

# Tales of Two Cities: Hiroshima and Los Alamos, and the Collec- tive Memories about the Atomic Bombing Presented in their Principal Museums

MASUMOTO Tomoko

When the atomic bomb developed in Los Alamos exploded over Hiroshima, these two cities became forever linked. The principal museum in each city presents this history differently, in narrative, objects and images displayed, purpose and impact. The Bradbury Science Museum, as part of the Los Alamos National Laboratory, presents a story of scientists brought together during war time who faced challenges, theoretical, technical, and moral to design a secret weapon. Science and military technology are conflated in a narrative that reaffirms a national collective memory of how the war was ended. At the Hiroshima Peace Memorial Museum the defining story is one of devastation and suffering wrought by the atomic bomb, and a resolve to prevent future nuclear wars. Without assigning blame, the museum presents a history of the bomb's development, and its effects, immediate and enduring. Emotionally affecting exhibits are synecdoche, small, personal items representing something much larger. A temporal metaphor runs throughout the museum, particularly the moment of the explosion. In its setting, architecture, signage, languages, and displays, the museum serves as witness, memorial, and protest against nuclear weapons. Conscious of its global significance, it presents a distinct cultural identity, specific to place but independent of a national identity.

**Key words:** Collective Memories, Master Tropes, Museum

“At least since the Romans leveled Carthage in 146 B.C., thereby imposing the first ‘Carthaginian peace,’ the names of certain sites

have taken on powerful symbolic meaning. ‘Waterloo’ evokes irrevocable defeat; . . . ‘Guernica’ and ‘Dresden’ stir thoughts of the slaughter of innocent civilians from the air. . . . Certain place-names, in short, serve a shorthand role in cultural discourse, based on a shared understanding of their symbolic meaning. When the event alluded to is sufficiently remote, the name is drained of emotion and serves a purely rhetorical function. . . . ‘Hiroshima’ is another place-name set apart by history, but unlike ‘Carthage’ or ‘Waterloo’ its symbolic meaning continues to evoke passionate emotional responses.” (Boyer, p. 144)

## 1. Introduction

“Los Alamos” does not resonate in the “nuclear geography of our minds” as does Hiroshima, and yet as the site of the research, testing and construction of the only nuclear bombs used in war, “Los Alamos” represents more than the place name of a small city in the sparsely populated state of New Mexico. Were it not for the development of the atomic bomb, Hiroshima might just be known today as another large city in Japan, and 10,000 km. away, Los Alamos only another small city in southwestern U.S.

This study examines messages and meanings expressed and evoked in the two major museums in these cities, the Bradbury Science Museum (hereafter BSM) in Los Alamos, NM, and the Hiroshima Peace Memorial Museum (hereafter HPMM) in the city of Hiroshima, Japan. Both museums exist because they are part of the same moment in history. And yet each museum tells a very different story, for different purposes, serving different audiences, with different means, toward different ends, affirming different values, with different meanings.

This comparative analysis is based on observations in the museums from 2011–2014 during July and August, linking two of Kenneth Burke’s “master tropes” in the contexts of the museums: 1) Meta-

phor, in this application, *temporal* metaphors; and 2) Synecdoche.<sup>1)</sup> As applied in museology, synecdoche includes the selection of specific items for display to represent a larger significance. In the present study these give form to the temporal metaphors.

This research contributes to the literature on collective memory as presented in museum exhibits about the bombing of Hiroshima and Nagasaki. In addition to scholarly writing from many disciplines, there have been times when public reaction to a museum exhibit about the atomic bombing draws attention in the popular media as well. Such was the case in 1995, the 50th anniversary of the bombing of Hiroshima, when plans for an exhibit prepared by the Smithsonian Air and Space Museum in Washington, D.C. became known. The announcement provoked a clash between the Smithsonian organizers and veterans' and other conservative groups, and forced the museum director to revise what was exhibited and the narrative that was presented (See, for example, Harwit, 1996; Hogan, 1996; NHK, 1996; Prosis, 1998). While significant, and relevant to the present article, the attention here is on the museums at the two historic sites, Los Alamos and Hiroshima.

This study reveals that each museum frames its history and purpose differently. Indeed, one history ends at the moment when the other's begins. The museum in Hiroshima demands that the visitor come face to face with the human toll that the images that the Los Alamos museum has chosen not to show.

The most evocative artifacts at Hiroshima are synecdoche, specific, personal items. Those in Los Alamos are impersonal, instruments of research or instruments of war. The human effects of the most famous war time achievement celebrated that are not shown in the "science museum" form the center of a museum dedicated to "peace."

In many respects the two museums have little in common. The BSM in Los Alamos is small, a 762 s.m. building on a main street in downtown Los Alamos, leased by Los Alamos National Laboratory

(hereafter LANL). It is the public face of a national nuclear weapons laboratory that prohibits public access. The BSM includes exhibits on science and technology related to some of the ongoing research at the laboratory; those exhibits are only briefly noted in this study. The HPMM is large, including three buildings that center an entire “peace park” and dedicated to the elimination of nuclear weapons. Areas of the HPMM that display postwar nuclear tests and their effects are also not considered in this study.

## 2. Los Alamos: The Bradbury Science Museum<sup>2)</sup>

Los Alamos, New Mexico, is where the story begins. Situated on a high desert plateau, 2256 m. above sea level in the Jemez mountains in northern New Mexico, the place that is now Los Alamos was chosen because of its remoteness as the site for the secret “Manhattan Project,” conducted between 1942–1945, to pursue the research that could produce an atomic bomb. Before it was abruptly taken over by the U.S. government in 1942 this was the site of the Los Alamos Ranch School, a highly regarded progressive private boys’ school that largely attracted the sons of wealthy executives from across the U.S.

Part of the ethos of Los Alamos is the cloak of secrecy that surrounded it during the Manhattan Project. Even today, Los Alamos, a city of 12,000, is often referred to as “that secret city,” or “the atomic city.” The city and county that surround it are no longer secret, but the highest security still characterizes much of what goes on at LANL. A deep ravine spanned by a bridge separates the residential and commercial areas, where the museum is located, from the massive LANL campus spread across nearly 40 square miles. Some buildings from the period of the Manhattan Project remain, notably those that were originally Ranch School buildings and which will be incorporated into a new National Park to commemorate the Manhattan Project (Dept. of Interior Press Release, 2011).<sup>3)</sup>

The BSM tells its story of the development of the atomic bomb in

the historic context of the era of World War II through displays with text, photographs, audio-visual presentations, artifacts, and an 18 minute film, “The Town that Never Was.”

There is no record of the number of visitors or their country of residence, but a staff member estimates 50,000 visitors come to the museum each year. Some visitors come from abroad, but the vast majority is from the U.S. The language of the signage and text for all of the displays is in English only.

## **2. 1. Exhibits**

The BSM divides its contiguous floor space into three main areas. (1) History: The Nuclear Age Begins is at the entrance and provides access to the theatre where the movie is shown. (2) Research: Science Serving Society displays how “the Laboratory conducts leading-edge research in many areas of science and technology to help solve national problems related to energy, the environment, infrastructure, and health.” (3) Defense: Strengthening Global Security includes rockets and models of the first two bombs, “Little Boy” and “Fat Man”, displayed against a backdrop of panels of text and photos that relate events of World War II. One display shows the global proliferation of nuclear weapons. The Research area serves as the bridge to connect the Manhattan Project history and the future, largely defined in terms of military defense.

The History area is exclusively the history of the Manhattan Project, presenting the challenges of research as a race to develop an atomic weapon before Nazi Germany could produce one. When that project was completed successfully, the weapon was handed off to the military. A timeline running along the top of one wall in this section identifies significant events leading up to and throughout World War II which are depicted in photos and text that mentions Nazi Germany more than Japan. Nobel Prize winning physicist Hideki Yukawa appears in a 1932 photograph, noting his work on the atom.

The timeline also shows a photograph and caption about the Japanese massacre in Nanking, China, and the Japanese attack on Pearl Harbor, and the Bataan Death March in the Philippines in which many of the prisoners were from New Mexico.<sup>4)</sup> The pictures and commentary about Nazi Germany provide a historical context, for it was fear that Germany would develop the bomb that initially drove the efforts at Los Alamos. The Manhattan Project continued even after it was known that the Germans had given up efforts to create a nuclear weapon.

Another theme is the struggle to make-do in the hurriedly formed exclusive community in the remote mountains of New Mexico. Apart from the film, the principal media are panels of text and black and white photographs<sup>5)</sup> and brief videos, shown on individual screens, to provide more historical information.

*“The Town that Never Was”* highlights the secrecy surrounding the building of the laboratory for Manhattan Project, the arrival of physicists from Europe, notably Jewish scientists escaping from Europe, and the hardships everyone at Los Alamos endured while working against time in this remote site. General Groves and Oppenheimer are shown, and the significance of their connection is introduced.

It is the testing of “the gadget,” code name for the nuclear device created at Los Alamos that is the high point of the story told here. The crucial test at the desert Trinity Site is presented in a way that builds suspense and marks the test as the successful completion of the Manhattan Project. The test, hundreds of kilometers from Los Alamos was conducted in a stark desert, devoid of potential human casualties. The movie also shows footage of the actual dropping of the bomb as viewed from inside the plane. As the bomb disappears from view, the film cuts to scenes of people in New York City rejoicing, celebrating the war’s end. Hiroshima is never shown, not even from the air.

The few artifacts displayed in the History area include instruments

of measurement (a seismograph to measure the impact from the Trinity test), cameras, and a detonator developed for the tests and the actual bombs.

Also included are references to arguments about the consequences of dropping the bomb and the moral justification. In text and tone, the historic decision is shown to be in the hands of President Truman who had assumed the Presidency only months earlier, following the death of President Roosevelt. That Roosevelt never told the new Vice President about the Manhattan Project and the potential bombing is not noted. Geopolitical concerns, including worries about Russia after the war, and the meeting of Roosevelt, Stalin and Churchill in Potsdam where Roosevelt told Stalin about the new weapon, are briefly noted. A note from Truman indicates that Stalin did not understand the significance of what he had been told about the new bomb.

## **2. 2. Theme**

A theme in telling the story of the Manhattan Project is the tension between the “burly no-nonsense General Leslie Groves,” and the gentle, reflective intellectual physicist, J. Robert Oppenheimer who oversaw the research and development in the race to make a nuclear weapon before Hitler’s physicists created one. The most prominent display in History is a life-size sculpture, in white plaster, of Groves and Oppenheimer as if engaged in conversation. Without caption or commentary, these statues acknowledge the significance each man in the Manhattan Project, and their unlikely partnership. The statue also suggests a metaphor of the engagement of military and science, a feature of the central narrative.

## **3. Hiroshima and the Hiroshima Peace Memorial Museum**

Hiroshima, capital of Hiroshima Prefecture and the largest city in western Honshu, stretches southward along a river delta from the Seto Inland Sea. The six rivers create an urban landscape that in-

spired the name “city of water.”

The HPMM is located in the Hiroshima Peace Park that, prior to the atomic bombing, had been the center of the city, with residential areas and shops. The park is located on a triangular space between the Honkawa and the Motoyasugawa.

Within two kilometers from the hypocenter are many monuments and small museums including an elementary school building in which more than 400 pupils died. The few trees that remain from that period show the effects of the A-bomb. The now iconic structure still standing after the bomb was detonated is the “Genbaku Dome,” now designated as a World Heritage site.<sup>6)</sup> The intense heat instantly killed all people inside the building, and within seconds burned even the iron framework and concrete of the structure. The plan of the peace memorial park and museum included the view of the structure that could be seen directly across the river.

### **3.1. The Museum Buildings**

Kenzo Tange designed the museum buildings so as not to evoke traditions expressed in Japanese architecture as he did not want the Hiroshima buildings to appear “Japanese.” Japanese-American artist Isamu Noguchi designed the parapets of the bridges that span the rivers that border the park, sites where thousands of the victims fled, seeking relief from their burns and intense thirst, and where most died.

Tange also designed the cenotaph which, in stone, present the words written by Tadayoshi Saika, Professor of Hiroshima University: “All the souls here rest in peace, for we shall not repeat the evil.” The inscription expresses the desire of the people of Hiroshima for everlasting world peace and the determination that the human race will never again “repeat the evil.” Though the U.S. is blamed for developing nuclear weapons, there is no explicit blame directed toward the U.S. for dropping the atomic bomb on Hiroshima. The evil



is nuclear warfare. The word choice also avoids placing blame elsewhere, including the Japanese military government and even the emperor, which was called for by some survivors in their oral histories elsewhere in the museum (Hiroshima Peace Memorial Museum, 2010).

The museum was formally opened in 1955 with the goal of presenting the facts of the atomic bombing as a means of promoting “the abolition of nuclear weapons and the realization of genuine and lasting world peace” (Matsui, 2011). The museum was renovated in 1994 and now consists of two co-joined buildings. The East Building presents “Hiroshima’s Journey,” a record of Hiroshima history up to the day the bomb was detonated. The Main Building presents, through photos and artifacts left by the victims, the atomic bombing and its aftermath (Hiroshima Peace Culture Foundation, 2006).<sup>7)</sup>

At the HPMM, all signage is in Japanese with English translations; explanatory guidebooks are available in ten languages, and there are also audiocassettes with commentaries keyed to the exhibits that are available in several foreign languages. Visitors from all over the world travel to Hiroshima to visit the park and the museum. In 2013 of the 1,383,129 visitors, 200,086 were from outside of Japan. Since its opening the total number of visitors exceeds one billion (Hiroshima City, 2014).

### **3. 2. The Museum Exhibits**

When visitors enter the East Building, they see a very large analogue (traditional) clock with digital screens below that show the number of days since August 6, 1945, and also the number of days since the last nuclear test was conducted.<sup>8)</sup>

On the first floor most striking is a three-story model of the *Genbaku Domu*. On the surrounding walls are copies of approximately 600 letters of protest sent by the mayors of Hiroshima City since 1968 to the leaders of the countries that have conducted nuclear tests.

The History exhibit begins with an overview and short video, tracing the history of Hiroshima from the 16th century up to the bombing, with maps, paintings, documents and photos. The introduction highlights the geography of Hiroshima which affected the pattern of devastation. The next section, the Development of Modern Hiroshima, shows how this town became a modern city, and with the reforms of the Meiji Restoration and the Sino-Japanese War that established Hiroshima's military character, attracted educational institutions. Hiroshima became known as "the education city."

The History from the Second Sino-Japanese War to the Pacific War explains how Japan went to war with China and ignited the Pacific War with its surprise attack on Pearl Harbor, and the expansion of military facilities in the Hiroshima. One photo depicts citizens cheering as they send soldiers off to war; this is matched with another photo from the same street showing grim citizens watching a solemn parade of soldiers carrying the remains of the soldiers who died. Life During the War shows the effect on citizens due to a scarcity of food, clothes and other items. The documents and photos show that Koreans and others were brought to Japan for forced labor.

The Road to the Atomic Bombing presents a brief history of atomic research, leading up to and including the Manhattan Project. Among the documents displayed are letters exchanged between the governments, military, and scientists including a copy of Albert Einstein's letter (August 2, 1939) to President Roosevelt urging him to develop a new kind of bomb, with some sentences highlighted and translated into Japanese. Documents indicate that at the beginning of the war the Germans were ahead of the Americans in nuclear fission research, but by 1942 Germany had abandoned their A-bomb project. The US government, even after confirming this fact, withheld this information from the scientists and continued pushing development of the bomb. Correspondence in 1943 shows that information about atomic bombs would be shared only between the U.S. and Britain,

and that the weapon should be used against Japan. Information about the decision to drop the atomic bomb, and copies of documents, including the James Franck papers of June 11, 1945, opposing the use of the bomb without warning, suggesting instead that a demonstration over water near Tokyo. The order to drop the atomic bomb is translated into Japanese. Dated July 25, 1945, the order calls for the bomb to be used as soon as possible “after about 3rd of August.” A field order was issued on August 2 that specified August 6 as the day of the attack, and Hiroshima as the primary target. Other documents identify the name of the airplane, pilots, the Tinian airfield from which the plane took off, and diagrams of the mechanism of the bombs.

It is in this area where questions regarding the motivation to bomb Hiroshima are suggested. Some documents imply that the U.S. wanted to drop the bombs on Japanese cities to test the power of the atomic bombs. One indication is a letter from Henry Stimson, Secretary of War, who wrote that he was concerned that Japan already had been bombed so thoroughly that there was no undamaged place to drop the bomb to test its strength. A second indication appears in discussions proposing that Japan would agree to surrender if the Emperor system could be retained after the war, and that this would be included in the Potsdam Declaration. Instead, the declaration demanded unconditional surrender which Japan could not accept, suggesting that the U.S. intentionally tried to keep the war going so that the bombs could be tested on Japanese cities, something also implied in the Franck papers. That the decision was made even before the Potsdam Declaration adds to questions about the purpose of bombing Hiroshima and Nagasaki.

August 6, 1945: Hiroshima in ruins shows that to prepare for air raids, Hiroshima City was clearing fire lanes and creating 100 meter-wide firebreaks across the center of the city. On the day of the bombing a corps of elderly veterans, community volunteers, and school

children were ordered to begin dismantling wooden buildings to prevent fires from spreading. Most third-year junior high school students had been mobilized to work in military supply factories that were on the outskirts of the city. Approximately 6300 of the children mobilized to work were killed by the blast.

The bomb that exploded 600 meters over the city created a fireball of more than 1,000,000 degrees C. at its center and spread out to 280 meters in diameter. The surface temperatures in the vicinity of the hypocenter rose to 3000-4000 degrees Celsius. The exhibit called "At the time, I . . ." presents memories of the moment of the explosion by some who survived. One reads "A dragonfly flitted in front of me and stopped on a fence. I stood up, took my cap in my hands, and was about to catch the dragonfly when . . . ."

A-Bomb Damage includes photos taken by journalist, Yoshito Matsushige, two hours after the bombing. A photo taken from the air shows the damage to the hypocenter, with the degree of destruction affected by distance and features of geographical features. The exhibit shows the damage to the built environment, and also presents statistics on the number of people who died or were wounded by the blast, including those who were not Japanese. An exhibit reports that President Truman announced to the world via radio on the morning of the August 7th that the US had dropped an atomic bomb on Hiroshima. That same day the Imperial Headquarters reported that Hiroshima had sustained significant damage, and on August 8, a Japanese newspaper reported that a new type of bomb was dropped on Hiroshima, but the public was not told these were "atomic bombs" until the war ended on August 15th.

With models that compare the city before the bombing and after the bombing, there is a scene of Hiroshima showing effects of the bombing with mannequins (woman and children) – all showing skin hanging from their bodies. Docents explain that the reality was much more terrible than shown on clean faces of the mannequins; a sani-

tized version is presented so as not to scare young children who visit the museum.<sup>9)</sup>

The Material Witnesses area displays individual items and identifies each with the person to whom it belonged (see Synecdoche, below). Those who were within 1.2 km from the hypocenter and received direct heat rays suffered skin-destroying burns and damage to internal tissues and organs. Most died immediately or within a few days.

There are also drawings made by those who survived, depicting people looking like ghosts walking, or like inanimate objects on ground. The atomic explosion created extreme atmospheric pressures that crushed bodies and expelled eyeballs and other internal organs. In a section on Black Rain drawings and explanations in the exhibit show people with severe thirst who drank “black rain” then experienced high radiation. Many of these works were made in decades long since 1945, often with notations that it took years to gain the courage to bare witness to the horror. After-effects describes the effects of the radiation, including photos of children born with microcephaly. It is painful to see the photos of the after-effects even without personal stories. For six years, the U.S. government controlled the publication in the U.S. and in Occupied-Japan of all photographs of post-August 6, 1945 Hiroshima. The U.S. also censored publications in Occupied Japan, but stories and poems appeared as underground publications.

Both museums display records showing that there were physicists and U.S. government officials who objected to dropping the bomb. President Truman was told of other options before deciding. The HPMM gives much more commentary and documentation to the decision and the rationale for bombing Hiroshima than appears in the Bradbury, and documents that raise questions about other motives, including a desire to test it on an actual city, to use it in order to justify the enormous cost (\$2.2 billion) of making the bomb, or to use it to demonstrate power, especially as a warning to Russia. U.S. scholars and those opposed to nuclear weapons have raised similar

questions, but these are not addressed in exhibits at the BSM (Walker, J. S., 1996). Albert Einstein's 1939 letter urging President Roosevelt to pursue the research to build the bomb appears in both museums. A second letter from Einstein, with Japanese translation, appears only in the HPMM. In it Einstein says, "the greatest mistake I made in my life was signing the letter sent to the president [Roosevelt]."

Both museums use historic photographs, but the character and function of the photographs differ. In the Hiroshima museum there are many photographs of the devastation to the built and natural environment and to the human devastation; at the Los Alamos, there are two photos showing destroyed buildings, but no images of human suffering

The history section in HPMM concludes with an exhibit about Nuclear Experiments and Nuclear Weapons, the world's entry into the nuclear age and the escalation of the nuclear arm race. The map and the globe shows locations of weapons by countries and a history of the test including the first hydrogen bomb test by the U.S. and its radiation fallout effects on the Japanese fishermen aboard the Fukuryu Maru.

#### 4. Discussion

The story of the Manhattan Project told at the BSM follows a familiar narrative, a "classic American story," of refugees coming to the new world in search of freedom, moving west, struggling against challenges in the wilderness, working together in their adopted land despite their differences in language and heritage and faith, to leave a legacy of hope for the future. This story, told in U.S. school history texts as well as at the museum, affirms implicit cultural values within this national story. Central to the collective memory is the narrative which includes the moral challenge to President Truman having to decide whether to drop the bomb, and by deciding to do so save thousands of lives, Japanese as well as troops from the U.S. and allied

forces.

#### **4. 1. Artifacts as Synecdoche**

As noted, artifacts in the BSM include copies of documents, a few items used in the design of the original bombs, and newer weapons, actual or models. Most items exhibited at the BSM are relatively large and made of metal. With few exceptions these are detached from any personal association. Except for the models of the atomic bombs, the representational significance is as an example of other such technological devices.

Artifacts in the Hiroshima museum evoke feelings and associations, and they have been used to re-create the story of a specific person, often a child, who died on August 6 or shortly thereafter. They are deeply moving. Some visitors cry when they see a personal object and read the descriptions.

As noted, where mannequins are used to show suffering, including skin hanging from the bodies of those still living, docents explain that the actual scene was far worse. Some critics complain that the images in the museum and even the entire historic area of the peace park seem too sanitized, too ordered, to fairly represent what happened in 1945 (Matsumoto, 1998).

More emotionally affecting still are the drawings and paintings of what was experienced on August 6 and the days that followed. Many of the drawings and paintings were done years after the event in part because the experience was too horrible to share.

#### **4. 2. Time as Metaphor and Synecdoche**

The temporal context in the BSM places the Manhattan Project as the starting point for the narrative of the U.S. collective memory, history at the entrance to the museum and reinforced in the film *“The Town that Never Was.”* The timeline along one wall in the History area gives some historical context as it relates to the narrative of a race

against time to complete the development of the bomb. The climax here is not the dropping of the bomb on Hiroshima, but rather the testing of “the gadget” at Trinity Site in the desert 320 km. to the south. The narrative ends at about the point where the central narrative at HPMM begins. The rest of the BSM exhibits, the larger part of the museum, is devoted to the kind of ongoing research at the LANL, and the implicit connection between that work and an indefinite future that will be safeguarded by the LANL research and development.

At the HPMM, *time* is a dominant theme throughout, beginning with the massive clock at the entrance that also marks the date of the most recent nuclear weapons tests anywhere in the world, and the number of days since the most recent test.

The historical narrative that is centered on the atomic bombing of Hiroshima begins from the 16th Century, with information increasing exponentially as the time of the explosion approaches which becomes the moment when time stood still. What have come to be iconic artifacts mark the moment of the explosion, especially a watch that stopped at that moment,<sup>10)</sup> and the shadow of a victim, forever imprinted by the blast, on a cement wall.<sup>11)</sup>

Other artifacts, such as a child’s lunch box with its carbonized rice contents, and diverse personal items, are the synecdoche elements that literally cause visitors to stop in their tracks and contemplate that moment.<sup>12)</sup> Individually, they linger in the memory and come to represent the greater message conveyed by the museum. The museum collection includes 20,000 such items.

The onomatopoeic word “*Pica Don*” — “*pica*,” the flash of the explosion, and “*don*,” the deafening sound that followed — is referenced throughout the museum: Because there was no previous knowledge of the terrible new weapon, people called it Pica Don. “*Pica Don*” refers only to the survivors’ experience at that moment.

The synecdoche images express a slow and relentless period of time



that has continued for seventy years. The names of the hibakusha who have died during the year are interred every August 6 at the cenotaph in the Peace Memorial Park.

#### **4. 3. August 6 as Synecdoche**

The most important and busiest day each year at the HPMM is August 6, the anniversary of the atomic bombing of Hiroshima. Thousands, including many dignitaries from Japan and abroad, come for a nationally televised memorial service, and at 8:15 a.m. bells toll and a moment of silence across the nation marks the time and date and honors those who died.

A memorial ceremony is held annually in the Peace Memorial Park attended by families of the victims, Japanese government officials and ambassadors and other officials from abroad, as well others who come from all over the world. The solemn ceremony occurs in the very space where thousands died when the bomb exploded. The broadcast of the ceremony and the newspaper reports reinforce the national memory of the atomic bombings. This use of space and ceremony “sanctifies” Hiroshima, in Foote’s interpretation (Foote, 1997). Those who learned history through the Japanese education system, and also those who have seen films or read literature, including graphic novels, have additional, narrative, perceptions (Oe, 1965, Ibuse, 1969, Nakazawa, 2000). In the 21st century few people who experienced of the atomic bombings are still alive. However, vivid images and interpretations of that history are continuously reinforced through mass media and subcultures (Sturken, 1997; Oka, 2000). Those mediated memories are not historical fact, but the bell that sounds at 8:15 a.m. each August 6 evokes such unbounded “memories.”

Each year in Japan, August 6 begins a sequence of days of remembrance: three days later, August 9, when the second nuclear bomb was dropped on Nagasaki; and then August 15 when Japan formally surrendered and the Pacific War ended. This coincides with the tra-

ditional period of O-Bon when Japanese honor the souls of all who have died, and families visit their ancestors' grave sites.

At the BSM (and LANL), no significance is given to August 6 (or August 5, adjusting for the time difference in Japan and the U.S.). News reports in the U.S. rarely call attention to the date, though some may note August 15 as the anniversary of the end of World War II.

## 5. Conclusion

If museums are expressions of the cultures that create them, what do these museums reveal about their respective cultural influences? Critical scholars in the field of communication have rightly pointed out some of the problems of conflating “culture” with nationality (Halualani, R. T., S. L. Mendoza, & J. A. Drzewiecka. 2009). Hiroshima, because of its uniqueness within world history explicitly presents itself as distinct, separate from the rest of Japan. Hiroshima, as a city, turns itself into a messenger of peace and hope created from the memory of and felt obligation to the victims. The official name of the city of Hiroshima is written in Japanese characters (広島) but it is often also written in katakana (ヒロシマ). The difference in scripts distinguishes 広島, as a city of Japan, from ヒロシマ, the city that became the world's first city to be attacked by an atomic bomb. In the “Afterword” of a brochure the HPMM published for a special exhibition, the Japanese characters are used to refer to Hiroshima before the war, as simply a place name. In the latter part of the brochure, katakana is used to refer to Hiroshima as the site of the now very important place in the world (Hiroshima Peace Memorial Museum Curator, 2011). There is no explanation about the usage of two written style but the message is clear. Similarly, the protest letters sent to the leaders of countries conducting nuclear weapon tests, displayed in the HPMM, are written not by the Japanese Prime Ministers, but by the mayors of Hiroshima who have been critical of Japa-

nese government policies for decades. Also, as noted architect Tange was careful to design a museum building that avoided Japanese architectural traditions because he did not want the Hiroshima buildings to appear “Japanese.” When visitors move from the East Building to the Main Building, they leave the history that is identified with Japan and enter a building where the victims of the bomb are shown as individual human beings, not as citizens of a nation.

The story of the Manhattan Project told at the BSM is of a challenge of scientific research to be applied toward a goal to make the first nuclear weapon that would be used in war, a political decision. The task was completed, the U.S. won the war, lives were saved and, as the signage proclaims, the world entered the dawn of “the Atomic age.” After that dawning, the display of newer weapons continues throughout the rest of the museum. The BSM reaffirms the narrative of the U.S. collective memory through the uniqueness of the history at Los Alamos that would come to have international, far reaching, and enduring consequences. For the visitor, “science” is conflated with technology, and both are presented in a national narrative. The story of the Manhattan Project, which grounds the museum, stops before the defining story of Hiroshima begins. Then the narrative of the importance of nuclear achievement at Los Alamos begins again, conflating nuclear science and technology, much that is weaponized. A visitor from the U.S. is likely to leave reassured.

The story told at the Hiroshima Peace Memorial Museum is that out of the ashes of the atomic bomb there arose a new cultural identity, in Japan but also distinct from Japan, and one that seeks to identify with the entire world, chronicling on a global scale the development of nuclear weapons, and warning of what may result. A visitor is likely to leave disturbed.

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### Notes

- 1) Kenneth Burke identified “Four Master Tropes.” Burke, Kenneth, *A Grammar of Motives*.
- 2) The Bradbury Science Museum is a part of the Los Alamos National Laboratory (LANL) under the auspices of the U.S. Department of Energy (DOE), and administered by a consortium of government, corporations (Bechtel, and Babcock & Wilcox) and the University of California, Berkeley. LANL is the largest employer in northern New Mexico and has an official budget of \$2.2 billion, though it is widely assumed that additional funds are made available.
- 3) The proposed park would include, in addition to the Los Alamos site, related sites in Hanford, Washington, and Oak Ridge, Tennessee. Calling the development of the atomic bomb “one of the most transformative events in our nation’s history,” Salazar said “the Manhattan Project ushered in the atomic age, changed the role of the United States in the world community, and set the stage for the Cold War.” The proposal provoked immediate reactions, both within the U.S. and in Japan (McArdle, 2011; Asahi, 2011). Michael Mariotte, the director of an anti-nuclear group, the Nuclear Information Resource Center, said “. . . glorifying a weapon of mass destruction is certainly not among the purposes of a national park.” (McArdle, 2011). The present study does not address the national park proposal.
- 4) Though not indicated in the text, many museum visitors from New Mexico would be keenly aware of that horror of the war. Locally, “the Bataan Death March” is a signal event (like “Pearl Harbor”) that evokes passionate feelings associated with the war.
- 5) On a wall across from the historical timeline are 45 black and white portraits of people who worked at the Lab during this period with a brief text, including quotes by each person. Included are physicists but also secretaries, nurses, and other staff support. The effect, and presumably the intent, is to literally put a friendly face on the effort to build the first weapon of mass destruction. The inclusion of staff that come from the region, “Hispanic” and Native American (terms not part of the historic vernacular), adds to the “American story” being told. Today the demographics of the city of Los Alamos indicates it is 89% “white.” As will be

noted later, it is in some of the comments of these workers that one sees expressions of discomfort with what their work produced.

- 6) Designed and completed in 1915 by the Czech architect Jan Letzel (UNESCO, 2014) as a prefectural Commercial Exhibition Hall, it later served as an office building until the atomic bomb exploded almost directly overhead.
- 7) Across the edge of the HPMM, Hiroshima National Peace Memorial Hall for the Atomic Bomb Victims was built in 2002. It stores photos and information of the victims and also recorded testimony of the survivors.
- 8) For example, August 4, 2014, the screen showed that 25,200 days had passed since the dropping the A-Bomb, and 326 days had passed since the last nuclear test (conducted by the U.S. on September 12, 2013).
- 9) In the next renovation of the museum, there are plans to remove the mannequins. Many people oppose the museum's decision which was made out of the concern about the strong impact these may have on young visitors. The director of the museum explained in an interview that the curators were afraid of giving a false impression to visitors as those disfigured mannequins' bodies are horrific, and yet their faces are clean and unblemished.
- 10) Watch worn by Kengo Nikawa who was exposed to the bomb crossing a bridge by bike. He suffered major burns on his right shoulder, back, and head, and died two weeks later.
- 11) A person sitting on the bank steps waiting for it to open was exposed to the flash from the atomic bomb explosion. Receiving the rays directly from the front, the victim undoubtedly died on the spot from massive burns. The surface of the surrounding stone steps was turned whitish by the intense heat rays. The place where the person was sitting remained dark like a shadow.
- 12) These items were offered, on loan, to the Smithsonian Air and Space Museum for an exhibit in 1995 where a part of the "Enola Gay," the name of the plane that dropped the bomb, was also displayed. However, veterans associations and later the media opposed including in the exhibit objects such as carbonated rice in a lunch box of a junior high school student, and other artifacts and photos of women and children who suffered the consequences of the bombing. As a result of protests that received international attention, these artifacts and photos offered by the HPMM were rejected.

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