his considerable estate.

Hatsuyo Nakamura

Nakamura, a widow, was at home looking out the window when the atomic detonation took place. She had three children: Toshio, a ten-year old boy; Yaeko, an eight-year-old girl; and Myeko, a five-year-old girl. Her children were buried in the rubble of her destroyed home but she was able to free them, the family suffering numerous but minor injuries. They later retreated to a park and then scrabbled out a difficult existence for several years. Nakamura suffered heavily from radiation sickness and was always exhausted and ill. She found it difficult to hold a job and her children often were hungry. She adopted a resigned attitude toward the atomic bombing, estimating it as, more or less, a natural disaster.

For nearly a decade, Nakamura performed odd jobs and suffered from poor health, at one time having a serious roundworm infestation. Due to social discrimination, she and her children usually avoided mentioning their connection with the atomic bombing. By 1953, she had secured a better job in a factory and worked consistently for the next thirteen years. Her children grew up and succeeded in their endeavors. In 1966, she retired. In 1967, she traveled to a national shrine. By 1975, her economic situation had improved and stabilized. In 1985, she was again hospitalized but recovered and returned home.

Father Wilhelm Kleinsorge

Father Kleinsorge was a German priest of the Society of Jesus. He was reclining in his bedroom at the order's mission house when the atomic detonation took place. For the next several minutes, Kleinsorge wandered about, out of his mind. He eventually recovered his senses and then, along with the other priest of the mission, rendered heroic and compassionate service for several weeks. Perhaps more than any other individual considered, Kleinsorge suffered catastrophic health failures due to radiation sickness. He suffered multiple and lengthy hospitalizations for the remainder of his life. In 1948, he was transferred to another mission and continued selfless service. He eventually naturalized as a Japanese citizen and adopted the name of Father Makoto Takakura (he was buried as Father Wilhelm Takakura). In 1956, he suffered serious health failures and was hospitalized for one year with infected fingers, flu like symptoms, joint pain, cataracts, and leucopenia. In 1961, he was transferred to the rural town of Mukaihara where he continued a simple life as a priest.

In 1966, he hired a new cook, Satsue Yoshiki. The two became very close friends and she nursed him throughout the remainder of his life. In 1971, he suffered another major hospitalization. In 1976, he slipped and fell, fracturing multiple vertebrae. Medical treatment proved ineffective or misdirected and Kleinsorge was bedridden for the remainder of his life. He died under the care of Yoshiki in 1977. The author notes that Kleinsorge's grave routinely is memorialized with fresh flowers.

Dr. Terufumi Sasaki

Dr. Sasaki was a member of the surgical staff of Hiroshima's modern Red Cross Hospital. Sasaki is not related to Toshiko Sasaki. He was at the hospital when the atomic detonation took place. Shielding by the sturdy hospital, Sasaki avoided serious physical injury. The hospital staff remained unaware of the larger devastation for several hours while they attempted to treat existing patients and a flood of new patients. For nearly two weeks Sasaki lived a zombie-like life of virtually no sleep and endless work. Short on supplies and medicines, he provided first aid and what assistance he could. When medical professionals arrived from the surrounding communities Sasaki retired to his family's home in the suburbs where he tried to recover his mental health. He suffered terrible mental haunting form the things that he saw after the bombing.

Sasaki came from a very wealthy family but suffered severe monetary setbacks during the war. He enjoyed a good marriage. From 1945 to 1950, he attempted, with others, to develop treatments for keloid scars—largely without success. In 1951, he resigned from the Red Cross Hospital and began a small practice in a rural community. His practice prospered and throughout the 1950s, he became wealthy and successful, even as he documented recurrent problems among atomic bomb survivors. These findings would later be recognized as radiation sickness. In 1963, he lost a lung to cancer and suffered a near-death experience that, though undefined, he would later view as the turning point of his life. In 1972, his wife died. By 1977, he had pioneered geriatric medicine and was enjoying unprecedented success as a respected, if eccentric, doctor.

Reverend Kiyoshi Tanimoto

Reverend Tanimoto was the pastor of the Hiroshima Methodist Church. He was unloading a cart at a neighborhood house when the atomic detonation took place. Due to his physical situation, he was spared almost entirely from physical injury. Tanimoto, haunted and embarrassed by his own unlikely escape, spent the next weeks in superhuman and heroic efforts to save others and alleviate suffering. Immediately after the war Tanimoto preached Christianity, helped others, and finagled funds and supplies to construct a new church. In 1948, he traveled to the United States to gather funds. While there, he began to proselyte about the establishment of an anti-nuclear weapon conference center and shrine in Hiroshima. The idea caught imaginations in the United States and Tanimoto went on a lecture circuit expounding his ideas—incidentally, ideas that were completely unknown in Japan. By 1949, he had made many influential contacts and garnered wide support.

In 1950, he returned to Japan and publicly espoused the idea of an anti-nuclear weapon conference center and shrine in Hiroshima. In the same year, he again traveled to the United States and lectured. He also championed the so-called Hiroshima Maidens. In 1955, he was featured on a television show but was also deemed, by the United States government, an unreliable and potentially unstable person. Although his ideas persisted, he was mostly swept aside. In the 1960s, the Japanese anti-nuclear weapon movement

had become politicized and fragmented, further diminishing Tanimoto's influence. He went on speaking tours of the United States in 1976, 1981, and 1982, and subsequently retired.

Father Superior LaSalle, Father Schiffer, and Father Cieslik

The mission to which Father Wilhelm Kleinsorge belongs has several priests as well as many employees and assistants. Several of these individuals are named in the text and participate in various actions to some degree. The mission's Father Superior is LaSalle, and he received debilitating wounds in the atomic detonation. Over the subsequent few days, he is evacuated to another mission on the outskirts of Hiroshima. Father Schiffer suffers a fairly serious head injury during the attack and bleeds profusely for quite some time—stopping the bleeding becomes a major focus for some of the mission staff. He is also evacuated after a few days. Father Cieslik is fortunate in having taken advantage of hard shelter immediately after the visible flash of light and is thus relatively uninjured. In the following hours and days, he is heroic in diligent activity to assist others. When the other priests are evacuated, Father Cieslik assists and accompanies them.

Mr. Fukai

Mr. Fukai is the secretary of the diocese where Kleinsorge works. Fukai survives the initial explosion but is staggered by the devastation. When the priests and other workers abandon the mission, Fukai insists that he wants to remain behind. He is finally carried bodily away by Kleinsorge but at the first opportunity, Fukai escapes and runs back through the burning wreckage toward the mission home. He is not seen again. Fukai, seeing the end of his city, desired to die with it.

Mrs. Kamai

Kamai is a twenty-year-old woman and a mother of one baby. Her husband, a soldier, entered the service the day before the atomic detonation and was most likely killed instantly. Her baby daughter also died—either killed with the explosion or dying very shortly thereafter. Kamai, realizing her daughter was dead, nevertheless carried the tiny corpse for four days while attempting to locate her husband so that he could see his child a final time.

Kataoka children

The Kataoka children, a thirteen-year-old boy and five-year-old boy, were temporarily orphaned by the atomic detonation. After the explosion, they went to Asano Park with their mother who returned to their home to retrieve supplies. She did not return. They meet Father Kleinsorge in the park and spend several hours playing and crying for their

lost parents. Days later, Kleinsorge takes them to a distant mission building where they stay for several weeks before being reunited with their mother.

Hiroshima Maidens

Hiroshima Maidens was the colloquial and somewhat sensationalist title given to a group of survivors from the atomic detonation over Hiroshima. Prior to the atomic bomb, the city was clearing fire lanes in the advent of conventional bombing. As working forces were in chronically short supply, the city had conscripted hundreds of school-aged girls to perform the physical labor. Thus, hundreds of young girls were outside and unsheltered when the atomic detonation took place. Many of them suffered extensive radiation burns to their faces, necks, and hands. These burns later healed with keloid scars and thus many hundreds of young girls were deformed for life. Subsequent assistance programs were offered whereby the Hiroshima Maidens were received reconstructive surgery. These processes were largely unsuccessful.

Objects/Places

B-san, or Mr. B

B-san, or Mr. B, was the colloquial name given to the United States B-29 bomber. The B-29 has superior range and was able to strike anywhere in Japan from distant island bases. Massive daily raids with conventional and fire bombs were conducted across the entire nation for many months prior to the atomic detonation. Hiroshima had largely been spared prior to the atomic bomb.

Tonarigumi

The tonarigumi was a nationally sponsored but locally organized neighborhood association concerned with the organization of air-raid defenses. Each association subsumed responsibility for perhaps twenty families. In the actual event, the focus of tonarigumi on preparations for conventional high-explosive strategic bombing rendered much of their work irrelevant after the atomic detonation. Reverend Tanimoto was the chairman of his own tonarigumi.

Molotoffano hanakago

A Molotoffano hanakago, also known as a Molotov flower basket or bread basket, was the Japanese name for an unidentified type of self-scattering cluster bomb. After the atomic detonation, the damage was so extensive and complete that various theories circulated to explain the city's destruction. One of the earliest theories stated that the Americans had used large numbers of Molotoffano hanakago to cause the widespread damage.

Genshi bakudan, or 'original child bomb'

Genshi bakudan was the colloquial name used in Hiroshima for the atomic bomb. It was understood to be a type of bomb which split atoms in two and released their destructive energy. The news of the bomb began circulating about a week after the initial detonation. The concept of atomic fission was so remote that for many weeks most survivors favored other theories of the explosion. For example, some said that it had been caused by powdered magnesium. Even months after the detonation, many survivors remained fairly ignorant about the atomic weapon and its functioning.

Hibakusha

Hibakusha was a general term referring to the surviving victims of the atomic bombing of Hiroshima and, later, Nagasaki. The word translates roughly as 'explosion-affected

people'. By law, hibakusha must have been within a certain distance of the hypo centers of the detonations within a certain period of time. Sadly, hibakusha were fairly often the target of social discrimination.

The Flash

The first component of the atomic detonation was a brilliant flash of light and heat. Most survivors describe it as pure white and incredibly concentrated. It preceded the concussive blast by a brief moment which gave many survivors the chance to take some sort of shelter. However, of course they did not know what to make of the flash. The radioactive light flash was so intense that it burned exposed skin, melted eyes, and even imprinted shadows onto concrete. The flash was such an unusual component of the atomic detonation that many fairly wild speculations about it were commonplace. For example, there was a rumor that the explosion had been caused by a powdered magnesium bomb.

The Blast

The second component of the atomic detonation was a concussive blast. Nearly every structure in Hiroshima within a few kilometers of the hypo center of the detonation was instantly destroyed. Structures further away were seriously damaged. The blast's destruction buried thousands of people alive under piles of rubble, shattered trees, walls and bridges, and obliterated most geographic identifiers.

The Fire

Within moments of the atomic detonation, hundreds of tiny fires started around Hiroshima. Most of these were not caused by the atomic detonation directly but were the result of buildings collapsing onto interior cooking fires. The largely-wooden construction of most buildings meant that the fires spread very quickly. Within hours, most of Hiroshima was engulfed in conflagration.

Radiation Sickness

Radiation sickness is a poorly defined suite of symptoms resulting from excessive exposure to ionizing radiation. The survivors of Hiroshima were exposed to a large dose of radiation over a short period of time and suffered from a range of secondary illnesses. Commonly experienced effects included hair loss, headache, nausea, petechial hemorrhaging, general malaise, exhaustion and death.

Keloid Scars

Keloid scars are an unusual form of scar resulting from an overgrowth of tissue at the site of a healed skin injury. The scars are firm, rubbery, and often shiny. Although benign, they are visually obvious and disfiguring. Many survivors of the atomic detonation developed keloid scar tissue on skin surfaces which had been burned by the atomic flash. At the time of the detonation, the local government had enlisted many thousands of school-age girls to clear fire lanes. These many girls were outside when the atomic bomb detonated and many suffered severe burns to their exposed faces, necks and arms. These burns later healed with, in many cases, keloid scars. Many of these girls later traveled to the United States for scar-removal surgery, a process which enjoyed some modest success.

Themes

Nuclear Holocaust

By far the dominant theme of the text is one of nuclear holocaust. Starting with the moment of detonation the text outlines the immediate effects of an atomic explosion and continues to develop the theme through the ensuing days, months, and years. All of the individuals considered at length in the text are both victim and long-term survivor of the atomic detonation; nearly all of the individuals considered at any length are victims of the detonation.

The theme of nuclear holocaust is developed on several levels. First, the text physically describes the detonation process—first a flash then a concussive blast. The physical effects of the flash and detonation upon structures and geography is considered. The weather is discussed—the blast spawned various forms of rain, high winds, and even tornadoes. The mid- to long-term physiological effects of burns and radiation are considered at length. The process used to produce the bomb is briefly noted, as are weapons which cause similar—but distinct—types of damage. The way the bomb was delivered is considered, as is target selection. These aspects are considered from various viewpoints, as well. Segments of the text discuss pure demographics, including how many thousands of people were killed and percentages of buildings destroyed. Other segments discuss objective problems faced by survivors, such as being buried alive or unable to secure adequate health care. Other segments also discuss the subjective psychology of the blast, as in mothers carrying dead infants or survivors being discriminated against.

Physical Survival

For the six major individuals in the text, the direct and immediate consequence of the atomic detonation is a struggle to survive. Housing and any shelter is destroyed. Clothing and medical supplies are destroyed. Services are unavailable. Even food and water are nearly nonexistent. In spite this shocking reality, all of the individuals are injured to some extent. Whereas Kleinsorge receives many minor wounds, Fujii suffers from a broken clavicle and ribs, and Sasaki suffers from a shattered leg which takes months to poorly heal.

Beyond the six principle individuals, the text also describes dozens of other survivors who are in similar situations. For example, a troop of antiaircraft soldiers whose eyes have been melted by the atomic flash stumble about searching for water. Their mouths and lips are too burned to open wider than a slit. Dozens of weak initial survivors straggle to the edge of the water on a river and collapse in the cooler temperatures only to drown when the tidal swell comes ashore. Many seek refuge in a park only to be killed by bizarre tornadoes spawned by the mass of super-heated air rising above the city.

The hours after the explosion are marked by the survivors trying to dig relatives and friends out of collapsed buildings while simultaneously avoiding the massive conflagration that envelops the city. The days after the explosion are marked by the survivors trying to find adequate clothing, food, water and medical supplies, and suitable living spaces and shelter. Survivors fight the varying degrees of serious complications from radiation sickness. Finally, the years after the explosion are marked by survivors trying to piece back together lives shattered by the atomic bomb amidst the social stigma of being hibakusha.

Military Morality

The unstated but obvious theme of military morality runs throughout the text. It is perhaps most noticeable in the latter sections of the book, and is developed by two primary methods. First, the journalistic and objective presentation of effects of atomic detonation establishes a strong and unarguable position that nuclear weapons cause horrific damage and incalculable suffering. This method of development is straightforward; a more-subtle method is also used. The author evidently feels that atomic weapons are immoral. The text states that only the United States would devote such endless wealth and effort to create atomic weaponry. Further, the text implies that the atomic detonation was not needed or perhaps even warranted. This method is carefully constructed, largely by stripping the atomic detonation of its historical significance and placing it as an isolated event. Whereas all of the people of Hiroshima were undoubtedly victims of the bombing, the text further constructs them as members of a nation that was itself a victim of the bombing. Missing entirely from the text is any description of the broader context of World War II or various other methodologies commonly utilized during that conflict such as mixed incendiary and explosive bombing of other Japanese cities. Whereas the mechanism of atomic weapon utilization is perhaps horrible, its ultimate result does not vary significantly from other weapons of mass destruction except, perhaps, in efficiency. Even so, the text adequately develops the theme of the morality of militarily attacking urban centers with weapons of mass destruction and significantly challenges readers to inspect their own morality regarding war.

Style

Perspective

The text is delivered as an extended piece of journalism originally intended for serial publication in a widely circulated periodical. After writing, the text was presented in a single issue of the periodical and, later, was published in book format with minor revision. Subsequent editions appeared and approximately four decades after initial publication a second edition was published containing a substantial volume of new material. The author, a journalist by trade, intended the text to be a recital of facts about, and a tribute to, the survivors of the first nuclear detonation. The resulting text is somewhat journalistic in tone but has been demonstrated to be an essentially correct presentation of fact.

The initial text was intended for a broad American audience. The initial publication doubtlessly included many tens of thousands of American men and women who were recently returned from service in World War II—including many veterans of the Pacific Theater of operations. The periodical selected for original publication was widely available and generally catered to an educated upper middle class readership. The original publication was well received. Subsequent publications have been targeted at rather wider demographics, including a strong emphasis on school-age readers.

The text was intended to accurately portray the effects, both short and long-term, of nuclear weapons. During the Cold War era, the book was often criticized as being unduly unfavorable to nuclear weapons. However, such criticism is factually erroneous, as the Cold War had not started when the book was first published. In addition, it is morally erroneous as nuclear weapons are obviously horrific in nature.

Tone

The book's tone is journalistic and is concerned mostly with the presentation of objective facts. Chapters 1 through 4, in particular, are generally devoid of subjective considerations beyond the immediate scope of the atomic detonation. Chapter 5, written decades later, differs somewhat in tone and perspective but only in minor ways. The text does not consider—in fact hardly mentions—the historic paradigm obtaining at the time of the events described. Given that the book was originally published one year after the bombing, this is perhaps understandable. Nevertheless, the text has often been criticized for portraying Japan as largely a victim of circumstances and the United States of America as a fairly amoral military victor. Obviously, such was not the case. The text also presents government officials, particularly Japanese and American military scientists, as fairly calculating and uncaring. Whether this is true or not, the subjective presentation is subtle but notable.

The tone of the text is professionally serious and usually deliberately detached. For example, Mrs. Kamai is depicted as carrying in arms the decomposing body of her four-day-dead infant without comment or pathos. Even so, the tone obviously objects to the use of nuclear weapons and presents them as an entirely horrific and objectionable method of warfare. The book does not offer an objective comparison of other methods used at the time, making only a vague reference to firebombing techniques employed to destroy other Japanese cities. Finally, the tone has been sometimes criticized for being too dry or journalistic. This seems unfair, however, as the text accurately presents the stories of the six individuals selected without editorial comment and in vivid and memorable prose. The tone thus achieved is professional and competent, somewhat removed, and successful.

Structure

The 152-page text is divided into five numbered and enumerated chapters. The first four chapters are concise and were originally intended for serial release in monthly installments of a periodical approximately one year after the atomic detonation described. The four chapters, however, were all printed in a single issue of the periodical. The periodical enjoyed wide circulation and some material was reprinted in various sources. Eventually the material was printed as a book. The dust jacket of the first hardcover printing included six photographs of the book's six major individual subjects. The book continued to be reprinted and printed, some with minor revisions. About four decades after the initial publication, the author performed extensive additional interviews and then wrote the lengthy fifth chapter. Multiple latter editions of the book, including the expanded material, have appeared on the market.

The initial chapters each consider the situation of six individuals chosen as representatives of the survivors of the atomic detonation over Hiroshima. Chapter 1 discusses the immediate minutes surrounding the detonation. Chapter 2 considers the day of the detonation. Chapter 3 considers the first days to approximately the first week after the detonation. Chapter 4 considers the next several weeks. Chapter 5, added much later, considers the intervening years and decades. The text is thus organized in a fairly chronological fashion. Chapter 5's material is further divided into segments focused on each of the six primary individuals. Previous chapters do not feature this marked division. The construction of the book is quite simple and easy to follow, and the presentation aids materially in accessing the text.

Quotes

"After the terrible flash—which, Father Kleinsorge later realized, reminded him of something he had read as a boy about a large meteor colliding with the earth—he had time (since he was 1,400 yards from the center) for one thought: A bomb has fallen directly on us. Then, for a few seconds or minutes, he went out of his mind.
"Father Kleinsorge never knew how he got out of the house. The next things he was conscious of were that he was wandering around in the mission's vegetable garden in his underwear, bleeding slightly from small cuts along his left flank; that all the buildings round about had fallen down except the Jesuits' mission house, which had long before been braced and double-braced by a priest named Gropper, who was terrified of earthquakes; that the day had turned dark; and that Muata-san, the housekeeper, was nearby, crying over and over 'Shu Jesusu, awaremi tamai! Our Lord Jesus, have pity on us!'" (Chapter 1, p. 13)

"Everything fell, and Miss Sasaki lost consciousness. The ceiling dropped suddenly and the wooden floor above collapsed in splinters and the people up there came down and the roof above them gave way; but principally and first of all, the bookcases right behind her swooped forward and the contents threw her down, with her left leg horribly twisted and breaking underneath her. There, in the tin factory, in the first moment of the atomic age, a human being was crushed by books." (Chapter 1, p. 16)

"Before long, patients lay and crouched on the floors of the wards and the laboratories and all the other rooms, and in the corridors, and on the stairs, and in the front hall, and under the porte-cochère, and on the stone front steps, and in the driveway and courtyard, and for blocks each way in the streets outside. Wounded people supported maimed people; disfigured families leaned together. Many people were vomiting. A tremendous number of schoolgirls—some of those who had been taken from their classrooms to work outdoors, clearing fire lanes—crept into the hospital. In a city of two hundred and forty-five thousand, nearly a hundred thousand people had been killed or doomed at one blow; a hundred thousand more were hurt. At least ten thousand of the wounded made their way to the best hospital in town, which was altogether unequal to such a trampling, since it had only six hundred beds, and they had all been occupied." (Chapter 2, pp. 25-26)

"Just before dark, Mr. Tanimoto came across a twenty-year-old girl, Mrs. Kamai, the Tanimoto's next-door neighbor. She was crouching on the ground with the body of her infant daughter in her arms. The baby had evidently been dead all day. Mrs. Kamai jumped up when she say Mr. Tanimoto and said, 'Would you please try to locate my husband?'
"Mr. Tanimoto knew that her husband had been inducted into the army just the day before; he and Mrs. Tanimoto had entertained Mrs. Kamai in the afternoon, to make her forget. Kamai had reported to the Chugoka Regional Army Headquarters—near the ancient castle in the middle of town—where some four thousand troops were stationed. Judging by the many maimed soldiers Mr. Tanimoto had seen during the day, he

surmised that the barracks had been badly damaged by whatever it was that had hit Hiroshima. He knew he hadn't a chance of finding Mrs. Kamai's husband, even if he searched, but he wanted to humor her. 'I'll try,' he said.
"'You've got to find him,' she said. 'He loved our baby so much. I want him to see her once more.'" (Chapter 2, pp. 40-41)

"Mr. Tanimoto found about twenty men and women on the sandspit. He drove the boat onto the bank and urged them to get aboard. They did not move and he realized that they were too weak to lift themselves. He reached down and took a woman by the hands, but her skin slipped off in huge, glovelike pieces. He was so sickened by this that he had to sit down for a moment. Then he got out into the water and, though a small man, lifted several of the men and women, who were naked, into his boat. Their backs and breasts were clammy, and he remembered uneasily what the great burns he had seen during the day had been like: yellow at first, then red and swollen, with the skin sloughed off, and finally, in the evening, suppurated and smelly. With the tide risen, his bamboo pole was now too short and he had to paddle most of the way across with it. On the other side, at a higher spit, he lifted the slimy living bodies out and carried them up the slope away from the tide. He had to keep consciously repeating to himself, 'These are human beings.' It took him three trips to get them all across the river. When he had finished, he decided he had to have a rest, and he went back to the park.
"As Mr. Tanimoto stepped up the dark bank, he tripped over someone, and someone else said angrilyl, 'Look out! That's my hand.' Mr. Tanimoto, ashamed of hurting wounded people, embarrassed at being able to walk upright, suddenly thought of the naval hospital ship, which had not come (it never did), and he had for a moment a feeling of blind, murderous rage at the crew of the ship, and then at all doctors. Why didn't they come to help these people?" (Chapter 3, pp. 45-46)

"On his way back with the water, he got lost on a detour around a fallen tree, and as he looked for his way through the woods, he heard a voice ask from the underbrush, 'Have you anything to drink?' He saw a uniform. Thinking there was just one soldier, he approached with the water. When he had penetrated the bushes, he saw there were about twenty men, and they were all in exactly the same nightmarish state: their faces were wholly burned, their eyesockets were hollow, the fluid from their melted eyes had run down their cheeks. (They must have had their faced upturned when the bomb went off; perhaps they were anti-aircraft personnel.) Their mouths were mere swollen, pus-covered wounds, which they could not bear to stretch enough to admit the spout of the teapot. So Father Kleinsorge got a large piece of grass and drew out the stem so as to make a straw, and gave them all water to drink that way. One of them said, 'I can't see anything.' Father Kleinsorge answered, as cheerfully as he could, 'There's a doctor at the entrance to the park. He's busy now, but he'll come soon and fix your eyes, I hope.'" (Chapter 3, pp. 51-52)

"Some time later, in a letter to an American, Mr. Tanimoto described the events of that morning. 'At the time of the Post-War, the marvelous thing in our history happened. Our Emperor broadcasted his own voice through radio directly to us, common people of

Japan. Aug. 15th we were told that some news of great importance could be heard & all of us should hear it. So I went to Hiroshima railway station. There set a loudspeaker in the ruins of the station. Many civilians, all of them were in boundage, some being helped by shoulder of their daughters, some sustaining their injured feet by sticks, they listened to the broadcast and when they came to realize the fact that it was the Emperor, they cried with full tears in their eyes, "What a wonderful blessing it is that Tenno himself call on us and we can hear his own voice in person. We are thoroughly satisfied in such a great sacrifice." When they came to know the war was ended—that is, Japan was defeated, they, of course, were deeply disappointed, but followed after their Emperor's commandment in calm spirit, making whole-hearted sacrifice for the everlasting peace of the world—and Japan started her new way.'" (Chapter 3, pp. 64-65)

"The hospitals and aid stations around Hiroshima were so crowded in the first weeks after the bombing, and their staffs were so variable, depending on their health and on the unpredictable arrival of outside help, that patients had to be constantly shifted from place to place. Miss Sasaki, who had already been moved three times, twice by ship, was taken at the end of August to an engineering school, also at Hatsukaichi. Because her leg did not improve but swelled more and more, the doctors at the school bound it with crude splints and took her by car, on September 9th, to the Red Cross Hospital in Hiroshima. This was the first chance she had had to look at the ruins of Hiroshima; the last time she had been carried through the city's streets, she had been hovering on the edge of unconsciousness. Even though the wreckage had been described to her, and though she was still in pain, the sight horrified and amazed her, and there was something she noticed about it that particularly gave her the creeps. Over everything—up through the wreckage of the city, in gutters, along the riverbanks, tangled among tiles and tin roofing, climbing on charred tree trunks—was a blanket of fresh, vivid, lush, optimistic green; the verdancy rose even from the foundations of ruined houses. Weeds already hid the ashes, and wild flowers were in bloom among the city's bones. The bomb had not only left the underground organs of plants intact; it had stimulated them. Everywhere were bluets and Spanish bayonets, goosefoot, morning glories and day lilies, the hairy-fruited bean, purslane and clotbur and sesame and panic grass and feverfew. Especially in a circle at the center, sickle senna grew in extraordinary regeneration, not only standing among the charred remnants of the same plant but pushing up in new places, among bricks and through cracks in the asphalt. It actually seemed as if a load of sickle-senna had been dropped along with the bomb." (Chapter 4, pp. 69-70)

"Whatever its source, the disease had some baffling quirks. Not all of the patients exhibited the main symptoms. People who suffered flash burns were protected, to a considerable extent, from radiation sickness. Those who had lain quietly for days or even hours after the bombing were much less liable to get sick than those who had been active. Gray hair seldom fell out. And, as if nature were protecting men against his own ingenuity, the reproductive processes were affected for a time; men became sterile, women had miscarriages, menstruation stopped." (Chapter 4, p. 78)

"A surprising number of the people of Hiroshima remained more or less indifferent about the ethics of using the bomb. Possibly they were too terrified by it to want to think about it at all. Not many of them even bothered to find out much about what it was like. Mrs. Nakamura's conception of it—and awe of it—was typical. 'The atom bomb,' she would say, 'is the size of a matchbox. The heat of it is six thousand times that of the sun. It exploded in the air. There is some radium in it. I don't know just how it works, but when the radium is put together, it explodes.' As for the use of the bomb, she would say, 'It was war and we had to expect it.' And then she would add, 'Shikata ga nai,' a Japanese expression as common as, and corresponding to, the Russian word 'nichevo': 'It can't be helped. Oh, well. Too bad.' Dr. Fujii said approximately the same thing about the use of the bomb to Father Kleinsorge one evening, in German: 'Da ist nichts zu machen. There's nothing to be done about it.'" (Chapter 4, p. 89)

"At this precarious time she fell ill. Her belly began to swell up, and she had diarrhea and so much pain she could no longer work at all. A doctor who lived nearby, came to see her and told her she had roundworm, and he said, incorrectly, 'If it bites your intestine, you'll die.' In those days, there was a shortage of chemical fertilizers in Japan, so farmers were using night soil, and as a consequence many people began to harbor parasites, which were not fatal in themselves but were seriously debilitating to those who had had radiation sickness. The doctor treated Nakamura-san (as he would have addressed her) with santonin, a somewhat dangerous medicine derived from certain varieties of Artemisia. To pay the doctor, she was forced to sell her last valuable possession, her husband's sewing machine. She came to think of that act as marking the lowest and saddest moment of her whole life." (Chapter 5, pp. 91-92)

"One of the happiest moments in her life came in 1980, while she was stationed at the society's headquarters in Tokyo: she was honored at a dinner to celebrate the twenty-fifth anniversary of her becoming a nun. By chance, a second guest of honor that night was the head of the society in Paris, Mother General France Delcourt, who, it happened, had also reached her twenty-fifth year in the order. Mother Delcourt gave Sister Sasaki a present of a picture of the Virgin Mary. Sister Sasaki made a speech: 'I shall not dwell on the past. It is as if I had been given a spare life when I survived the A-bomb. But I prefer not to look back. I shall keep moving forward.'" (Chapter 5, p. 126)

"Kiyoshi Tanimoto was over seventy now. The average age of all hibakusha was sixty-two. The surviving hibakush had been polled by Chugoku Shimbun in 1984, and 54.3 per cent of them said they thought that nuclear weapons would be used again. Tanimoto read in the papers that the United States and the Soviet Union were steadily climbing the steep steps of deterrence. He and Chisa both drew health-maintenance allowances as hibakusha, and he had a modest pension from the United Church of Japan. He lived in a snug little house with a radio and two television sets, a washing machine, an electric oven, and a refrigerator, and he had a compact Mazda automobile, manufactured in Hiroshima. He ate too much. He got up at six every morning and took an hour's walk with his small woolly dog, Chiko. He was slowing down a bit. His memory, like the world's, was getting spotty." (Chapter 5, p. 152)

Topics for Discussion

To date, only two atomic detonations have been used in military operations against urban centers—namely, the destruction of Hiroshima and Nagasaki, Japan. Do you think that atomic weapons will eventually be used a third time?

The United States government and military carefully considered the use of atomic weapons against Japan and, ultimately, decided to drop atomic bombs on Hiroshima and Nagasaki. What are some of the things that politicians and military strategists likely considered when making those decisions?

Do you think that atomic weapons are morally reprehensible? Or are they just another weapon roughly analogous to a 'big bomb' like a Molotoffano hanakago? Discuss your opinion.

After the war, many young Japanese women who suffered from keloid scars traveled to the United States to receive cosmetic surgery—with varying degrees of success. Victims disfigured by other attacks on other cities with conventional weapons did not receive this type of special consideration. Why do you think public concern over some types of injuries is so great?

After the war, Father Kleinsorge continued to immerse himself in Japanese culture and eventually became a Japanese citizen, taking a Japanese name. Why do you think some people leave their own cultures and societies behind and adopt a foreign culture as their own?

Only days after the atomic detonation at Hiroshima, the emperor of Japan addressed the nation and then unconditionally surrendered to the allied forces. Do you think that the surrender was a direct consequence of the atomic bomb? Would Japan have surrendered anyway? If the atomic bomb had not been used, how might the end of World War II have been different?

During World War II, the United States extensively bombed most Japanese cities using a mixture of conventional bombs and firebombs designed to destroy wooden and paper buildings. Hiroshima was spared this fate only because it was one of the identified targets of the atomic bomb. Japanese defense of territory was famously determined, and capturing Japanese territory was very costly in terms of lives. Is it conceivable that the use of atomic weapons actually saved tens of thousands of lives? Discuss.

Is the atomic detonation over Hiroshima just a thing of the past? Is it simply boring ancient history with no modern-day application? Why or why not?

The book states that after the bombing of Hiroshima, many Japanese and American scientists descended upon the city with all manner of equipment to study the effects of the bomb. The book portrays these men and women as fairly heartless, far more

interested in radiation counts than disfigured survivors. Do you think this is an accurate portrayal of military scientists?

What is radiation sickness? Describe some of the symptoms identified in the book.