ABSTRACT: The photographic images of Hiroshima, Japan, in this photo essay are attempts to visually, poetically, and historically address the magnitude of what disappeared as a result of and what remains after the dropping of the A-bomb in 1945. They are images of loss and survival, fragments and lives, architecture and skin, surfaces and invisible things, like radiation. Exposure is at the core of the author’s photographic project: exposure to radiation, to the sun, to light, to history, and exposures made from radiation, the sun, light and historical artifacts from the Peace Memorial Museum’s collection. *Hiroshima: After Aftermath* engages ethical seeing, visually registers warfare, and addresses the irreconcilable paradox of making visible the most barbaric as witness, artist, and viewer.

On 6 August 1945, the United States of America dropped an atomic bomb fueled by enriched uranium on the city of Hiroshima, killing 70,000 people instantly. Another 70,000 died by the end of 1945 as a result of exposure to radiation and other related injuries. While the bombing itself is quite well known, what happened afterwards in Hiroshima is not. Despite its status as the only nation to use atomic weapons against another nation, the United States has given little attention to the visual record of those attacks. The victims, by contrast, remember the event that started the Atomic Age through memorials, museums, events, and the designation of the city of Hiroshima as a City of Peace.

It has been over fifty years since the atomic bomb was dropped, but reminders of the A-bomb are everywhere in Hiroshima: A-bombed trees (*Hibakujyuumoku*) continue to grow and A-bombed buildings still stand — grim markings of history, trauma, and survival.

The city is now dotted with special clinics for the survivors and their unusual pathologies. Names are added each year to the registry of the dead as a result of
the bomb. My intention in this photo essay is to respectfully bring this history into the present. As a hibaku-sha (A-bomb survivor) recounted during her presentation at the Peace Memorial Museum in Hiroshima, “There are now over 30,000 nuclear weapons in this world. Hiroshima and Nagasaki are not past events. They are about today’s situation.”

(TOP) This globe in the Peace Memorial Museum shows how many nuclear warheads countries currently possess. (BOTTOM) Surprisingly, many flowers blossomed shortly after the atomic bomb was dropped. The blooming of flowers offered a false and fleeting hope to survivors of the A-bomb. This Hiroshima dandelion will vanish without notice.
The history of the atomic age is intertwined with that of photography. The discovery uranium possesses radioactive energy naturally was via a photograph and this discovery launched the nuclear age. In 1896 Henri Becquerel placed uranium on a photographic plate, intending to expose it to the sun. However, because it was a cloudy day, he put the experiment in a drawer. The next day he decided to develop the plate anyway. To his amazement he saw the outline of the uranium on the plate that had never been exposed to light. Correctly concluding that the uranium was spontaneously emitting a new kind of penetrating radiation, Becquerel published a paper entitled “On Visible Radiation Emitted by Phosphorescent Bodies.” Following in Becquerel’s footsteps, this photo essay develops the relationship between radiation and the visual language of photography. Working in close collaboration with the staff of the Hiroshima Peace Memorial Museum for three months during the summer of 2008, I commenced a pilot project on the use of autoradiography (capturing on x-ray film radioactive emissions from objects), cyanotypes (natural sun exposures on cotton paper impregnated with cyanide salts), frottages (rubbings) and subsequent contact prints from the frottages, and traditional photography to document places and objects that survived the atomic bombing. The Peace Memorial Museum’s collection holds over 19,000 objects, many donated by A-bomb survivors. My work with autoradiography involved placing A-bombed objects on x-ray film in light-tight bags for a period of ten days. Surprisingly, or perhaps not, abstract exposures were made on the x-ray film: spots, dots, cracks, and fissures.

The lingering radiation in the metal and roof tile fragments, bamboo, and glass bottles, appears on the x-ray film much like Becquerel’s uranium on photographic plates. The cyanotypes produce ghostly images of objects that survived the bombing, evoking those that vanished.

Silver gelatin contact print made from an autoradiograph — a sheet of x-ray film that captures radioactive emissions from objects. In this case, a fragment of an A-bombed tree from the Peace Memorial Museum’s archive was placed on x-ray film in light-tight conditions for ten days.
The process and problem of exposure is central to my project. Countless people were exposed to the radiation of the atomic bomb. To this day, they say that someone in their family was “exposed” (hibaku) to the bomb. Now I am exposing these already exposed A-bombed objects on x-ray film, but this time, it is the radiation within them that is causing the exposure. The cyanotypes of exposed objects taken briefly out of the vaults of the Peace Museum’s collection to be exposed to the sun, render the traumatic objects as white shadows, ghostly silhouettes — like Anna Atkins’s botanical cyanotypes from the 1800s but with a violent force. I am oddly satisfied with the discovery of the blank shadows of the ragged aluminum lunch box and round canteen, the slender hair comb with one tooth missing, and deformed glass bottles amid the deep and uneven cyanotype blue. I am fortunate to have had access to these materials and bothered by the incalculable absence that these things mark and hold; aware that once again, these objects are being exposed — not to radiation, but from radiation and to light. The cyanotypes render these damaged objects in soft white forms, much like the white shadows cast by incinerated people and bridge railings, ladders, and plants at the time of the A-bombing. As Susan Sontag and Roland Barthes have discussed in their books on photography, there is an implicit violence to photography, actually and linguistically. In Hiroshima: After Aftermath, criminal absence has been made visibly present by itself. I am utilizing exposures to make visible the unseen, to reveal what is denied and hidden.

I am also making black crayon frottages on Japanese paper of A-bombed places and things: the bridge that was the lone survivor in a traditional Japanese garden; a bank countertop, floor, and vault; and trees, among other things. I
(Top) Silver gelatin contact print made from a frottage (rubbing) on Japanese paper of keyholes in the Fuel Hall basement where Mr. Nomura Eizo survived the A-bomb. (Bottom) Silver gelatin contact print made from a frottage of an A-bombed Kurogane Holly tree trunk.
was given permission to do rubbings and make photographs in the basement of the old Fuel Hall and City Planning Office — now the Peace Park Rest House — where a man survived the A-bomb. I spent two days there, wearing the required hard hat to take pictures of the black-rain-like stains on the wall, the worn stairwell banister, the dark and damp room, the rusty door and lonely origami offerings left for Mr. Nomura Eizo, the man who survived at the age of forty-seven and died in 1982 at the age of eighty-four.

I made frottages of the old keyholes and broken columns, rusty doors and hallowed floor. The frottages were then exposed in the darkroom as “paper negatives” used to make contact prints on photographic paper. The result is haunting — another ghostly trace, a negative index, almost as if the surface had been dusted with light or memory. Some of the frottages are unwieldy. The rubbing of the bridge in the Shukkeien Garden is twenty feet long and eight feet high.
Then there are the photographs themselves, still exposures of light upon matter and events. I made hundreds of exposures while in Hiroshima, digital and analog, color and black and white, images of survival and images of destruction. There is a large series of dandelion heads about to disappear into the wind, a small gesture in the midst of a profound event.

This gesture harks back to the many flowers that blossomed shortly after the atomic bomb was dropped. As John Hersey writes in his unforgettable book Hiroshima, “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” (Knopf, 1946, p. 91). The blooming of flowers offered a false and fleeting hope to the victims and survivors of the
A-bomb. And, like these signs of regeneration, a dandelion vanishes, perhaps with a child’s breath of a wish, but usually it disappears without notice — small, wispy, fragile balls, tiny-stemmed stars, blooming, blossomed, temporary. To me, the photographs of dandelions are as powerful and significant as the photograph of the hallowed basement and of the A-bombed gravestone of a government official. When the atomic bomb was dropped on Hiroshima, the stone ball on top of a government official’s gravestone near the hypocenter was toppled, and remains half buried in the ground. Engraved on the ball are the Japanese characters for sky and wind, but only half of the word wind is visible.

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This ruin in the Peace Memorial Park was the gravestone of Kunai Okamoto, a senior statesman of the Asano clan that controlled Hiroshima in 1945. The gravestone was located 200 meters from the hypocenter. The top of the gravestone was hurled to the ground from the tremendous blast of the A-bomb. The words read sky and wind — wind being half hidden in the ground.
(TOP) Hiroshima dandelion, something small but extraordinary.
(BOTTOM) Cyanotype of dead Hiroshima flowers.
The old Fuel Hall and City Planning Office sits at one end of the Motoyasu-bashi Bridge that spans the Motoyasu-gawa River. Mr. Nomura Eizo survived the A-bomb because he went down to the basement to retrieve some paperwork. The old Fuel Hall is now the Peace Memorial Park Rest House. (BOTTOM) A man washes his feet in the Motoyasu-gawa River that was once blood red and filled with corpses. The river runs through downtown Hiroshima. The Rest House stands on the opposite riverbank.
(TOP) The banister at the bottom of the stairs leading to the basement in the Rest House.
(BOTTOM) The basement of the old Fuel Hall where Mr. Nomura Eizo, 47 years old, survived the A-bomb. When he came back upstairs all he could see was a burning hell. He died in 1982 at the age of 84.
A detail of the wall in the old Fuel Hall basement. One cannot help but think of black rain — the dark poisonous stains of our history — and to feel the weight of lonely survival.
Bamboo Grove in Hiroshima’s Shukkeien Garden. In 1945 the garden was destroyed by the atomic bomb, but has since been restored. Many survivors sought refuge in the garden immediately after the A-bomb, but died before receiving medical care. Their remains were interred within the garden.
This former Hiroshima branch of the Nippon Bank stands in the center of the city. Even though it was only 380 meters from the hypocenter, it withstood the blast. It was used as a bank until 1992. Now it is a cultural center for exhibitions, such as an installation of over one million paper cranes from around the world.

Old Ugina Police Station, an A-bombed building, Hiroshima.
The sidewalk at the hypocenter and the wall of the rebuilt Shima Hospital.
Sculpture of Sadako Sasaki at the top of the Children’s Peace Monument. She holds up a large crane, about to take flight. She is shown here looking up through one of the many glass display rooms filled with paper cranes in her honor from around the world.

Schoolchildren sing at the Children’s Peace Monument or Tower of a Thousand Cranes. Teenager Sadako Sasaki died of leukemia in 1955. She had hoped to recover by “folding a thousand paper cranes to bring good luck”—a popular belief. Sadako folded over a thousand cranes but still she died. Students all over the world contributed to the funds for this monument to comfort Sadako’s soul and their own and to express their desire for peace.
(TOP) Schoolgirls having a picnic on the Motoyasu-gawa Riverbank in Peace Memorial Park, Hiroshima. (BOTTOM) Behind the Hiroshima Train Station where hundreds of A-bomb orphans once lived.
Cyanotype of bark from an A-bombed Eucalyptus tree. The cyanotype evokes the white shadows cast by incinerated people and bridge railings, ladders and plants at the time of the bombing.
(TOP) This Eucalyptus tree stands where it withstood the blast, 740 meters from the hypocenter. There are about sixty trees that survived the A-bomb in Hiroshima, many of them scarred. (BOTTOM) Detail of a wall from the Army Clothing Depot where equipment and uniforms were produced and stored during the war. It became an emergency relief station after the atomic bombing. The iron shutters of the west-facing buildings show signs of blast deformation. Stains like these can be found all over these empty and neglected buildings that cover three city blocks.
Ninoshima was home to a military base during the war. Soldiers returning from war, A-bomb victims, survivors, horses in need of quarantine or cremation, and orphans were all sent to Ninoshima. Military towers, foundations, ruins, memorials, and the orphanage — which is still in use for unwanted, needy, or orphaned children — can be found on the island.
(TOP) Schoolchildren, teachers, and tour guide have their picture taken in front of the Cenotaph for the A-bomb Victims. Stored in the Cenotaph is a register of the names of those who died as a result of the A-bomb. Every year new names are added. The Peace Memorial Museum can be seen in the background. (BOTTOM) Schoolchildren visit the Atomic Bomb Memorial Mound in Peace Memorial Park, Hiroshima. Inside the Mound are the ashes of tens of thousands of victims of the A-bomb. Most of these ashes are unidentified. Immediately after the bombing, countless dead bodies were carried here — the center of the bombing. Rescue squads cremated those dead bodies. An interreligious group, the Society for the Praying for the War Dead, started the Atomic Bomb Memorial Mound in 1946.
(TOP) Cyanotype of a fragment of a beam from the A-bomb Dome. The A-bomb Dome is the ruin of the 1915 Secession style Hiroshima Prefectural Industrial Promotion Hall. It is preserved as an appeal for world peace and as a witness to the horror of nuclear weapons. (BOTTOM) Graffiti on the foundation of the Tsurumi-bashi Bridge that spans the Kyobashi-gawa River, one of five rivers in Hiroshima.